Cisco WAE Design 6.2 Plan Table Schema and CLI Reference

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C O N T E N T S

Overview

This reference is useful for those who are using WAE Design, WAE Live, and WAE Collector CLI tools and for those who need to understand the WAE Design and WAE Collector table schema.

- CLI Help Reference—Lists the CLI Help output for WAE Design, WAE Live, and WAE Collector CLI tools that are located in `$CARIDEN_HOME/bin`.
- Plan File Schema Reference—Lists the most commonly used columns in plan tables. Another reference for this information is the `$CARIDEN_HOME/docs/table_schema.html` file.

Note `$CARIDEN_HOME` is the directory in which the WAE Design, WAE Live, and WAE Collector executables and binaries are installed. On Linux, the default `$CARIDEN_HOME` is `/opt/cariden/software/mate/current`.

Related Topics

- *WAE Platform Configuration Guide*
- *WAE Design Integration and Development Guide*

CLI Help Reference

This chapter lists information for the CLI tools that are located in `$CARIDEN_HOME/bin`. `$CARIDEN_HOME` is the directory in which the WAE Design, WAE Live, and WAE Collector executables and binaries are installed. On Linux, the default `$CARIDEN_HOME` is `/opt/cariden/software/mate/current`.

Note   The tools that are available depend on your licensing agreement.

- Commands by Function—Groups the CLI tools by function and briefly describes each.
- WAE Design Executable CLI Help—Help output of the `mate` executable that starts the WAE Design GUI.
- CLI Reference—Alphabetical list of CLI tools and their Help output.

Commands by Function

Table 2-1   API Tools

Command	Description
designapid	Starts the designapi service with an endpoint accessible at <hostname>:<port> that uses communication protocol <protocol>
design_api_python	Executes the given python script with the correct environment for Design API scripts

Table 2-2   WAE Collector Tools

Command	Description
add_nodes_to_nso	Add nodes to the Tail-f NCS/NSO server
build_inventory	Process the NetIntHardware* tables so that inventory collection can be made available for use in WAE Live
cacti_poll_interfaces	Import traffic measurements from Cacti
collector_getplan	Get the plan file from either the Collector server or the WAE Network Interface (NI) server

Command	Description
collector_migrate	Migrate Collector server files from the previous release to the current one
collector_pushplan	Push a plan file, network authorization file, and/or network access file to the WAE NI server
cricket_poll_interfaces	Import traffic measurements from Cricket
get_configs	Get the configuration files from a list of routers
get_inventory	Use SNMP to access a network and collect inventory information. For Juniper routers, use NETCONF to log in and get SFP transceiver information that is not available via SNMP.
get_show	Issue a router 'show' command
get_snmp	Get network SNMP information
mate_access_manage	Manage access to nodes in the plan
mate_access_test	Test the current settings in the access file
mrtg_poll_interfaces	Import traffic measurements from MRTG
parse_configs	Import config files into a new or existing plan file
parse_igp	Parse the IGP database from a router
snapshot	Automate the discovery process
Authorization	
mate_auth_export	Decrypt an encrypted file
mate_auth_import	Encrypt a plain text file
mate_auth_init	Create an authentication file
mate_auth_test	Display authentication file information
Flow Collection	
flow_get	Get the most recent flow data from the flow collection server, and put it into a plan file
flow_list	Get the location of the file containing inter-AS flows corresponding to the specified input plan file
flow_manage	Manage the flow collection server, such as starting and stopping the server, and loading the configurations
Login Access	
login_find_igp_db	Access seed node and collect IGP information
login_find_ldp_ext	Log into routers and collect LDP information
login_find_multicast_ext	Log into routers and collect multicast information
login_test	Test login access
SNMP	
snmp_find_interfaces	Access nodes and collect interface information
snmp_find_ldp	Access nodes and collect LDP information
snmp_find_multicast	Access nodes and collect multicast information
snmp_find_nodes	Access nodes and collect additional node information
snmp_find_ospf_db	Access seed node and collect OSPF information

Command	Description
snmp_find_rsvp	Access nodes and collect RSVP information
snmp_find_vpn	Access nodes and collect VPN information
snmp_poll	Access nodes and collect data
snmp_poll_interfaces	Access nodes and collect interface data
snmp_poll_ldp	Access nodes and collect LDP data
snmp_poll_multicast	Access nodes and collect multicast data
snmp_poll_rsvp	Access nodes and collect LSP data
snmp_test	Test SNMP access
Login and SNMP	
find_bgp	Combined login and SNMP router access to get BGP traffic statistics
find_bgpls	Collects BGP LS from an OSC controller
login_poll_multicast_ext	Combined login and SNMP router access to get multicast traffic statistics
poll_ldp	Poll the network and/or log into routers to get LDP information and statistics
SAM	
sam_getplan	Extract SAM information into a plan file from a SAM server

Table 2-3　　　*Archive Tools for WAE Live and WAE Design Archive Applications*

Command	Description
archive_config	Manage the list of archives available to the server; this tool creates an archivelist.xml file in the $CARIDEN_HOME/etc/archive/config directory (applicable only to the WAE Design Archive application)
archive_delete	Delete a plan from an archive
archive_do	Facilitate updates to archive files
archive_extract	Retrieve, and optionally remove files from an archive
archive_init	Create a new archive or update the structure of an existing archive
archive_insert	Put a plan into an archive
archive_list	List files in an archive
archive_merge	Merge data from one archive into another
archive_predict	Insert prediction plans in an archive using traffic from previous plans.
archive_summarize	Create summary information in the SQLite database for the specified archive.
archive_update	Update plot summary data in an archive using information from previous plans
time_plot	Plot traffic from an archive of plans

Table 2-4   Network Modeling Tools

Command	Description
arrange_nodes	Arrange screen position of nodes
arrange_sites	Arrange screen position of sites
assign_sites_L1	Create and assign sites to selected L1 nodes
assign_sites_L3	Create and assign sites to selected nodes
copy_from_template	Copy objects and attributes from a template plan to the open plan
merge_circuits	Merge parallel circuits between nodes or sites
merge_nodes	Merge parallel circuits between nodes or sites
rename_nodes	Rename nodes, primarily to remove unwanted prefixes or suffixes from names
set_as_relationships	Set the properties of the external AS's
trim_as	Trim unwanted AS's from the plot view
trim_nodes	Trim unwanted nodes from the plot view

Table 2-5   Demand and Traffic Tools

Command	Description
create_growth_plans	Create plans based on predicted traffic growth
dmd_deduct	Deduce demand traffic from traffic measurements.
dmd_est	Estimate demand traffic using only total node traffic
dmd_mesh_creator	Create a mesh of traffic demands in the network
dmd_traffic_creator	Create demand traffic using only total endpoint traffic
dmd_trim	Remove small demands from a plan file
edit_traffic_levels	Create, change, or delete traffic levels
insert_demand_grouping_mesh	Create a demand grouping mesh
insert_multicast_demands	Insert multicast demands
modify_demand_traffic	Grow/shrink demand traffic

Table 2-6   Layer 1 Tools

Command	Description
export_lambda_util	Export lambda (wavelength) utilization for L1 links
insert_L1circuit_for_circuit	Create an L1 circuit for each selected L3 circuit

Table 2-7   MPLS LSP Tools

Command	Description
dmds_for_lsps	Create demands for private LSPs
dmds_for_p2mplsps	Create demands for point to multipoint LSPs
lsp_diagnostics	Analyze LSP routing problems
lsp_mesh_creator	Creates a mesh of LSPs between selected nodes
lsp_path_initializer	Create LSP paths for existing LSPs
lsps_for_dmds	Create private LSPs from existing demands
resolve_plan	Resolve unresolved LSP destinations and hops
set_up_bw_initializer	Initialize LSP setup bandwidth

Table 2-8   Simulation and Optimization Tools

Command	Description
changeover	Perform changeover from one metric and LSP routing configuration to another
exp_opt	Explicit LSP optimization
explicit_L1circuit_path_init	Initialize explicit paths for Layer 1 circuit paths
explicit_LSP_path_init	Create explicitly routed named paths for LSPs
explicit_P2MP_LSP_path_init	Create explicitly routed named paths for P2MP LSPs
frr_lsp_init	Create fast-reroute LSPs for all specified source nodes
IGP_metric_init	Initialize IGP metrics using circuit delays
latency_bounds_init	Initialize latency bounds based on simulation
latency_distance_init	Estimate circuit delay (ms) and estimate L1 link distance (km) and delay (ms) using site longitude and latitude
L1_metric_init	Initialize L1 link metrics using L1 link distances
lsp_loadshare_opt	Optimize loadshare settings between LSPs
metric_opt	Optimize IGP metrics
metric_opt_tactical	Optimize IGP metrics for congestion
rsvp_te_opt	Create or modify fully-explicit RSVP LSP paths for specified LSPs, and optimize paths globally for better performance
sim_analysis	Simulation analysis over failure scenarios and traffic levels
sr_te_opt	Optimize routings of SR LSPs by minimizing the TE metric, delay (latency), or IGP metric of the path

Table 2-9   Plan Table Tools

Command	Description
tab_merger	Merge tables in two text plan files
table_compare	Compare tables in two text plan files
table_delete	Delete tables from a plan file
table_edit	Edit a tables in a text plan file according to the instructions in an edit file
table_extract	Extract tables from a plan to a text plan file
table_replace	Replace tables in a plan with the tables in a text file

Table 2-10   Plan File Tools

Command	Description
create_representative_plan	Create a plan file out from snapshot plan files in the archive or a directory. The plan file has multiple traffic levels representing network traffic over the time periods of the snapshots.
export_exp_lsp	Export explicit LSP settings from the plan file.
export_routes	Export demands, shortest paths (based on IGP metric), active LSPs, established LSP paths, circuits, L1 circuits, and L1 circuit paths to an external file
import_cricket	Import traffic from Cricket into a plan file
import_demand_groupings	Import demand groupings from a plan file or from a file containing a <DemandGroupings> table
import_external_endpoints	Import external endpoints into a plan file
import_growth	Import growth rates into a plan file
import_layer1	Import Layer 1 objects (L1 nodes, L1 links, and L1 circuits) from another plan file, including associations with the Layer 3 objects, if applicable
import_lsps	Import LSPs from a .txt format plan file into a plan file
import_qos	Import service classes, their policies, and their interface queue mappings from another plan file
import_srlgs	Import shared-risk link groups (SRLGs) from another plan file
import_tags	Import object tags from another plan file.
import_traffic	Import traffic and demands from a .txt format plan file into a plan file
insert_L1_from_L3	Insert Layer 1 topology into a plan file based on Layer 3 topology
insert_vpns	Insert VPNs into a plan file using existing VPN node information.
mate_convert	Convert a plan file from one format to another
mate_sim	Simulate a plan file; it is often before inserting into an archive is to create the cache values that are used for performance optimization of the archive.
network_options_manage	Set plan file options that determine global network behavior

Table 2-11   Report Tools

Command	Description
compare_plans	Create a comparison report between two plan files
compare_traffic	Create a traffic comparison report between two plan files
cost_analysis	Create an infrastructure report that summarizes monetary cost of specified nodes and circuits
manage_reports	Create report directories, and delete, rename, import, export, list, and print reports
mate_jasper	Produce a report in PDF or HTML format that uses either a plan file or arbitrary SQLite database file as input and uses a Jasper report template.
mate_select	Extract information from a report
mate_sql	Extract information from a report (advanced)
mate_summary	Extract summary data from a report file
report_demand_groupings	Generate a report on demand groupings.

Table 2-12   WAE Live Tools

Command	Description
ml_backup	Backup a WAE Live datastore
ml_insert_ctl	View, modify, and schedule the collection of data from WAE Collector
ml_insert_plan	Insert a plan file into the WAE Live datastore. Used only with manual snapshots.
ml_insert_props_export	Export user-defined property definitions
ml_insert_props_import	Import user-defined property definitions
ml_read	Display interfaces, tables, and available commands for the WAE Live datastore
ml_restore	Restore a WAE Live datastore that was previously backed up
mld	Control the installation and running of the WAE Live datastore

Table 2-13   Other CLI Tools

Command	Description
circuit_cost_init	Calculates the monetary costs of circuits based on the distance or/or capacity of the circuits
embedded_web_server	Control operation of the web server
license_borrow	Borrow a floating license for up to 30 days
license_check	Display installed license
license_install	Install the license file

Command	Description
license_return	Return a license to a floating license server
mate	WAE Design executable
mate_cfg	Manage the web configuration of WAE Live and the WAE Collector UI
mate_plot	Save network plot to a file
mate_tech_support	Create a tar file of support information for the WAE Live application and for the WAE Collector UI

WAE Design Executable CLI Help

When you launch the WAE Design desktop application from the command line, you can specify the file to open, view options, and other initialization options.

You can open multiple plan files (both .pln and .txt) by entering their names as options to the `mate` command. This bypasses the need to use the `-plan-file` option.

mate

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .  is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .  Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .  file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .  from .txt format of -out-file if parameter
    .  exists. Default is 'false'.

Required options:

Optional options:
    -plan-file <value>: Plan file to open.
    -directory <value>: The default directory for the Open and
    .  Save file dialogs. Default is the
    .  directory of the -plan-file. If -plan-file
    .  is not specified, the default is
    .  OS-specific.
    -min-link-width <value>: this is the minimum width used in drawing
    .  the links. Default is 5
    -min-cap <value>: Circuits at this capacity will be drawn in
    .  Capacity View at the smallest thickness
    .  possible. Circuits below this capacity
    .  will be drawn in Wire View. Circuits above
    .  this capacity will be drawn according to
    .  width-step setting. Default is 580.
    -width-step <[0+integer>: Determines thickness of circuits on the
    .  plot. Each 4x increase above min-cap will
    .  increase thickness by width-step number of
```

```
            .   pixels. Default is 2.
            -util-color-list <value>: List of colors for links at increasing
            .   levels of utilization.
            .   Default:
            .   'LightBlue,30,LightGreen,50,Yellow,80,Oran
            .   ge,90,Red,100,Purple'
            .   That is, 0% <= LightBlue < 30%, 30% <=
            .   LightGreen < 50%, ..., >= 100% Purple.
            .   Colors are of the form #RRGGBB or standard
            .   html color names.
            -view <value>: This option determines how the links get
            .   colored. The options are:
            .   meas-util
            .   for plotting the measured utilizations
            .   sim-util
            .   for plotting the simulated utilizations
            .   sim-wc-util
            .   for plotting the worst-case simulated
            .   utilizations
            .   sim-lsp-rsrv
            .   for plotting the simulated LSP
            .   reservations per link.
            .   failure-impact
            .   for plotting the simulated failure
            .   impact.
            .   The default is sim-util if the plan has
            .   demands and meas-util otherwise.
            -circuit-display <value>: One of
            .   'interface': Default. Interface next to
            .   node.
            .   'remote': Remote Interface next to
            .   node.
            .   'side': Interfaces side-by-side.
            -interface-text <value>: Text on Interfaces. One of
            .   'none' (default),
            .   'fill': Percentage of interface filled,
            .   'metric': IGP Metric.
            -wc-failure-sets <value>: This setting is consulted when the
            -sim-wc-util view is selected. It is a
            .   comma separated list of failure sets that
            .   will be used in determining the worst
            .   case. The failure-sets must already have
            .   been specified as part of sim_analysis.
            .   The default is 'none' (the no failure
            .   scenario).
            -service-class <value>: This setting causes the policy utilization
            .   of the specified service-class to be
            .   plotted for the utilization views instead
            .   of the policy utilization for the
            .   undifferentiated service class. The
            -meas-util view requires traffic
            .   measurements for individual service
            .   classes, which is not yet supported.
            -anti-alias <true/false>: Turns on anti-aliasing in the plots.
            .   Default is true.
            -transparency <true/false>: Turns on transparency effects in the
            .   plots. Default is true.
            -system-settings <true/false>: Sets whether WAE Design should use the
            .   system's standard colors, fonts, etc.
            .   Default is true.
            -geometry <geometry>: The initial geometry of the WAE Design
            .   window, specified in the format
            .   <w>x<h>{+,-}<x>{+,-}<y>, where <w> is the
            .   window width, <h> the window height, <x>
```

```
        .   the distance from the x-border (left if
        .   '+' specified, or right if '-' is
        .   specified), and <y> the distance from the
        .   y-border (top or bottom). Example:
        .   900x600-0-0 places a 900x600 application
        .   window in the upper right corner of the
        .   display.
    -max-parallel-circuits-width <value>: The maximum width in pixels used to
        .   display parallel circuits between two
        .   sites. Default = 50.
    -auto-sim <true/false>: If true (default), autosimulation is
        .   turned on when the GUI starts. If false,
        .   autosimulation is turned off.
    -lic-product <value>: Specify the base product license (Design
        .   or Live) to check out and use.
```

CLI Reference

Imported CLI Help

add_nodes_to_nso

```
Usage: add_nodes_to_nso -plan-file <filename> -nso-server <address> [options]
    .   Devices will be configured so that NSO uses SSH for communication.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
        .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
        .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
        .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
        .   from .txt format of -out-file if parameter
        .   exists. Default is 'false'.

Required options:
    -plan-file <filename>: Input plan file name (.pln/.txt).
        .
    -nso-server <address>: NSO server address.
        .

Optional options:
    -log-level <value>: Log level, one of: [off, activity, fatal,
        .   error, warn, notice, info, debug, trace]
        .   Default is 'error'.
    -nso-ipc-port <portnumber>: NSO server IPC port.
        .   Default is '4569'.
    -auth-file <filename>: Authentication file name. Default is in
        .   the configuration path.
        .   ($HOME/.cariden/etc, $CARIDEN_ROOT/etc or
```

```
.   $CARIDEN_HOME/etc).
.   Default is 'auth.enc'.
-synch-nodes <true/false>: Sync device configuration into NSO DB
.   Default is 'true'.


Example: Add devices to the 10.104.56.3 NSO server from a plan file named
/cisco/infile.txt
 add_nodes_to_nso -plan-file /cisco/infile.txt -nso-server 10.104.56.3
```

archive_config

```
Usage: archive_config <options>.
Manage the Archive application.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -action <value>: 'add': Adds an archive to the list of
    .   archives under server management.
    .   'edit': Edit properties of an archive.
    .   'remove': Removes an archive from the
    .   list.
    .   'clear': Clears all archives from the
    .   list.
    .   'list': Lists the archives under
    .   management.

Optional options:
    -name <value>: Name of the archive (required by 'add' or
    .   'remove').
    -path <value>: Full path name of the archive (required by
    .   'add').
    .   For example, ~john/archives/archive1.
    -description <value>: Set the description of the archive.
    -group-name <value>: Set the Archive's group name.
    -template-dir <value>: Set the name of the directory where
    .   template plan files should be uploaded.
    -template-name <value>: Set the template plan file name.
    -custom-archive-content-name <value>: Custom content display name for this
    .   Archive.
    -custom-archive-content-html <value>: Set the location of the custom content
    .   html file.
    -custom-archive-content-url <value>: Set the custom content URL.
```

archive_delete

```
Usage: archive_delete options
Deletes a plan and summary for the given times from the archive.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -archive <directory>: Archive directory

Optional options:
    -time <timestamp>: Timestamp of plan to retrieve from
    .   archive, in UTC format. The format is:
    .   'YYMMDD_HHMM'. DEFAULT: The most recent
    .   plan file.
    -time-zone <+/-integer>: Time zone relative to UTC, e.g., +5, -3.
    .   Default = 0.
    -time-to <timestamp>: To timestamp for archive extraction.
    -traffic-level <value>: Traffic level to delete. If not specified,
    .   all traffic levels.


Example:
archive_delete -archive /mate -time 070214_0855_UTC

Deletes the plan file, and database archived with timestamp closest to the
given time.
```

archive_do

```
Usage: archive_do options
Performs a command on a range of archived entries.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.
```

```
Required options:
    -archive <directory>: Archive directory
    -cmd <command and args>: A command which should be run against each
    .    entry in the specified archive.

Optional options:
    -time <timestamp>: Timestamp of beginning of period that cmd
    .    is executed on. Format is YYMMDD_HHMM,
    .    interpreted as UTC. Default is the most
    .    recent entry in the archive.
    -time-to <timestamp>: Timestamp of end of period (inclusive)
    .    that cmd is executed on. Format is
    .    YYMMDD_HHMM, interpreted as UTC. Default
    .    is the most recent entry in the archive.
    -time-zone <+/-integer>: Time zone relative to UTC, e.g., +5, -3.
    .    Default = 0.
    -dry-run <true/false>: Outputs list of commands that will be
    .    executed to stdout, without executing them.
    -work-dir <path>: Directory in to which files should be
    .    extracted and from which they will be
    .    inserted. The default is the current
    .    directory.
    -traffic-level <value>: Traffic level to report. If not specified,
    .    all traffic levels.


Example:
archive_do -archive /mate -time 071102_0900_UTC
-cmd "copy_from_template -plan-file %extract_plan -template-file temp.pln
-out-file %insert_plan"
Applies a new template 'temp.pln' to all archived plan files since Nov 2nd,
2007 at 9:00 UTC.
```

archive_extract

```
Usage: archive_extract options
Extracts a file from the archive and places it in the given file.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -archive <directory>: Archive directory

Optional options:
    -time <timestamp>: Timestamp of plan to retrieve from
    .    archive, in UTC format. The format is:
    .    'YYMMDD_HHMM'. DEFAULT: The most recent
```

```
.    plan file.
-time-zone <+/-integer>: Time zone relative to UTC, e.g., +5, -3.
.    Default = 0.
-plan-file <filename>: Extracts the plan file using the specified
.    name. The plan file will only be extracted
.    if this option is specified.
-user-file <filename>: Name of user file. Must match name of a
.    user file in the archive. To extract
.    multiple user files use wildcards. For
.    example '*' extracts all user files, or
.    '*.png' extracts all PNG user files.
-closest-match <true/false>: If there isn't a file for the specified
.    time, it finds the closest match to the
.    timestamp. If more than one file type is
.    specified and closest match is true, it
.    will correlate timestamps so all the files
.    are under the same timestamp. Default is
.    true.
-prediction <true/false>: If true, extracts the prediction plan for
.    the specified time, if any. If false
.    (default), extracts an actual snapshot.


Example:
archive_extract -archive /mate -time 070214_0855_UTC -plan-file core.pln
Extracts the plan file archived with timestamp closest to the given time, and
writes it to 'core.pln' in the current directory.
```

archive_init

```
Usage: archive_init options
Creates or updates an archive.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -archive <directory>: Archive directory

Optional options:
    -upgrade <true/false>: Upgrade the archive directory. Used to
    .    update the archive structure and re-sync
    .    to the current version of the tool.
    .    Default is false.
    -force-dir-update <true/false>: Force directory to new format.
    -timeplot-visual-format <filename>: If specified, will override the default
    .    setting:
    .    etc/archive\default_timeplot_visual_format
    .    .txt.
```

```
                    -timeplot-summary-format <filename>: If specified, will override the default
                    .    setting:
                    .    etc/archive\default_timeplot_summary_forma
                    .    t.txt.
                    .    You must also recalculate summaries with
                    .    archive_update.
                    -maint-visual-format <filename>: If specified, will override the default
                    .    setting:
                    .    etc/archive\default_maintenance_visual_for
                    .    mat.txt.
                    -maint-summary-format <filename>: If specified, will override the default
                    .    setting:
                    .    etc/archive\default_maintenance_summary_fo
                    .    rmat.txt.
                    -weathermap-visual-format <filename>: If specified, will override the default
                    .    setting:
                    .    etc/archive\default_weathermap_visual_form
                    .    at.txt.


            Example:
            archive_init -archive /mate
            Updates the archive directory, or creates it if it doesn't exit (creates
            necessary files and sub-directories).
```

archive_insert

```
            Usage: archive_insert options
            Adds a file to the archive.

            Generic options:
                -help <true/false>: Prints help message.
                -options-file <value>: Read options from <filename>.
                -version <true/false>: Prints version string
                -no-global-options <true/false>: Inhibits loading of global options file.
                -suppress-progress <true/false>: Do not show progress information. Default
                .    is true.
                -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                .    Default = 30.
                -log-file <value>: Keep copies of warnings and errors in this
                .    file.
                -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                .    from .txt format of -out-file if parameter
                .    exists. Default is 'false'.

            Required options:
                -archive <directory>: Archive directory

            Optional options:
                -time <timestamp>: Timestamp of plan to add to archive, in
                .    UTC format. The format is: 'YYMMDD_HHMM'.
                .    DEFAULT: Local server time.
                -time-zone <+/-integer>: Time zone relative to UTC, e.g., +5, -3.
                .    Default = 0.
                -plan-file <.pln plan filename>: Plan file to archive.
                -summary-file <filename>: Summary file to archive.
                -user-file <filename>: User specified file to archive.
                .    Note: At least one of <plan-file>,
                .    <summary-file> or <user-file> needs to be
                .    specified.
                -replace <true/false>: Replace archive file with inserted file,
```

```
        .   if present. Default: false.
        -prediction <true/false>: If true, marks the inserted plan as a
        .   prediction. If false (default), plan is
        .   marked as an actual network snapshot.
        -traffic-level <value>: Traffic level to report. If not specified,
        .   all traffic levels.
        -summary-format-file <value>: The summary format file to use when
        .   creating summaries


    Example:
    archive_insert -archive /mate -plan-file rcbin_bgp_1135.pln -time
    070214_0855_UTC
    Adds the planfile 'rcbin_bgp_1135.pln' to the archive in the mate directory
    timestamped for 070118_UTC under the name '070214_0855_UTC.pln'.
```

archive_list

```
    Usage: archive_list options
    Lists files from the archive

    Generic options:
        -help <true/false>: Prints help message.
        -options-file <value>: Read options from <filename>.
        -version <true/false>: Prints version string
        -no-global-options <true/false>: Inhibits loading of global options file.
        -suppress-progress <true/false>: Do not show progress information. Default
        .   is true.
        -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
        .   Default = 30.
        -log-file <value>: Keep copies of warnings and errors in this
        .   file.
        -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
        .   from .txt format of -out-file if parameter
        .   exists. Default is 'false'.

    Required options:
        -archive <directory>: Archive directory

    Optional options:
        -time <timestamp>: Timestamp of plan to retrieve from
        .   archive, in UTC format. The format is:
        .   'YYMMDD_HHMM'. DEFAULT: The most recent
        .   plan file.
        -time-zone <+/-integer>: Time zone relative to UTC, e.g., +5, -3.
        .   Default = 0.
        -time-to <value>: The last timestamp to list. The default is
        .   in the distant future.
        -num-times <+integer>: The maximum number of unique timestamps to
        .   list.If there are more than the amount
        .   specified, it will retrieve those closest
        .   to the 'time' timestamp. Default: no
        .   maximum.
        -list-previous <true/false>: If no time-to is specified, this specifies
        .   that it should list timestamps before the
        .   'time' timestamp, instead of after.
        .   Default: false (list timestamps after
        .   'time').
        -user-list-files <filename>: Produce a list of user files for the given
        .   timestamp. If <filename> is "-", written
        .   to stdout.
```

```
-list-plans <value>: Produce a list of plan timestamps in the
.   archive between times 'time' and
.   'time-to', if specified, or the end of the
.   archive if not. If <filename> is "-",
.   written to stdout. If -list-traffic-levels
.   is set to true then the list is in tab
.   delimited table format with TimeStamp and
.   TrafficLevel as its column headers.
-list-userfiles <value>: Produce a list of user file timestamps in
.   the archive between times 'time' and
.   'time-to', if specified, or the end of the
.   archive if not. If <filename> is "-",
.   written to stdout. If -list-traffic-levels
.   is set to true then the list is in tab
.   delimited table format with TimeStamp and
.   TrafficLevel as its column headers.
-list-measurestates <filename>: Produce a list of possible values of
.   traffic levels available for the specified
.   range of timestamps
-prediction <true/false>: If true, lists the prediction plans for
.   the specified time, if any. If false
.   (default), lists an actual snapshot.
-traffic-level <value>: Traffic level to list. If not specified,
.   all traffic levels.


Example:
archive_list -archive /mate -time 070214_0855_UTC -list-plans -
Lists the plan files after the stated time to stdout
```

archive_merge

```
Usage: archive_merge options
Merges data from from-archive into to-archive.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -from-archive <directory>: Source archive directory
    -to-archive <directory>: Destination archive directory

Optional options:
    -from-start-time <timestamp>: Timestamp of first plan to retrieve from
    .   archive, in UTC format. The format is:
    .   'YYMMDD_HHMM'. Default: Start of archive.
    -to-start-time <timestamp>: Timestamp of last plan to retrieve from
    .   archive, in UTC format. The format is:
    .   'YYMMDD_HHMM'. Default: End of archive.
```

archive_predict

```
Usage: archive_predict options
Generate and insert into an archive multiple predicted plan files based on a
template plan file and past traffic information.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -archive <directory>: Archive directory

Optional options:
    -plan-file <filename>: Predicts the plan file using the specified
    .   name. The plan file will only be predicted
    .   if this option is specified.
    -summary-format-file <value>: File containing summary format Default:
    .   CARIDEN_HOME/etc/archive\default_timeplot_
    .   summary_format.txt
    -time-span <+integer>: Number of hours to predict into the
    .   future. Minimum is 1. Default is 24.
    -frequency <+integer>: Predictions per hour. Default, and
    .   minimum, is 1. 2 for every half-hour, 4
    .   for 15 minutes, etc.
    -traffic-cycle <+integer>: Traffic for prediction taken from plan
    .   this many hours before predicted plan.
    .   Default 24.
    -clear <true/false>: Clears all predicted plans from the
    .   archive.
    -traffic-level <value>: Traffic level to report. If not specified,
    .   all traffic levels.

Example:
archive_predict -archive /mate Inserts multiple prediction plans in the
specified archive, using a base plan (which is typically a very recent plan
with a new event, such as a failure) and traffic from plans in the archive
over the previous 24 hours.
```

archive_summarize

```
Usage: archive_summarize options
Creates all summary information in -database <database>

Generic options:
```

```
-help <true/false>: Prints help message.
-options-file <value>: Read options from <filename>.
-version <true/false>: Prints version string
-no-global-options <true/false>: Inhibits loading of global options file.
-suppress-progress <true/false>: Do not show progress information. Default
.    is true.
-verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
.    Default = 30.
-log-file <value>: Keep copies of warnings and errors in this
.    file.
-simple-txt-out-file <true/false>: Whether to remove empty tables and columns
.    from .txt format of -out-file if parameter
.    exists. Default is 'false'.

Required options:
-archive <directory>: Archive directory
-start-time <timestamp>: Timestamp of first summary file to
.    regenerate, in UTC format. The format is:
.    'YYMMDD_HHMM'.
-summary-format-file <filename>: timeplot-summary-format file used for
.    generating summary information
-database <filename>: Output SQLite database file, modified
.    in-place, or created otherwise.

Optional options:
-end-time <timestamp>: Timestamp of last summary file to
.    regenerate, in UTC format. The format is:
.    'YYMMDD_HHMM'. The default is in the
.    distant future.


Example:
archive_summarize -archive /mate -start-time 000101_1200 -end-time
000101_1300 -database summaries.db -summary-format-file
summary-format-file.txt
Generates (or modifies) a summary database

Usage: archive_summarize options
Creates all summary information in -database <database>

Generic options:
-help <true/false>: Prints help message.
-options-file <value>: Read options from <filename>.
-version <true/false>: Prints version string
-no-global-options <true/false>: Inhibits loading of global options file.
-suppress-progress <true/false>: Do not show progress information. Default
.    is true.
-verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
.    Default = 30.
-log-file <value>: Keep copies of warnings and errors in this
.    file.
-simple-txt-out-file <true/false>: Whether to remove empty tables and columns
.    from .txt format of -out-file if parameter
.    exists. Default is 'false'.

Required options:
-archive <directory>: Archive directory
-start-time <timestamp>: Timestamp of first summary file to
.    regenerate, in UTC format. The format is:
.    'YYMMDD_HHMM'.
-summary-format-file <filename>: timeplot-summary-format file used for
.    generating summary information
-database <filename>: Output SQLite database file, modified
.    in-place, or created otherwise.
```

```
Optional options:
    -end-time <timestamp>: Timestamp of last summary file to
    .    regenerate, in UTC format. The format is:
    .    'YYMMDD_HHMM'. The default is in the
    .    distant future.


Example:
archive_summarize -archive /mate -start-time 000101_1200 -end-time
000101_1300 -database summaries.db -summary-format-file
summary-format-file.txt
Generates (or modifies) a summary database
```

archive_update

```
Usage: archive_update options
Recreates all summaries or small plans.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -archive <directory>: Archive directory
    -start-time <timestamp>: Timestamp of first summary file to
    .    regenerate, in UTC format. The format is:
    .    'YYMMDD_HHMM'.

Optional options:
    -end-time <timestamp>: Timestamp of last summary file to
    .    regenerate, in UTC format. The format is:
    .    'YYMMDD_HHMM'. The default is in the
    .    distant future.
    -timeplot-summaries <true/false>: updates the timeplot-summary information
    .    based on the designated
    .    timeplot-summary-format (Default is false)
    -upgrade-plans <true/false>: If set to true, upgrades the plan file
    .    formats on disk the corresponding version
    .    of archive_update. It is recommended that
    .    users set this to true for performance
    .    improvements unless the archive needs to
    .    be used with older versions of WAE Design.
    .    Default is false.


Example:
archive_update -timeplot-summaries -archive /mate -start-time 000101_1200
-end-time 000101_1300
Regenerates summary files
```

arrange_nodes

```
Usage: arrange_nodes options
Arranges the X and Y coordinates of specified nodes within their sites.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <filename>: Input: .pln file
    -out-file <filename>: Output: .pln file

Optional options:
    -nodes-table <file>: File containing <Nodes> table of nodes to
    .   arrange. Default is all. See mate_select.

Example:
arrange_nodes -plan-file untidy.pln -out-file neat.pln -nodes-table nodex.txt
```

arrange_sites

```
Usage: arrange_sites options
Arranges the X and Y coordinates of sites. Arrangements may be based on
supplied longitude and latitude, or to minimize visual clutter.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <filename>: Input: .pln file
    -out-file <filename>: Output: .pln file

Optional options:
    -sites-table <file>: File containing <Sites> table of sites to
    .   arrange. Default is all. See mate_select.
    -keep-scaling-and-position <true/false>: if true, keep the scale of the sites
    .   (default is false)
    -geo <true/false>: if true, use long and latitude (default is
```

```
         .   false),
             -stacked <true/false>: if true, stack similar sites (default is
         .   false),

     Example:
     arrange_sites -plan-file untidy.pln -out-file neat.pln -sites-to-arrange
     cr1.A,cr2.B,cr1.C
```

assign_sites_L1

```
     Usage: assign_sites_L1 options
     Creates and assigns sites to selected Layer 1 nodes in the plan, using rules
     based on node names to determine the site names.

     Generic options:
         -help <true/false>: Prints help message.
         -options-file <value>: Read options from <filename>.
         -version <true/false>: Prints version string
         -no-global-options <true/false>: Inhibits loading of global options file.
         -suppress-progress <true/false>: Do not show progress information. Default
         .   is true.
         -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
         .   Default = 30.
         -log-file <value>: Keep copies of warnings and errors in this
         .   file.
         -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
         .   from .txt format of -out-file if parameter
         .   exists. Default is 'false'.

     Required options:
         -plan-file <value>: Input Plan file
         -out-file <value>: Output plan file with assigned sites

     Optional options:
         -L1-nodes-table <file>: File containing <L1Nodes> table of Layer 1
         .   nodes to assign. Default all. See
         .   mate_select.
         -site-mapping-table <value>: filename containing table <SiteMapping>
         .   with columns 'Node' and 'Site', defining
         .   how selected Layer 1 nodes should be
         .   mapped to sites. Layer 1 Node can be a
         .   regular expression, and site can contain
         .   Perl-like backreferences to variables in
         .   the expression. For example, Node =
         .   RM.(*), Site = $1, will put RM.atl in site
         .   atl. Nodes that are not matched by any
         .   entries are assigned using -format.
         .   Matching is case-insensitive.
         -format <value>: Selected Layer 1 nodes, not matched in by
         .   site-mapping-table, are assigned to site
         .   name with this format. $1, $2, $-1 refer
         .   to first, second last delimited sections
         .   of node name, [1:3], [-2:-1] picks out
         .   first three, last two characters. Example:
         .   $2[1:3] and $-3[1:-2] pick nyc from
         .   cr1.nyc2.isp.com. Default: 'ExtraNodes'.
         -delimiters <value>: Delimiters in -format. Default = '.-'.
         -by-neighbor <true/false>: If true, selected Layer 1 nodes that are
         .   not assigned using the -format or
         -site-mapping-table will be assigned, if
         .   possible, to the sites that the majority
```

```
.    of their neighboring nodes are assigned
.    to. Default is false.
-keep-unmatched-nodes <true/false>: If true(default), keep unmatched nodes in
.    current site.
```

assign_sites_L3

```
Usage: assign_sites_L3 options
Creates and assigns sites to selected (Layer 3) nodes in the plan, using
rules based on node names to determine the site names.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <value>: Input Plan file
    -out-file <value>: Output plan file with assigned sites

Optional options:
    -nodes-table <file>: File containing <Nodes> table of nodes to
    .    assign. Default all. See mate_select.
    -site-mapping-table <value>: filename containing table <SiteMapping>
    .    with columns 'Node' and 'Site', defining
    .    how selected nodes should be mapped to
    .    sites. Node can be a regular expression,
    .    and site can contain Perl-like
    .    backreferences to variables in the
    .    expression. For example, Node = cr1.(*),
    .    Site = $1, will put cr1.atl in site atl.
    .    Nodes that are not matched by any entries
    .    are assigned using -format. Matching is
    .    case-insensitive.
    -format <value>: Selected nodes, not matched in by
    .    site-mapping-table, are assigned to site
    .    name with this format. $1, $2, $-1 refer
    .    to first, second last delimited sections
    .    of node name, [1:3], [-2:-1] picks out
    .    first three, last two characters. Example:
    .    $2[1:3] and $-3[1:-2] pick nyc from
    .    cr1.nyc2.isp.com. Default: 'ExtraNodes'.
    -delimiters <value>: Delimiters in -format. Default = '.-'.
    -external-as <value>: Nodes in external AS's assigned to site
    .    with name
    .    'Name': AS Name, or ASN if Name field
    .    blank,
    .    'ASN': ASN,
    .    'None': No special treatment.
    .    Default is 'Name' if any format or
```

```
                    -site-mapping-table specified, otherwise
                .    'None'.
                -by-neighbor <true/false>: If true, selected nodes that are not
                .    assigned using the -format or
                -site-mapping-table will be assigned, if
                .    possible, to the sites that the majority
                .    of their neighboring nodes are assigned
                .    to. Default is false.
                -by-neighbor-psn <true/false>: Same behavior as -by-neighbor, but
                .    restricted to node type psn. Default is
                .    true.
                -keep-unmatched-nodes <true/false>: If true(default), keep unmatched nodes in
                .    current site.
```

auth_try_communities

```
            Usage: auth_try_communities options
                .    try to init SNMP communities section of authentication file

            Generic options:
                -help <true/false>: Prints help message.
                -options-file <value>: Read options from <filename>.
                -version <true/false>: Prints version string
                -no-global-options <true/false>: Inhibits loading of global options file.
                -suppress-progress <true/false>: Do not show progress information. Default
                .    is true.
                -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                .    Default = 30.
                -log-file <value>: Keep copies of warnings and errors in this
                .    file.
                -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                .    from .txt format of -out-file if parameter
                .    exists. Default is 'false'.

            Required options:
                -plan-file <file.txt>: File containing <Nodes> table with list of
                .    nodes whose communities need to be guessed.

            Optional options:
                -auth-file <value>: Authentication file name. Default is
                .    'auth.enc' in the Cariden configuration
                .    path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
                .    or CARIDEN_HOME/etc).
                -auth-prompt <true/false>: If true (default) will prompt for default
                .    authentication details if none found in
                .    authentication file. Otherwise just uses
                .    authentication file. See mate_auth_init.
                -net-access-file <net_access.txt>: Network access configuration file. Default
                .    is 'net_access.txt' in the Cariden
                .    configuration path.
                -net-access-router-mode <value>: Uses specified network access router mode
                .    as defined in the network access
                .    configuration file.
                -net-access-global-mode <value>: Uses specified network access global mode
                .    as defined in network access configuration
                .    file.
                -net-recorder <off/record/play>: Specifies the network recorder mode. In
                .    'record' mode, messages to and from the
                .    live network are recorded in the
                .    net-record-file as the tool is run. In
```

```
              .   'play' mode, network messages from the
              .   net-record-file are played back through
              .   the tool as if they came from the live
              .   network, thus providing offline debugging
              .   of network collection. In 'off' mode, no
              .   recording or playback is performed.
              .   Default is 'off'.
          -net-record-file <file.txt>: The file to record messaged to or playback
              .   messages from. Used for net-recorder
              .   operation. In 'record' mode, if the
              .   log-file option is specified, messages are
              .   recorded into the log (Default).
          -out-auth-file <value>: The updated authentication file. Default
              .   is the auth-file setting.
          -clear-current <true/false>: If true, clear the SNMP entries in the
              .   authentication file, instead of just
              .   modifying them. Default is false.

Example:
auth_try_communities -plan-file /mate/plan.txt -out-auth-file /mate/auth.enc
Interactively asks for communities to try on the list of routers in
'/mate/plan.txt'. Writes the results in new authentication file
'/mate/auth.enc.txt'
```

build_inventory

```
Usage: build_inventory -plan-file <filename> -out-file <filename> [options]
    .   Process the data produced by get_inventory tool.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -out-file <filename>: Output plan file name (.pln/.txt).
    .
    -plan-file <filename>: Input plan file name (.pln/.txt).
    .

Optional options:
    -log-level <value>: Log level, one of: [off, activity, fatal,
    .   error, warn, notice, info, debug, trace]
    .   Default is 'error'.
    -exclude-file <filename>: File containing <ExcludeHWList> table
    .   that defines hardware characteristics to
    .   match against for exclusion in the output.
    .   'master_exclude_list.txt' is in
    .   configuration path.
    .   Default is 'master_exclude_list.txt'.
```

```
                    -guess-template-if-nomatch <true/false>: Search for matching hardware template
                    .    regardless of router model
                    .    if model-specific and wildcard template
                    .    are not found.
                    .    Default is 'false'.
                    -hardware-spec-file <filename>: File containing <HardwareSpec> table
                    .    that defines slot counts for specific
                    .    types of hardware to verify SNMP data
                    .    returned from routers.
                    .    'master_hw_spec.txt' is in configuration
                    .    path.
                    .    Default is ''.
                    -template-file <filename>: Hardware template file in the
                    .    configuration path
                    .    File containing <HWInventoryTemplates> and
                    .    <HWNameFormatRules> tables.
                    .    Default is
                    .    'master_inventory_templates.txt'.


            Example: build_inventory -plan-file /cisco/inplan.txt -out-file
            /cisco/outplan.txt
```

build_model

```
            Usage: build_model options
                .    remove user/NetInt tables and user/NetInt columns from plan

            Generic options:
                -help <true/false>: Prints help message.
                -options-file <value>: Read options from <filename>.
                -version <true/false>: Prints version string
                -no-global-options <true/false>: Inhibits loading of global options file.
                -suppress-progress <true/false>: Do not show progress information. Default
                .    is true.
                -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                .    Default = 30.
                -log-file <value>: Keep copies of warnings and errors in this
                .    file.
                -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                .    from .txt format of -out-file if parameter
                .    exists. Default is 'false'.

            Required options:
                -plan-file <file.txt>: The plan to convert.
                -out-file <file.txt>: The output file.

            Optional options:
                -remove-user-tables <true/false>: remove user tables in the plan file.
                .    Default = true.
                -remove-user-columns <true/false>: remove user columns from all tables in the
                .    plan file. Not valid if
                .    'remove-user-tables' is false. Default =
                .    true.
                -remove-netint-tables <true/false>: remove NetInt tables in the plan file.
                .    Default = true.
                -remove-netint-columns <true/false>: remove NetInt columns from all tables in
                .    the plan file. Not valid if
                .    'remove-netint-tables' is false. Default =
                .    true.
```

```
Example:
build_model -plan-file /mate/infile.txt -out-file /mate/outplan.txt
Removes from '/mate/infile.txt' all user columns and user tables (For
example, NetInt:: columns) and writes it to '/mate/outfile.txt'


Usage: build_model options
    .   remove user/NetInt tables and user/NetInt columns from plan

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <file.txt>: The plan to convert.
    -out-file <file.txt>: The output file.

Optional options:
    -remove-user-tables <true/false>: remove user tables in the plan file.
    .   Default = true.
    -remove-user-columns <true/false>: remove user columns from all tables in the
    .   plan file. Not valid if
    .   'remove-user-tables' is false. Default =
    .   true.
    -remove-netint-tables <true/false>: remove NetInt tables in the plan file.
    .   Default = true.
    -remove-netint-columns <true/false>: remove NetInt columns from all tables in
    .   the plan file. Not valid if
    .   'remove-netint-tables' is false. Default =
    .   true.

Example:
build_model -plan-file /mate/infile.txt -out-file /mate/outplan.txt
Removes from '/mate/infile.txt' all user columns and user tables (For
example, NetInt:: columns) and writes it to '/mate/outfile.txt'


Usage: build_model options
    .   remove user/NetInt tables and user/NetInt columns from plan

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
```

```
                          .   exists. Default is 'false'.

              Required options:
                  -plan-file <file.txt>: The plan to convert.
                  -out-file <file.txt>: The output file.

              Optional options:
                  -remove-user-tables <true/false>: remove user tables in the plan file.
                  .   Default = true.
                  -remove-user-columns <true/false>: remove user columns from all tables in the
                  .   plan file. Not valid if
                  .   'remove-user-tables' is false. Default =
                  .   true.
                  -remove-netint-tables <true/false>: remove NetInt tables in the plan file.
                  .   Default = true.
                  -remove-netint-columns <true/false>: remove NetInt columns from all tables in
                  .   the plan file. Not valid if
                  .   'remove-netint-tables' is false. Default =
                  .   true.

          Example:
          build_model -plan-file /mate/infile.txt -out-file /mate/outplan.txt
          Removes from '/mate/infile.txt' all user columns and user tables (For
          example, NetInt:: columns) and writes it to '/mate/outfile.txt'


          Usage: build_model options
              .   remove user/NetInt tables and user/NetInt columns from plan

          Generic options:
                  -help <true/false>: Prints help message.
                  -options-file <value>: Read options from <filename>.
                  -version <true/false>: Prints version string
                  -no-global-options <true/false>: Inhibits loading of global options file.
                  -suppress-progress <true/false>: Do not show progress information. Default
                  .   is true.
                  -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                  .   Default = 30.
                  -log-file <value>: Keep copies of warnings and errors in this
                  .   file.
                  -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                  .   from .txt format of -out-file if parameter
                  .   exists. Default is 'false'.

          Required options:
                  -plan-file <file.txt>: The plan to convert.
                  -out-file <file.txt>: The output file.

          Optional options:
                  -remove-user-tables <true/false>: remove user tables in the plan file.
                  .   Default = true.
                  -remove-user-columns <true/false>: remove user columns from all tables in the
                  .   plan file. Not valid if
                  .   'remove-user-tables' is false. Default =
                  .   true.
                  -remove-netint-tables <true/false>: remove NetInt tables in the plan file.
                  .   Default = true.
                  -remove-netint-columns <true/false>: remove NetInt columns from all tables in
                  .   the plan file. Not valid if
                  .   'remove-netint-tables' is false. Default =
                  .   true.

          Example:
          build_model -plan-file /mate/infile.txt -out-file /mate/outplan.txt
```

```
                    Removes from '/mate/infile.txt' all user columns and user tables (For
                    example, NetInt:: columns) and writes it to '/mate/outfile.txt'
```

build_topology

```
Usage: build_topology options
    .   build a topology by matching interfaces

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <file.txt>: File containing at least a <Nodes> table.
    -out-file <file.txt>: The output file.

Optional options:
    -ip-guessing <off/safe/full>: The level of IP address guessing to do,
    .   for interfaces that are not present in the
    .   topology database: 'off' performs no
    .   guessing, 'safe' only chooses where there
    .   is no ambiguity, and 'full' makes best
    .   guess decisions where there is ambiguity.
    .   This is only necessary in ISIS topologies
    .   that do not have TE extensions enabled
    .   everywhere. Default is 'off'.
    -find-parallel-links <true/false>: find parallel links not included in the
    .   IGP database. This is only necessary in
    .   ISIS topologies that do not have TE
    .   extensions enabled everywhere. Default is
    .   false.
    -min-prefix-length <integer>: the minimum prefix length to allow in
    .   finding parallel links or with use-subnet.
    .   All interfaces with equal or larger prefix
    .   lengths, but less than 32, will be
    .   considered. Default 30 (/30 subnet prefix
    .   length).
    -lag-port-match <exact/none/guess/complete>: Indicates how local and remote ports are
    .   matched in port-circuits. Values are
    .   'exact', 'none', 'guess' and 'complete'.
    .   If 'none', no port-circuits are created.
    .   If 'guess', port-circuits are created to
    .   match as many ports as possible, even if
    .   not possible deterministically. If
    .   'exact', match deterministically based on
    .   LACP. If complete, match deterministically
    .   based on LACP first and then try to match
    .   as many as possible. Default is 'none'.
    -add-virtual-nodes <true/false>: add virtual nodes for external interfaces
```

```
              .   Default is false.

          Example:
          build_topology -plan-file /mate/infile.txt -out-file /mate/outfile.txt
          -ip-guessing true
          Matches all interfaces and builds a topology from '/mate/infile.txt' and
          writes it to '/mate/outfile.txt'
```

cacti_poll_interfaces

```
          Usage: cacti_poll_interfaces options
              .   read collected Cacti data and extract interface traffic measurements

          Generic options:
              -help <true/false>: Prints help message.
              -options-file <value>: Read options from <filename>.
              -version <true/false>: Prints version string
              -no-global-options <true/false>: Inhibits loading of global options file.
              -suppress-progress <true/false>: Do not show progress information. Default
              .   is true.
              -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
              .   Default = 30.
              -log-file <value>: Keep copies of warnings and errors in this
              .   file.
              -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
              .   from .txt format of -out-file if parameter
              .   exists. Default is 'false'.

          Required options:
              -plan-file <file.txt>: File containing at least a <Nodes> and
              .   <Interfaces> table. Traffic from will be
              .   added to interfaces in this plan file and
              .   written to the out-file.

          Optional options:
              -out-file <file.txt>: The output file with the collected
              .   interface traffic information. Default, if
              .   not provided, is the plan-file.
              -only-plan-interfaces <true/false>: If true (default) only collects traffic
              .   for interfaces connecting two nodes in
              .   plan. If false, collects for all
              .   discovered interfaces.
              -external-ip-only <true/false>: If true (default) calculates total source
              .   and destination traffic for each node by
              .   summing traffic over only external
              .   interfaces with an IP address. If false,
              .   sums over all external interfaces. Note,
              .   only relevant if -only-plan-interfaces is
              .   false
              -traffic-level-name <value>: The traffic level name. Default is
              .   'Default'.
              -url <URL>: URL of cacti. For example:
              .   "http://.../cacti"
              -traffic-file <file.txt>: File containing a <Interfaces> table with
              .   traffic measurements. This is obtained
              .   from the Cacti PHP script. If <file.txt>
              .   is "-", read from stdin. Note: either
              .   'url' or 'traffic-file' must be provided.
              .   If both are specified, the traffic is
              .   written to this file.
```

```
               -remove-node-suffix <value>: remove suffix from node names in
               .   traffic-file if the node contains this
               .   suffix. For example: '.company.net'
               .   removes the domain name for the network.
               .   This is required if cacti uses suffixes
               .   for node names to be able to match them
               .   against those in the plan file.

Example:
cacti_poll_interfaces -plan-file /mate/infile.txt -out-file /mate/outplan.txt
-url "http://server.company.com/cacti" -remove-node-suffix company.com
Retrieves traffic measurments collected by Cacti and writes it to a new
column in the same table in '/mate/outplan.txt'


Usage: cacti_poll_interfaces options
    .   read collected Cacti data and extract interface traffic measurements

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <file.txt>: File containing at least a <Nodes> and
    .   <Interfaces> table. Traffic from will be
    .   added to interfaces in this plan file and
    .   written to the out-file.

Optional options:
    -out-file <file.txt>: The output file with the collected
    .   interface traffic information. Default, if
    .   not provided, is the plan-file.
    -only-plan-interfaces <true/false>: If true (default) only collects traffic
    .   for interfaces connecting two nodes in
    .   plan. If false, collects for all
    .   discovered interfaces.
    -external-ip-only <true/false>: If true (default) calculates total source
    .   and destination traffic for each node by
    .   summing traffic over only external
    .   interfaces with an IP address. If false,
    .   sums over all external interfaces. Note,
    .   only relevant if -only-plan-interfaces is
    .   false
    -traffic-level-name <value>: The traffic level name. Default is
    .   'Default'.
    -url <URL>: URL of cacti. For example:
    .   "http://.../cacti"
    -traffic-file <file.txt>: File containing a <Interfaces> table with
    .   traffic measurements. This is obtained
    .   from the Cacti PHP script. If <file.txt>
    .   is "-", read from stdin. Note: either
    .   'url' or 'traffic-file' must be provided.
    .   If both are specified, the traffic is
```

```
                       .    written to this file.
                  -remove-node-suffix <value>: remove suffix from node names in
                       .    traffic-file if the node contains this
                       .    suffix. For example: '.company.net'
                       .    removes the domain name for the network.
                       .    This is required if cacti uses suffixes
                       .    for node names to be able to match them
                       .    against those in the plan file.

              Example:
              cacti_poll_interfaces -plan-file /mate/infile.txt -out-file /mate/outplan.txt
              -url "http://server.company.com/cacti" -remove-node-suffix company.com
              Retrieves traffic measurments collected by Cacti and writes it to a new
              column in the same table in '/mate/outplan.txt'
```

changeover

```
              Usage: changeover options
                  Calculates a sequence of changes from one plan to
                  another, optimizing to keep link utilizations low during all
                  intermediate steps in the sequence.

              Generic options:
                  -help <true/false>: Prints help message.
                  -options-file <value>: Read options from <filename>.
                  -version <true/false>: Prints version string
                  -no-global-options <true/false>: Inhibits loading of global options file.
                  -suppress-progress <true/false>: Do not show progress information. Default
                       .    is true.
                  -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                       .    Default = 30.
                  -log-file <value>: Keep copies of warnings and errors in this
                       .    file.
                  -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                       .    from .txt format of -out-file if parameter
                       .    exists. Default is 'false'.

              Required options:
                  -from-file <value>: Input plan file.
                  -to-file <value>: Output plan file.

              Optional options:
                  -accept-util <value>: Maximum allowable utilization, in
                       .    percents, for any step. If can't be
                       .    achieved,
                       .    changeover will try to keep it as low as
                       .    possible.
                  -traffic-level <value>: Use traffic from this traffic level.
                       .    Required if more than one level present.
                  -summary-file <value>: File where summary of changeover is
                       .    written. If not specified,
                       .    the summary is printed to stdout.
                  -step-file <value>: File where the detailed changeover plan
                       .    should be written.
                       .    If not present, prints to stdout.
                  -util-file <value>: File where the intermediate utilizations
                       .    for all links should
                       .    be written. If not specified, the
                       .    information is lost.
                  -lic-product <value>: Specify the base product license (Design
```

```
.   or WAE) to check out. Defaults to checking
.   out a Design license.
-group-tunnel-steps <true/false>: Group tunnel steps into per-node tunnel
.   changes. Default true.
```

```
Example:
changeover -from-file plana.pln -to-file planb.pln -traffic-level low
-accept-util 90
```

```
Writes the changeover sequence from plana.pln to
planb.pln to stdout. Attempts to maintain link
utilizations, calculated for bandwidth level "low", under 90%.
```

circuit_cost_init

```
Set circuit costs using circuit distance and capacity:
```

```
Circuit cost = Fixed cost + Per-unit cost x Distance x Capacity
Both Distance and Capacity can be include or excluded from the calculation.
```

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.
```

```
Required options:
    -plan-file <value>: Input pln file
    -out-file <value>: Output pln file
```

```
Optional options:
    -circuits-table <file>: File containing <Circuits> table of
    .   circuits to use. Default is all. See
    .   mate_select.
    -cost-type <value>: 'initial' or 'period' (default).
    .   Determines the cost field to initialize.
    -fixed-cost <value>: Fixed cost, default 0.
    -per-unit-cost <value>: Per-unit cost, default 0.
    -use-distance <true/false>: If true, cost varies with distance.
    .   Default false
    -use-capacity <true/false>: If true (default), cost varies with
    .   capacity.
```

collector_getplan

```
Usage: collector_getplan retrieves from a collector server any of these: the
latest network plan file, the latest network authorization file or the latest
network access file.
```

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -set-credentials <true/false>: When set to true it will prompt for a
    .   username and password to be used in any
    .   communication with the server.

Optional options:
    -log-level <value>: Log level, one of: [off, activity, fatal,
    .   error, warn, notice, info, debug, trace]
    .   Default is 'error'.
    -credentials-file <file>: Path to a file that either will contain or
    .   does already contain the username and
    .   password to be used to get any type of
    .   file from the Collector server or
    .   Continuous Poller server. Default is
    .   '${CARIDEN_ROOT}/etc/collector/credentials
    .   .enc'.
    -get <option>: One of [info, files].
    .   info: Retrieves information about the
    .   latest collected files.
    .   files: Retrieves any of the latest files,
    .   according to these options: out-plan-file,
    .   out-net-access-file, out-auth-file.
    .   Default is 'info'.
    -url <url>: URL for the Collector server.
    .   http[s]://server-ip-address:server-tcp-por
    .   t Default is ''.
    -if-later-than-timestamp <time>: Timestamp in the format
    .   YYYYMMDD_HHMM[SS].Optional with option
    -get files. If not empty, will be used to
    .   retrieve the latest files produced
    .   strictly after that specified time. All
    .   time is in UTC. Do not use this option
    .   with the if-later-than-timestamp-file
    .   option. If seconds are not specified they
    .   are assumed to be zero. Default is ''.
    -if-later-than-timestamp-file <file>: A local path to a file containing the time
    .   of the latest successfully retrieved plan
    .   file.Optional with -get files. This file
    .   is used to retrieve the latest files
    .   produced strictly after the time recorded
    .   in this file.The timestamp file will be
    .   updated with the time for the latest plan
    .   file.Do not use this option with the
    .   if-later-than-timestamp option.Do not
    .   manually change the file. Default is ''.
    -out-file <file>: A local path to a file in where to write
    .   the latest network plan file. This path
    .   should terminate in one of '.txt', '.pln',
    .   '.db' Default is ''.
```

```
                    -out-auth-file <file>: A local path to a file in where to write
                    .    the latest network authorization file.
                    .    Default is ''.
                    -out-net-access-file <file>: A local path to a file in where to write
                    .    the latest network access file. Default is
                    .    ''.
```

collector_migrate

```
         Usage: collector_migrate options

          Migration script for WAE Collector files.

         Generic options:

            -help: Prints help message.
            -verbose: Verbosely list processed files.

         Required options:

            -previous <directory>: Previous installation directory.
            -new <directory>: New installation directory.

         Example:

         collector_migrate -previous /previous/directory -new /new/directory
```

collector_pushplan

```
         Usage: collector_pushplan pushes into a continuous poller server any of these
         files: a network plan file, a network authorization file or a network access
         file.

         Generic options:
            -help <true/false>: Prints help message.
            -options-file <value>: Read options from <filename>.
            -version <true/false>: Prints version string
            -no-global-options <true/false>: Inhibits loading of global options file.
            -suppress-progress <true/false>: Do not show progress information. Default
            .    is true.
            -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
            .    Default = 30.
            -log-file <value>: Keep copies of warnings and errors in this
            .    file.
            -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
            .    from .txt format of -out-file if parameter
            .    exists. Default is 'false'.

         Required options:
            -set-credentials <true/false>: When set to true it will prompt for a
            .    username and password to be used in any
            .    communication with the server.

         Optional options:
            -log-level <value>: Log level, one of: [off, activity, fatal,
            .    error, warn, notice, info, debug, trace]
            .    Default is 'error'.
            -credentials-file <file>: Path to a file that either will contain or
```

```
                      .   does already contain the username and
                      .   password to be used to push any type of
                      .   file to the Continuous Poller server.
                      .   Default is
                      .   '${CARIDEN_ROOT}/etc/collector/credentials
                      .   .enc'.
                  -in-plan-file <filepath>: A local path from where to read a network
                      .   plan file. This path should terminate in
                      .   one of '.txt', '.pln', '.db'. Default is
                      .   ''.
                  -in-auth-file <filepath>: A local path from where to read the
                      .   network authorization file. Default is ''.
                  -in-net-access-file <filepath>: Local path from where to read the network
                      .   access file. Default is ''.
                  -jms-server-address <name or ip address>: Network address for the JMS server.
                      .   Default is 'localhost'.
                  -jms-server-port <number>: Network port for the JMS server. Default
                      .   is '61617'.
```

compare_plans

```
              Generates comparison report in Plan File 1

              Generic options:
                  -help <true/false>: Prints help message.
                  -options-file <value>: Read options from <filename>.
                  -version <true/false>: Prints version string
                  -no-global-options <true/false>: Inhibits loading of global options file.
                  -suppress-progress <true/false>: Do not show progress information. Default
                      .   is true.
                  -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                      .   Default = 30.
                  -log-file <value>: Keep copies of warnings and errors in this
                      .   file.
                  -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                      .   from .txt format of -out-file if parameter
                      .   exists. Default is 'false'.

              Required options:
                  -plan-file-1 <value>: WAE Design Plan File 1
                  -plan-file-2 <value>: WAE Design Plan File 2
                  -out-file <value>: WAE Design Plan File 1, with comparison
                      .   report

              Optional options:
                  -method <value>: 'Config': IP/MPLS topology and
                      .   configuration (Default)
                      .   'Complete': Complete plan comparison
                      .   'DemandRoutings': Demand routings
                      .   'LSPRoutings': LSP routings
                  -diff-properties-only <true/false>: If true (default), show only properties
                      .   with differences. If false,show all
                      .   properties on which comparisons were made.
```

compare_traffic

```
              Generates traffic comparison report in Plan File 1

              Generic options:
```

```
-help <true/false>: Prints help message.
-options-file <value>: Read options from <filename>.
-version <true/false>: Prints version string
-no-global-options <true/false>: Inhibits loading of global options file.
-suppress-progress <true/false>: Do not show progress information. Default
.   is true.
-verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
.   Default = 30.
-log-file <value>: Keep copies of warnings and errors in this
.   file.
-simple-txt-out-file <true/false>: Whether to remove empty tables and columns
.   from .txt format of -out-file if parameter
.   exists. Default is 'false'.


Required options:
-plan-file-1 <value>: WAE Design Plan File 1
-plan-file-2 <value>: WAE Design Plan File 2. May be same as
.   Plan File 1.
-out-file <value>: WAE Design Plan File 1, with comparison
.   report


Optional options:
-compare <value>: Object to compare. One of 'Interfaces'
.   (Default), 'Circuits',
.   'Nodes','LSPs','MulticastFlows','Flows'.
-column-1 <value>: Column compared in plan 1. Depends on
.   table:
.
.   Interfaces:
.   TraffSim (Default), SrcTraffSim,
.   TransitTraffSim, TraffMeas, CapacitySim,
.   UtilMeas, UtilSim, WCUtil, WCTraffic,
.   ResvBW, LSPResv.
.
.   Circuits`:
.   TraffSim (Default), TraffMeas, Capacity,
.   CapacitySim, UtilMeas, UtilSim, WCUtil,
.   WCTraffic.
.
.   Nodes:
.   SrcTraffSim (Default), DestTraffSim,
.   SrcTraffMeas, DestTraffMeas,
.   TotalTraffSim, TransitTraffSim.
.
.   LSPs:
.   TraffSim (Default), SetupBWSim, TraffMeas.
.   MulticastFlows, TraffMeas
.
.   Demands:
.   Traffic (Default)
.
.   Flows:
.   TraffMeas
-column-2 <value>: Columns compared in plan 2. same as
.   column-1.
-traffic-level-1 <value>: Traffic level to compare in 1. Required if
.   more than one traffic level present.
-traffic-level-2 <value>: see traffic-level-1.
-service-class-1 <value>: If specified, compare traffic from this
.   service class in 1. 'undifferentiated'
.   (Default): Ignore service classes.
-service-class-2 <value>: see service-class-1.
-queue-1 <value>: If service-class-1 is omitted, and queue
.   is specified, compare traffic from this
```

```
.   queue in 1.
-queue-2 <value>: see queue-1.
-auto-sim <true/false>: If true (default), performs simulation if
.   necessary.
```

copy_from_template

```
Usage: copy-from-template [options]
Copies plan file values from template to new plan file.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file for copy-from-template.
    -out-file <value>: Output plan file with copied values

Optional options:
    -template-file <value>: Template file for copy-from-template.
    -report-file <value>: Report file
    -method <value>: Options are:
    .   'missing' (default): Copies the following
    .   from the template to the plan:
    .   a) model information that is not
    .   discoverable via the Collector. This
    .   includes: SRLGs, the QoS Model, AS
    .   Relationship. The -missingL1 option
    .   determines how the L1 Model is handled.
    .   b) Nodes and circuits in the template
    .   that are missing from the plan. These are
    .   set to inactive in the plan.
    .   c) visual layout information, including
    .   site assignments for nodes. Uses the
    .   template node-to-site assignment rules to
    .   assign sites to nodes not in the template.
    .   The -visualL1 option determines how the L1
    .   visual layout information is handled.
    .   'visual': Copies only visual layout
    .   information from template to plan.
    -visualL1 <true/false>: Specify whether to copy L1 visual layout.
    .   The default is false.
    -missingL1 <value>: Applies only when -method is 'missing'.
    .   Options are:
    .   'replace': (Default) Replaces the L1
    .   model with the one in the template.
    .   'none': Ignore the L1 model in the
    .   template.
    -node-match <value>: 'name': Match nodes by name, then IP
    .   address (if available), then BGP ID
```

```
    .   'ip': Match nodes by IP address (if
    .   available), then BGP ID, then name.
    .   Default is 'name'.
-interface-match <value>: 'name': Match interface by name, then IP
    .   address (if available)
    .   'ip': Match interface by IP address (if
    .   available), then name.
    .   Default is 'ip'
-site-mapping-table <value>: Filename containing containing a table of
    .   node-to-site mapping rules, that are
    .   imported into the template and plan, and
    .   applied in the plan to nodes based on the
-update-assigned-site option.
    .   File should contain a table <SiteMapping>
    .   with columns 'Node' and 'Site', defining
    .   how nodes in the plan but not the template
    .   should be mapped to sites. Node can be a
    .   regular expression, and site can contain
    .   Perl-like back-references to variables in
    .   the expression. For example, Node =
    .   cr1.(*), Site = $1, will put cr1.atl in
    .   site atl. Matching is case-insensitive.
-site-assign-external-as <value>: Nodes in external AS's assigned to site
    .   with name
    .   'Name': AS Name, or ASN if Name field
    .   blank,
    .   'ASN': ASN,
    .   'None': No special treatment.
    .   Default is 'Name' if a node to site
    .   mapping is defined, otherwise 'None'.
-site-assign-by-neighbor <true/false>: If true, nodes that are not assigned sites
    .   by the template will be assigned, if
    .   possible, to the sites that the majority
    .   of their neighboring nodes are assigned
    .   to. Default is false.
-update-assigned-sites <true/false>: If false (default), only nodes in the plan
    .   but not in the template are mapped to
    .   sites based on the '-site-mapping-table'
    .   option or the <SiteMapping> table. If
    .   true, all nodes in the plan are mapped to
    .   sites based on the '-site-mapping-table'
    .   option or the <SiteMapping> table
-out-template-file <value>: Updated template file. New nodes and
    .   circuits in the plan are added to the
    .   template, and nodes and circuits that have
    .   not been seen in the plan since
-remove-after are removed.
-remove-after <value>: Duration of time, in days. Default 7.
    .   Nodes and circuits in the plan file are
    .   removed from the template file if their
    .   'Last Template Update' time in the
    .   template is further in the past than this
    .   value.
```

cost_analysis

```
Create a report containing a costing summary for selected objects.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
```

```
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Input pln file.
    -out-file <value>: Output pln file with cost report

Optional options:
    -nodes-table <file>: File containing <Nodes> table of nodes to
    .   include in the analysis. Default is all.
    .   See mate_select.
    -node-num-periods <value>: Number of periods used for amortization of
    .   node costs. Default 1.
    -node-interest-rate <value>: Interest rate used for amortization of
    .   node costs. Default 0.
    -circuits-table <file>: File containing <Circuits> table of
    .   circuits to include in the analysis.
    .   Default is all. See mate_select.
    -circuit-num-periods <value>: Number of periods used for amortization of
    .   circuit costs. Default 1.
    -circuit-interest-rate <value>: Interest rate used for amortization of
    .   circuit costs. Default 0.
```

create_growth_plans

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Plan file with initial traffic level and
    .   growth rates.

Optional options:
    -create-plans-from <value>: Create growth plans using growth rates
    .   specified in one of:
    .   'DemandGroupings'
    .   'Demands'
    .   'Interfaces'
    .   'DemandGroupingTrafficTable'
```

```
        .   Default is 'DemandGroupings'
        -num-periods <value>: Number of periods to forecast. Default =
        .   1. Applies to all create-plans-from
        .   options except
        .   'DemandGroupingTrafficTable'.
        -period-inc <value>: If the period increment is i, generates a
        .   traffic level for each ith period. Default
        .   is 1. Applies to all create-plans-from
        .   options except
        .   'DemandGroupingTrafficTable'.
        -growth-method <value>: 'Compound': Percentage growth is
        .   compounded (Default).
        .   'Simple': Same amount of traffic is
        .   added for every period.
        -demand-grouping-traffic-file <value>: If create-plans-from is set to
        .   'DemandGroupingTrafficTable', this
        .   specifies the file containing the
        .   <DemandGroupingTraffic> Table.
        -traffic-levels <value>: Comma-separated list of traffic levels.
        .   LSP Setup BW is set to the maximum amount
        .   of traffic passing through each tunnel
        .   across selected Traffic Levels.
        .   Default is all traffic levels.
        -set-setup-bw <true/false>: If true, sets setup bw each LSP in each
        .   new plan equal to the simulated traffic
        .   through the LSP. Default false.
        -out-plan-name <value>: New plan name. Default '$PLAN_$PERIOD'.
        .   $PLAN is the current plan name, $PERIOD is
        .   the period count.
        -update-lsp-bw <true/false>: Run LSP BW initializer on the plans.
        .   Default is false.
        -run-sim-analysis <true/false>: Run simulation analysis on the plans.
        .   Default is false.
        -upgrade-plan <true/false>: Upgrade the plans. Default is false.
        -upgrade-current-plan <true/false>: Perform updates on the input plan. Default
        .   is false.
```

create_representative_plan

```
        Creates a single plan file from snapshot plans in the archive or a directory.
        Creates traffic levels in the plan, each representative of demand traffic in
        a given time interval during a day or week.

        Generic options:
            -help <true/false>: Prints help message.
            -options-file <value>: Read options from <filename>.
            -version <true/false>: Prints version string
            -no-global-options <true/false>: Inhibits loading of global options file.
            -suppress-progress <true/false>: Do not show progress information. Default
            .   is true.
            -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
            .   Default = 30.
            -log-file <value>: Keep copies of warnings and errors in this
            .   file.
            -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
            .   from .txt format of -out-file if parameter
            .   exists. Default is 'false'.

        Required options:
            -out-file <value>: Output plan file
```

```
                Optional options:
                   -archive <value>: Extract snapshot plans from this archive.
                   .   Either this option or the 'plan-dir'
                   .   option must be specified
                   -plan-dir <value>: Extract snapshot plans from this
                   .   directory. Either this option or the
                   .   'archive' option must be specified
                   -time-period <value>: 'Day' (default) or 'Week'
                   -time-interval-length <value>: Length of time intervals for each traffic
                   .   level, in minutes. Default 60.
                   -time-interval-starts <value>: Comma-separated list of starting times for
                   .   time intervals in the time period.
                   .   Format 'HHMM' for time period one day, and
                   .   'DDDHHMM' for time period one week.
                   .   Eg, '1600,1700', or 'Mon1600,Tue1600'.
                   .   Default is all time intervals in the
                   .   period, starting at '0000' (day) or
                   .   'Mon0000' (week).
                   -sample-time-end <value>: End time for sample, in YYYYMMDD_HHMM
                   .   format. Default is last insert date in
                   .   archive.
                   -sample-time-length <value>: Length in days of sample. Default 1 for
                   .   time-period 'Day', and 7 for 'Week'.
                   -time-zone <+/-integer>: Time zone relative to UTC, e.g., +5, -3.
                   .   Default = 0.
                   -archive-base-time <value>: Use the snapshot in the archive at this
                   .   time as the base plan to augment with
                   .   traffic levels from other snapshots in the
                   .   archive. Format is YYYYMMDD_HHMM. Default
                   .   is last snapshot in sample time.
                   -base-plan <value>: Plan to augment with traffic levels from
                   .   archive. If present, overrides
                   .   archive-base-time.
```

cricket_poll_interfaces

```
                Usage: cricket_poll_interfaces options
                   .   read collected Cricket data and extract interface traffic measurments

                Generic options:
                   -help <true/false>: Prints help message.
                   -options-file <value>: Read options from <filename>.
                   -version <true/false>: Prints version string
                   -no-global-options <true/false>: Inhibits loading of global options file.
                   -suppress-progress <true/false>: Do not show progress information. Default
                   .   is true.
                   -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                   .   Default = 30.
                   -log-file <value>: Keep copies of warnings and errors in this
                   .   file.
                   -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                   .   from .txt format of -out-file if parameter
                   .   exists. Default is 'false'.

                Required options:
                   -plan-file <file.txt>: File containing at least a <Nodes> and
                   .   <Interfaces> table. Traffic from will be
                   .   added to interfaces in this plan file and
                   .   written to the out-file.
                   -cricket-interfaces <filename>: Cricket router-interfaces file.
```

```
        -rrd-directory <directory>: The "router-interfaces" directory in which
        .   cricket stores its RRD files

Optional options:
        -out-file <file.txt>: The output file with the collected
        .   interface traffic information. Default, if
        .   not provided, is the plan-file.
        -only-plan-interfaces <true/false>: If true (default) only collects traffic
        .   for interfaces connecting two nodes in
        .   plan. If false, collects for all
        .   discovered interfaces.
        -external-ip-only <true/false>: If true (default) calculates total source
        .   and destination traffic for each node by
        .   summing traffic over only external
        .   interfaces with an IP address. If false,
        .   sums over all external interfaces. Note,
        .   only relevant if -only-plan-interfaces is
        .   false
        -traffic-level-name <value>: The traffic level name. Default is
        .   'Default'.
        -time <timestamp>: Extracts traffic data from cricket RRD
        .   files for closest time stamp to this time.
        .   Format: YYMMDD_HHMM. Default is current
        .   time.

Example:
cricket_poll_interfaces -plan-file /mate/infile.txt -out-file
/mate/outplan.txt -cricket-interfaces
cricket-config/router-interfaces/interfaces -rrd-directory
cricket-data/router-interfaces
Retrieves traffic measurments collected by Cricket using the interfaces file,
and writes it to a new column in the same table in '/mate/outplan.txt'
```

designapid

```
Usage: designapid [-host <hostname>] [-port <port>] [-protocol <protocol>]
Starts the designapi service with an endpoint accessible at <hostname>:<port>
that uses communication protocol <protocol>.

Generic options:
        -help <true/false>: Prints help message.
        -options-file <value>: Read options from <filename>.
        -version <true/false>: Prints version string
        -no-global-options <true/false>: Inhibits loading of global options file.
        -suppress-progress <true/false>: Do not show progress information. Default
        .   is true.
        -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
        .   Default = 30.
        -log-file <value>: Keep copies of warnings and errors in this
        .   file.
        -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
        .   from .txt format of -out-file if parameter
        .   exists. Default is 'false'.

Required options:

Optional options:
        -host <value>: Hostname for the service endpoint.
        -port <value>: Port for the service endpoint.
        -protocol <value>: Protocol for the service endpoint.
```

design_api_python

```
Usage: design_api_python <python script> [script arguments] ...
Usage: design_api_python [options] -- <python script> [script arguments] ...
Executes the given python script with the correct environment for WAE Design
API scripts.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:

Optional options:
    -python-executable <value>: Full path to the python executable.
    .   Overrides the platform-dependent default
    .   value (C:\Python27\python.exe for this
    .   platform).
```

dmd_deduct

```
Usage: dmd_deduct options

Creates a mesh of point-to-point demands between specified nodes in the plan.
Calculates the bandwidth of these demands using both the specified total
source and destination traffic of these nodes (as does dmd_est), as well as
the available interface and LSP utilization measurements.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <filename>: Input .pln file containing traffic
    .   measurements.
    -out-file <filename>: Output .pln file with new demands deduced
    .   from traffic measurements.

Optional options:
```

```
                    -use-demands-table <file>: File containing <Demands> table of demands
                    .   to be used. Default is all. See
                    .   mate_select.
                    -fix-demands-table <file>: File containing <Demands> table of demands
                    .   to be fix at current traffic value.
                    .   Default is none. See mate_select.
                    -report-file <filename>: Tab-delimited report of measurements
                    .   versus plan utilizations
                    -traffic-level <name>: Traffic level to use. Required if more
                    .   than one level present.
                    -use-measurements <name>: Comma-separated list of measurements in
                    .   the plan to use. One or more of nodes,
                    .   links, or tunnels. Default is
                    .   "nodes,links,tunnels,flows"
                    -priority-of-nodes <value>: Fitting priority of node measurements with
                    .   respect to other measurements. Either 1,
                    .   or 2 (default, lower priority).
                    -priority-of-links <value>: See priority-of-nodes. Either 1 (default,
                    .   top priority) or 2.
                    -priority-of-tunnels <value>: See priority-of-nodes. Either 1 or 2
                    .   (default, lower priority).
                    -priority-of-flows <value>: See priority-of-nodes. Either 1 or 2
                    .   (default, lower priority).
                    -scale-measurements <name>: Comma-separated list of measured elements
                    .   in the plan, out of
                    .   nodes,links,tunnels,flows. These
                    .   measurements will be scaled to fit other
                    .   (non-scaled) measurements. Default = none.
                    -meas-errors <value>: 'concentrate' Concentrate measurement
                    .   errors in fewer places. For model
                    .   debugging.
                    .   'spread'(default) Spread out errors
                    .   evenly. For operational use.
                    -traffic-distribution <value>: Obsolete.
                    -traffic-dist-setting <value>: Obsolete.
                    -accuracy-bounds <value>: Obsolete.
                    -max-percent-link-util <value>: If specified, demands will be selected to
                    .   ensure that the maximum percentage
                    .   interface utilization in the resulting
                    .   plan is less than this number. Default =
                    .   unspecified.
                    -demand-upper-bound <value>: An upper bound on the demand traffic
                    .   levels. A warning will be issued if this
                    .   is reached. Default = 10,000Mb/s.
                    -only-tunnel-as <value>: If specified, then this AS is assumed not
                    .   to contain any traffic outside of LPSs.
                    .   Therefore all demands that pass through
                    .   this AS outside of LSPs will be estimated
                    .   to have bandwidth 0. To specify default
                    .   AS, use "blank"
                    -remove-zero-bw-demands <true/false>: If true (the default), removes any demands
                    .   that have zero traffic (actually, less
                    .   than zero-bw-tolerance traffic), in the
                    .   estimated traffic set.
                    -zero-bw-tolerance <value>: All estimated bandwidth levels smaller
                    .   than this are assumed (and set to exactly)
                    .   zero. Default = 0.01.
                    -zero-flow-tolerance <value>: All demands mapping to flows with
                    .   measurements below this value are assumed
                    .   (at set to exactly) zero. Default = -1.
                    -warn-dynamic-lsps <true/false>: If true (the default), issue warning when
                    .   there are LSPs routed dynamically
                    -warn-unrouted-lsps <true/false>: If true (the default), issue warning when
                    .   there are unrouted LSPs
```

Example:
dmd_deduct -plan-file in.pln -out-file out.pln

dmd_est

Usage: dmd_est options

Creates a mesh of point-to-point demands between specified nodes in the plan.
Calculates the bandwidth of these demands using the specified total source
and destination traffic of these nodes.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <filename>: Input .pln file containing traffic
    .   measurements.
    -out-file <filename>: Output .pln file with new demands deduced
    .   from traffic measurements.

Optional options:
    -use-demands-table <file>: File containing <Demands> table of demands
    .   to be used. Default is all. See
    .   mate_select.
    -fix-demands-table <file>: File containing <Demands> table of demands
    .   to be fix at current traffic value.
    .   Default is none. See mate_select.
    -report-file <filename>: Tab-delimited report of measurements
    .   versus plan utilizations
    -traffic-level <name>: Traffic level to use. Required if more
    .   than one level present.
    -meas-errors <value>: 'concentrate' Concentrate measurement
    .   errors in fewer places. For model
    .   debugging.
    .   'spread'(default) Spread out errors
    .   evenly. For operational use.
    -traffic-distribution <value>: Obsolete.
    -traffic-dist-setting <value>: Obsolete.
    -accuracy-bounds <value>: Obsolete.
    -max-percent-link-util <value>: If specified, demands will be selected to
    .   ensure that the maximum percentage
    .   interface utilization in the resulting
    .   plan is less than this number. Default =
    .   unspecified.
    -demand-upper-bound <value>: An upper bound on the demand traffic
    .   levels. A warning will be issued if this
    .   is reached. Default = 10,000Mb/s.
    -only-tunnel-as <value>: If specified, then this AS is assumed not
    .   to contain any traffic outside of LPSs.

```
         .    Therefore all demands that pass through
         .    this AS outside of LSPs will be estimated
         .    to have bandwidth 0. To specify default
         .    AS, use "blank"
         -remove-zero-bw-demands <true/false>: If true (the default), removes any demands
         .    that have zero traffic (actually, less
         .    than zero-bw-tolerance traffic), in the
         .    estimated traffic set.
         -zero-bw-tolerance <value>: All estimated bandwidth levels smaller
         .    than this are assumed (and set to exactly)
         .    zero. Default = 0.01.
         -zero-flow-tolerance <value>: All demands mapping to flows with
         .    measurements below this value are assumed
         .    (at set to exactly) zero. Default = -1.
         -warn-dynamic-lsps <true/false>: If true (the default), issue warning when
         .    there are LSPs routed dynamically
         -warn-unrouted-lsps <true/false>: If true (the default), issue warning when
         .    there are unrouted LSPs


Example:
dmd_est -plan-file in.pln -out-file out.pln
```

dmd_mesh_creator

```
Usage: dmd_mesh_creator options
Create a demand mesh for a plan.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <value>: Source plan file.
    -out-file <value>: Destination plan file.

Optional options:
    -source-list <value>: comma separated list containing 'nodes',
    .    'sites', 'as' and/or 'endpoints'. The
    .    elements to use as sources. Default:
    .    nodes,as,endpoints.
    -source-nodes-table <file>: File containing <Nodes> table of source
    .    nodes. Default is all internal nodes.
    -source-sites-table <file>: File containing <Sites> table of source
    .    sites. Default is all internal sites.
    -source-as-table <file>: File containing <AS> table of source AS's.
    .    Default is all external AS's.
    -source-endpoints-table <file>: File containing <ExternalEndpoints> table
    .    of source external endpoints. Default is
    .    all external endpoints.
    -demandmesh-table <value>: File containing <DemandMeshGenerator>
```

```
.    table. If provided, ignores other tables
.    and creates demands in this mesh.
-out-demandmesh-table <value>: File containing <DemandMeshGenerator>
.    table. Used by demand_traffic_creator.
-out-demands-table <value>: File containing table of generated
.    demands. Used by demand_traffic_creator.
-dest-equals-source <true/false>: If true (default), set destinations equal
.    to sources, and ignore destination tables.
-dest-list <value>: comma separated list containing 'nodes',
.    'sites', 'as' and/or 'endpoints'. The
.    elements to use as destinations. Default:
.    nodes,as,endpoints.
-dest-nodes-table <file>: File containing <Nodes> table of
.    destination nodes. Default is all internal
.    nodes.
-dest-sites-table <file>: File containing <Sites> table of
.    destination sites. Default is all internal
.    sites.
-dest-as-table <file>: File containing <AS> table of destination
.    AS's. Default is all external AS's.
-dest-endpoints-table <file>: File containing <ExternalEndpoints> table
.    of destination external endpoints. Default
.    is all external endpoints.
-both-directions <true/false>: If true (default) includes all demands
.    from dest to source as well as source to
.    dest.
-external-AS-interface-endpoints <true/false>: If true, use interface endpoints
to/from
.    external AS nodes. If false, use node
.    endpoints. Default is true.
-respect-as-relationships <true/false>: If true (default), demands go to/from
.    entire external AS if shortest exit
.    setting, or to/from specific nodes if
.    respect MEDs setting.
-service-class <value>: Service class to assign to created
.    demands. If omitted, use the default
.    class. Can specify multiple service
.    classes, comma-separated, to create
.    multiple demand meshes, one for each
.    service class.
-topology <value>: If specified, topology to assign to
.    created demands.
-set-name <value>: If specified, sets all demands created to
.    have this name.
-set-tag-list <value>: If specified, sets all demands created to
.    contain this list of tags. Expects
.    comma-separated list.
-delete-same-name <true/false>: If true, deletes all currently existing
.    demands with same name as specified in
.    set-name. Default is false.
-include-demands-to-self <true/false>: If true, creates demands for each source
.    with destination equal to source. Default
.    is true.
-external-mesh <value>: respect (default): respect external mesh
.    settings
override: create complete mesh,
.    ignoring settings


Example:
dmd_mesh_creator -plan-file plana.pln -out-file planb.pln
Create a demand mesh for plana.pln, between all nodes, respecting AS
relationships, and removing all the previous demands.
```

dmd_traffic_creator

For the format of the `demandmesh-table` table, see the *WAE Design Integration and Development Guide*.

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Source plan file.
    -out-file <value>: Destination plan file.
    -demandmesh-table <value>: File containing <DemandMeshGenerator>
    .   table.

Optional options:
    -demands-table <file>: File containing <Demands> table. Creates
    .   traffic for these demands. Default is all
    .   demands in plan.
    -estimation-method <value>: 'gravity' (default): use gravity model.
    .   'prop': proportional to
    .   traffic of remaining demands in plan.
    .
    -traffic-level <value>: Traffic level to use. Required if more
    .   than one level present.
```

dmd_trim

```
Usage: dmd_trim options
    .   Removes small demands from a plan file.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: <filename> is the input plan.
    -out-file <value>: writes the resulting plan to <filename>.
```

```
Optional options:
    -bw-level-name <value>: the given <set> of bw levels will be
    .   considered.
    -all-bw-levels <true/false>: use all existing bw levels.
    -min-bw <value>: all demands smaller than or equal to
    .   <value> will be removed.
    -percent <value>: trim the most demands that will result in
    .   not more than this percent of total demand
    .   traffic
    .   removed from any traffic level.

Example: dmd_trim -out-file out.pln -plan-file plan.pln
```

dmds_for_lsps

```
Usage: dmds_for_lsps -plan-file <input file> -out-file <output file>.
Creates a demand for each LSP specified, matching source and destination.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file for dmds_for_lsps.
    -out-file <value>: Output plan file with new demands.

Optional options:
    -lsps-table <file>: File containing <LSPs> table of LSPs to
    .   use.
    -service-class <value>: Service class for the new demands.
    -set-traffic <value>: One of:
    .   'bw' (default): set dmd traffic to
    .   setup bw.
    .   'traffic': set dmd traffic to LSP
    .   traffic.
    .   'zero': set dmd traffic to zero.
    -private-lsps <true/false>: If true (default), marks LSPs as private.
```

dmds_for_p2mplsps

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
```

```
.    is true.
-verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
.    Default = 30.
-log-file <value>: Keep copies of warnings and errors in this
.    file.
-simple-txt-out-file <true/false>: Whether to remove empty tables and columns
.    from .txt format of -out-file if parameter
.    exists. Default is 'false'.

Required options:
-plan-file <value>: Input plan file for dmds_for_p2mplsps.
-out-file <value>: Output plan file with new demands.

Optional options:
-p2mplsps-table <file>: File containing <P2MPLSPs> table of P2MP
.    LSPs to use.
-service-class <value>: Service class for the new demands.
-set-traffic <value>: One of:
.    'bw': set dmd traffic to
.    minimum setup bw of sub-lsps
.    'zero' (default): set dmd traffic to zero.
```

edit_traffic_levels

```
Outputs current traffic levels at verbosity=40.

Generic options:
-help <true/false>: Prints help message.
-options-file <value>: Read options from <filename>.
-version <true/false>: Prints version string
-no-global-options <true/false>: Inhibits loading of global options file.
-suppress-progress <true/false>: Do not show progress information. Default
.    is true.
-verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
.    Default = 30.
-log-file <value>: Keep copies of warnings and errors in this
.    file.
-simple-txt-out-file <true/false>: Whether to remove empty tables and columns
.    from .txt format of -out-file if parameter
.    exists. Default is 'false'.

Required options:
-plan-file <value>: Plan file.

Optional options:
-out-file <value>: Plan file. Required unless -action is
.    'none'.
-action <value>: One of 'new', 'duplicate', 'delete',
.    'rename', 'none' (default)
-traffic-level <value>: Name of traffic level to 'duplicate',
.    'delete', or 'rename'. Required if one of
.    these options is selected and more than
.    one traffic level in the plan. Otherwise
.    uses the single level.
-new-traffic-level <value>: Required for 'new', 'duplicate', 'rename'.
.    Name of level to create.
```

embedded_web_server

```
Usage: embedded_web_server <options>.
Manage the embedded web server.
***DEPRECATED: Use the wae-web-server service, which is controlled by the
/opt/cariden/etc/sysconfig/wae-web-server.cfg file. If you start the web
server using embedded_web_server, it will not be monitored. If you execute
'embedded_web_server -action stop' and the web server does not stop, execute
'service wae-svcs-mon stop' and then try again.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -action <value>: 'start': Starts the server.
    .   'stop': Stops the server.
    .   'status': Give the status for the
    .   server.
    .   'restart': Stops and starts the server.

Optional options:
    -http-port <value>: Port on which server will run (if action
    .   'start'). Default is 8080.
    -https-port <value>: Port on which server will run (if action
    .   'start'). Default is 8443.
    -http-redirect <true/false>: Redirect web browser's HTTP requests to
    .   HTTPS. Default is true
    -autoupgrade <true/false>: Flag that indicate, if autoupgrade is
    .   needed or not.Default is true
```

exp_opt

```
Usage: exp_opt options
Calculates explicit routes in a way that minimizes utilization in normal
operation and during failure.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
```

```
                          .    from .txt format of -out-file if parameter
                          .    exists. Default is 'false'.

             Required options:
                 -plan-file <value>: Input plan file.
                 -out-file <value>: Output plan file.

             Optional options:
                 -exclude-lsps-table <file>: File containing <LSPs> table of LSPs to
                          .    exclude from optimization. Takes
                          .    precedence over optimize-lsps-table.
                          .    Default is none. See mate_select.
                 -optimize-lsps-table <file>: File containing <LSPs> table of LSPs to
                          .    optimize. Default is all. See mate_select.
                 -lsp-tag <value>: Tag the optimized LSPs with this value.
                          .    Default is 'expopt'
                 -opt-interfaces-table <file>: File containing <Interfaces> table of
                          .    interfaces whose utilization should be
                          .    optimized. Default is all interfaces. See
                          .    mate_select.
                 -non-opt-interfaces <value>: How to treat the interfaces that are not
                          .    optimized.
                          .    Options are
                          .    'ignore': Does not monitor interfaces
                          .    'bound': (default) Keep interface util
                          .    < maximum of bounds determined by
                          .    non-opt-increment and non-opt-bound.
                 -non-opt-increment <true/false>: If true (default) and non-opt-interfaces =
                          .    'bound', keep non-optimized interface
                          .    utilization below current utilization +
                          .    non-opt-increment-value.
                 -non-opt-increment-value <value>: See non-opt-increment. Default 0.
                 -non-opt-bound <true/false>: If true (default) and non-opt-interfaces =
                          .    'bound',
                          .    use min-nofailure-links-above as bound for
                          .    non-optimized interfaces.
                 -lsp-configuration <value>: List of reconfigurations applied to
                          .    optimized LSPs.
                          .    'setupbw': set setup BW to zero.
                          .    'affinities': remove affinities, if any.
                          .    'hoplimit': remove hop limit, if any.
                          .    'priorities': set setup priority, hold
                          .    priority to 7.
                          .    Default
                          .    'setupbw,affinities,hoplimit,priorities'.
                 -report-file <value>: Optimization report file. The default is
                          .    not to produce any. To print the report to
                          .    the standard output, specify '-'.
                 -primaries <value>: How to place primary paths. If 'optimized'
                          .    (the default), explicit paths will be
                          .    created according to the optimization
                          .    settings. If 'keep', exp_opt will assume
                          .    that existing primary paths are explicit
                          .    (if not, an error message will be issued),
                          .    and they will not be modified.
                 -min-max-nofailure-util <true/false>: If set, route explicit primary paths so as
                          .    to minimize the maximum utilization under
                          .    normal (no failure) operations.
                          .    Default=false
                 -min-nofailure-links-above <value>: Minimize the number of links with
                          .    utilization above <percent> under normal
                          .    operation. 'Inf' makes exp_opt skip this
                          .    minimization. Default is 80%.
                 -balance-util-threshold <value>: Utilization percentage above which exp_opt
```

```
.   will balance nonresilient utilizations.
.   The default 'Inf' disables utilization
.   balancing.
-balance-latency-tolerance <value>: The allowable deviation from optimized
.   latency (potentially subject to latency
.   bounds) while balancing utilizations.
.   Default=30
-enforce-latency-bounds <true/false>: If set to true, paths will be optimized
.   only to the extent that the latency bounds
.   for demands through the LSPs under normal
.   operations are not violated. Default=false.
-traffic-level <value>: Use traffic from this traffic level.
.   Required if more than one level present.
-optimization-type <value>: If "incremental" (the default), the
.   original paths of LSPs to be optimized are
.   taken into account. If "global", exp_opt
.   disregards them.
-traffic-disjointness <true/false>: Whether or not to consider only 'traffic
.   disjointness' for LSPs. Tunnel paths are
.   'traffic disjoint' if they are routed for
.   all failures in which the tunnel is
.   requested to carry traffic. The default is
.   false, that is, exp_opt will try to place
.   disjoint paths taking into account all
.   failures.
-configure-rerouted-LSPs-only <true/false>: If true, create fully explicit named paths
.   and set configurations described in
.   'lsp-configuration' for rerouted LSPs only
.   (default). If false, set for all selected
.   LSPs.
-rerouting-preference <value>: Determines the priority tunnels get for
.   rerouting. The default 'none' produces the
.   best result in most cases. If set to
.   'high-traffic', tunnels with higher
.   traffic will be optimized first. If set to
.   'low-traffic', tunnels with lower traffic
.   will be optimized first.
-set-inactive <true/false>: If true (default), set failed elements to
.   inactive. If false, current failures are
.   ignored.
-max-pathname-length <value>: Sets the maximum length for generated
.   named paths. The default is 32 characters.
-priority <value>: What to prioritize. "disjointness" (the
.   default) makes exp_opt place disjoint LSPs
.   whenever possible, even if that results in
.   higher utilization. "nonresilient-util"
.   makes non-resilient utilization as low as
.   possible, even if it results in some LSPs
.   that are not disjoint.
-secondaries <value>: Selects the type of secondary paths to
.   output. If 'optimized,' exp_opt will
.   output fully explicit static secondaries
.   subject to the failure optimization
.   objectives. If 'dynamic,' exp_opt will
.   create fully dynamic secondary paths with
.   no optimization. If 'none,' there will be
.   no secondary paths for the optimized LSPs
.   (that is, the LSPs will cease to exist
.   under failure of elements along the
.   explicit primary path). Default=optimized.
-secondary-setup-bw <value>: Either 'inherit', in which case the setup
.   bandwidth for secondary paths will be
.   inherited from the LSP, or a value. The
.   default is '0'. This option is only
```

```
               .   relevant when -secondaries is not 'none'.
               -secondary-standby <true/false>: If set (the default), make the secondary
               .   path be hot standby. This option is only
               .   relevant when -secondaries is not 'none'.
               -disjoint-failure-set <value>: A comma-separated list of failure
               .   scenarios to consider for disjointness.
               .   Possible values are nodes, sites,
               .   circuits, srlgs, l1nodes, l1links, none.
               .   The default value is
               .   "nodes,circuits,srlgs,l1links".
               -disjoint-weight-circuits <value>: Weight to place on circuit disjointness
               .   relative to other failure sets. Value can
               .   be any real number. Smaller numbers
               .   represent higher priorities for
               .   disjointness. The default value is 1.
               -disjoint-weight-srlgs <value>: Weight to place on SRLG disjointness
               .   relative to other failure sets. Value can
               .   be any real number. Smaller numbers
               .   represent higher priorities for
               .   disjointness. The default value is 2.
               -disjoint-weight-nodes <value>: Weight to place on node disjointness
               .   relative to other failure sets. Value can
               .   be any real number. Smaller numbers
               .   represent higher priorities for
               .   disjointness. The default value is 3.
               -disjoint-weight-l1nodes <value>: Weight to place on L1 node disjointness
               .   relative to other failure sets. Value can
               .   be any real number. Smaller numbers
               .   represent higher priorities for
               .   disjointness. The default value is 3.
               -disjoint-weight-l1links <value>: Weight to place on L1 link disjointness
               .   relative to other failure sets. Value can
               .   be any real number. Smaller numbers
               .   represent higher priorities for
               .   disjointness. The default value is 3.
               -tertiaries <value>: Selects the type of tertiary paths to
               .   output. If 'dynamic,' exp_opt will create
               .   fully dynamic tertiary paths with no
               .   optimization. If 'none,' there will be no
               .   tertiary paths for the optimized LSPs.
               .   Default=dynamic. This option is only
               .   relevant when -secondaries is not 'none'.
               -tertiary-setup-bw <value>: Either 'inherit', in which case the setup
               .   bandwidth for tertiary paths will be
               .   inherited from the LSP, or a value. The
               .   default is '0'. This option is only
               .   relevant when -tertiaries is not 'none'.
               -tertiary-standby <true/false>: If set, make the tertiary path be hot
               .   standby. The default is for the tertiary
               .   to not be standby. This option is only
               .   relevant when -tertiaries is not 'none'.
               -failure-set <value>: <list> is a comma-separated list of types
               .   of failure scenarios to consider for
               .   minimizing utilization under failure.
               .   Possible values:
               .   nodes,sites,circuits,srlgs,l1links,none
               .   Example: -failure-set circuits,nodes
               .   Default: circuits,srlgs
               -min-max-failure-util <true/false>: If set, route explicit secondaries so as
               .   to minimize maximum utilization across
               .   failure scenarios specified in
               -failure-set. This option is only relevant
               .   when the -secondaries option is set to
               .   'optimized'. Default=false.
```

```
                   -min-failure-links-above <value>: Minimize the number of links with
                   .    utilization above <percent> under the
                   .    specified failure set. The default 'Inf'
                   .    skips this minimization. This option is
                   .    only relevant when the -secondaries option
                   .    is set to 'optimized'.


            Example:
            exp_opt -plan-file plana.pln -out-file planb.pln
             Computes explicit routes for LSPs in 'plana', writing the results in 'planb'.
```

exp_opt_tactical

```
            Usage: exp_opt_tactical options
            Calculates explicit routes in a way that minimizes utilization in normal
            operation.

            Generic options:
                -help <true/false>: Prints help message.
                -options-file <value>: Read options from <filename>.
                -version <true/false>: Prints version string
                -no-global-options <true/false>: Inhibits loading of global options file.
                -suppress-progress <true/false>: Do not show progress information. Default
                .    is true.
                -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                .    Default = 30.
                -log-file <value>: Keep copies of warnings and errors in this
                .    file.
                -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                .    from .txt format of -out-file if parameter
                .    exists. Default is 'false'.

            Required options:
                -plan-file <value>: Input plan file.
                -out-file <value>: Output plan file.

            Optional options:
                -exclude-lsps-table <file>: File containing <LSPs> table of LSPs to
                .    exclude from optimization. Takes
                .    precedence over optimize-lsps-table.
                .    Default is none. See mate_select.
                -optimize-lsps-table <file>: File containing <LSPs> table of LSPs to
                .    optimize. Default is all. See mate_select.
                -lsp-tag <value>: Tag the optimized LSPs with this value.
                .    Default is 'expopt'
                -opt-interfaces-table <file>: File containing <Interfaces> table of
                .    interfaces whose utilization should be
                .    optimized. Default is all interfaces. See
                .    mate_select.
                -non-opt-interfaces <value>: How to treat the interfaces that are not
                .    optimized.
                .    Options are
                .    'ignore': Does not monitor interfaces
                .    'bound': (default) Keep interface util
                .    < maximum of bounds determined by
                .    non-opt-increment and non-opt-bound.
                -non-opt-increment <true/false>: If true (default) and non-opt-interfaces =
                .    'bound', keep non-optimized interface
                .    utilization below current utilization +
                .    non-opt-increment-value.
```

```
-non-opt-increment-value <value>: See non-opt-increment. Default 0.
-non-opt-bound <true/false>: If true (default) and non-opt-interfaces =
.   'bound',
.   use min-nofailure-links-above as bound for
.   non-optimized interfaces.
-lsp-configuration <value>: List of reconfigurations applied to
.   optimized LSPs.
.   'setupbw': set setup BW to zero.
.   'affinities': remove affinities, if any.
.   'hoplimit': remove hop limit, if any.
.   'priorities': set setup priority, hold
.   priority to 7.
.   Default
.   'setupbw,affinities,hoplimit,priorities'.
-report-file <value>: Optimization report file. The default is
.   not to produce any. To print the report to
.   the standard output, specify '-'.
-primaries <value>: How to place primary paths. If 'optimized'
.   (the default), explicit paths will be
.   created according to the optimization
.   settings. If 'keep', exp_opt_tactical will
.   assume that existing primary paths are
.   explicit (if not, an error message will be
.   issued), and they will not be modified.
-min-max-nofailure-util <true/false>: If set, route explicit primary paths so as
.   to minimize the maximum utilization under
.   normal (no failure) operations.
.   Default=false
-min-nofailure-links-above <value>: Minimize the number of links with
.   utilization above <percent> under normal
.   operation. 'Inf' makes exp_opt_tactical
.   skip this minimization. Default is 80%.
-balance-util-threshold <value>: Utilization percentage above which
.   exp_opt_tactical will balance nonresilient
.   utilizations. The default 'Inf' disables
.   utilization balancing.
-balance-latency-tolerance <value>: The allowable deviation from optimized
.   latency (potentially subject to latency
.   bounds) while balancing utilizations.
.   Default=30
-enforce-latency-bounds <true/false>: If set to true, paths will be optimized
.   only to the extent that the latency bounds
.   for demands through the LSPs under normal
.   operations are not violated. Default=false.
-traffic-level <value>: Use traffic from this traffic level.
.   Required if more than one level present.
-optimization-type <value>: If "incremental" (the default), the
.   original paths of LSPs to be optimized are
.   taken into account. If "global",
.   exp_opt_tactical disregards them.
-traffic-disjointness <true/false>: Whether or not to consider only 'traffic
.   disjointness' for LSPs. Tunnel paths are
.   'traffic disjoint' if they are routed for
.   all failures in which the tunnel is
.   requested to carry traffic. The default is
.   false, that is, exp_opt_tactical will try
.   to place disjoint paths taking into
.   account all failures.
-configure-rerouted-LSPs-only <true/false>: If true, create fully explicit named paths
.   and set configurations described in
.   'lsp-configuration' for rerouted LSPs only
.   (default). If false, set for all selected
.   LSPs.
-rerouting-preference <value>: Options are
```

```
.    'high-traffic': tunnels with higher
.    traffic will be optimized first.
.    This is the default.
.    'low-traffic': tunnels with lower traffic
.    will be optimized first
.    'none'
-set-inactive <true/false>: If true (default), set failed elements to
.    inactive. If false, current failures are
.    ignored.
-max-pathname-length <value>: Sets the maximum length for generated
.    named paths. The default is 32 characters.


Example:
exp_opt_tactical -plan-file plana.pln -out-file planb.pln
 Computes explicit routes for LSPs in 'plana', writing the results in 'planb'.
```

explicit_L1circuit_path_init

```
Usage: explicit_L1circuit_path_init
Create fully explicit paths for selected L1 Circuit Paths. Can specify
disjoiness requirements between L1 Circuits or between L1 Circuit Paths
within L1 Circuits.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file
    -out-file <value>: Output plan file, updated with initialized
    .    L1 Circuit paths.

Optional options:
    -existing-hops <value>: 'remove' (Default) or 'respect'.
    -routing-selection <value>: One of
    .    'Current': (Default) Follow
    .    currently simulated routes
    .    'DisjointGroups': Create disjoint L1
    .    circuit paths between L1 circuits in
    .    Disjoint Groups
    .    'PrimSec': Create disjoint L1
    .    circuit paths within L1 circuits.
    -L1Link-priority <value>: 'ignore', '1' (Default), '2', or '3'.
    -L1node-priority <value>: 'ignore' (Default), '1', '2', or '3'
    -site-priority <value>: 'ignore' (Default), '1', '2', or '3'
    -SRLG-priority <value>: 'ignore' (Default), '1', '2', or '3'
    -L1-Circuit-Paths-table <file>: File containing <L1CircuitPaths> table of
    .    L1 Circuit Paths to use. Default all.
```

explicit_LSP_path_init

```
Usage: explicit_LSP_path_init options
Create fully explicit LSP paths for selected LSPs. Can specify disjointness
requirements between LSPs or between LSP Paths within an LSP.
See also: explicit_P2MP_LSP_path_init.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: A plan file
    -out-file <value>: Output plan file, updated with initialized
    .   LSP Path.

Optional options:
    -lsps-table <file>: File containing <LSPs> table of LSPs to
    .   use. Default is all.
    -routing-selection <value>: One of
    .   'Current': (Default) Follow
    .   currently simulated routes
    .   'DisjointGroups': Create disjoint paths
    .   between LSPs in Disjoint Groups
    .   'PrimSec': Create disjoint primary
    .   and secondary paths for LSPs
    -strict-circuit-priority <value>: 'ignore', '1' (default), '2', or '3'
    -strict-srlg-priority <value>: 'ignore', '1', '2' (default), or '3'
    -strict-node-priority <value>: 'ignore' (default), '1', '2', or '3'
    -strict-site-priority <value>: 'ignore' (default), '1', '2', or '3'
    -strict-l1link-priority <value>: 'ignore' (default), '1', '2', or '3'
    -lic-product <value>: Specify the base product license (Design
    .   or WAE) to check out. Defaults to checking
    .   out a Design license.
```

explicit_P2MP_LSP_path_init

```
Usage: explicit_P2MP_LSP_path_init options
Create fully explicit P2MP LSP paths for selected P2MP LSPs. Can specify
disjointness requirements between P2MP LSPs or between LSP Paths within each
sub-LSP.
See also: explicit_LSP_path_init.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
```

```
                  -suppress-progress <true/false>: Do not show progress information. Default
                  .   is true.
                  -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                  .   Default = 30.
                  -log-file <value>: Keep copies of warnings and errors in this
                  .   file.
                  -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                  .   from .txt format of -out-file if parameter
                  .   exists. Default is 'false'.

           Required options:
                  -plan-file <value>: A plan file
                  -out-file <value>: Output plan file, updated with initialized
                  .   LSP Path.

           Optional options:
                  -p2mp-lsps-table <file>: File containing <P2MPLSPs> table of P2MP
                  .   LSPs to use. Default is all.
                  -routing-selection <value>: One of
                  .   'Current': (Default) Follow
                  .   currently simulated routes
                  .   'DisjointGroups': Create disjoint paths
                  .   between LSPs in Disjoint Groups
                  .   'PrimSec': Create disjoint primary
                  .   and secondary paths for LSPs
                  -strict-circuit-priority <value>: 'ignore', '1' (default), '2', or '3'
                  -strict-srlg-priority <value>: 'ignore', '1', '2' (default), or '3'
                  -strict-node-priority <value>: 'ignore' (default), '1', '2', or '3'
                  -strict-site-priority <value>: 'ignore' (default), '1', '2', or '3'
                  -strict-l1link-priority <value>: 'ignore' (default), '1', '2', or '3'
                  -lic-product <value>: Specify the base product license (Design
                  .   or WAE) to check out. Defaults to checking
                  .   out a Design license.
```

export_exp_lsp

```
           Usage: export_exp_lsp
                  .   Export explicit tunnel routes in a plan file.

           Generic options:
                  -help <true/false>: Prints help message.
                  -options-file <value>: Read options from <filename>.
                  -version <true/false>: Prints version string
                  -no-global-options <true/false>: Inhibits loading of global options file.
                  -suppress-progress <true/false>: Do not show progress information. Default
                  .   is true.
                  -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                  .   Default = 30.
                  -log-file <value>: Keep copies of warnings and errors in this
                  .   file.
                  -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                  .   from .txt format of -out-file if parameter
                  .   exists. Default is 'false'.

           Required options:
                  -plan-file <value>: Input plan file.
                  -out-file <value>: Export explicit LSP paths to <file>.

           Optional options:
```

```
Example: export_exp_lsp -plan-file plan.pln -out-file out.txt
```

export_lambda_util

```
Usage: export_lambda_util options

Export wavelength utilization for L1 Links.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file
    -out-file <value>: Output table file with lambda utilization.

Optional options:
    -l1-links-table <file>: File containing <L1Links> table of L1
    .   links to include in the analysis. Default
    .   is all. see mate_select.
    -failure-sets <value>: Comma separated list of failure sets to
    .   take into account. Valid entries are
    .   'sites', 'l1nodes', 'l1links'. The default
    .   is the empty list (no failures).
    -specify-l1-circuit-paths <true/false>: Specify whether to identify the L1 Circuit
    .   Path that is using the lambda
    .   (L1ctp{Name|NodeA|NodeB|pathOption}). The
    .   default is false.
```

export_routes

```
Usage: export_routes
Export current simulated routes for selected object type: Demands, LSPs, or
Layer 1 Circuits.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
```

```
           .   exists. Default is 'false'.

       Required options:
           -plan-file <value>: Input plan file
           -out-file <value>: Output table file with route tables

       Optional options:
           -object <value>: One of:
           .   'demands': create
           .   <DemandHops> table for all Demand routes
           .   'shortestpaths': create
           .   <ShortestPathHops> table for BGP routes
           .   between all pairs of nodes
           .   'shortestIGPpaths': create
           .   <ShortestIGPPathHops> table for IGP routes
           .   between all pairs of nodes
           .   'shortestTEpaths': create
           .   <ShortestTEPathHops> table for TE routes
           .   between all pairs of nodes
           .   'shortestlatencypaths': create
           .   <ShortestLatencyPathHops> table for
           .   latency routes between all pairs of nodes
           .   'lsps': create <LSPHops>
           .   table for all active LSP routes
           .   'lsppaths': create
           .   <LSPPathHops> table for all established
           .   LSP Paths routes
           .   'circuits': create
           .   <CircuitHops> table for all Circuit routes
           .   in Layer 1
           .   'l1circuits': create
           .   <L1CircuitHops> table for all L1 Circuit
           .   routes in Layer 1
           .   'l1circuitpaths': create
           .   <L1CircuitPathHops> table for all L1
           .   Circuit Path routes in Layer 1
           .   No action if unspecified.
           -hop-type <value>: Type of hops in route representation. One
           .   of:
           .   'lsp': LSP hops
           .   'lsp_interface': LSP and Interface hops
           .   'interface': Interface hops
           .   'l1link': L1Link hops
           .   Default: 'lsps_interfaces' for object
           .   'demands', 'shortestIGPpaths',
           .   'shortestTEpaths', 'shortestlatencypaths'
           .   'interfaces' for object 'lsp', 'lsppaths',
           .   'l1links' for object
           .   'circuits','l1circuits'.
           -no-failure-diff <true/false>: If true, only routes that differ from the
           .   routes in the no-failure case will be
           .   exported. Default is false.
           -object-table <file>: File containing a table listing the
           .   objects to export.
           .   For 'shortestIGPpaths', 'shortestTEpaths',
           .   'shortestlatencypaths', this is a <Nodes>
           .   table of nodes used to select the routes.
           .   For all other objects it is a table of
           .   the objects themselves:
           .   <Demands>, <LSPs>, <LSPPaths>, <Circuits>,
           .   <L1Circuits> <L1CircuitPaths>. Default is
           .   all objects. See mate_select.
           .
           -routes-from-nodes <value>: For object 'shortestIGPpaths',
```

```
            .   'shortestTEpaths', 'shortestlatencypaths'
            .   used to select routes exported based on
            .   <Nodes> table in object-table file:
            .   'between': (default) between selected
            .   nodes
            .   'source': with selected nodes as source
            .   'destination': with selected nodes as
            .   destination
            .   'all': through all selected nodes
            .   'any': through any selected nodes
            .
```

find_bgp

```
Usage: find_bgp options
    .   Through SNMP, access a network and collect BGP information.
    .   If needed, login to routers, fetch and/or parse to get EBGP multihop
    .   static route information that is not available via SNMP polling.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <file.txt>: File containing at least a <Nodes>,
    .   <Interfaces> and <NetInt::IpAddresses>
    .   tables. (Obtained e.g., through
    .   snmp_find_interfaces).

Optional options:
    -auth-file <value>: Authentication file name. Default is
    .   'auth.enc' in the Cariden configuration
    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .   or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .   authentication details if none found in
    .   authentication file. Otherwise just uses
    .   authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .   is 'net_access.txt' in the Cariden
    .   configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .   as defined in the network access
    .   configuration file.
    -net-access-global-mode <value>: Uses specified network access global mode
    .   as defined in network access configuration
    .   file.
    -out-file <file.txt>: The output file with the collected BGP
    .   information. Default, if not provided, is
```

```
.    the plan-file.
-internal-asns <value>: A comma-separated list to specify internal
.    ASNs. If used, the specified ASNs will be
.    set to internal, all others external.
.    Default is to use what is discovered.
-find-internal-asn-links <true/false>: If true, finds links between two or more
.    internal ASNs. Default is false.
-min-prefix-length <integer>: the minimum prefix length of ipv4 address
.    to allow in subnet matching. All
.    interfaces with equal or larger prefix
.    lengths, will be considered for BGP exit
.    interfaces. Default 24 (/24 subnet prefix
.    length).
-net-recorder <off/record/play>: Specifies the network recorder mode. In
.    'record' mode, messages to and from the
.    live network are recorded in the
.    net-record-file as the tool is run. In
.    'play' mode, network messages from the
.    net-record-file are played back through
.    the tool as if they came from the live
.    network, thus providing offline debugging
.    of network collection. In 'off' mode, no
.    recording or playback is performed.
.    Default is 'off'.
-net-record-file <file.txt>: The file to record messaged to or playback
.    messages from. Used for net-recorder
.    operation. In 'record' mode, if the
.    log-file option is specified, messages are
.    recorded into the log (Default).
-find-non-ip-exit-interface <true/false>: If true, searches for exit interfaces that
.    are not represented as next-hop IP
.    Addresses, but rather as interfaces
.    (rare). Note: this greatly increases the
.    amount of SNMP requests for BGP discovery;
.    use only if needed. Default is false.
-get-mac-address <true/false>: Collect source MAC addresses of BGP peers
.    connected to an Internet Exchange public
.    peering switch. Default is false.
-asn-include <value>: A comma-separated list to specify ASNs of
.    interest. If used, peer discovery is
.    restricted to this list. Default is to
.    peer with all discovered external ASNs.
-min-IPv6-prefix-length <integer>: the minimum prefix length of ipv6 address
.    to allow in subnet matching. All
.    interfaces with equal or larger prefix
.    lengths, will be considered for BGP exit
.    interfaces. Default 64 (/64 subnet prefix
.    length).
-peer-protocol <value>: A comma-separated list to specify the
.    version of the IP protocol of interest. If
.    specified, peer discovery is restricted to
.    the version of the IP protocol. Default is
.    IPv4.
-asn-include-table <value>: File containing table of ASNs of interest.
.    If specified, peer discovery is restricted
.    to this table. Default is to peer with all
.    discovered external ASNs.
-session-type <telnet/ssh>: The type of session to use: 'telnet' or
.    'ssh'. Default 'telnet'.
-port <+integer>: The port number to use for telnet/ssh
.    session. Default = 23(telnet) or 22 (ssh).
-login-record-mode <off/record/play>: Specifies the login recorder mode. In
.    'record' mode, messages to and from the
.    live network are recorded in the
```

```
                 .  login-record-dir as the tool is run. In
                 .  'play' mode, network messages from the
                 .  net-record-file are played back through
                 .  the tool as if they came from the live
                 .  network, thus providing offline debugging
                 .  of network collection. In 'off' mode, no
                 .  recording or playback is performed.
                 .  Default is 'off'.
              -login-record-dir: The directory to record messaged to or
                 .  playback messages from. Used for
                 .  login-record-mode operation. Default is
                 .  'loginRecordDir'.
              -data-dir <dirname>: <dirname> is a directory containing router
                 .  config files. Default is 'configs/'
              -force-config-update <true/false>: Updates config files even if they exist in
                 .  data-dir. If false, will use config files
                 .  already present in data-dir and only get
                 .  ones that are not. Default is true.
              -save-configs <true/false>: Specifies whether the router configs are
                 .  saved to the data-dir or discarded.
                 .  Default is false.
              -overwrite-files <true/false>: Specifies if existing files should be
                 .  overwritten. Default is false.
              -login-multihop <true/false>: Login to routers that contain multihop
                 .  peers to fetch and parse their static
                 .  route configurations. Default is true.


      Example:
      find_bgp -plan-file /mate/infile.txt -out-file /mate/outfile.txt -data-dir
      /mate/configs
      Collect BGP information from nodes listed in '/mate/infile.txt' via SNMP.
       For routers where EBGP multihop static route information is missing,
       check if there is a configuration for it in /mate/configs and parse it to
       get missing BGP info. If there is no config, login to router and fetch
       the configuration before parsing. Write result to '/mate/outplan.txt'
```

find_bgpls

```
      Usage: find_bgpls retrieves from WAE the latest network plan file collected
      through BGP-LS.

      Generic options:
          -help <true/false>: Prints help message.
          -options-file <value>: Read options from <filename>.
          -version <true/false>: Prints version string
          -no-global-options <true/false>: Inhibits loading of global options file.
          -suppress-progress <true/false>: Do not show progress information. Default
             .  is true.
          -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
             .  Default = 30.
          -log-file <value>: Keep copies of warnings and errors in this
             .  file.
          -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
             .  from .txt format of -out-file if parameter
             .  exists. Default is 'false'.

      Required options:
          -url <url>: URL for the WAE BGP-LS server.
             .  http[s]://server-ip-address:server-tcp-port
          -out-file <file>: A local path to a file in where to write
```

```
.    the latest network plan file. This path
.    should terminate in one of '.txt', '.pln',
.    '.db'

Optional options:
    -log-level <value>: Log level, one of: [off, activity, fatal,
    .    error, warn, notice, info, debug, trace]
    .    Default is 'error'.
    -igp-protocol <value>: Network IGP protocol type whose topology
    .    to discover, one of: [ospf, isis] Default
    .    is 'ospf'.
    -isis-level <value>: IS-IS Level of the topology to discover.
    .    One of: [both, 1, 2]'.
    .    If 'both' is specified then get the
    .    information at both levels. Default is '2'.
    -ospf-area <value>: The Area ID to get information for. Can be
    .    specified as an integer, an IP address or
    .    'all'. If 'all', then gets the information
    .    for all areas. Default is '0.0.0.0'.
```

flow_get

```
Usage: flow_get <options>
Gets the most recent flow data from a running flow collection server, and
imports it into a plan file.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:

Optional options:
    -log-level <value>: Log level, one of: [off, activity, fatal,
    .    error, warn, notice, info, debug, trace]
    .    Default is 'error'.
    -extra-aggregation <list>: Comma-separated list of aggregation keys.
    .    For example, "src_mask,dst_mask,tos". For
    .    a full list of available aggregation keys,
    .    use list-extra-aggregation-keys. Default
    .    is ''.
    -list-extra-aggregation-keys true/false: If true, will list the available extra
    .    aggregation keys Default is 'false'.
    -plan-file <file_name>: Input plan file name (.txt/.pln). Default
    .    is ''.
    -out-file <file_name>: Output plan file name (.pln/.txt), use -
    .    for standard output. Default is ''.
    -inter-as-flows <true/false>: If true, create or replace
    .    <NetIntInterASFlows> table containing flow
```

```
.   data. Default is 'false'.
-exclude-interface <list>: Comma-separated list of interfaces to
.   exclude by description. Default is ''.
-asn <value>: The ASN of the internal AS in the plan.
.   Default is ''.
-service-class <value>: If -demands is true, specifies the demand
.   service class. If not specified, uses
.   default service class. Default is ''.
-traffic-level <value>: If -demands is true, specifies the demand
.   traffic level. If not specified, uses
.   default traffic level. Default is ''.
-split-as-flows-on-ingress <option>: When multiple ASNs are connected to an
.   ingress IXP peering interface and it is
.   not possible to distinguish per-ASN
.   traffic, determines whether to aggregate
.   traffic from all ASNs or distribute the
.   traffic evenly across all ASNs. Possible
.   values are: [aggregate, distribute].
.   Default is 'aggregate'.
-missing-flows <file_name>: Generates a file containing a
.   tab-separated table that lists external
.   interfaces that are missing flows, their
.   admin and operating status, and their
.   nodes. Default is ''.
-trim-inter-as-flows <value>: Discard inter-as-flows for traffic
.   strictly less than the specified value in
.   MBits/sec. Default is '1.0'.
-address-family <list>: Comma-separated list of protocol versions
.   to include.
.   Each element is one of: [ipv4, ipv6,
.   ipv4+ipv6].
.   Both the InterASFLows and Demands outputs
.   would only include entries for the IP
.   protocol(s) included in this list. Default
.   is 'ipv4+ipv6'.
-match-on-bgp-external-info <true/false>: Attempt to match egress IP address with
.   external addresses in the BGP peer
.   relation. Default is 'false'.
-ext-node-tags <list>: Comma-separated list of one or more node
.   tags. Default is ''.
-inter-as-flows-file <file>: File name to export inter-AS flows. The
.   file content will be produced using tab
.   delimited columns. Default is ''.
-number-of-threads <number> or <1-100%>: Maximum number of simultaneous threads to
.   be used in parallel computations. If a
.   percentage symbol is present by the
.   number, then the number of threads will be
.   computed over the number of cores, and
.   rounded down. Default is '1'.
-demands <true/false>: If true, adds demands to the plan by
.   aggregating flows from the flow collection
.   server output. Default is 'false'.
-demand-name <value>: Name for any new demands. Default is ''.
-demand-tag <value>: Tag for any new demands, or to be appended
.   to existing demands' tags. Default is
.   'flow'.
-trim-demands <value>: Discard demands for traffic strictly less
.   than the specified value in MBits/sec.
.   Default is '1.0'.
```

flow_list

```
Usage: flow_list <options>
Gets the location of the file containing Inter-AS flows corresponding to the
input plan file.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <file_name>: Input plan file name (.txt/.pln).

Optional options:
```

flow_manage

```
Usage: flow_manage <options>
Controls and monitors a flow collection server.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:

Optional options:
    -log-level <value>: Log level, one of: [off, activity, fatal,
    .   error, warn, notice, info, debug, trace]
    .   Default is 'error'.
    -use-flume { true | false }: Send all log messages to a flume agent.
    .   Default is 'false'.
    -flume-server <server ip address or server name>: Name or address for the server
running a
    .   flume agent. Default is 'localhost'.
    -flume-port <number>: Port number to which the flume agent is
    .   bound. Default is '41417'.
```

```
              -extra-aggregation <list>: Comma-separated list of aggregation keys.
              .   For example, "src_mask,dst_mask,tos". For
              .   a full list of available aggregation keys,
              .   use list-extra-aggregation-keys. Default
              .   is ''.
              -list-extra-aggregation-keys true/false: If true, will list the available extra
              .   aggregation keys Default is 'false'.
              -action <option>: Action to execute, one of: [start, stop,
              .   status, restart, reload].
          - start: Starts the flow collection
              .   service.)
          - stop: Stops the flow collection
              .   service.)
          - reload: Reloads the flow <flowNodes>
              .   network configuration file.
          - restart: Stops and starts the flow
              .   collection service.
          - status: Gives the flow collector
              .   service status. Default is 'status'.
              -node-flow-configs-table <file>: File containing the table
              .   <NodeFlowConfigs> with network
              .   configuration information, one row per
              .   router, using tab-delimited columns:
              .   - Name (optional)
              .   - SamplingRate (required, if router is
              .   Cisco IOS; optional, if router is Juniper
              .   or Cisco IOS XR)
              .   - FlowSourceIP (required)
              .   - BGPSourceIP (required, if -bgp is true)
              .   - BGPPassword (optional, used only if -bgp
              .   is true)
              .   Changes to this file are effective only
              .   when executing actions 'start', 'restart'
              .   or 'reload'. Default is ''.
              -flow-size <option>: Flow Collection deployment size, based on
              .   network-wide aggregated flow export
              .   traffic rate, one of: [small, medium,
              .   large, lab].
          - small: recommended when flow traffic
              .   rate is less than 10 Mbps.
          - medium: recommended when flow traffic
              .   rate in between 10 Mbps and 50 Mbps.
          - large: recommended when rate is more
              .   than 50 Mbps.
          - lab: not for customer use.
              .   Default is 'medium'.
              -bgp <true/false>: Starts passive BGP peering if true.
              .   Default is 'false'.
              -port <value>: UDP port to be used by flow service.
              .   Default is '2100'.
              -bgp-port <value>: TCP port to be used by the bgp peering
              .   service. Default is '179'.
              -server-ip <value>: IPv4 or IPv6 address to be used to bind
              .   server's netflow and bgp sockets. Default
              .   is ''.
              -interval <value>: Interval time for writing the output file,
              .   in seconds. Should be greater than zero
              .   and multiple of 60. Default is '900'.
```

frr_lsp_init

Creates FRR LSPs for all specified source nodes, to (link or node) protect
FRR-protected interfaces.

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Input pln file
    -out-file <value>: Output pln file with created LSPs

Optional options:
    -source-nodes-table <file>: File containing <Nodes> table of source
    .   nodes. Default is all. See mate_select.
    -link-protection <true/false>: Add link protection LSPs. Default is true.
    -node-protection <true/false>: Add node protection LSPs. Default is false.
    -name-postfix <value>: If non-empty, newly created LSPs will be
    .   named
    .   'FRR_<source-node-name>_<dest-node-name>_<
    .   post fix>'. If empty (the default),
    .   'FRR_<source-node-name>_<dest-node-name>'
    -delete-current <true/false>: If true (default), deletes any current FRR
    .   LSPs on the selected nodes.
```

get_configs

```
Usage: get_configs options
    .   access an OSPF or ISIS network and collect router configuration

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -nodes-table <filename>: File containing a <Nodes> table. The
    .   'IPAddress' column is used to access
```

```
                .   nodes, the 'Name' column is used to name
                .   the config files, if available, otherwise
                .   'IPaddress' is used.

        Optional options:
            -auth-file <value>: Authentication file name. Default is
                .   'auth.enc' in the Cariden configuration
                .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
                .   or CARIDEN_HOME/etc).
            -auth-prompt <true/false>: If true (default) will prompt for default
                .   authentication details if none found in
                .   authentication file. Otherwise just uses
                .   authentication file. See mate_auth_init.
            -net-access-file <net_access.txt>: Network access configuration file. Default
                .   is 'net_access.txt' in the Cariden
                .   configuration path.
            -net-access-router-mode <value>: Uses specified network access router mode
                .   as defined in the network access
                .   configuration file.
            -net-access-global-mode <value>: Uses specified network access global mode
                .   as defined in network access configuration
                .   file.
            -session-type <telnet/ssh>: The type of session to use: 'telnet' or
                .   'ssh'. Default 'telnet'.
            -port <+integer>: The port number to use for telnet/ssh
                .   session. Default = 23(telnet) or 22 (ssh).
            -login-record-mode <off/record/play>: Specifies the login recorder mode. In
                .   'record' mode, messages to and from the
                .   live network are recorded in the
                .   login-record-dir as the tool is run. In
                .   'play' mode, network messages from the
                .   net-record-file are played back through
                .   the tool as if they came from the live
                .   network, thus providing offline debugging
                .   of network collection. In 'off' mode, no
                .   recording or playback is performed.
                .   Default is 'off'.
            -login-record-dir: The directory to record messaged to or
                .   playback messages from. Used for
                .   login-record-mode operation. Default is
                .   'loginRecordDir'.
            -out-dir <directory>: Directory to store configs. Default =
                .   current directory. Creates directory if
                .   necessary.
            -default-port <+integer>: The port number to use for telnet/ssh
                .   session. Same as -port, do not use both
            -port and -default-port (results
                .   undefined). Default = 23 (telnet) or
                .   22(ssh).

        Example:
        get_configs -nodes-table /mate/nodes.txt -out-dir /mate/configs
        Reads router configs or routers listed in '/mate/nodes.txt' and places them
        in the directory '/mate/configs'
```

get_inventory

```
        Usage: get_inventory -plan-file <filename> -out-file <filename> [options]
            .   Use SNMP to access a network and collect inventory information.
            .   For Juniper routers, use NETCONF to log in and get SFP transceiver
```

```
              .   information that is not available via SNMP.

        Generic options:
            -help <true/false>: Prints help message.
            -options-file <value>: Read options from <filename>.
            -version <true/false>: Prints version string
            -no-global-options <true/false>: Inhibits loading of global options file.
            -suppress-progress <true/false>: Do not show progress information. Default
            .   is true.
            -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
            .   Default = 30.
            -log-file <value>: Keep copies of warnings and errors in this
            .   file.
            -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
            .   from .txt format of -out-file if parameter
            .   exists. Default is 'false'.

        Required options:
            -out-file <filename>: Output plan file name (.pln/.txt).
            .
            -plan-file <filename>: Input plan file name (.pln/.txt).

        Optional options:
            -log-level <value>: Log level, one of: [off, activity, fatal,
            .   error, warn, notice, info, debug, trace]
            .   Default is 'error'.
            -auth-file <filename>: Authentication file name. Default is in
            .   the configuration path.
            .   ($HOME/.cariden/etc, $CARIDEN_ROOT/etc or
            .   $CARIDEN_HOME/etc).
            .   Default is 'auth.enc'.
            -login-allowed <true/false>: Enable / disable Log in to collect
            .   inventory data.
            .   Default is 'true'.
            -net-access-file <filename>: Network access configuration file name.
            .   Default is in the configuration path.
            .   ($HOME/.cariden/etc, $CARIDEN_ROOT/etc or
            .   $CARIDEN_HOME/etc).
            .   Default is 'net_access.txt'.
            -net-access-router-mode <value>: Network access router mode
            .   defined in network access configuration
            .   file.
            .   Default is ''.
            -net-access-global-mode <value>: Network access global mode
            .   defined in network access configuration
            .   file.
            .   Default is ''.
            -net-record-file <filename>: The file to record messaged to or playback
            .   messages from. Used for net-recorder
            .   operation. In 'record' mode, if the
            .   log-file option is specified, messages are
            .   recorded into the log
            .   Default is ''.
            -net-recorder <value>: Values are { off | record | play }.
            .   Specifies the network recorder mode. In
            .   'record' mode, messages to and from the
            .   live network are recorded in the
            .   net-record-file as the tool is run. In
            .   'play' mode, network messages from the
            .   net-record-file are played back through
            .   the tool as if they came from the live
            .   network, thus providing offline debugging
            .   of network collection. In 'off' mode, no
            .   recording or playback is performed.
```

```
        .    Default is 'off'.


Example: get_inventory -plan-file /cisco/infile.txt -out-file
/cisco/outfile.txt
```

get_show

```
Usage: get_show options
    .    execute a show command on a router

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:

Optional options:
    -session-type <telnet/ssh>: The type of session to use: 'telnet' or
    .    'ssh'. Default 'telnet'.
    -port <+integer>: The port number to use for telnet/ssh
    .    session. Default = 23(telnet) or 22 (ssh).
    -login-record-mode <off/record/play>: Specifies the login recorder mode. In
    .    'record' mode, messages to and from the
    .    live network are recorded in the
    .    login-record-dir as the tool is run. In
    .    'play' mode, network messages from the
    .    net-record-file are played back through
    .    the tool as if they came from the live
    .    network, thus providing offline debugging
    .    of network collection. In 'off' mode, no
    .    recording or playback is performed.
    .    Default is 'off'.
    -login-record-dir: The directory to record messaged to or
    .    playback messages from. Used for
    .    login-record-mode operation. Default is
    .    'loginRecordDir'.
    -auth-file <value>: Authentication file name. Default is
    .    'auth.enc' in the Cariden configuration
    .    path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .    or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .    authentication details if none found in
    .    authentication file. Otherwise just uses
    .    authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .    is 'net_access.txt' in the Cariden
    .    configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .    as defined in the network access
```

```
                         .    configuration file.
                         -net-access-global-mode <value>: Uses specified network access global mode
                         .    as defined in network access configuration
                         .    file.
                         -cmd <value>: The show command to run. A ';' can be used
                         .    to separate multiple commands.
                         -nodes-table <file.txt>: File containing a <Nodes> table. The
                         .    'IPAddress' column is used to access
                         .    nodes, the 'Name' column is used to name
                         .    the show result files, if available,
                         .    otherwise 'IPaddress' is used. If
                         .    'IPAddress' is not available, 'Name'
                         .    column is used using DNS lookup. If
                         .    <file.txt> is "-", read from stdin.
                         -node <IP address or name>: The node to access. Either IP address or
                         .    node name (this uses DNS lookup to
                         .    determine the IP address). Either 'node'
                         .    or 'nodes-table' needs to be specified.
                         -out-dir <directory>: Directory to store show results. Default =
                         .    current directory. Creates directory if
                         .    necessary. If <directory> is "-", write to
                         .    stdout (only available for node option).
                         -default-port <+integer>: The port number to use for telnet/ssh
                         .    session. Default = 23 (telnet) or 22(ssh).
                         .    For backward compatibility only. Use -port.
                         -command-table <file.txt>: File containing a <Commands> table. The
                         .    table contains the following columns:
                         .    NodeRegExp (optional) IpRegExp (optional)
                         .    VendorRegExp (optional) ModelRegExp
                         .    (optional) Command (required). If
                         .    <file.txt> is "-", read from stdin. The
                         .    RegExps are applied to the <Nodes> table,
                         .    so nodes-table must also be specified.

                 Example:
                 get_show -cmd "show ip ospf database router" -nodes-table /mate/nodes.txt
                 -out-dir /mate/dbs
                 Executes the show command on routers listed in '/mate/nodes.txt' and places
                 them in the directory '/mate/dbs'
```

get_snmp

```
                 Usage: get_snmp options
                     .    access a network and collect SNMP information

                 Generic options:
                     -help <true/false>: Prints help message.
                     -options-file <value>: Read options from <filename>.
                     -version <true/false>: Prints version string
                     -no-global-options <true/false>: Inhibits loading of global options file.
                     -suppress-progress <true/false>: Do not show progress information. Default
                     .    is true.
                     -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                     .    Default = 30.
                     -log-file <value>: Keep copies of warnings and errors in this
                     .    file.
                     -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                     .    from .txt format of -out-file if parameter
                     .    exists. Default is 'false'.
```

```
Required options:
    -query-table <file.txt>: File containing a <SNMPQuery> table. The
    .   table contains the following columns:
    .   IPAddress (required, IP of router to
    .   query)
    .   Type (optional, "get" or "walk".
    .   Default is "get")
    .   OID (required, the SNMP OID to poll)
    .   Numeric OID should start with a '.'
    .   (for example: .1.3.6.1.2.1.1)
    .   If <file.txt> is "-", read from stdin.

Optional options:
    -auth-file <value>: Authentication file name. Default is
    .   'auth.enc' in the Cariden configuration
    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .   or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .   authentication details if none found in
    .   authentication file. Otherwise just uses
    .   authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .   is 'net_access.txt' in the Cariden
    .   configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .   as defined in the network access
    .   configuration file.
    -net-access-global-mode <value>: Uses specified network access global mode
    .   as defined in network access configuration
    .   file.
    -net-recorder <off/record/play>: Specifies the network recorder mode. In
    .   'record' mode, messages to and from the
    .   live network are recorded in the
    .   net-record-file as the tool is run. In
    .   'play' mode, network messages from the
    .   net-record-file are played back through
    .   the tool as if they came from the live
    .   network, thus providing offline debugging
    .   of network collection. In 'off' mode, no
    .   recording or playback is performed.
    .   Default is 'off'.
    -net-record-file <file.txt>: The file to record messaged to or playback
    .   messages from. Used for net-recorder
    .   operation. In 'record' mode, if the
    .   log-file option is specified, messages are
    .   recorded into the log (Default).
    -out-file <file.txt>: The output <SNMPResults> table is written
    .   to this file. The table contains the
    .   following columns:
    .   IPAddress: from query table
    .   OID: from query table
    .   TimeStamp: Timestamp of when the result
    .   was received. Format: YYMMDD_HHMM_UTC
    .   ResponseOID: OID in the response
    .   Value: Full returned value including the
    .   Type field
    .   If <file.txt> is "-", written to stdout.
    .   Default snmp_results.txt.

Example:
get_snmp -query-table /mate/query.txt -out-file /mate/results.txt
Issues SNMP requests as listed in '/mate/query.txt' and places the results in
'/mate/results.txt'
```

IGP_metric_init

```
Set Interface IGP metrics to max("Delay Sim" * Multiplier, Minimum).
Explicit TE metrics are removed, so they inherit IGP metrics.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: A plan file.
    -out-file <value>: Output plan file, updated with initialized
    .   metrics.

Optional options:
    -multiplier <value>: Default is 1.
    -minimum <value>: Default is 1.
    -interfaces-table <file>: File containing <Interfaces> table of
    .   interfaces whose metrics are set. Default
    .   is all interfaces in plan.
```

import_cricket

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -cricket-interfaces <value>: <filename> is a cricket router-interfaces
    .   file
    -rrd-directory <value>: <directory> the "router-interfaces"
    .   directory in which cricket stores its RRD
    .   files
    -out-file <value>: <filename> will contain a TAB file
    .   corresponding to the interfaces-file

Optional options:
```

import_demand_groupings

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Plan file to import into.
    -out-file <value>: Output plan file.

Optional options:
    -import-plan-file <value>: Plan file to import from.
    -import-table-file <value>: A .txt file containing Demand Groupings
    .   table to import. Not used if
    -import-plan-file is specified.
    -existing-groupings <value>: How existing demand groupings are treated.
    .   One of 'keep', 'update', or 'delete'.
    .   Default is 'delete'.
    -import-tags <true/false>: Import sites, nodes, AS and demands tags,
    .   keeping existing tags. Default false.
```

import_external_endpoints

```
Usage: import_external_endpoints options
Imports external endpoints from one plan into another.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Plan file to import into.
    -out-file <value>: Output plan.

Optional options:
    -import-plan-file <value>: Plan file to import from.
    -existing-endpoints <value>: How existing endpoints are treated. One of
```

```
.   'keep', 'delete', 'update'. Default is
.   'delete'.
```

import_growth

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: .pln plan file
    -out-file <value>: .pln plan file with imported growth rates
    -growth-file <value>: File containing <InterfacesGrowth> and/or
    .   <DemandsGrowth> tables.

Optional options:
    -multiple-matches <value>: How to handle interfaces or demands with
    .   more than on matching tag:
    .   'average': (Default) Average the
    .   corresponding rates
    .   'add': Add the corresponding rates
    .
```

import_layer1

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Plan file to import into.
    -out-file <value>: Output plan.

Optional options:
    -import-plan-file <value>: Plan file to import from.
```

import_lsps

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <file>: Input plan file.
    -lsp-file <file>: File containing LSP and AdminGroups tables.
    -out-file <file>: Output plan file, containing imported LSPs
    .   and AdminGroups.

Optional options:
    -delete-existing-lsps <true/false>: If true, deletes LSPs, LSP Paths,
    .   NamedPaths and AdminGroups before import.
    .   Default is false.
```

import_qos

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Plan file to import into.
    -out-file <value>: Output plan.

Optional options:
    -import-plan-file <value>: Plan file to import from.
```

import_srlgs

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <value>: Plan file to import into.
    -out-file <value>: Output plan.

Optional options:
    -import-plan-file <value>: Plan file to import from.
    -existing-srlgs <value>: How existing SRLGs are treated. One of
    .    'keep', 'update', or 'delete'. Default is
    .    'delete'.
```

import_tags

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <value>: Plan file to import into.
    -out-file <value>: Output plan.

Optional options:
    -import-plan-file <value>: Plan file to import from.
    -objects <value>: Import tags from these objects.
    .    Comma-separated list of supported objects:
    .    nodes, interfaces, circuits, LSPs, sites,
    .    AS, L1Links, L1Nodes, demands,
    .    externalendpoints. Default is none.
    -existing-tags <value>: How existing tags are treated. One of
    .    'keep' or 'delete'. Default is 'delete'.
```

import_traffic

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file: Plan file to import traffic into.
    -out-file: Output plan file, containing imported
    .   traffic

Optional options:
    -traffic-plan-file <value>: Plan file to import traffic from.
    -traffic-table-file <value>: .txt file containing traffic tables to
    .   import. Not used if traffic-plan-file is
    .   specified.
    -node-traffic <true/false>: Import Node traffic. If from table file,
    .   <NodeTraffic> table must be provided.
    .   Default is false
    -node-keys <value>: Key columns used to match nodes in table
    .   file. Must be one of 'Name' (default) or
    .   'IPAddress'.
    -port-traffic <true/false>: Import PortTraffic. If from table file,
    .   <PortTraffic> table must be provided.
    .   Default is false
    -interface-traffic <true/false>: Import Interface traffic. If from table
    .   file, <InterfaceTraffic> table must be
    .   provided. Default is true.
    -interface-growth <true/false>: Import Interface growth. If from table
    .   file, <InterfaceTraffic> table must be
    .   provided. Default is false.
    -interface-keys <value>: Key columns used to match interfaces in
    .   table file. Must be one of
    .   'Node-Interface' or 'IPAddress'. Default
    .   is 'IPAddress'.
    -lsp-traffic <true/false>: Import LSP Traffic. If from table file,
    .   <LSPTraffic> table must be provided.
    .   Default is false.
    -lsp-keys <value>: Key columns used to match LSPs in table
    .   file. Must be one of 'Name-Source'
    .   (default) or 'Name-SourceIP'.
    -flows <true/false>: Import flow traffic for demands in plan.
    .   Default is false. If table file is
    .   specified, <FlowTraffic> table should be
    .   provided.
    -new-flows <true/false>: Import new flows, with traffic. Default is
    .   false. If table file is specified, <Flows>
    .   table with new flows should be provided.
    -demands <true/false>: Import demand traffic for demands in plan.
    .   Default is false. If table file is
    .   specified, <DemandTraffic> table should be
```

```
.    provided.
-new-demands <true/false>: Import new demands, with traffic. Default
.    is false. If table file is specified,
.    <Demands> table with new demands should be
.    provided.
-demands-growth <true/false>: Import Demand growth. If from table file,
.    <DemandTraffic> table must be provided.
.    Default is false.
-single-traffic-level <true/false>: If true, just import a single traffic
.    level. Default is false.
-traffic-level <value>: If single-traffic-level is true, this is
.    the traffic level to import
-new-name <value>: If single-traffic-level is true, it is
.    renamed in the plan to this. Default is to
.    use the original name.
```

insert_demand_grouping_mesh

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file.
    -out-file <value>: Output plan file.

Optional options:
    -source-selection <value>: Determines source type for groupings
    .    created.
    .    One of:
    .    'site': group by demand source site
    .    'sitetag': group by demand source site tag
    .    'as': group by demand source AS
    .    'astag': group by demand source AS tag
    .    'node': group by demand source node
    .    'nodetag': group by demand source node tag
    .    'externalendpoint': group by demand source
    .    external endpoint
    .    'none': do not group by demand source.
    .    Default is 'site'
    .
    -source-sites-table <file>: File containing <Sites> table of source
    .    sites. Default is all. Used if
    .    source-selection is 'site'
    -source-as-table <file>: File containing <AS> table of source AS's.
    .    Default is all. Used if source-selection
    .    is 'as'.
    -source-node-table <file>: File containing <Nodes> table of source
    .    nodes. Default is all. Used if
```

```
.    source-selection is 'node'.
-source-external-endpoint-table <file>: File containing <ExternalEndpoints> table
.    of source external endpoints. Default is
.    all. Used if source-selection is
.    'externalendpoint'.
-dest-selection <value>: Determines destination type for groupings
.    created.
.    One of:
.    'site': group by demand destination site
.    'sitetag': group by demand destination
.    site tag
.    'as': group by demand destination AS
.    'astag': group by demand destination AS
.    tag
.    'node': group by demand destination node
.    'nodetag': group by demand destination
.    node tag
.    'externalendpoint': group by demand
.    destination external endpoint
.    'none': do not group by demand destination
.    Default is 'none'
.
-dest-sites-table <file>: File containing <Sites> table of
.    destination sites. Default is all. Used if
.    dest-selection is 'site'
-dest-as-table <file>: File containing <AS> table of destination
.    AS's. Default is all. used if
.    dest-selection is 'as'
-dest-node-table <file>: File containing <Nodes> table of
.    destination nodes. Default is all. Used if
.    dest-selection is 'node'.
-dest-external-endpoint-table <file>: File containing <ExternalEndpoints> table
.    of destination external endpoints. Default
.    is all. Used if dest-selection is
.    'externalendpoint'.
-demand-name <value>: Demands in groupings must have this name.
.    If omitted, any name accepted.
-service-class <value>: Demands in groupings must have this
.    service class. If omitted, any service
.    class accepted.
-source-node-match <value>: Source nodes of demands must match this
.    regular expression. If omitted, any name
.    accepted.
-dest-node-match <value>: Destination nodes of demands must match
.    this regular expression. If omitted, any
.    name accepted.
-name-of-grouping <value>: Name of generated demand grouping. Default
.    '$1 to $2', where $1 and $2 are variables
.    specifying the source and destination per
.    grouping.
```

insert_L1circuit_for_circuit

```
Usage: insert_L1circuit_for_circuit options

Creates L1 circuits mapped to circuits. Selects the best L1 circuits using
L3-L1 links or site membership.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
```

```
            -version <true/false>: Prints version string
            -no-global-options <true/false>: Inhibits loading of global options file.
            -suppress-progress <true/false>: Do not show progress information. Default
            .   is true.
            -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
            .   Default = 30.
            -log-file <value>: Keep copies of warnings and errors in this
            .   file.
            -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
            .   from .txt format of -out-file if parameter
            .   exists. Default is 'false'.


    Required options:
            -plan-file <value>: Input plan file
            -out-file <value>: Output table file, updated with mapped L1
            .   circuits.


    Optional options:
            -circuits-table <file>: File containing <Circuits> table of
            .   circuits to create L1 Circuits for.
            .   Default is all. see mate_select.
            -require-L3L1Links <true/false>: If true, only create an L1 circuit for a
            .   circuit, if a L3L1Link exists connecting
            .   the circuits's nodes to the L1 circuit's
            .   L1 Nodes. Default is false
            -create-L3L1Links <true/false>: If true (default), create L3L1Links
            .   connecting the circuit's nodes to the L1
            .   circuit's L1 Nodes. The option is only
            .   available if -require-L3L1Links is false
```

insert_L1_from_L3

```
    Creates a Layer 1 topology based on the Layer 3 topology in the plan.
    - Creates L1 nodes for each specified site or specified node
    - Creates L1 links between all created L1 nodes that have L3 circuit
    connections
    - Creates L1 circuits mapped to all existing L3 circuits.


    Generic options:
            -help <true/false>: Prints help message.
            -options-file <value>: Read options from <filename>.
            -version <true/false>: Prints version string
            -no-global-options <true/false>: Inhibits loading of global options file.
            -suppress-progress <true/false>: Do not show progress information. Default
            .   is true.
            -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
            .   Default = 30.
            -log-file <value>: Keep copies of warnings and errors in this
            .   file.
            -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
            .   from .txt format of -out-file if parameter
            .   exists. Default is 'false'.


    Required options:
            -plan-file <value>: Plan file containing Layer 3 topology
            -out-file <value>: Resulting plan file with Layer 1 topology
            .   inserted


    Optional options:
            -method <value>: 'site' (default) inserts an L1 node for
            .   each site.
```

```
     .    'node' inserts an L1 node for each L3 node.
     -sites-table <file>: File containing <Sites> table. Used if
     .    method is 'site'. Default is all. See
     .    mate_select.
     -nodes-table <file>: File containing <Nodes> table. Used if
     .    method is 'node'. Default is all. See
     .    mate_select.
```

insert_multicast_demands

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file
    -out-file <value>: Output file with inserted demands

Optional options:
    -set-name <value>: Sets all demands created to have this
    .    name. Default is blank.
    -service-class <value>: Service class to assign to created
    .    demands. If omitted, the demands are
    .    assigned to the default BE class.
    -topology <value>: If specified, topology to assign to
    .    created demands.
```

insert_vpns

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file.
```

```
                   -out-file <value>: Output plan file with VPNs inserted.

           Optional options:
                   -naming-method <value>: 'name' (default), 'RD' or 'tag'.
                   .   If 'name' or 'RD', VPN named after regexp
                   .   substitution of VPN Node name or , VPN
                   .   node RD fields, using -vpn-node-name and
                   -vpn-node-rd.
                   .   If 'tag', VPN named after VPN Node tags
                   -vpn-node-name <value>: Regular expression to match VPN Node Name,
                   .   containing variables to substitute into
                   .   VPN Name. Default '(.+)'.
                   .   Example: vpn-node-name '.*\.net\.(.+)' and
                   .   vpn-name '$1' will name VPN for node
                   .   cr1.atl.net.bigbank as bigbank.
                   -vpn-nod-rd <value>: Similar to vpn-node-name, but matches VPN
                   .   Node RD.
                   -vpn-name <value>: Name of VPN to create, using variables
                   .   from vpn-node-name or vpn-node-rd. Default
                   .   '$1'.
                   -service-class <value>: All VPNs will be created with this service
                   .   class. Default is 'Default'.
                   -vpn-node-table <file>: File containing <VPNNodes> table of VPN
                   .   Nodes to use to create VPNs. Default is
                   .   all. See mate_select.
```

L1_metric_init

```
           Set Layer 1 Link metrics to max("Distance" * Multiplier, Minimum).

           Generic options:
                   -help <true/false>: Prints help message.
                   -options-file <value>: Read options from <filename>.
                   -version <true/false>: Prints version string
                   -no-global-options <true/false>: Inhibits loading of global options file.
                   -suppress-progress <true/false>: Do not show progress information. Default
                   .   is true.
                   -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                   .   Default = 30.
                   -log-file <value>: Keep copies of warnings and errors in this
                   .   file.
                   -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                   .   from .txt format of -out-file if parameter
                   .   exists. Default is 'false'.

           Required options:
                   -plan-file <value>: A plan file.
                   -out-file <value>: Output plan file, updated with initialized
                   .   metrics.

           Optional options:
                   -multiplier <value>: Default is 1.
                   -minimum <value>: Default is 1.
                   -L1Linkstable <file>: File containing <L1Links> table of Layer 1
                   .   Links whose metrics are set. Default is
                   .   all Layer 1 Links in plan.
```

latency_bounds_init

```
Usage: latency_bounds_init options
Initializes the latency bounds of demands.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file for latency_bounds_init.
    -out-file <value>: Output plan file from latency_bounds_init.

Optional options:
    -demands-table <file>: File containing <Demands> table of demands
    .   to initialize. Default is all. See
    .   mate_select.
    -remove <true/false>: Remove latency bounds.
    -fixed-value <value>: Sets latency bounds to <value> ms.
    -min-value <value>: Makes sure no latency bound is smaller
    .   than <value> ms. Default is 20 ms.
    -max-value-above <value>: Makes sure no latency bound is greater
    .   than <value> ms plus its shortest possible
    .   value. Default is 35 ms. Set <value> to
    .   'None' if no maximum is desired.
    -relative-value <value>: sets the latency bounds to <value>% above
    .   the shortest possible value as long as
    .   that is minimum and maximum values are
    .   respected. The new value is
    .   max(<min>,
    .   min(shortest+<max_above>,
    .   (1+<value>/100)*shortest))

Note: one of -remove, -fixed-value or -relative-value is required.
Example:
latency_bounds_init -plan-file plana.pln -out-file planb.pln
    -relative-value 20
```

latency_distance_init

```
Estimates propagation delay and distance using longitude, latitude of sites.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
```

```
                  -log-file <value>: Keep copies of warnings and errors in this
                  .   file.
                  -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                  .   from .txt format of -out-file if parameter
                  .   exists. Default is 'false'.

              Required options:
                  -plan-file <value>: Input plan file
                  -out-file <value>: Output plan file

              Optional options:
                  -circuits-table <file>: File containing <Circuits> table of
                  .   circuits to select. Default is all. See
                  .   mate_select.
                  -l1links-table <file>: File containing <L1Links> table of layer 1
                  .   links to select. Default is all. See
                  .   mate_select.
                  -itu-g826 <true/false>: Adjust circuit delay based on the ITU-G826
                  .   recommendation. The default is 'true'.
                  -medium-correction <value>: Delay calculations us this correction
                  .   factor for speed of light in the given
                  .   medium. Range (0,1). Default is 0.67.
                  -keep-distances <true/false>: If true, any existing distances on L1
                  .   Links are kept, and delays calculated from
                  .   these. If false, all distances are removed
                  .   and recalculated from site longitude and
                  .   latitude. Default is false
```

license_borrow

```
              Usage: license_borrow options
                  Borrow licenses from a floating license server.

              Generic options:
                  -help <true/false>: Prints help message.
                  -options-file <value>: Read options from <filename>.
                  -version <true/false>: Prints version string
                  -no-global-options <true/false>: Inhibits loading of global options file.
                  -suppress-progress <true/false>: Do not show progress information. Default
                  .   is true.
                  -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                  .   Default = 30.
                  -log-file <value>: Keep copies of warnings and errors in this
                  .   file.
                  -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                  .   from .txt format of -out-file if parameter
                  .   exists. Default is 'false'.

              Required options:
                  -num-days <value>: The number of days to borrow the license
                  .   (1 - 30).

              Optional options:


              Example:
                  license_borrow -num-days 7
```

license_check

```
Usage: license_check [options]
    .   Check the installed license for valid products and features.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:

Optional options:
    -detail <true/false>: Display license feature descriptions.
    .   Valid value is { true | false }.
    .   If option value is not specified, it will
    .   set to true.
    .   Default is false.

Exit codes:
    -1  : Invalid option
    -2  : Invalid option value

Example:
license_check
 Show brief description of installed license.
license_check -detail
 Show detailed description of installed license.
```

license_install

```
Usage: license_install options
    .   install a license file

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.
```

```
Required options:

Optional options:
    -file <value>: Read the license data from <filename>.
    .   This may be a dedicated or floating
    .   license file.
    -existing-lic <value>: merge(default) or overwrite the existing
    .   license file. This is only used if the
    -file option is specified.
    -server-host <value>: Hostname of the floating license server.
    .   This is required if -file option is not
    .   specified.
    -server-mac <value>: MAC address of the floating license
    .   server. This is required if -file option
    .   is not specified.
    -server-port <value>: Port on the floating license server. This
    .   is optional and is used only if the
    -server-host and -server-mac options are
    .   specified.

Example:
 license_install -file cariden.lic [-existing-lic overwrite]
 license_install -server-host lic.cisco.com -server-mac 1a2b3c4d5e6f
 license_install -server-host lic.cisco.com -server-mac 1a2b3c4d5e6f
-server-port 27000
```

license_return

```
Usage: license_return options
    Return licenses borrowed from a floating license server.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:

Optional options:


Example:
    license_return
```

login_find_igp_db

```
Usage: login_find_igp_db options
    .   login to router, fetch and parse the IGP database
```

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -igp-protocol <ospf/ospfv3/isis/isisv6>: The IGP of the database. 'OSPF', 'OSPFv3',
    .   'ISIS', or 'ISISv6'.
    -out-file <file.txt>: The plan file generated from the IGP
    .   database.
    -seed-router <value>: The primary seed router to use.

Optional options:
    -isis-level <value>: which level to pick from the database: 1,
    .   2 or both. Default is 2.
    -auth-file <value>: Authentication file name. Default is
    .   'auth.enc' in the Cariden configuration
    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .   or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .   authentication details if none found in
    .   authentication file. Otherwise just uses
    .   authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .   is 'net_access.txt' in the Cariden
    .   configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .   as defined in the network access
    .   configuration file.
    -net-access-global-mode <value>: Uses specified network access global mode
    .   as defined in network access configuration
    .   file.
    -session-type <telnet/ssh>: The type of session to use: 'telnet' or
    .   'ssh'. Default 'telnet'.
    -port <+integer>: The port number to use for telnet/ssh
    .   session. Default = 23(telnet) or 22 (ssh).
    -login-record-mode <off/record/play>: Specifies the login recorder mode. In
    .   'record' mode, messages to and from the
    .   live network are recorded in the
    .   login-record-dir as the tool is run. In
    .   'play' mode, network messages from the
    .   net-record-file are played back through
    .   the tool as if they came from the live
    .   network, thus providing offline debugging
    .   of network collection. In 'off' mode, no
    .   recording or playback is performed.
    .   Default is 'off'.
    -login-record-dir: The directory to record messaged to or
    .   playback messages from. Used for
    .   login-record-mode operation. Default is
    .   'loginRecordDir'.
    -plan-file <value>: Existing plan to merge with configs.
    -backup-router <value>: The secondary seed router to use for
```

```
.    automatic failover.
-database-file <filename>: The raw IGP database is output to this
.    file.
-database-dir <dirname>: Directory to write the raw IGP databases
.    to, one file per IGP database. Only used
.    for multi-level discovery. Default is a
.    temporary directory.
-ospf-area <value>: The area that should be fetched or 'all.
.    The area ID can be specified as an integer
.    or as an IP address. If 'all', then ABRs
.    are identified from area 0 information and
.    logged into for non-zero area information.
.    Default is '0'
-use-dns <true/false>: If true, uses DNS to resolve router IP
.    addresses found in the IGP database, for
.    entry in plan file. Default is false.
-find-ip-manage <true/false>: whether parsing should attempt to find the
.    Manage IP addresses in the database (isis
.    only). Default is true
-create-subnet-links <true/false>: Create links based on subnet-matching,
.    even if adjacencies are missing. Default:
.    true
-allow-dup-area <true/false>: If true, allows for duplicate area IDs for
.    Level1 databases. Only valid for
.    isis-level 'both'. Default is false.
-get-segments <true/false>: If true, collects Segment Routing
.    information from ISIS database. Only valid
.    for ISIS on CISCO IOS XR routers. Default
.    is false.
-ospf-proc-id <value>: OSPF Process ID to select when multiple
.    Process IDs exist. Value is a positive
.    integer.

Example:
login_find_igp_db -out-file /mate/outplan.txt -igp-protocol ospf -seed-router
10.1.1.1
Login to 10.1.1.1 using ssh, fetch the OSPF database, parse it and write the
plan file to '/mate/outplan.txt'
```

login_find_ldp_ext

```
Usage: login_find_ldp_ext options
.    login to routers, fetch and/or parse to get LDP info

Generic options:
-help <true/false>: Prints help message.
-options-file <value>: Read options from <filename>.
-version <true/false>: Prints version string
-no-global-options <true/false>: Inhibits loading of global options file.
-suppress-progress <true/false>: Do not show progress information. Default
.    is true.
-verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
.    Default = 30.
-log-file <value>: Keep copies of warnings and errors in this
.    file.
-simple-txt-out-file <true/false>: Whether to remove empty tables and columns
.    from .txt format of -out-file if parameter
.    exists. Default is 'false'.

Required options:
```

```
                 -plan-file <file.txt>: The out-file generated by snmp_find_ldp.

         Optional options:
             -auth-file <value>: Authentication file name. Default is
             .    'auth.enc' in the Cariden configuration
             .    path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
             .    or CARIDEN_HOME/etc).
             -auth-prompt <true/false>: If true (default) will prompt for default
             .    authentication details if none found in
             .    authentication file. Otherwise just uses
             .    authentication file. See mate_auth_init.
             -net-access-file <net_access.txt>: Network access configuration file. Default
             .    is 'net_access.txt' in the Cariden
             .    configuration path.
             -net-access-router-mode <value>: Uses specified network access router mode
             .    as defined in the network access
             .    configuration file.
             -net-access-global-mode <value>: Uses specified network access global mode
             .    as defined in network access configuration
             .    file.
             -session-type <telnet/ssh>: The type of session to use: 'telnet' or
             .    'ssh'. Default 'telnet'.
             -port <+integer>: The port number to use for telnet/ssh
             .    session. Default = 23(telnet) or 22 (ssh).
             -login-record-mode <off/record/play>: Specifies the login recorder mode. In
             .    'record' mode, messages to and from the
             .    live network are recorded in the
             .    login-record-dir as the tool is run. In
             .    'play' mode, network messages from the
             .    net-record-file are played back through
             .    the tool as if they came from the live
             .    network, thus providing offline debugging
             .    of network collection. In 'off' mode, no
             .    recording or playback is performed.
             .    Default is 'off'.
             -login-record-dir: The directory to record messaged to or
             .    playback messages from. Used for
             .    login-record-mode operation. Default is
             .    'loginRecordDir'.
             -out-file <file.txt>: The output file with the collected LDP
             .    information. Default, if not provided, is
             .    the plan-file
             -data-dir <dirname>: <dirname> is a directory containing LDP
             .    config files. Default is 'ldpconfigs/'
             -force-config-update <true/false>: Updates LDP config files even if they
             .    exist in data-dir. If false, will use
             .    config files already present in data-dir
             .    and only get ones that are not. Default is
             .    true.
             -save-configs <true/false>: Specifies whether the LDP configs are
             .    saved to the data-dir or discarded.
             .    Default is false.
             -overwrite-files <true/false>: Specifies if existing files should be
             .    overwritten. Default is false.
             -min-prefix-length <integer>: the minimum prefix length to allow in
             .    matching LDP IP with interface subnet for
             .    determining DestNode. All interfaces with
             .    equal or larger prefix lengths, but less
             .    than 32, will be considered. Default 27
             .    (/27 subnet prefix length).

         Example:
         login_find_ldp_ext -plan-file /mate/inplan.txt -out-file /mate/outplan.txt
         -data-dir /mate/configs
```

For routers where LDP information is missing, check if there is a
configuration for it in /mate/configs and parse it to get missing LDP info.
If there is no config, login to router and fetch the configuration before
parsing. Write result to '/mate/outplan.txt'

login_find_multicast_ext

```
Usage: login_find_multicast_ext options
    .   login to routers, fetch and/or parse to get Multicast info

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <file.txt>: The out-file generated by
    .   snmp_find_multicast.

Optional options:
    -auth-file <value>: Authentication file name. Default is
    .   'auth.enc' in the Cariden configuration
    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .   or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .   authentication details if none found in
    .   authentication file. Otherwise just uses
    .   authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .   is 'net_access.txt' in the Cariden
    .   configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .   as defined in the network access
    .   configuration file.
    -net-access-global-mode <value>: Uses specified network access global mode
    .   as defined in network access configuration
    .   file.
    -session-type <telnet/ssh>: The type of session to use: 'telnet' or
    .   'ssh'. Default 'telnet'.
    -port <+integer>: The port number to use for telnet/ssh
    .   session. Default = 23(telnet) or 22 (ssh).
    -login-record-mode <off/record/play>: Specifies the login recorder mode. In
    .   'record' mode, messages to and from the
    .   live network are recorded in the
    .   login-record-dir as the tool is run. In
    .   'play' mode, network messages from the
    .   net-record-file are played back through
    .   the tool as if they came from the live
    .   network, thus providing offline debugging
    .   of network collection. In 'off' mode, no
```

```
.    recording or playback is performed.
.    Default is 'off'.
-login-record-dir: The directory to record messaged to or
.    playback messages from. Used for
.    login-record-mode operation. Default is
.    'loginRecordDir'.
-out-file <file.txt>: The output file with the collected
.    Multicast information. Default, if not
.    provided, is the plan-file
-data-dir <dirname>: <dirname> is a directory containing
.    Multicast config files. Default is
.    'multiconfigs/'
-force-config-update <true/false>: Updates Multicast config files even if
.    they exist in data-dir. If false, will use
.    config files already present in data-dir
.    and only get ones that are not. Default is
.    true.
-save-configs <true/false>: Specifies whether the Multicast configs
.    are saved to the data-dir or discarded.
.    Default is false.
-overwrite-files <true/false>: Specifies if existing files should be
.    overwritten. Default is false.


Example:
login_find_multicast_ext -plan-file /mate/inplan.txt -out-file
/mate/outplan.txt -data-dir /mate/multiconfigs
For routers where Multicast information is missing via SNMP (Cisco IOS
12.2(33)SRC2 for example), login to the router, retrieve the configuration,
place it in /mate/multiconfigs and parse it to get missing Multicast info.
Write result to '/mate/outplan.txt'
```

login_poll_multicast_ext

```
Usage: login_poll_multicast_ext options
.    login to routers to get Multicast traffic rates

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <file.txt>: The out-file generated by
    .    snmp_poll_multicast.

Optional options:
    -auth-file <value>: Authentication file name. Default is
    .    'auth.enc' in the Cariden configuration
    .    path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .    or CARIDEN_HOME/etc).
```

```
                    -auth-prompt <true/false>: If true (default) will prompt for default
                 .    authentication details if none found in
                 .    authentication file. Otherwise just uses
                 .    authentication file. See mate_auth_init.
                    -net-access-file <net_access.txt>: Network access configuration file. Default
                 .    is 'net_access.txt' in the Cariden
                 .    configuration path.
                    -net-access-router-mode <value>: Uses specified network access router mode
                 .    as defined in the network access
                 .    configuration file.
                    -net-access-global-mode <value>: Uses specified network access global mode
                 .    as defined in network access configuration
                 .    file.
                    -session-type <telnet/ssh>: The type of session to use: 'telnet' or
                 .    'ssh'. Default 'telnet'.
                    -port <+integer>: The port number to use for telnet/ssh
                 .    session. Default = 23(telnet) or 22 (ssh).
                    -login-record-mode <off/record/play>: Specifies the login recorder mode. In
                 .    'record' mode, messages to and from the
                 .    live network are recorded in the
                 .    login-record-dir as the tool is run. In
                 .    'play' mode, network messages from the
                 .    net-record-file are played back through
                 .    the tool as if they came from the live
                 .    network, thus providing offline debugging
                 .    of network collection. In 'off' mode, no
                 .    recording or playback is performed.
                 .    Default is 'off'.
                    -login-record-dir: The directory to record messaged to or
                 .    playback messages from. Used for
                 .    login-record-mode operation. Default is
                 .    'loginRecordDir'.
                    -out-file <file.txt>: The output file with the collected
                 .    Multicast traffic. Default, if not
                 .    provided, is the plan-file
                    -number-of-samples <integer>: The number of samples that will be taken.
                 .    Default is 1.
                    -polling-interval <integer>: Time delay, in seconds, between the login
                 .    rate readings. Default 300. Since rates
                 .    instead of counters are read, this is only
                 .    used if number-of-samples is greater than
                 .    1.
                    -traffic-level-name <value>: The traffic level name. Default is
                 .    'Default'.
                    -data-dir <dirname>: <dirname> is a directory containing
                 .    Multicast config files. Default is
                 .    'multiconfigs/'
                    -save-configs <true/false>: Specifies whether the Multicast configs
                 .    are saved to the data-dir or discarded.
                 .    Default is false.

         Example:
         login_poll_multicast_ext -plan-file /mate/inplan.txt -out-file
         /mate/outplan.txt -data-dir /mate/multiconfigs
         For routers where Multicast information is missing via SNMP (Cisco IOS
         12.2(33)SRC2 for example), login to the router, retrieve the configuration,
         place it in /mate/multiconfigs and parse it to get Multicast traffic. Write
         result to '/mate/outplan.txt'
```

login_test

```
Usage: login_test options
    .   test session login with router.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -seed-router <value>: The primary seed router to use.

Optional options:
    -auth-file <value>: Authentication file name. Default is
    .   'auth.enc' in the Cariden configuration
    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .   or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .   authentication details if none found in
    .   authentication file. Otherwise just uses
    .   authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .   is 'net_access.txt' in the Cariden
    .   configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .   as defined in the network access
    .   configuration file.
    -net-access-global-mode <value>: Uses specified network access global mode
    .   as defined in network access configuration
    .   file.
    -session-type <telnet/ssh>: The type of session to use: 'telnet' or
    .   'ssh'. Default 'telnet'.
    -port <+integer>: The port number to use for telnet/ssh
    .   session. Default = 23(telnet) or 22 (ssh).
    -login-record-mode <off/record/play>: Specifies the login recorder mode. In
    .   'record' mode, messages to and from the
    .   live network are recorded in the
    .   login-record-dir as the tool is run. In
    .   'play' mode, network messages from the
    .   net-record-file are played back through
    .   the tool as if they came from the live
    .   network, thus providing offline debugging
    .   of network collection. In 'off' mode, no
    .   recording or playback is performed.
    .   Default is 'off'.
    -login-record-dir: The directory to record messaged to or
    .   playback messages from. Used for
    .   login-record-mode operation. Default is
    .   'loginRecordDir'.
    -backup-router <value>: The secondary seed router to use for
    .   automatic failover.
```

```
        -ping <true/false>: If true, only pings router. Default: false.


Example:
login_test -seed-router 10.1.1.1
Test access to given router through a telnet session
```

lsp_diagnostics

```
lsp_diagnostics

Generate diagnostic reports on simulation routing of an LSP or LSP Path.
Provides reasons for LSPs being unrouted, or routed away from the actual LSP
path.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <value>: Source plan file.
    -out-file <value>: Output plan file with diagnostics reports

Optional options:
    -lsps-table <file>: File containing <LSPs> table. Default is
    .    all. Used if report-type contains 'lsps'
    -lsppaths-table <file>: File containing <LSPPaths> table. Default
    .    is all. Used if report-type contains
    .    'lsppaths'
    -report-type <value>: Comma-separated list of 'lsps' and
    .    'lsppaths'. Default is none.
```

lsp_loadshare_opt

```
Optimizes loadshare settings between selected parallel LSPs in the
network.'Parallel' LSPs are those with the same source and destination.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
```

```
.       from .txt format of -out-file if parameter
.       exists. Default is 'false'.

Required options:
    -plan-file <value>: Plan file to optimize.
    -out-file <value>: Optimized plan file

Optional options:
    -lsps-table <file>: File containing <LSPs> table of LSPs to
    .    optimize. Default is all (parallel) LSPs
    .    in plan. See mate_select.
    -lsp-tag <value>: Tag LSPs whose Loadshare parameter is
    .    changed, with this value. Default is
    .    'LSPLoadshare'.
    -traffic-level <value>: Traffic level to use. Required if more
    .    than one level present.
    -min-max-util <true/false>: If true (default), minimizes maximum
    .    interface utilization on interfaces
    .    carrying selected LSP routes. If false,
    .    minimizes number of interfaces with util
    .    percent > util-bound.
    -util-bound <value>: See min-max-util. Default 100%.
    -num-bins <value>: The total LSP traffic across parallel LSPs
    .    can be split into this number of bins.
    .    Default is 0, which means no limit on the
    .    number of bins.
```

lsp_mesh_creator

```
Usage: lsp_mesh_creator options
Creates a mesh of LSPs connecting a user-defined set of nodes.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <filename>: Input: input .pln file.
    -out-file <filename>: Output: .pln file with created/modified
    .    LSPs.

Optional options:
    -source-nodes-table <file>: File containing <Nodes> table of source
    .    nodes. Default is all. See mate_select.
    -dest-nodes-table <file>: File containing <Nodes> table of
    .    destination nodes. Default is all. See
    .    mate_select.
    -dest-equals-source <true/false>: If true (default), use the source node
    .    settings for the destination nodes,
```

```
.     ignoring any -dest-nodes-table setting.
-setup-bw <string>: Selects the setup bandwidth for the
.     created LSPs. If a number is specified,
.     then the setup bandwidth for all LSPs is
.     set to that value. If a bandwidth level
.     name is specified, then the setup
.     bandwidth is set to the bandwidth the LSP
.     will carry under no failure. If the plan
.     file has only one bandwidth level, the
.     default is that bandwidth level name.
.     Otherwise, the user must specify a value
.     for this option.
-autobandwidth <true/false>: If true, enable autobandwidth on the LSP.
.     Default is false. Note that for
.     autobandwidth simulation, the 'simulation
.     convergence mode' network option also has
.     to be set appropriately.
-setup-pri <number>: Selects the setup priority for the created
.     LSPs. The default is 7.
-hold-pri <number>: Selects the hold priority for the created
.     LSPs. The default is 7.
-load-share <number>: If specified, it sets the newly created
.     LSP's LoadShare field to the provided
.     number. If not specified, the newly
.     created LSP's LoadShare field will be
.     undefined. copy-from-existing option can
.     override this option for existing LSPs.
-metric-type <value>: Determines LSP-IGP interaction. Must be
.     either autoroute (default), fa (forwarding
.     adjacency), or private
-metric <integer>: For metric-type 'autoroute', the static
.     metric for this LSP.
.     For metric-type 'fa', the forwarding
.     adjacency metric.
.     Default is blank: if 'autoroute' this
.     means no static metric, if 'fa' this means
.     assume a metric of 10.
.
-type <value>: 'RSVP' (default), or 'SR'. Specifies
.     whether a mesh of RSVP LSPs or Segment
.     Routed LSPs is created.
-copy-from-existing <list>: A comma separated list of properties to
.     copy from existing (if any) LSPs.
.     Possible values are "setup-pri",
.     "hold-pri", "metric-type" , "hop-limit",
.     "setup-bw", "include", "include-any", and
.     "exclude". The default value is the empty
.     list.
-name-postfix <string>: If non-empty, newly created LSPs will be
.     named
.     "<source-node-name>_<dest-node-name>_<post
.     fix>". If empty (the default),
.     "<source-node-name>_<dest-node-name>".
-no-inter-as-lsp <true/false>: If set to true (default), prevents
.     creation of inter-AS LSPs
-no-inter-area-lsp <true/false>: If set to true (default), prevents
.     creation of inter-Area LSPs
-include <list>: A comma separated list of include
.     affinities for the LSPs. When an LSP is
.     set to include certain membership it will
.     only consider interfaces with that
.     membership. The default value is the empty
.     list.
-include-any <list>: A comma separated list of include-any
```

```
                        .   affinities for the LSPs. When an LSP is
                        .   set to include certain memberships it will
                        .   only consider interfaces belonging to at
                        .   least one membership. The default value is
                        .   the empty list.
                    -exclude <list>: A comma separated list of exclude
                        .   affinities for the LSPs. When certain
                        .   memberships are excluded those links are
                        .   pruned from the possible interfaces over
                        .   which the LSP may be established. The
                        .   default value is the empty list.
                    -include-any-demand-tags <value>: A comma separated list of demand tags.
                        .   Only demands with these tags will route
                        .   over the LSP.
                    -topology <value>: If specified, topology to assign to
                        .   created LSPs.
                    -both-directions <true/false>: If true (default) includes all LSPs from
                        .   dest to source as well as source to dest.


                Example:
                lsp_mesh_creator -plan-file plana.pln -out-file planb.pln
                 Creates a complete mesh of LSPs for 'plana', writing the results in 'planb'.
```

lsp_path_initializer

```
                Generic options:
                    -help <true/false>: Prints help message.
                    -options-file <value>: Read options from <filename>.
                    -version <true/false>: Prints version string
                    -no-global-options <true/false>: Inhibits loading of global options file.
                    -suppress-progress <true/false>: Do not show progress information. Default
                        .   is true.
                    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                        .   Default = 30.
                    -log-file <value>: Keep copies of warnings and errors in this
                        .   file.
                    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                        .   from .txt format of -out-file if parameter
                        .   exists. Default is 'false'.


                Required options:
                    -plan-file <value>: A plan file
                    -out-file <value>: Output plan file, updated with initialized
                        .   LSP Path.

                Optional options:
                    -lsps-table <file>: File containing <LSPs> table of LSPs to
                        .   use. Default is all.
                    -path-option <value>: Path option of inserted LSP paths.
                        .   Default 1.
                    -inherit-setup-bw <true/false>: If true, each inserted LSP path inherits
                        .   setup bandwidth from its LSP. Default
                        .   false.
                    -setup-bw <value>: Setup bandwidth to use for all LSP paths,
                        .   if inherit-setup-bw is false. Default 0.
                    -path-names <value>: Generates names for named paths using this
                        .   formula. Default is '$1_$2'. Here $1 is
                        .   LSP Name, $2 is Path Option.
                    -standby <true/false>: If true (default), sets path as standby.
                    -inherit-include-affinity <true/false>: If true (default), inherits Include
```

```
                  .    affinity setting for each LSP path from
                  .    its LSP.
                  -inherit-includeany-affinity <true/false>: If true (default), inherits Include Any
                  .    affinity setting for each LSP path from
                  .    its LSP.
                  -inherit-exclude-affinity <true/false>: If true (default), inherits Exclude
                  .    affinity setting for each LSP path from
                  .    its LSP.
                  -include-affinities <value>: comma-delimited list of affinities for LSP
                  .    path, if -inherit-include-affinity is
                  .    false. May specify affinity number or name.
                  -includeany-affinities <value>: Similar to include-affinities for Include
                  .    Any settings.
                  -exclude-affinities <value>: Similar to include-affinities for Exclude
                  .    Any settings.
```

lsps_for_dmds

```
          Usage: lsps_for_dmds -plan-file <input file> -out-file <output file>.
          Creates an LSP for each Demand specified, matching source and destination.

          Generic options:
              -help <true/false>: Prints help message.
              -options-file <value>: Read options from <filename>.
              -version <true/false>: Prints version string
              -no-global-options <true/false>: Inhibits loading of global options file.
              -suppress-progress <true/false>: Do not show progress information. Default
              .    is true.
              -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
              .    Default = 30.
              -log-file <value>: Keep copies of warnings and errors in this
              .    file.
              -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
              .    from .txt format of -out-file if parameter
              .    exists. Default is 'false'.

          Required options:
              -plan-file <value>: Input plan file for lsps_for_dmds.
              -out-file <value>: Output plan file with new LSPs.

          Optional options:
              -demands-table <file>: File containing <Demands> table of demands
              .    to use.
              -set-bw <value>: One of:
              .    'traffic' (default): set lsp bw to dmd
              .    traffic of in selected traffic-level.
              .    'zero': set lsp bw to
              .    zero.
              .
              -traffic-level <value>: Traffic level, required if set-bw is
              .    'traffic', and more than one traffic level
              .    present.
              -private-lsps <true/false>: If true (default), marks lsps as private.
```

manage_reports

```
          Inserts,extracts,deletes,renames and lists reports in a plan file.

          Generic options:
```

```
-help <true/false>: Prints help message.
-options-file <value>: Read options from <filename>.
-version <true/false>: Prints version string
-no-global-options <true/false>: Inhibits loading of global options file.
-suppress-progress <true/false>: Do not show progress information. Default
.   is true.
-verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
.   Default = 30.
-log-file <value>: Keep copies of warnings and errors in this
.   file.
-simple-txt-out-file <true/false>: Whether to remove empty tables and columns
.   from .txt format of -out-file if parameter
.   exists. Default is 'false'.

Required options:
-action <value>: Action to be taken on the
.   report(insert,extract,delete,rename,list).
-plan-file <value>: The plan file associated with the report.

Optional options:
-out-file <value>: Output plan file.
-report-dir <value>: Directory where the report is stored.
-report-name <value>: Name of the report.
-new-report-name <value>: Name of the new report in case of a rename.
```

mate_access_manage

```
Usage: mate_access_manage options
.   change the router mode (in the net-access-file) of the nodes
.   from nodes-table that match the filter to net-access-router-mode

Generic options:
-help <true/false>: Prints help message.
-options-file <value>: Read options from <filename>.
-version <true/false>: Prints version string
-no-global-options <true/false>: Inhibits loading of global options file.
-suppress-progress <true/false>: Do not show progress information. Default
.   is true.
-verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
.   Default = 30.
-log-file <value>: Keep copies of warnings and errors in this
.   file.
-simple-txt-out-file <true/false>: Whether to remove empty tables and columns
.   from .txt format of -out-file if parameter
.   exists. Default is 'false'.

Required options:
-out-file: Save the modified net-access-file to here

Optional options:
-net-access-file <value>: Read network access configuration from
.   this file. Default is 'net_access.txt' in
.   the Cariden configuration path.
-net-access-router-mode <value>: Uses specified network access router mode
.   as defined in network access configuration
.   file.
-task <value>: Task to which access mode will be applied.
.   E.g. snmp_find_interfaces
-nodes-table <value>: A file containing a table of nodes, with
.   either (or both) a Name or IPAddress
```

```
                    .   column. Entries in the table may be
                    .   regular expressions.
                -filter <value>: SQL WHERE expression used to select nodes.
                    .   Only one of -filter and -nodes-table may
                    .   be specified. For example, "Name REGEXP
                    .   'cr.*' AND Vendor = 'Cisco'"

            Example: mate_access_manage -out-file new_file.txt -net-access-router-mode
            Ignore
```

mate_access_test

```
            Usage: mate_access_test options
                .   look up access parameters based on router ip addresses.
                .   Used to test the current settings in the access file.

            Generic options:
                -help <true/false>: Prints help message.
                -options-file <value>: Read options from <filename>.
                -version <true/false>: Prints version string
                -no-global-options <true/false>: Inhibits loading of global options file.
                -suppress-progress <true/false>: Do not show progress information. Default
                .   is true.
                -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                .   Default = 30.
                -log-file <value>: Keep copies of warnings and errors in this
                .   file.
                -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                .   from .txt format of -out-file if parameter
                .   exists. Default is 'false'.

            Required options:

            Optional options:
                -node <value>: RouterMode in first entry in
                .   <PerRouterSettings> table that matches
                .   node, nodeip, and task is used to retrieve
                .   access parameters in <RouterModes> table.
                -net-access-file <value>: Read network access configuration from
                .   this file. Default is 'net_access.txt' in
                .   the Cariden configuration path.
                -net-access-router-mode <value>: Uses specified network access router mode
                .   as defined in network access configuration
                .   file.
                -net-access-global-mode <value>: Uses specified network access global mode
                .   as defined in network access configuration
                .   file.
                -task <value>: Pretends to be this program name when
                .   searching the access file.
                -nodes-table <value>: SQL filtering operates on the data in this
                .   file. If you don't specify this file, then
                .   no SQL filtering will be done.

            Example: mate_access_test -task mate_get_show
```

mate_auth_export

```
Usage: mate_auth_export options
   .   Decrypts an encrypted file..

Generic options:
   -help <true/false>: Prints help message.
   -options-file <value>: Read options from <filename>.
   -version <true/false>: Prints version string
   -no-global-options <true/false>: Inhibits loading of global options file.
   -suppress-progress <true/false>: Do not show progress information. Default
   .   is true.
   -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
   .   Default = 30.
   -log-file <value>: Keep copies of warnings and errors in this
   .   file.
   -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
   .   from .txt format of -out-file if parameter
   .   exists. Default is 'false'.

Required options:
   -out-file <value>: The output file.

Optional options:
   -auth-file <value>: Authentication file name. Default is
   .   'auth.enc' in the Cariden configuration
   .   path.
   -password-file <value>: File containing master password string.
   .   Use '-' for stdin. If omitted, prompts
   .   user for password.

Example: mate_auth_export -out-file out.txt
```

mate_auth_import

```
Usage: mate_auth_import options
   .   Encrypts a plain text file.

Generic options:
   -help <true/false>: Prints help message.
   -options-file <value>: Read options from <filename>.
   -version <true/false>: Prints version string
   -no-global-options <true/false>: Inhibits loading of global options file.
   -suppress-progress <true/false>: Do not show progress information. Default
   .   is true.
   -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
   .   Default = 30.
   -log-file <value>: Keep copies of warnings and errors in this
   .   file.
   -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
   .   from .txt format of -out-file if parameter
   .   exists. Default is 'false'.

Required options:
   -plaintext-file <value>: The file to encrypt.

Optional options:
   -auth-file <value>: Authentication file name. Default is
   .   'auth.enc' in the Cariden configuration
   .   path.
   -clean-up <true/false>: If true, deletes the plain text file after
   .   a successful encryption. Default: false.
```

```
            Example: mate_auth_import -plaintext-file in.txt
```

mate_auth_init

```
            Usage: mate_auth_init options
            Prompts for default username, password, community etc used by network
            interface tools, and writes to an authentication file.
            Without -auth-file, it prompts for one of three configuration paths
            ($HOME/.cariden/etc, $CARIDEN_ROOT/etc or $CARIDEN_HOME/etc) and creates the
            authentication file with default name 'auth.enc'.
            For router-specific authentication, or to view entries, see mate_auth_export
            and mate_auth_import.

            Generic options:
                -help <true/false>: Prints help message.
                -options-file <value>: Read options from <filename>.
                -version <true/false>: Prints version string
                -no-global-options <true/false>: Inhibits loading of global options file.
                -suppress-progress <true/false>: Do not show progress information. Default
            .    is true.
                -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
            .    Default = 30.
                -log-file <value>: Keep copies of warnings and errors in this
            .    file.
                -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
            .    from .txt format of -out-file if parameter
            .    exists. Default is 'false'.

            Required options:

            Optional options:
                -auth-file <value>: Authentication file name. To change the
            .    file location, enter a full path name.
            .    Although the file is created in the
            .    directory from which you execute the
            .    command, authentication does not work
            .    unless this file is in $HOME/.cariden/etc,
            .    $CARIDEN_ROOT/etc or $CARIDEN_HOME/etc. If
            .    you put this file in a different
            .    directory, binaries must be explicity
            .    called using this path.

            Example: mate_auth_init
```

mate_auth_test

```
            Usage: mate_auth_test options
            .    Looks up authentication settings from an authentication file. If
             show-details is true, will prompt for master password, otherwise not..
            Useful to test that the authentication file has been set up correctly.

            Generic options:
                -help <true/false>: Prints help message.
                -options-file <value>: Read options from <filename>.
                -version <true/false>: Prints version string
                -no-global-options <true/false>: Inhibits loading of global options file.
```

```
                    -suppress-progress <true/false>: Do not show progress information. Default
                    .   is true.
                    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                    .   Default = 30.
                    -log-file <value>: Keep copies of warnings and errors in this
                    .   file.
                    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                    .   from .txt format of -out-file if parameter
                    .   exists. Default is 'false'.

            Required options:

            Optional options:
                    -auth-file <value>: Authentication file name. Default is
                    .   'auth.enc' in the Cariden configuration
                    .   path.
                    -nodeip: IP address of router. Will look up
                    .   authentication for this router IP.
                    -show-details <true/false>: If true, outputs all authentication
                    .   details found in plaintext. If false
                    .   (default), only returns whether lookup is
                    .   successful.

            Example: mate_auth_test -auth-file in.txt
```

mate_cfg

```
            usage: mate_cfg options
            This command line tool is replacement for ml.conf configuration file. Use this
            tool to manipulate with configuration database.

            Generic options:
                    -help Print help information about usage
                    -noheader When used, raw value is displayed without header
                    -verbose When used, verbose information will be printed

            Required options:
                    -action <value>:get - get value from store for specific key and
                    .   application namespace
                    :dump - dump values for specific application
                    .   namespace
                    :dump-all - dump all values from for all application
                    .   namespaces
                    :dump-schema - dump data schema known by system
                    :list-applications - show name of all application
                    .   namespaces
                    :migrate-ml - migrate properties from ml.conf to
                    .   store
                    :remove - remove key from store for specific
                    .   application namespace
                    :set - set up value to store for specific key and
                    .   application namespace
                    :backup - Create backup of configuration database
                    :restore - Restore existing backup of configuration
                    .   database
                    :upgrade - Upgrage existing configuration database

            Optional options:
                    -application <value> Name of application namespace. For global options
                    .   use 'Global'
                    -key <value> Name of configuration property
```

```
                  -list When used with 'restore' action, it will list all
                  .   backups
                  -path <value> Path to ml.conf file, used with 'migrate-ml' action
                  -type <value> Data type of given value
                  -value <value> Value of configuration property

            Examples:
            1, Read property named 'MLData' for application Matelive
            mate_cfg -action get -application Matelive -key MLData
            2, Write property named 'MLData' for application Matelive
            mate_cfg -action set -application Matelive -key MLData -value
            /opt/cariden/mldata
            3, Dump configuration of application Matelive
            mate_cfg -action dump -application Matelive
            4, Dump entire configuration of all applications
            mate_cfg -action dump-all
            5, Migrate content of ml.conf into configuration database
            mate_cfg -action migrate-ml -path ~/.cariden/etc/matelive/ml.conf
            ------------------------------------------------------------------------
            Configuration database location: C:\C_MATE\MATE-K~4.2DE\etc\config\config.xml
```

mate_convert

```
            Usage: mate_convert -plan-file <file> -out-file <file> [-version <version>]
            Converts the given file to the specified version.

            Generic options:
                  -help <true/false>: Prints help message.
                  -options-file <value>: Read options from <filename>.
                  -version <true/false>: Prints version string
                  -no-global-options <true/false>: Inhibits loading of global options file.
                  -suppress-progress <true/false>: Do not show progress information. Default
                  .   is true.
                  -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                  .   Default = 30.
                  -log-file <value>: Keep copies of warnings and errors in this
                  .   file.
                  -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                  .   from .txt format of -out-file if parameter
                  .   exists. Default is 'false'.

            Required options:
                  -plan-file <value>: Input plan file. Set to '-' for standard
                  .   input.
                  -out-file <value>: Output table file. If set to '-', print to
                  .   standard output

            Optional options:
                  -to-version <value>: The version to convert to. If set to
                  .   'current' (the default), upgrade to most
                  .   recent version (6.2.-1). If set to 'keep',
                  .   do not change the version.
```

mate_jasper

```
            Usage: mate_jasper -template <template file> -out-file <file>
                  {-plan-file | -table-file} <file> [-parameters <parameterlist> ]
                  [-savecompiledfile <true/false>] [-verbose-output <true/false>]
```

Generates a JasperReports report in output file running the supplied
template (.jrxml) file against the plan or generic database. If the .jrxml
file uses parameters, they can be supplied in a parameter list in the
following format: -parameters "param1:value1;param2:value2;...paramN:valueN;"
An optional compiled template file (.jasper) can be produced by specifying
-savecompiledfile true. (This allows further use of the template as a
subreport.)

Note: some generic options are ignored by mate_jasper.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -template: Input JasperReports template file (.jrxml).
    -out-file <filename>: Output report directory path and file
    .   name, including the file extension (.pdf,
    .   .html, or .txt). If no extension is
    .   supplied, the format will be PDF.

Optional options:
    -plan-file <value>: Input plan file. One of -plan-file or
    -table-file must be present.
    -table-file <value>: Input data file. One of -plan-file or
    -table-file must be present.
    -parameters <value>: JRXML parameter list string.
    -savecompiledfile <true/false>: Generate a compiled template .jasper file.
    -verbose-output <true/false>: Print out execution step information.

Usage: mate_jasper -template <template file> -out-file <file>
    {-plan-file | -table-file} <file> [-parameters <parameterlist>]
    [-savecompiledfile <true/false>] [-verbose-output <true/false>]

Generates a JasperReports report in output file running the supplied
template (.jrxml) file against the plan or generic database. If the .jrxml
file uses parameters, they can be supplied in a parameter list in the
following format: -parameters "param1:value1;param2:value2;...paramN:valueN;"
An optional compiled template file (.jasper) can be produced by specifying
-savecompiledfile true. (This allows further use of the template as a
subreport.)

Note: some generic options are ignored by mate_jasper.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).

```
.    Default = 30.
-log-file <value>: Keep copies of warnings and errors in this
.    file.
-simple-txt-out-file <true/false>: Whether to remove empty tables and columns
.    from .txt format of -out-file if parameter
.    exists. Default is 'false'.


Required options:
    -template: Input JasperReports template file (.jrxml).
    -out-file <filename>: Output report directory path and file
    .    name, including the file extension (.pdf,
    .    .html, or .txt). If no extension is
    .    supplied, the format will be PDF.


Optional options:
    -plan-file <value>: Input plan file. One of -plan-file or
    -table-file must be present.
    -table-file <value>: Input data file. One of -plan-file or
    -table-file must be present.
    -parameters <value>: JRXML parameter list string.
    -savecompiledfile <true/false>: Generate a compiled template .jasper file.
    -verbose-output <true/false>: Print out execution step information.



Usage: mate_jasper -template <template file> -out-file <file>
    {-plan-file | -table-file} <file> [-parameters <parameterlist> ]
    [-savecompiledfile <true/false>] [-verbose-output <true/false>]


Generates a JasperReports report in output file running the supplied
template (.jrxml) file against the plan or generic database. If the .jrxml
file uses parameters, they can be supplied in a parameter list in the
following format: -parameters "param1:value1;param2:value2;...paramN:valueN;"
An optional compiled template file (.jasper) can be produced by specifying
-savecompiledfile true. (This allows further use of the template as a
subreport.)


Note: some generic options are ignored by mate_jasper.


Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -template: Input JasperReports template file (.jrxml).
    -out-file <filename>: Output report directory path and file
    .    name, including the file extension (.pdf,
    .    .html, or .txt). If no extension is
    .    supplied, the format will be PDF.

Optional options:
    -plan-file <value>: Input plan file. One of -plan-file or
    -table-file must be present.
    -table-file <value>: Input data file. One of -plan-file or
```

```
        -table-file must be present.
        -parameters <value>: JRXML parameter list string.
        -savecompiledfile <true/false>: Generate a compiled template .jasper file.
        -verbose-output <true/false>: Print out execution step information.


Usage: mate_jasper -template <template file> -out-file <file>
    {-plan-file | -table-file} <file> [-parameters <parameterlist> ]
    [-savecompiledfile <true/false>] [-verbose-output <true/false>]

Generates a JasperReports report in output file running the supplied
template (.jrxml) file against the plan or generic database. If the .jrxml
file uses parameters, they can be supplied in a parameter list in the
following format: -parameters "param1:value1;param2:value2;...paramN:valueN;"
An optional compiled template file (.jasper) can be produced by specifying
-savecompiledfile true. (This allows further use of the template as a
subreport.)

Note: some generic options are ignored by mate_jasper.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -template: Input JasperReports template file (.jrxml).
    -out-file <filename>: Output report directory path and file
    .   name, including the file extension (.pdf,
    .   .html, or .txt). If no extension is
    .   supplied, the format will be PDF.

Optional options:
    -plan-file <value>: Input plan file. One of -plan-file or
    -table-file must be present.
    -table-file <value>: Input data file. One of -plan-file or
    -table-file must be present.
    -parameters <value>: JRXML parameter list string.
    -savecompiledfile <true/false>: Generate a compiled template .jasper file.
    -verbose-output <true/false>: Print out execution step information.
```

mate_plot

✎
Note   Export to either PDF or SVG produces bitmap fonts on the Linux platform.

```
Usage: mate_plot options
plots the given plan file as an image

Generic options:
```

```
        -help <true/false>: Prints help message.
        -options-file <value>: Read options from <filename>.
        -version <true/false>: Prints version string
        -no-global-options <true/false>: Inhibits loading of global options file.
        -suppress-progress <true/false>: Do not show progress information. Default
        .   is true.
        -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
        .   Default = 30.
        -log-file <value>: Keep copies of warnings and errors in this
        .   file.
        -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
        .   from .txt format of -out-file if parameter
        .   exists. Default is 'false'.

    Required options:
        -plan-file <filename>: Input: .pln file to plot
        -out-file <filename>: Output: plot in png format

    Optional options:
        -traffic-level <value>: Traffic level to plot. Required if more
        .   than one level present.
        -plot-layout <value>: This option specifies the plot layout.
        .   If omitted, plots the Default layout.
        -view <value>: This option determines how the links get
        .   colored. The options are:
        .   meas-util
        .   for plotting the measured utilizations
        .   sim-util
        .   for plotting the simulated utilizations
        .   sim-wc-util
        .   for plotting the worst-case simulated
        .   utilizations
        .   sim-lsp-rsrv
        .   for plotting the simulated LSP
        .   reservations per link.
        .   failure-impact
        .   for plotting the simulated failure
        .   impact.
        .
        -wc-failure-set <value>: This setting is consulted when the
        .   sim-wc-util view is selected. It is a
        .   comma separated list of failure sets that
        .   will be used in determining the worst
        .   case. The failure-sets must already have
        .   been specified as part of sim_analysis.
        .   The default is to use all simulated
        .   failure sets in the plan.
        -service-class <value>: If specified, only traffic in this Service
        .   Class is displayed in plot.
        .   "undifferentiated": Ignore service classes
        .   (default).
        -queue <value>: If service-class is omitted, and queue is
        .   specified, displays traffic in this Queue.
        .   If omitted, displays all traffic,
        .   undifferentiated.
        -site <value>: This option plots site view for the site
        .   with name <value>.
        .   If omitted, plots the intersite view.
        -plot-options-file <value>: File containing plot options
        -width <+integer>: Plot width in pixels. Default is 800.
        -height <+integer>: Plot height in pixels. Default is 600.
        -color-depth <+integer>: Number of bits to use for color. Options
        .   are 8 or 32. Default is 32.
        -legend <true/false>: Include a plot legend. Default is true
```

```
                    -bg-color <hextriplet>: Plot background color name or hex triplet.
                    .  E.g., #000000 for black, #0000FF for blue.
                    .  Default is #C0C0C0. Note: some command
                    .  line shells (bash for example) require
                    .  quotes around the hextriplet value.
                    -type <value>: The type of plot to create (png, svg or
                    .  pdf). Default: 'png'.
                    -force-simulation <true/false>: If true, mate plot will not use cached
                    .  simulation result. Default is false.
                    -user-plot-name <value>: Plot name to display in the legend. If
                    .  omitted, uses plan file file-name.


            Example:
            mate_plot -plan-file plan.pln -out-file plan.png
```

mate_select

```
            Usage: mate_select -table-file <file> -out-file <file> [-filter <SQL
            expression>]

            Generic options:
                -help <true/false>: Prints help message.
                -options-file <value>: Read options from <filename>.
                -version <true/false>: Prints version string
                -no-global-options <true/false>: Inhibits loading of global options file.
                -suppress-progress <true/false>: Do not show progress information. Default
                .  is true.
                -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                .  Default = 30.
                -log-file <value>: Keep copies of warnings and errors in this
                .  file.
                -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                .  from .txt format of -out-file if parameter
                .  exists. Default is 'false'.

            Required options:
                -table-file <value>: File containing one or more tables. Either
                .  WAE Design table file or .pln file. Set to
                .  '-' (default) for standard input.

            Optional options:
                -out-file <value>: File to export result of filtering. The
                .  default '-' exports to the standard output.
                -table <value>: Which table in table file to filter on.
                .  Required if more than one table in the
                .  table file.
                -filter <value>: SQL WHERE expression to apply to table.
                .  Examples (using Nodes table):
                .  1. "Site = 'ATL' OR Site = 'MIA'"
                .  2. "Name REGEXP '.*\.ATL.*' (Any node name
                .  containing ".ATL")
                .  3. "SUBNET(IpAddress, '192.168.1.0/24'"
                .  (Any node in this subnet)
                .  See reference documentation for details of
                .  the SQL implementation in WAE Design.
                -show-columns <value>: The columns to show on the filtered table.
                .  The default is 'all'.
                .  If the output of mate_select is to be used
                .  as an argument to a WAE Design CL tool to
                .  specify a table of network elements, the
                .  following key columns must be present:
             Nodes: Name
```

```
            Interfaces: Node, Interface
            Circuits: NodeA, InterfaceA, nodeB,
               .   InterfaceB
            Sites: Name
            AS : ASN
            SRLGs: Name
            LSPs: Name, Source
            LSPPaths: Name, Source, PathOption
            NamedPaths: Name, Source
            NamedPathHops: Name, Source, Step
               .   ActualPathHops: Source, LSPName,
               .   PathOption, Step
            Demands: Name, Source, Destination,
               .   ServiceClass
               .   (This is not a concern if the default
               .   'all' is used.)
```

mate_sim

```
            Simulates a plan file.

            Generic options:
                -help <true/false>: Prints help message.
                -options-file <value>: Read options from <filename>.
                -version <true/false>: Prints version string
                -no-global-options <true/false>: Inhibits loading of global options file.
                -suppress-progress <true/false>: Do not show progress information. Default
                .   is true.
                -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                .   Default = 30.
                -log-file <value>: Keep copies of warnings and errors in this
                .   file.
                -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                .   from .txt format of -out-file if parameter
                .   exists. Default is 'false'.

            Required options:
                -plan-file <value>: Input plan file for mate_sim.
                -out-file <value>: Output plan file for mate_sim.

            Optional options:
                -fail-nodes <value>: comma separated list of node failures.
                .   Example: -fail-nodes nodeA,nodeB
                .   Default: blank meaning no node failure.
                -fail-circuits <value>: comma separated list of circuit failures.
                .   Example: -fail-circuits cirA,cirB
                .   Default: blank meaning no circuit failure.
                -fail-srlgs <value>: comma separated list of SRLG failures.
                .   Example: -fail-srlgs srlg1,srlg2
                .   Default: blank meaning no SRLG failure.
```

mate_sql

```
            Usage: mate_sql [-file <file>] [-out-file <file>] [-sql <SQL statement>]
            Executes the SQL statement (or sequence of statements). The database is
            optionally initialized with the contents of a tab file <file>. If a query is
            performed, the results are collected into a table and printed to the standard
            output or a file. If an output file is specified, the database is exported to
            the specified tab file after the SQL statements are executed.
```

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:

Optional options:
    -file <value>: Input tab file. Set to '-' for standard
    .   input.
    -out-file <value>: Output table file. If set to '-', print to
    .   standard output
    -table-name <value>: The name to give the query table. The
    .   default is 'SQLQueryResult'.
    -select-out-file <value>: Output file for the result of any single
    .   SELECT inside the statement. If set to '-'
    .   (the default), print to standard output
    -select-out-file-append <true/false>: If true, append the output file. Only
    .   applies to *.txt files. Default is false.
    -sql <value>: The SQL statement to execute
    -attach <value>: A comma-separated list of files to attach
    .   to the database. The databases will be
    .   named after the file name by default. To
    .   change that, specify a name as in the
    .   following example: -attach 'file.txt AS
    .   Attached'.
    -sql-file <value>: Input file containing the SQL statement to
    .   execute. Only used if -sql is not
    .   specified.
```

mate_summary

```
Usage: mate_summary options
Constructs a list of summary statistics from a file

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.
```

```
Required options:
    -table-file <filename>: Input: File containing one or more tables
    -out-file <filename>: Output: File to export summary results

Optional options:
    -summary-format-file <value>: File containing summary format Default:
    .   CARIDEN_HOME/etc/archive\default_timeplot_
    .   summary_format.txt
    -old-table-file <value>: File containing one or more tables

Example:
mate_summary -table-file plan.txt -out-file summary.txt
```

mate_tech_support

```
Usage:
 mate_tech_support
 Create a tar file containing MATE technical support information

Generic option:
    -help <true/false>: Print help message

Required option:
 None

Optional options:
    -tar-path: Specify the path for the tar file.
    .   Default is /tmp/MATE_TS.

Example:
mate_tech_support -tar-path /tmp
Output MATE technical support information to the /tmp directory
```

merge_circuits

```
merge_circuits

Merges a set of circuits into one base circuit per set of node-parallel
circuits.
1. Sets base circuit capacity to sum of capacities.
2. Sets base circuit metric to min of metrics.
3. Sets base circuit traffic measurements to sum.
4. Deletes other circuits.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
```

```
    -plan-file <value>: Input plan file for merge_circuits.
    -out-file <value>: Output plan file with merged circuits.

Optional options:
    -circuits-table <file>: A file containing a circuits table.
    .   Circuits in table are merged into the
    .   merge-circuit. See mate_select.
    -base-circuit <value>: Name of circuit in circuits-table which
    .   other circuits are merged into. May only
    .   be used if all circuits in circuits-table
    .   are node-parallel. If not, merge circuits
    .   will be selected arbitrarily from
    .   circuits-table.
```

merge_nodes

```
merge_nodes

Merges a set of nodes into one base node:
1. Re-attach circuits from other nodes to base node.
2. Move demands to/from other nodes to base node.
3. Move LSPs to/from other nodes to base node.
4. Sets base node traffic measurements to sum of
 measurements over selected nodes.
5. Deletes other nodes.

Use -verbosity 40 to view node-by-node details of merge groupings

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file for merge_nodes.
    -out-file <value>: Output plan file with merged nodes.

Optional options:
    -nodes-table <file>: A file containing a nodes table. Nodes in
    .   table are merged into the base-node. See
    .   mate_select.
    .   If omitted, for each site, merges all
    .   nodes in that site
    .   into a node named after the site.
    -merge-in-sites <true/false>: If true, merges nodes by site. Merged
    .   nodes are named after the site. If false,
    .   merge nodes all together. Default is true
    .   if nodes-table omitted, otherwise false.
    -base-node <value>: Used if merge-in-sites is false. Name of
    .   node in the nodes table which other nodes
    .   are merged into. If not specified, uses
```

```
                        .   first node in list.
                    -new-node-name <value>: Used if merge-in-sites is false. If
                        .   specified, renames the merged node to this
                        .   name. If omitted, uses name of base node.
                    -new-node-suffix <value>: Used if merge-in-sites is true. Merged
                        .   nodes in each site are named after the
                        .   site, with this suffix added. Default is
                        .   blank.
                    -merge-table <value>: File containing <MergeNodes> table with
                        .   columns:
                        .   Node: SQLite expression of nodes from
                        .   nodes-table to select for merge, e.g.,
                        .   "Name REGEXP '.*acc.*'".
                        .   GroupBy: SQLite expression evaluating to
                        .   string that nodes are grouped by,
                        .   eg "Site" (merges nodes within same site)
                        .   "SUBSTITUTE(Name,'er.*\.(.*)','\1')"
                        .   (merges eg er1.atl and er2.atl together,
                        .   and er1.lax and er2.lax together)
                        .   Method: 'All' merges all nodes in each
                        .   group.
                        .   'ByNeighbor' subdivides further by nodes
                        .   with same set of connecting nodes.
                        .   'ByRouting' requires further that the
                        .   interface metrics and OSPF areas of
                        .   connecting circuits be identical.
                        .   Suffix: Merged nodes are named using
                        .   GroupBy
                        .   string plus this suffix.
                        .   MergeCircuits: If 'All', merges parallel
                        .   circuits
                        .   from merged to non-merged nodes.
                        .   Default 'None'.
                        .   If specified, overrides other options
                        .   except nodes-table.
```

metric_opt

```
Usage: metric_opt options
Replaces the IGP metrics of the core links in a plan with new metrics chosen
to maximize the throughput achievable by the resultant routings.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
        .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
        .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
        .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
        .   from .txt format of -out-file if parameter
        .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Input: .pln file to optimize.
    -out-file <value>: Output: Optimized .pln file.
```

```
Optional options:
    -report-file <value>: Optimization report
    -set-interfaces-table <file>: File containing <Interfaces> table of
    .    interfaces whose metrics should be set.
    .    Default is all core interfaces. See
    .    mate_select.
    -traffic-level <value>: Use traffic from this traffic level.
    .    Required if more than one level present.
    -min-nofailure-links-above <value>: If specified, minimizes the number of
    .    links with no-failure utilization above
    .    this percentage. Default = Inf, that is,
    .    feature not active.
    -incremental-time-limit <value>: Stops incremental iterations after
    .    specific amount of time (in seconds) has
    .    passed, and returns the best so far.
    .    Default = inf (that is, no limit).
    -enforce-latency-bounds <true/false>: Optimizes so that resulting routes respect
    .    specified latency bounds.
    -enforce-symmetric-metrics <true/false>: Preserves the symmetry of the target
    .    metrics. That is, the two interfaces on
    .    the same circuit have the same metric.
    .    Default is false.
    -opt-interfaces-table <file>: File containing <Interfaces> table of
    .    interfaces whose utilization should be
    .    optimized. Default is all interfaces. See
    .    mate_select.
    -non-opt-interfaces <value>: How to treat the interfaces that are not
    .    optimized. Options are
    .    'ignore': Does not monitor interfaces
    .    'increment': Default. Keep interface util
    .    < current + non-opt-increment
    .    'bound': Keep interface util <
    .    non-opt-bound
    -non-opt-increment <value>: If non-opt-interfaces is set to
    .    'increment', keep non-optimized interface
    .    utilizations below current utilization +
    .    this increment. Default 5%.
    -non-opt-bound <value>: If non-opt-interfaces is set to 'bound',
    .    keep non-optimized interface utilizations
    .    below this bound. Default 100%.
    -set-inactive <true/false>: If true (default), set failed elements to
    .    inactive. If false, current failures are
    .    ignored.
    -failure-sets <value>: A comma-separated list of types of failure
    .    scenarios to consider in optimization.
    .    Valid entries are 'circuits', 'nodes',
    .    'sites', 'ports', 'portcircuits',
    .    'externalEndPointMembers', 'l1nodes',
    .    'l1links' and 'srlgs'.
    .    Default: circuits,srlgs.
    -min-max-nofailure-util <true/false>: If true (default), chooses metrics to
    .    minimize the maximum utilization under
    .    normal (no failure) operations.
    -min-max-failure-util <true/false>: If true (default), chooses metrics to
    .    minimize the maximum utilization under all
    .    failure scenarios in the specified failure
    .    sets.
    -min-failure-links-above <value>: If specified, minimizes the number of
    .    links with failure utilization above this
    .    percentage. Default = Inf, that is,
    .    feature not active
    -nr-util-percent-bound <value>: Bound on nonresilient utilization to use
    .    in resilient optimization.
    -prevent-edge-leakage <true/false>: If true (default), metrics will not be
```

```
                      .   selected which result in demands exiting
                      .   and reentering the core, that is,
                      .   "leaking" into the edge. Unless edge
                      .   metrics are settable or sufficiently high,
                      .   this may limit optimization performance.
                      -max-iterations-no-improv <value>: Maximum number of iterations of the
                      .   incremental algorithm, without finding a
                      .   better solution, before optimizer
                      .   terminates. Default = 60.
                      -intersite-metric-upper-bound <value>: Keeps intersite core metrics below
                      .   specified bound, if this is possible
                      .   without reducing optimization performance.
                      .   Default = +Inf.
                      -intersite-metric-lower-bound <value>: Keeps intersite core metrics above
                      .   specified bound, if this is possible
                      .   without reducing optimization performance.
                      .   Default = 1.
                      -intrasite-metric-upper-bound <value>: Keeps intrasite core metrics below
                      .   specified bound, if this is possible
                      .   without reducing optimization performance.
                      .   Default = +Inf.
                      -intrasite-metric-lower-bound <value>: Keeps intrasite core metrics above
                      .   specified bound, if this is possible
                      .   without reducing optimization performance.
                      .   Default = 1.
                      -intrasite-metrics-below-intersite <true/false>: If true, restricts optimization
              solutions
                      .   to those for which all intrasite core
                      .   metrics are less than all intersite core
                      .   metrics. Default = false.
                      -target-metrics <value>: <type> is "current" (default) or "none".
                      .   If current, the tool attempts to keepthe
                      .   number of changes from current metrics as
                      .   small as possible. If "none",
                      .   default-target-metric is used as target
                      .   for all metrics, but the optimization to
                      .   minimize number of metric changes from
                      .   target is turned off.
                      -default-target-metric <value>: The default target metric, used if
                      -target-metrics set to "none". Default is
                      .   1.
                      -min-usage-improvement <value>: If the tool cannot achieve decreases in
                      .   usage (resilient or nonresilient, Mb/s)
                      .   more than this amount, it will not change
                      .   any metrics. Default = 0.051
                      -latency-correction-bound <value>: Will regard latencies that differ by less
                      .   than this bound as equal when optimizing
                      .   for average latency. Prevents, e.g.,
                      .   errors in ping latencies from affecting
                      .   ECMP between parallel links. Default = 0ms.
                      -latency-rounding <value>: Rounds latencies down to the nearest
                      .   multiple of this parameter. Used to remove
                      .   minor variations in latencies which
                      .   interfere with ECMP balancing. Default =
                      .   0ms (no rounding)
                      -optimization-type <value>: <type> is one of:
                      .   global:, reroutes globally
                      .   incremental (default): reroutes relative
                      .   to target metric routings, and tends to
                      .   use fewer metric changes relative to
                      .   target metrics
                      .   none: no optimization
                      -num-threads <value>: Maximum number of threads to use for
                      .   multi-core computations. Must be >= 1.
```

```
            .    If omitted, attempts to select optimal
            .    number of threads based on cores available
            .    on machine.


        Example:
        metric_opt -plan-file in.pln -out-file out.pln
```

metric_opt_tactical

```
        Usage: metric_opt_tactical options
        Replaces the IGP metrics of the core links in a plan with new metrics chosen
        to maximize the throughput achievable by the resultant routings.


        Generic options:
            -help <true/false>: Prints help message.
            -options-file <value>: Read options from <filename>.
            -version <true/false>: Prints version string
            -no-global-options <true/false>: Inhibits loading of global options file.
            -suppress-progress <true/false>: Do not show progress information. Default
            .    is true.
            -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
            .    Default = 30.
            -log-file <value>: Keep copies of warnings and errors in this
            .    file.
            -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
            .    from .txt format of -out-file if parameter
            .    exists. Default is 'false'.


        Required options:
            -plan-file <value>: Input: .pln file to optimize.
            -out-file <value>: Output: Optimized .pln file.


        Optional options:
            -report-file <value>: Optimization report
            -set-interfaces-table <file>: File containing <Interfaces> table of
            .    interfaces whose metrics should be set.
            .    Default is all core interfaces. See
            .    mate_select.
            -traffic-level <value>: Use traffic from this traffic level.
            .    Required if more than one level present.
            -min-nofailure-links-above <value>: If specified, minimizes the number of
            .    links with no-failure utilization above
            .    this percentage. Default = 100.
            -incremental-time-limit <value>: Stops incremental iterations after
            .    specific amount of time (in seconds) has
            .    passed, and returns the best so far.
            .    Default = inf (that is, no limit).
            -enforce-latency-bounds <true/false>: Optimizes so that resulting routes respect
            .    specified latency bounds.
            -enforce-symmetric-metrics <true/false>: Preserves the symmetry of the target
            .    metrics. That is, the two interfaces on
            .    the same circuit have the same metric.
            .    Default is false.
            -opt-interfaces-table <file>: File containing <Interfaces> table of
            .    interfaces whose utilization should be
            .    optimized. Default is all interfaces. See
            .    mate_select.
            -non-opt-interfaces <value>: How to treat the interfaces that are not
            .    optimized. Options are
            .    'ignore': Does not monitor interfaces
            .    'increment': Default. Keep interface util
            .    < current + non-opt-increment
```

```
.     'bound': Keep interface util <
.     non-opt-bound
-non-opt-increment <value>: If non-opt-interfaces is set to
.     'increment', keep non-optimized interface
.     utilizations below current utilization +
.     this increment. Default 5%.
-non-opt-bound <value>: If non-opt-interfaces is set to 'bound',
.     keep non-optimized interface utilizations
.     below this bound. Default 100%.
-set-inactive <true/false>: If true (default), set failed elements to
.     inactive. If false, current failures are
.     ignored.


Example:
metric_opt_tactical -plan-file in.pln -out-file out.pln
```

ml_backup

```
Usage: ml_backup <options>
Backup the MATE Live datastore.

Optional options:
    -directory <directory>: Where to store a backup of the datastore.
    : The default is set during the installation.
    -L <level>: Backup level. 0=full. 1=everything since last
    .     level 0. 2=everything since last level 1.
    .     The default is a full, level 0 backup.

Examples:

 ml_backup -directory /data/mld/backup
```

ml_insert_ctl

```
ml_insert_ctl [one of required options] [other options]

View/Modify/Control scheduled collection of MATE Live data

Generic options:
    -help: prints this message
Required options: (use only one of the following)
    -disable-scheduler: Pause the submission of
    .     collection of new data.
    .     NOTE: the currently running jobs
    .     will continue until completion
    -insert: Insert the specified plan file
    .     using the data collection
    .     scheduler.
    -enable-scheduler: Resume the submission of
    .     collection of new data
    -list: List data collection jobs. If
    .     no -size option is specified,
    .     the default listing will limit
    .     to most recent 30 job entries
    -status: Displays latest plan collection
    .     stats
    -rerun <jobIds>: Mark the data collection job by
    .     specified list of ids as able to
    .     run again
    -detail <jobId>: Shows detailed information of
```

```
    .   specified data collection job
    -cancel <jobIds>: Cancels data collection job by
    .   specified list of ids. A
    .   canceled data collection job
    .   will NOT block subsequent jobs.
Optional options:
    -jobstatus <jobStatus>: Data Collection Job Status:
    .   [CREATED|PENDING|IN_PROGRESS
    .   |COMPLETED|CANCELED
    .   |CANCELING|ERRORS|ABORTED]. Use
    .   with -list option only
    -time <timestamp>: Timestamp to be used for the
    .   plan file insertion. This is
    .   mandatory option if -insert is
    .   specified. The format is ISO
    .   8601, YYYY-MM-DDTHH:MM:SS
    -plan-file <filename>: The .pln plan file to be
    .   inserted. This is mandatory
    .   option if -insert is specified
    -handler <handler name>: The .json handler file name
    .   (located under
    .   $CARIDEN_HOME/etc/matelive/ml_in
    .   sert_handlers on the MATELive
    .   server) used to handle the
    .   insertion. This is mandatory
    .   option if -insert is specified
    -size <size>: The number of collection job
    .   entries to display. Use with
    -list option only.
    -username <userName>: MATE Live Username. Will prompt
    .   if needed.
    -password <password>: MATE Live Password. Will prompt
    .   if needed.
    -url <url>: Server url where MATE Live is
    .   hosted. If not specified, it
    .   defaults to
    .   https://localhost:8443
    -network <network name>: The name of a network partition
    .   in the datastore. Used by
    -insert and -list options.
```

ml_insert_plan

```
Usage: ml_insert_plan options
Inserts a plan file into a WAE Live datastore.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.
```

```
                    Required options:
                        -plan-file: Insert this plan file's Interfaces and
                        .   LSPs.

                    Optional options:
                        -conn <value>: ODBC database connection string of the
                        .   form:
                        .   'host=127.0.0.1;service=<port>;database=<d
                        .   b name>;server=<informix server
                        .   name>;protocol=onsoctcp;UID=<user
                        .   name>;PWD=<password>'
                        -filter-juniper <value>: A comma-delimited list of regular
                        .   expressions that a Juniper interface name
                        .   may not match.
                        -filter-juniper-incl <value>: A comma-delimited list of regular
                        .   expressions that a Juniper interface name
                        .   must match.
                        -extract-simulated-data <true/false>: Compute and extract simulated data. For
                        .   example the Shortest TE Path value for
                        .   LSPs with a resolved Actual Path.
                        -traffic-level <value>: If multiple traffic levels are found in
                        .   the plan file, this command will fail if
                        .   you don't use this option to specify which
                        .   to use.
                        -network <value>: Insert data into the specified network
                        .   segment of the datastore. If no name is
                        .   given, the 'default' network will be used.
                        -time <value>: Uses the specified time (in the local
                        .   timezone) instead of the current time. The
                        .   format is ISO 8601, YYYY-MM-DDTHH:MM:SS
                        -objects <value>: Specify the exact object types to insert
                        .   separated by comma. (e.g., if
                        .   Interfaces,LSPs is specified in this
                        .   option, only Interfaces and LSPs will be
                        .   inserted although there may be data for
                        .   other types in the plan file.)


                    Example:
                    ml_insert_plan -plan-file foo.pln -time 2014-01-01T00:00
                    -extract-simulated-data true -objects interfaces,nodes,inventory
                    Inserts the plan file 'foo.pln' into the WAE Live datastore
```

ml_insert_props_export

```
                    usage: ml_props_export [-h] [-v] [-u user] [-P password] [-s] [-p port] [-H
                        .   host] FILE
                    Prints all user properties.
                    Generic options:
                        -H,--host <arg> Host name of MATE Live server,
                        .   default=localhost.
                        -h,--help Print this message.
                        -P,--password <arg> Optional password. Will prompt if needed.
                        -p,--port <arg> Port number of MATE Live server, default=8080
                        .   (8443 when using SSL.)
                        -s,--ssl Use SSL/TLS for the connection.
                        -u,--user <arg> User name.
                        -V,--version Prints MATE Live server version.


                    Example:
                    ml_props_export -p 8443 -u myname
```

ml_insert_props_import

```
usage: ml_props_import [-h] [-v] [-replace] [-u user] [-P password] [-s]
    .   [-p port] [-H host] FILE
Imports user properties from a file.
Generic options:
    -H,--host <arg> Host name of MATE Live server,
    .   default=localhost.
    -h,--help Print this message.
    -P,--password <arg> Optional password. Will prompt if needed.
    -p,--port <arg> Port number of MATE Live server, default=8080
    .   (8443 when using SSL.)
    -r,--replace Delete existing properties before import
    -s,--ssl Use SSL/TLS for the connection.
    -u,--user <arg> User name.
    -V,--version Prints MATE Live server version.


Example:
ml_props_import -p 8080 -H localhost /tmp/myprops.xml
Import file must reside on MATE Live host
```

ml_read

```
Loaded configuration file: /opt/cariden//etc/config/config.xml
usage: ml_read [options] command

Querying the data source.
Generic options:
    -format <format> the output format (XML/JSON)
    -help print this message
    -logfile <file> dump warnings and errors into this file
    -network <network> use network partition
    -verbosity <arg> Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
Examples:
ml_read commands.# list what commands are available
ml_read -help find.# get help on the find command
ml_read tables.# list what tables are available
ml_read -format JSON tables.# list the tables in JSON format
ml_read find Interfaces.# list all items in Interfaces
ml_read -format XML find Interfaces # list all interfaces in XML
ml_read networks.# list what networks are available
```

ml_restore

```
Usage: ml_restore <options>
Restore the MATE Live datastore.

Optional options:
    -directory <directory>: Where to recover a backup of the datastore.
    : The default is set during the installation.

Examples:

 ml_restore -directory=/data/mld/backup
```

mld

```
Usage: mld options

 Install and manage the MATE Live datastore.

Generic options:
    -help: Prints help message.
    -version: Displays the datastore version.

Required options:

    -action <value>: 'start': Starts the mld server.
    : 'stop': Shuts down the mld server.
    : 'status': Prints the mld server status.
    : 'restart': Stops and then restarts the mld
    .   server.
    : 'upgrade': Upgrades an existing datastore and
    .   creates a new mld server.
    : 'install': Installs a new mld server and
    .   datastore, and starts the mld
    .   server.

Optional options:
    -mld <directory>: mld server installation directory. Use with
    .   -action install and -action upgrade. Default is
    .   $CARIDEN_ROOT/software/mld/current.
    -mldata <directory>: Directory where all application data is stored.
    .   This includes the datastore, report output, and
    .   other application data. Use only with -action
    .   install. Default is $CARIDEN_ROOT/data/mldata.
    -datastore <directory>: Datastore directory. Use only with -action
    .   install. For better performance, create a
    .   separate ext2 partition for this directory.
    .   Default is $CARIDEN_ROOT/data/mldata/datastore.
    -backup <directory>: Default directory for saving datastore backups.
    .   Use with -action install and -action upgrade.
    .   Default is $CARIDEN_ROOT/data/mldata/backup.
    -size [DSML]: Required with -action install. Allocate
    .   schema based upon the anticipated size of the
    .   datastore.
    .   D = demo, very small, less than 5GB
    .   S = small, less than 80GB
    .   M = medium, less than 160GB
    .   L = large, less than 800GB
    -cpus <N>: Reserve this number of CPUs for the mld server.
    .   Use only with -action install. Size D can only
    .   support a single CPU. Default is half of the
    .   total CPUs.
Example:

This example installs a small mld server into $CARIDEN_ROOT/data/matelive,
and sets the number of CPUs to 4.

mld -action install -mldata /data/matelive -cpus 4 -size S
```

modify_demand_traffic

```
Usage: modify_demand_traffic options
Modify the traffic for the selected demands according to the specified
method. Only one method can be specified per call.
```

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file for modify_demand_traffic.
    -out-file <value>: Output plan file from
    .    modify_demand_traffic.

Optional options:
    -traffic-levels <value>: Comma separated list of traffic levels.
    .    Default: all traffic levels in the plan
    .    file.
    -change-percent <value>: If specified, the traffic for the selected
    .    demands will be modified according to
    .    new_val = old_val * (100 +
    .    change_percent)/100. Range: -100 to inf.
    -add-proportional <value>: The specified positive or negative
    .    bandwidth amount will be added to the
    .    traffic of the selected demands according
    .    to new_val = min(0, (old_val +
    .    amount*(old_val/sum(old_vals))))
    -add-uniform <value>: The specified positive or negative
    .    bandwidth amount will be evenly added to
    .    the traffic of the selected demands. For
    .    example, if the specified amount is -100
    .    and there are 4 selected demands, subtract
    .    25 from the traffic for each demand, while
    .    making sure the traffic does not go
    .    negative.
    -set-fixed <value>: Change the traffic for each selected
    .    demand to a fixed amount.
    -set-proportional <value>: The specified positive bandwidth amount
    .    will be assigned to the traffic of the
    .    selected demands according to new_val =
    .    amount*(old_val/sum(old_vals))
    -set-uniform <value>: The specified positive bandwidth amount
    .    will be evenly assigned to the traffic of
    .    the selected demands.
    -demands-table <file>: File containing <Demands> table of demands
    .    affected. Default is all. See mate_select.

Example:
modify_demand_traffic -plan-file plana.pln -out-file planb.pln
    -change-percent 5
```

mrtg_poll_interfaces

```
Usage: mrtg_poll_interfaces options
```

```
      .    read collected MRTG data and extract interface traffic measurments

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <file.txt>: File containing at least a <Nodes> and
    .    <Interfaces> table. Traffic from will be
    .    added to interfaces in this plan file and
    .    written to the out-file.
    -config-file <filename>: MRTG config file.

Optional options:
    -out-file <file.txt>: The output file with the collected
    .    interface traffic information. Default, if
    .    not provided, is the plan-file.
    -only-plan-interfaces <true/false>: If true (default) only collects traffic
    .    for interfaces connecting two nodes in
    .    plan. If false, collects for all
    .    discovered interfaces.
    -external-ip-only <true/false>: If true (default) calculates total source
    .    and destination traffic for each node by
    .    summing traffic over only external
    .    interfaces with an IP address. If false,
    .    sums over all external interfaces. Note,
    .    only relevant if -only-plan-interfaces is
    .    false
    -traffic-level-name <value>: The traffic level name. Default is
    .    'Default'.
    -time <timestamp>: Extracts traffic data from MRTG RRD files
    .    for closest time stamp to this time.
    .    Format: YYMMDD_HHMM. Default is current
    .    time.

Example:
mrtg_poll_interfaces -plan-file /mate/infile.txt -out-file /mate/outplan.txt
-config-file mrtg.cfg
Retrieves traffic measurments collected by MRTG using the configuration file,
and writes it to a new column in the same table in '/mate/outplan.txt'
```

network_options_manage

```
View and set network options in the plan file. These are options that
determine global routing behavior.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
```

```
                      -no-global-options <true/false>: Inhibits loading of global options file.
                      -suppress-progress <true/false>: Do not show progress information. Default
                      .   is true.
                      -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                      .   Default = 30.
                      -log-file <value>: Keep copies of warnings and errors in this
                      .   file.
                      -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                      .   from .txt format of -out-file if parameter
                      .   exists. Default is 'false'.

                  Required options:

                  Optional options:
                      -plan-file <value>: Input plan file
                      -out-file <value>: Output plan file
                      -action <value>: 'set' a network option or 'view' all
                      .   option settings in plan. Default is 'view'.
                      -option <value>: Network option to set. Required if action
                      .   is 'set'. To see a list of options and and
                      .   their values, use -action -view.
                      -option-value <value>: Value of option. Required if action is
                      .   'set'.
```

parse_configs

```
                  Usage: parse_configs imports config files into a new or an existing plan file.

                  Generic options:
                      -help <true/false>: Prints help message.
                      -options-file <value>: Read options from <filename>.
                      -version <true/false>: Prints version string
                      -no-global-options <true/false>: Inhibits loading of global options file.
                      -suppress-progress <true/false>: Do not show progress information. Default
                      .   is true.
                      -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                      .   Default = 30.
                      -log-file <value>: Keep copies of warnings and errors in this
                      .   file.
                      -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                      .   from .txt format of -out-file if parameter
                      .   exists. Default is 'false'.

                  Required options:
                      -out-file <file_name>: Output plan file name (.pln/.txt).
                      .   Use - for standard output.

                  Optional options:
                      -log-level <value>: Log level, one of: [off, activity, fatal,
                      .   error, warn, notice, info, debug, trace]
                      .   Default is 'error'.
                      -plan-file <file_name>: Input plan file name (.txt/.pln) to merge
                      .   with configs. Default is ''.
                      -data-dir <dirname>: Directory containing router config files
                      .   to be parsed. Default is './config'.
                      -filenameregexp <regexp>: Shell regular expression for filtering on
                      .   file names to be parsed, use single quotes
                      .   to surround the expression, ie: '*' means
                      .   all files.The expression will be evaluated
                      .   on the full path for the files. Default is
```

```
.    '*'.
-igp-protocol <value>: Network IGP protocol type whose topology
.    to discover, one of: [none, ospf, isis]
.    Default is 'isis'.
-ospf-proc-id <value>: OSPF Process ID to select.
.    The default value selects the first OSPF
.    Process ID found among all configuration
.    files.
.    If number/name select OSPF Process ID
.    matching this number/name from each
.    configuration file.
.    If 'all' then select all the OSPF process
.    IDs from each configs.
.    Default is ''.
-ospf-area <value>: The Area ID to parse information for. Can
.    be specified as an integer, an IP address
.    or 'all'. If 'all', then parse the
.    information for all areas. Default is
.    '0.0.0.0'.
-isis-level <value>: IS-IS Level of the interfaces to parse.
.    One of: [both, 1, 2, invalid]'.
.    If 'both' is specified then parse the
.    information at both levels. Default is '2'.
-isis-instance-id <value>: IS-IS Instance ID or name to select only
.    when multiple instances exist.
.    The default value will make it take the
.    first one in config. Default is ''.
-asn <value>: BGP Autonomous System Number. Only include
.    nodes in this ASN. Default is ''.
-select-loopback-int <value>: Loopback interface number to use for the
.    router IP. Only valid for Cisco routers.
.    Default is '0'.
-include-object <list>: Comma separated list of config objects to
.    parse.
.    Each element is one of: [base, lag, srlg,
.    rsvp, vpn, frr, sr_lsps].
.    BASE: Interfaces and nodes. Default value.
.    LAG: Link Aggregation Group and
.    link-bundle (Ethernet, POS) member ports.
.    SRLG: Shared Risk Link Group member
.    interfaces.
.    RSVP: RSVP-TE LSPs, LSP paths, and path
.    hops.
.    VPN: Virtual Private Networks.
.    FRR: Fast reroute LSPs.
.    SR_LSPS: Segment Routing LSP paths.
.    Default is 'base'.
-augment-nodes <value>: Only applicable when updating an existing
.    plan file.
.    One of: [old, new, both]
.    old: only update from config files
.    corresponding to nodes already present in
.    the plan file.
.    new: only update from config files
.    corresponding to nodes not present yet in
.    the plan file.
.    both: update from any config files
.    regardless to the fact that the
.    corresponding node is present or not in
.    the plan file. Default is 'both'.
-build-topology <true/false>: Build network topology after configuration
.    parsing. Default is 'true'.
-shared-media <true/false>: Create pseudonodes and interfaces for
.    matching circuits for shared media such as
```

```
.    Ethernet LANs. Default is 'true'.
-lag-port-match <value>: Match LAG ports to neighbor nodes. One of:
.    [none, guess]. The 'guess' option will
.    match contained ports based on ascending
.    contained port names/numbers on aggregated
.    ports on both ends of a circuit. Default
.    is 'guess'.
-lic-product <value>: Use the license coming from one of these
.    sources: [collector, design]. Defines
.    which type of license should be used.
.    Default is 'collector'.
```

parse_igp

```
Usage: parse_igp options
.    Create a WAE Design plan file from a database

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -igp-protocol <ospf/ospfv3/isis/isisv6>: The IGP of the database. 'OSPF', 'OSPFv3',
    .    'ISIS', or 'ISISv6'.
    -out-file <filename>: The file to write the plan file to.

Optional options:
    -isis-level <value>: which level to pick from the database: 1,
    .    2 or both. Default is 2.
    -plan-file <value>: Existing plan to merge with configs.
    -database-file <filename>: File containing the output of a "show"
    .    database command on a router:
    .    Cisco, OSPF:
    .    show ip ospf database router
    .    Cisco, ISIS:
    .    show isis database verbose
    .    Juniper, OSPF:
    .    show ospf database extensive
    .    Juniper, ISIS:
    .    show isis database extensive
    .    If <filename> is "-", read from stdin.
    -database-dir <dirname>: Directory containing multiple database
    .    files. Default is 'igpdbdir'.Either
    .    database-file or database-dir must be
    .    specified
    -lic-product <value>: Specify the base product license
    .    (Collector or Design) to check out.
    .    Defaults to checking out a Collector
    .    license.
```

```
                    -use-dns <true/false>: whether DNS should be use to resolve
                    .   router IP addresses. Default is false
                    -area <value>: the numeric value of the area that should
                    .   be fetched or 'all' Default is '0'
                    -find-ip-manage <true/false>: whether parsing should attempt to find the
                    .   Manage IP addresses in the database.
                    .   Default is true
                    -create-subnet-links <true/false>: Create links based on subnet-matching,
                    .   even if adjacencies are missing. Default:
                    .   true
                    -get-segments <true/false>: If true, collects Segment Routing
                    .   information from ISIS database. Only valid
                    .   for ISIS on CISCO IOS XR routers. Default
                    .   is false.
```

poll_ldp

```
                    Usage: poll_ldp options
                    .   poll the network and/or login to routers to get LDP info and
                    statistics

                    Generic options:
                    -help <true/false>: Prints help message.
                    -options-file <value>: Read options from <filename>.
                    -version <true/false>: Prints version string
                    -no-global-options <true/false>: Inhibits loading of global options file.
                    -suppress-progress <true/false>: Do not show progress information. Default
                    .   is true.
                    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                    .   Default = 30.
                    -log-file <value>: Keep copies of warnings and errors in this
                    .   file.
                    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                    .   from .txt format of -out-file if parameter
                    .   exists. Default is 'false'.

                    Required options:
                    -plan-file <file.txt>: File containing at least a <Nodes> and
                    .   <Interfaces> table. The 'IPAddress' column
                    .   of the <Nodes> table is used to access the
                    .   routers.

                    Optional options:
                    -auth-file <value>: Authentication file name. Default is
                    .   'auth.enc' in the Cariden configuration
                    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
                    .   or CARIDEN_HOME/etc).
                    -auth-prompt <true/false>: If true (default) will prompt for default
                    .   authentication details if none found in
                    .   authentication file. Otherwise just uses
                    .   authentication file. See mate_auth_init.
                    -net-access-file <net_access.txt>: Network access configuration file. Default
                    .   is 'net_access.txt' in the Cariden
                    .   configuration path.
                    -net-access-router-mode <value>: Uses specified network access router mode
                    .   as defined in the network access
                    .   configuration file.
                    -net-access-global-mode <value>: Uses specified network access global mode
                    .   as defined in network access configuration
                    .   file.
```

```
-net-recorder <off/record/play>: Specifies the network recorder mode. In
.   'record' mode, messages to and from the
.   live network are recorded in the
.   net-record-file as the tool is run. In
.   'play' mode, network messages from the
.   net-record-file are played back through
.   the tool as if they came from the live
.   network, thus providing offline debugging
.   of network collection. In 'off' mode, no
.   recording or playback is performed.
.   Default is 'off'.
-net-record-file <file.txt>: The file to record messaged to or playback
.   messages from. Used for net-recorder
.   operation. In 'record' mode, if the
.   log-file option is specified, messages are
.   recorded into the log (Default).
-session-type <telnet/ssh>: The type of session to use: 'telnet' or
.   'ssh'. Default 'telnet'.
-port <+integer>: The port number to use for telnet/ssh
.   session. Default = 23(telnet) or 22 (ssh).
-login-record-mode <off/record/play>: Specifies the login recorder mode. In
.   'record' mode, messages to and from the
.   live network are recorded in the
.   login-record-dir as the tool is run. In
.   'play' mode, network messages from the
.   net-record-file are played back through
.   the tool as if they came from the live
.   network, thus providing offline debugging
.   of network collection. In 'off' mode, no
.   recording or playback is performed.
.   Default is 'off'.
-login-record-dir: The directory to record messaged to or
.   playback messages from. Used for
.   login-record-mode operation. Default is
.   'loginRecordDir'.
-out-file <file.txt>: The output file with the collected LDP
.   information. Default, if not provided, is
.   the plan-file
-polling-interval <integer>: Time delay, in seconds, between the
.   beginning of one counter polling and the
.   beginning of the next. Default 300. The
.   timeout for SNMP queries is adjusted
.   accordingly so that all queries return
.   before the end of the polling-interval.
-number-of-samples <integer>: How many intervals will be sampled. (One
.   less than the number of pollings). Default
.   is 1.
-traffic-level-name <value>: The traffic level name. Default is
.   'Default'.
-data-dir <dirname>: <dirname> is a directory containing LDP
.   config files. Default is 'ldpconfigs/'
-save-configs <true/false>: Specifies whether the LDP configs are
.   saved to the data-dir or discarded.
.   Default is false.
-min-prefix-length <integer>: the minimum prefix length to allow in
.   matching LDP IP with interface subnet for
.   determining DestNode. All interfaces with
.   equal or larger prefix lengths, but less
.   than 32, will be considered. Default 27
.   (/27 subnet prefix length).
-area <value>: The area for which LDP information should
.   be collected or 'all'. Default is 'all'

    Example:
```

```
poll_ldp -plan-file /mate/inplan.txt -out-file /mate/outplan.txt -data-dir
/mate/configs
Collects LDP, info and statistics, for routers listed in '/mate/infile.txt',
via Login or SNMP, and writes it to '/mate/outfile.txt' Login, when
available, is the preferred method for Cisco CRS routers, otherwise, SNMP is
used.
```

rename_nodes

```
Usage: rename-nodes -plan-file <input file> -out-file <output file>
-remove-suffix <suffix>.

Remove suffices from selected nodes.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file for rename_nodes.
    -out-file <value>: Output plan file with renamed nodes.
    -remove-suffix <value>: Suffix to remove from selected node names.
    .   For example '.network.net'.

Optional options:
    -nodes-table <file>: File containing <Nodes> table with nodes
    .   to be renamed. Default, if omitted, is all
    .   nodes.
    -remove-from-sites <true/false>: If true (default), applies same operation
    .   to the site name of any site containing
    .   one of the selected nodes.
```

report_demand_groupings

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
```

```
.    exists. Default is 'false'.

Required options:
    -plan-file <value>: WAE Design plan file.
    -out-file <value>: WAE Design plan file containing generated
    .    report.

Optional options:
```

resolve_plan

```
Some plan configurations may be unmatched or refer to elements outside of the
modelled network. For example, destination nodes of LSPs in the plan may not
themselves be in the plan.
This tool attempts to resolve these references to elements in the plan.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file for resolve_plan.
    -out-file <value>: Resolved output plan file.

Optional options:
    -named-paths <true/false>: If true (default), resolve hops in all
    .    named paths.
    -actual-paths <true/false>: If true (default), resolve hops in all
    .    actual paths.
    -destinations <true/false>: If true (default), resolve all LSP
    .    destinations.
```

rsvp_te_opt

```
Usage: RSVP_TE_opt options

Create or modify fully explicit RSVP LSP paths for selected LSPs. Similarly
to RSVP TE, LSPs are routed on shortest paths (either defined by TE metric or
latency) subject to reservable bandwidth constraints. However, unlike
distributed RSVP TE routing, the tool attempts to optimize the paths globally
for better performance.

Although setup bandwidth values are used to keep reservations below total
reservable bandwidths of all selected LSPs, they are set to 0 in the output
plan to ensure routability. Reservable bandwidths of any non-selected LSPs
are ignored.

It is possible to create secondary LSPs for each primary, and specify
```

```
disjointness constraints between primary and secondary paths.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: A plan file
    -out-file <value>: Output plan file, updated with optimized
    .   LSP Paths.

Optional options:
    -init-lsp-groups <true/false>: If true, use the tables specified below to
    .   classify the LSPs in the LSP table 'Group'
    .   column. The tables are applied in the
    .   following order: 'opt', 'fit', 'fix'. All
    .   LSPs not specified are marked as 'ignore'.
    .   If false (default), use existing column
    .   entries.
    -opt-lsps-table <file>: LSPs in this table are routed or rerouted
    .   to optimize path length (based on
    .   interface metric in 'Metric' column),
    .   subject to bandwidth constraints. Default
    .   is empty.
    -fit-lsps-table <file>: LSPs in this table can be rerouted only to
    .   satisfy bandwidth constraints. Default is
    .   empty. If valid route does not yet exist
    .   for an LSP, it is put in 'opt' group.
    -fix-lsps-table <file>: LSPs in this table should not be moved
    .   from current route. Default is empty. If
    .   valid route does not yet exist for an LSP,
    .   it is put in 'opt' group.
    -init-lsp-bwreq <value>: How to initialize the LSP table 'BWReq'
    .   column. One of 'setupbw' (default),
    .   'traffmeas', 'traffsim', 'none'. If
    .   'none', use existing column entries.
    -init-lsp-bwreq-sec <value>: How to initialize the bandwidth of
    .   secondary LSP Paths. One of 'zero' or
    .   'prim'. If 'zero' (default), zero required
    .   bandwidth is used. If 'prim', the same
    .   required bandwidth as for primary LSP
    .   paths is used. The SetupBW of secondary
    .   LSP Paths is initialized in the output
    .   file based on their required bandwidths.
    -set-bw-prim <value>: How to set the LSP 'SetupBW' in the output
    .   file. One of 'zero' (default),
    .   'init-lsp-bwreq', 'keep'. If 'keep', keep
    .   existing entries
    -init-int-bwbound <value>: How to initialize the Interface table
    .   'BWBound' column. One of
    .   'resvbw' (default): Use reservable
    .   bandwidth (ResvBWSim) on interface
    .   'capacity': Use simulated capacity
```

```
.    on (CapacitySim) on interface
.    'capavailsim': Available capacity
.    (excluding simulated traffic) on interface
.    'none': use existing column
.    entries.
-init-int-metric <value>: How to initialize the Interface table
.    'Metric' column. One of
.    'temetric' (default): use interface
.    TEMetric
.    'delay': use circuit delay
.    'none': use existing column
.    entries.
-traffic-level <value>: Traffic level to use when 'init-lsp-bwreq'
.    or 'init-int-bwbound' need traffic.
.    Required if more than one level present.
-service-class <value>: Service class to use when 'init-lsp-bwreq'
.    or 'init-int-bwbound' need traffic.
.    Default is the 'undifferentiated' class.
-queue <value>: Queue to use when 'init-lsp-bwreq' or
.    'init-int-bwbound' need traffic.
-disjoint-paths <value>: One of
.    'None': (Default) Do not create
.    disjoint paths
.    'PrimSec': Create disjoint primary
.    and secondary paths for LSPs
.    'DisjointGroups': Create disjoint paths
.    between LSPs in Disjoint Groups.
-disjoint-circuit-priority <value>: 'ignore', '1' (default), '2', or '3'
-disjoint-srlg-priority <value>: 'ignore', '1', '2' (default), or '3'
-disjoint-node-priority <value>: 'ignore' (default), '1', '2', or '3'
-disjoint-site-priority <value>: 'ignore' (default), '1', '2', or '3'
-disjoint-l1link-priority <value>: 'ignore' (default), '1', '2', or '3'
-parameter-namespace <value>: Default 'TEOpt'. Initializes and expects
.    columns in plan file under this namespace.
```

sam_getplan

The `-pass` parameter is an MD5 hash password that can be generated using the `md5hash` tool that ships with every SAM server and client.

```
Usage: sam_getplan options
.    extracts a MATE plan file from a SAM server

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -out-file <filename>: sends output to <filename>
```

```
Optional options:
    -log-level <value>: Log level, one of: [off, activity, fatal,
    .    error, warn, notice, info, debug, trace]
    .    Default is 'error'.
    -lag-port-match <value>: Indicates how local and remote ports are
    .    matched in port-circuits. Values are
    .    "exact", "none", and "guess". If "none",
    .    no port-circuits are created. If "guess"
    .    (default), port-circuits are created to
    .    match as many ports as possible, even if
    .    not possible deterministically. If
    .    "exact", match deterministically.
    -vpn-types <list>: A comma-separated list. Extracts VPNs of
    .    this type from SAM. Possible values are
    .    'VLL:Epipe','VPLS' and 'VPRN'. Default is
    .    the empty list.
    -include-qos-measurements <true/false>: Include interface queue traffic
    .    measurements. Default is false.
    -include-queue-names <true/false>: Collect device QoS queue names. Default is
    .    false.
    -lag <true/false>: Enables discovery of LAG port members.
    .    Default is false.
    -include-lag-port-measurements <true/false>: Include LAG port traffic measurements.
    .    Default is false.
    -include-vpn-measurements <true/false>: Collects VPN access interface traffic
    .    measurements for the selected -vpn-types.
    .    Default is false.
    -server <URL>: server's URL
    -server-protocol <protocol>: server's access protocol, either http or
    .    https. Default is http
    -port <portnumber>: server's port. Default for http is 8080,
    .    for https is 8443
    -backupserver <backup URL>: backup server's URL
    -backupport <backup portnumber>: backup server's port. Default for http is
    .    8080, for https is 8443
    -user <username>: <username> is server's account name
    -pass <password>: <password> is user's Md5 password
    -util-stats <statsoption>: Either of nostats or loggedstats. Default
    .    is nostats
    -num-logged-measwin <num>: Number of measurement aggregation windows
    .    (traffic levels) collected. Set to '1' to
    .    use the latest set of logged measurements.
    .    Default: 1
    -logged-measwin-length <minutes>: Length of sliding measurement aggregation
    .    window for each set of logged stats. It
    .    should be greater than twice the
    .    collection interval. Default: 30 minutes.
    -proxy <URL>: URL of proxy server if needed
    -proxyport <portnumber>: Proxy port for proxy server
    -only-adminup-lsps <true/false>: If true, only LSPs that are
    .    administratively up will be considered.
    .    default is true.
    -lsp-actual-path <value>: None or Actual. To save the actual path of
    .    LSP in ActualPathHops table. Default is
    .    none.
    -include-lsp-measurements <true/false>: include LSP traffic measurements. Default
    .    is false.
    -include-frr-lsp <true/false>: include FRR LSP ( backup and bypass )
    .    information. Default is false.
    -replay-mode <off/replay/log>: If 'off' is used then the option
    .    replay-file must not be defined. If either
    .    'log' or 'replay' are used, then
    .    replay-file must be defined. Default value
```

```
.   is 'off', and is the only one supported.
-replay-file none: Replay file name for either logging the
.   session or replaying the session based on
.   replay-mode
-igp-protocol <protocol>: Either of ospf or isis. Default is ospf.
-include-mpls <true/false>: Enables collection of MPLS LSP
.   configuration and namedpaths. The default
.   is true.
-isis-level <value>: defines which isis level interfaces are
.   considered. "1" indicated level_1, "2"
.   indicates level_2 and "both" implies both
.   levels. Default is "2"
-srlg <true/false>: Enables discovery of SRLG members. Default
.   is false.
-sdp <true/false>: Enables mapping of SDPs to LSPs and
.   collection of traffic measurements. If
.   many LSPs are associated with an SDP, then
.   distribute SDP traffic evenly across the
.   LSPs. Default is false.
-use-combined-qos-stats <true/false>: Uses the Combined Accounting Policy for
.   collecting network interface queue stats.
.   Default is false.
-ospf-area <all|number|ip-address>: The area whose topology to fetch or 'all'
.   for all areas. The area ID can be
.   specified as an integer or as an IP
.   address. Default is '0'.

Example: sam_getplan -out-file out.txt -server samserver.company.com -port
8080 -user usr -pass 8348174765439deb96687cf5694b3227
```

set_as_relationships

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file
    -out-file <value>: Output plan file

Optional options:
    -as-table <value>: File containing <AS> table of AS's.
    .   Default is all external AS's in plan. Must
    .   contain at least an ASN column.
    -as <value>: ASN of an AS in the plan. If specified,
    .   overrides as-table.
    -in-mesh <true/false>: If true, places selected AS's in external
    .   mesh. If false, removes them from mesh. If
    .   omitted, does nothing.
```

```
                         -to-as <value>: ASN of an AS in the plan. Used in Routing
                         .    Policy specification. If omitted, Routing
                         .    policies will be set to/from arbitrary
                         .    AS's.
                         -forward <value>: The Routing Policy from specified AS's to
                         .    the to-as will be set to this. Options
                         .    are:
                         .    'shortestExit'
                         .    'respectMEDs'
                         .    If omitted, does nothing.
                         -backward <value>: The Routing Policy from the to-as to
                         .    specified AS's will be set to this.
                         .    Options are:
                         .    'shortestExit'
                         .    'respectMEDs'
                         .    If omitted, does nothing.
```

set_up_bw_initializer

```
               Usage: set_up_bw_initializer options
               Initialize the setup BW of tunnels to the maximum amount of traffic passing
               through across selected traffic levels.

               Generic options:
                   -help <true/false>: Prints help message.
                   -options-file <value>: Read options from <filename>.
                   -version <true/false>: Prints version string
                   -no-global-options <true/false>: Inhibits loading of global options file.
                   -suppress-progress <true/false>: Do not show progress information. Default
                   .    is true.
                   -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                   .    Default = 30.
                   -log-file <value>: Keep copies of warnings and errors in this
                   .    file.
                   -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                   .    from .txt format of -out-file if parameter
                   .    exists. Default is 'false'.

               Required options:
                   -plan-file <value>: A plan file
                   -out-file <value>: Output plan file, updated with initialized
                   .    LSPs.

               Optional options:
                   -bw-from-traffic <true/false>: If true (default), Setup BW is set to the
                   .    maximum amount of traffic forwarded
                   .    through each LSP across selected traffic
                   .    levels.
                   -traffic-levels <value>: Comma-separated list of traffic levels to
                   .    use in setting bw. Default is all.
                   -loadshare-from-bw <true/false>: If true, LSP loadshare values are set
                   .    equal to setup BW. Default false.
                   -lsps-table <file>: File containing <LSPs> table of LSPs to
                   .    use. Default is all.
```

sim_analysis

```
               Usage: sim_analysis options
```

```
Runs simulation for the given scenarios and generates plan file.
By default, run with 8 thread(s) on this machine.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <value>: Input plan file.
    -out-file <value>: Output plan file.

Optional options:
    -failure-sets <value>: Comma separated list of failure sets to
    .    take into account. Valid entries are
    .    'circuits', 'nodes', 'sites', 'ports',
    .    'portcircuits', 'externalEndPointMembers',
    .    'l1nodes', 'l1links' and 'srlgs'. The
    .    default is the empty list (no failures).
    -traffic-levels <value>: Comma-separated list of traffic levels.
    .    Default: all traffic levels in the plan
    .    file.
    -record-failures-within-bound <value>: Record failures causing interface
    .    utilizations within this percent of
    .    worst-case utilization. Default 0.
    -max-num-failures-per-interface <value>: This is the maximum number of failure
    .    scenarios per interface. Default is 10.
    -wc-latency <true/false>: If true, calculate worst-case latencies
    .    for each demand, and the failures that
    .    cause them. Default false.
    -wc-vpn <true/false>: If true, calculate worst-case utilizations
    .    and latencies for each VPN. Default false.
    -demand-paths <value>: Export demand paths for all failure
    .    scenarios analyzed to <file>.
    -no-failure-diff <true/false>: If true, and -demand-paths specified, only
    .    paths that differ from the routing in the
    .    no-failure case will be exported. Default
    .    is false.
    -set-inactive <true/false>: If true (default), set failed elements to
    .    inactive. If false, current failures are
    .    ignored.
    -num-threads <value>: Maximum number of threads to use for
    .    multi-core computations. Must be >= 1.
    .    If omitted, attempts to select optimal
    .    number of threads based on cores available
    .    on machine.

Example:
sim_analysis -plan-file in.pln -out-file out.pln
```

snapshot

```
Usage: snapshot options
    .    execute the tasks defined in the configuration file.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -config-file <filename>: The name of the configuration file that
    .    defines snapshot behavior.

Optional options:
    -log-level <value>: Log level, one of: [off, activity, fatal,
    .    error, warn, notice, info, debug, trace]
    .    Default is 'error'.
    -use-flume { true | false }: Send all log messages to a flume agent.
    .    Default is 'false'.
    -flume-server <server ip address or server name>: Name or address for the server
running a
    .    flume agent. Default is 'localhost'.
    -flume-port <number>: Port number to which the flume agent is
    .    bound. Default is '41417'.
    -seed-router <seed-router>: The name or IP address of the seed router
    .    from which discovery can collect data.
    .    Default is 'unspecified'.
    -verify-config <true|false>: If true, only verify the format of the
    .    config file. This option does not execute
    .    defined tasks. Default is 'false'.
    -extra <list>: The extra name-value pairs that can be
    .    used as environment variables in the
    .    configuration file. Use ";" to separate
    .    the pairs. Example. -extra
    .    "arg1=ARG1;arg2=ARG2" Default is
    .    'unspecified'.
    -log-to-screen <true|false>: Send log messages to stderr before any log
    .    file is used, default is true Default is
    .    'true'.
    -log-start-new <true|false>: Remove previous log if any. Default is
    .    'true'.
    -dry-run <true|false>: do not execute any commands, write instead
    .    to standard output all those command lines
    .    that would otherwise be executed,
    .    regardless of the individual outcomes
    .    Default is 'false'.


Example: snapshot -network [network] -seed-router [seedRouter] -config-file
[cfgFile] -log-level [level] -log-to-screen [true/false] -h -help
```

```
                      [2015-06-11 01:33:07,385 CDT] [FATAL ] [snapshot] [12188]
                      com.cariden.mate.util.ShowHelpTerminationException: help requested
```

snmp_find_interfaces

```
                  Usage: snmp_find_interfaces options
                      .    access a network and collect interface information

                  Generic options:
                      -help <true/false>: Prints help message.
                      -options-file <value>: Read options from <filename>.
                      -version <true/false>: Prints version string
                      -no-global-options <true/false>: Inhibits loading of global options file.
                      -suppress-progress <true/false>: Do not show progress information. Default
                      .    is true.
                      -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                      .    Default = 30.
                      -log-file <value>: Keep copies of warnings and errors in this
                      .    file.
                      -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                      .    from .txt format of -out-file if parameter
                      .    exists. Default is 'false'.

                  Required options:
                      -plan-file <file.txt>: File containing at least a <Nodes> table.
                      .    The 'IPAddress' column is used to access
                      .    the routers.

                  Optional options:
                      -auth-file <value>: Authentication file name. Default is
                      .    'auth.enc' in the Cariden configuration
                      .    path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
                      .    or CARIDEN_HOME/etc).
                      -auth-prompt <true/false>: If true (default) will prompt for default
                      .    authentication details if none found in
                      .    authentication file. Otherwise just uses
                      .    authentication file. See mate_auth_init.
                      -net-access-file <net_access.txt>: Network access configuration file. Default
                      .    is 'net_access.txt' in the Cariden
                      .    configuration path.
                      -net-access-router-mode <value>: Uses specified network access router mode
                      .    as defined in the network access
                      .    configuration file.
                      -net-access-global-mode <value>: Uses specified network access global mode
                      .    as defined in network access configuration
                      .    file.
                      -net-recorder <off/record/play>: Specifies the network recorder mode. In
                      .    'record' mode, messages to and from the
                      .    live network are recorded in the
                      .    net-record-file as the tool is run. In
                      .    'play' mode, network messages from the
                      .    net-record-file are played back through
                      .    the tool as if they came from the live
                      .    network, thus providing offline debugging
                      .    of network collection. In 'off' mode, no
                      .    recording or playback is performed.
                      .    Default is 'off'.
                      -net-record-file <file.txt>: The file to record messaged to or playback
                      .    messages from. Used for net-recorder
                      .    operation. In 'record' mode, if the
                      .    log-file option is specified, messages are
```

```
.    recorded into the log (Default).
-ip-guessing <off/safe/full>: The level of IP address guessing to do,
.    for interfaces that are not present in the
.    topology database: 'off' performs no
.    guessing, 'safe' only chooses where there
.    is no ambiguity, and 'full' makes best
.    guess decisions where there is ambiguity.
.    This is only necessary in ISIS topologies
.    that do not have TE extensions enabled
.    everywhere. Default is 'safe'.
-find-parallel-links <true/false>: find parallel links not included in the
.    IGP database. This is only necessary in
.    ISIS topologies that do not have TE
.    extensions enabled everywhere. Default is
.    false.
-min-prefix-length <integer>: the minimum prefix length to allow in
.    finding parallel links or with use-subnet.
.    All interfaces with equal or larger prefix
.    lengths, but less than 32, will be
.    considered. Default 30 (/30 subnet prefix
.    length).
-lag-port-match <exact/none/guess/complete>: Indicates how local and remote ports are
.    matched in port-circuits. Values are
.    'exact', 'none', 'guess' and 'complete'.
.    If 'none', no port-circuits are created.
.    If 'guess', port-circuits are created to
.    match as many ports as possible, even if
.    not possible deterministically. If
.    'exact', match deterministically based on
.    LACP. If complete, match deterministically
.    based on LACP first and then try to match
.    as many as possible. Default is 'guess'.
-out-file <file.txt>: The output file with the collected
.    interface information. Default, if not
.    provided, is the plan-file.
-cleanup-circuits <true/false>: remove any circuits that don't have IP
.    Addresses associated to them. This is
.    sometimes needed with ISIS databases to
.    fix ISIS advertising inconsistencies.
.    Default: false
-lag <true/false>: Enables LAG discovery of port members.
.    Default is false.
-copy-descriptions <true/false>: Copies physical interface descriptions to
.    logical interfaces if there is only one
.    logical interface and its description is
.    blank. Default false.


Example:
snmp_find_interfaces -plan-file /mate/infile.txt -out-file /mate/outplan.txt
Reads interface information of routers listed in '/mate/infile.txt' via SNMP
and writes it to an <Interface> table in '/mate/outfile.txt'
Mapping between the <Ports>::LACPMuxState and Mux state:
-----------------------------------------------
|LACPMuxState.| Mux state |
-----------------------------------------------
|   .   1 | detached |
|   .   2 | waiting |
|   .   3 | attached |
|   .   4 | collecting |
|   .   5 | distributing |
|   .   6 | collectingDistributing|
-----------------------------------------------
```

snmp_find_ldp

```
Usage: snmp_find_ldp options
    .   find the network for LDP info

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <file.txt>: File containing at least a <Nodes> and
    .   <Interfaces> table. The 'IPAddress' column
    .   of the <Nodes> table is used to access the
    .   routers.

Optional options:
    -auth-file <value>: Authentication file name. Default is
    .   'auth.enc' in the Cariden configuration
    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .   or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .   authentication details if none found in
    .   authentication file. Otherwise just uses
    .   authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .   is 'net_access.txt' in the Cariden
    .   configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .   as defined in the network access
    .   configuration file.
    -net-access-global-mode <value>: Uses specified network access global mode
    .   as defined in network access configuration
    .   file.
    -net-recorder <off/record/play>: Specifies the network recorder mode. In
    .   'record' mode, messages to and from the
    .   live network are recorded in the
    .   net-record-file as the tool is run. In
    .   'play' mode, network messages from the
    .   net-record-file are played back through
    .   the tool as if they came from the live
    .   network, thus providing offline debugging
    .   of network collection. In 'off' mode, no
    .   recording or playback is performed.
    .   Default is 'off'.
    -net-record-file <file.txt>: The file to record messaged to or playback
    .   messages from. Used for net-recorder
    .   operation. In 'record' mode, if the
    .   log-file option is specified, messages are
    .   recorded into the log (Default).
    -out-file <file.txt>: The output file with the collected LDP
    .   information. Default, if not provided, is
```

```
.    the plan-file.
-min-prefix-length <integer>: the minimum prefix length to allow in
.    matching LDP IP with interface subnet for
.    determining DestNode. All interfaces with
.    equal or larger prefix lengths, but less
.    than 32, will be considered. Default 27
.    (/27 subnet prefix length).


Example:
snmp_find_ldp -plan-file /mate/infile.txt -out-file /mate/outplan.txt
Collects LDP for routers listed in '/mate/infile.txt' via SNMP and writes it
to '/mate/outfile.txt'
```

snmp_find_multicast

```
Usage: snmp_find_multicast options
.    poll the network for Multicast

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -plan-file <file.txt>: File containing at least a <Nodes> and
    .    <Interfaces> table. The 'IPAddress' column
    .    of the <Nodes> table is used to access the
    .    routers.

Optional options:
    -auth-file <value>: Authentication file name. Default is
    .    'auth.enc' in the Cariden configuration
    .    path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .    or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .    authentication details if none found in
    .    authentication file. Otherwise just uses
    .    authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .    is 'net_access.txt' in the Cariden
    .    configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .    as defined in the network access
    .    configuration file.
    -net-access-global-mode <value>: Uses specified network access global mode
    .    as defined in network access configuration
    .    file.
    -net-recorder <off/record/play>: Specifies the network recorder mode. In
    .    'record' mode, messages to and from the
    .    live network are recorded in the
```

```
              .   net-record-file as the tool is run. In
              .   'play' mode, network messages from the
              .   net-record-file are played back through
              .   the tool as if they came from the live
              .   network, thus providing offline debugging
              .   of network collection. In 'off' mode, no
              .   recording or playback is performed.
              .   Default is 'off'.
          -net-record-file <file.txt>: The file to record messaged to or playback
              .   messages from. Used for net-recorder
              .   operation. In 'record' mode, if the
              .   log-file option is specified, messages are
              .   recorded into the log (Default).
          -out-file <file.txt>: The output file with the collected
              .   multicast information. Default, if not
              .   provided, is the plan-file.

Example:
snmp_find_multicast -plan-file /mate/infile.txt -out-file /mate/outplan.txt
Collects Multicast info for routers listed in '/mate/infile.txt' via SNMP and
writes it to '/mate/outfile.txt'
```

snmp_find_nodes

```
Usage: snmp_find_nodes options
    .   access a network and collect node information

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <file.txt>: File containing at least a <Nodes> table.
    .   The 'IPAddress' column is used to access
    .   the routers.

Optional options:
    -auth-file <value>: Authentication file name. Default is
    .   'auth.enc' in the Cariden configuration
    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .   or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .   authentication details if none found in
    .   authentication file. Otherwise just uses
    .   authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .   is 'net_access.txt' in the Cariden
    .   configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
```

```
          .    as defined in the network access
          .    configuration file.
          -net-access-global-mode <value>: Uses specified network access global mode
          .    as defined in network access configuration
          .    file.
          -net-recorder <off/record/play>: Specifies the network recorder mode. In
          .    'record' mode, messages to and from the
          .    live network are recorded in the
          .    net-record-file as the tool is run. In
          .    'play' mode, network messages from the
          .    net-record-file are played back through
          .    the tool as if they came from the live
          .    network, thus providing offline debugging
          .    of network collection. In 'off' mode, no
          .    recording or playback is performed.
          .    Default is 'off'.
          -net-record-file <file.txt>: The file to record messaged to or playback
          .    messages from. Used for net-recorder
          .    operation. In 'record' mode, if the
          .    log-file option is specified, messages are
          .    recorded into the log (Default).
          -out-file <file.txt>: The output file with the collected node
          .    information. Default, if not provided, is
          .    the plan-file.
          -read-qos-queues <true/false>: read QoS queue support on the nodes
          -remove-node-suffix <value>: remove suffix from node names if the node
          .    contains this suffix. For example:
          .    '.company.net' removes the domain name for
          .    the network. May specify multiple suffix
          .    via use of a comma separator. For example:
          .    'net,com'
          -perf-data <true/false>: collect node performance (route processor)
          .    data (default=false).

     Example:
     snmp_find_nodes -plan-file /mate/infile.txt -out-file /mate/outplan.txt
     Reads node information from nodes listed in '/mate/infile.txt' via SNMP and
     writes it to an <Nodes> table in '/mate/outfile.txt'
```

snmp_find_ospf_db

```
     Usage: snmp_find_ospf_db options
          .    access a network fetch and parse an OSPF database

     Generic options:
          -help <true/false>: Prints help message.
          -options-file <value>: Read options from <filename>.
          -version <true/false>: Prints version string
          -no-global-options <true/false>: Inhibits loading of global options file.
          -suppress-progress <true/false>: Do not show progress information. Default
          .    is true.
          -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
          .    Default = 30.
          -log-file <value>: Keep copies of warnings and errors in this
          .    file.
          -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
          .    from .txt format of -out-file if parameter
          .    exists. Default is 'false'.

     Required options:
```

```
    -out-file <file.txt>: The output file generated from the OSPF
    .    database.
    -seed-router <value>: The primary seed router to use.

Optional options:
    -auth-file <value>: Authentication file name. Default is
    .    'auth.enc' in the Cariden configuration
    .    path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .    or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .    authentication details if none found in
    .    authentication file. Otherwise just uses
    .    authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .    is 'net_access.txt' in the Cariden
    .    configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .    as defined in the network access
    .    configuration file.
    -net-access-global-mode <value>: Uses specified network access global mode
    .    as defined in network access configuration
    .    file.
    -net-recorder <off/record/play>: Specifies the network recorder mode. In
    .    'record' mode, messages to and from the
    .    live network are recorded in the
    .    net-record-file as the tool is run. In
    .    'play' mode, network messages from the
    .    net-record-file are played back through
    .    the tool as if they came from the live
    .    network, thus providing offline debugging
    .    of network collection. In 'off' mode, no
    .    recording or playback is performed.
    .    Default is 'off'.
    -net-record-file <file.txt>: The file to record messaged to or playback
    .    messages from. Used for net-recorder
    .    operation. In 'record' mode, if the
    .    log-file option is specified, messages are
    .    recorded into the log (Default).
    -plan-file <value>: Existing plan to merge with configs.
    -backup-router <value>: The secondary seed router to use for
    .    automatic failover.
    -database-file <filename>: The raw OSPF database is output to this
    .    file.
    -ospf-area <value>: The area that should be fetched or 'all.
    .    The area ID can be specified as an integer
    .    or as an IP address. If 'all', then ABRs
    .    are identified from area 0 information and
    .    polled for non-zero area information.
    .    Default is '0'
    -use-dns <true/false>: If true, uses DNS to resolve router IP
    .    addresses found in the OSPF database, for
    .    entry in plan file. Default is false.

Example:
snmp_find_ospf_db -out-file /mate/outplan.txt
Collects OSPF information through SNMP, converts it in the format of an OSPF
database, parses the database and writes it as a tab file to
mate/outplan.txt'
```

snmp_find_rsvp

```
Usage: snmp_find_rsvp options
    .   poll the network for MPLS TE tunnels (Actual Path)

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <file.txt>: File containing at least a <Nodes> and
    .   <Interfaces> table. The 'IPAddress' column
    .   of the <Nodes> table is used to access the
    .   routers.

Optional options:
    -find-actual-paths <true/false>: Collect the actual path from the MPLS
    .   RSVP-TE RRO for the LSP. Default is 'true'.
    -get-extras <true/false>: Whether to get additional LSP properties
    .   (such as IncludeAll and ActivePath on
    .   Juniper which is not normally
    .   available).This option incurs a great deal
    .   of overhead. Default is 'false'.
    -use-calculated-hops <true/false>: On Cisco routers use the Calculated Hop
    .   Table instead of the Actual Hop Table in
    .   discovering Path Hops. Default false.
    -get-frr-lsps <true/false>: If 'true', collect MPLS FRR LSP (backup
    .   and bypass) information. Default is
    .   'false'.
    -get-backup-paths <true/false>: If 'true', collect MPLS signaled backup
    .   path information. Default is 'false'.
    -auth-file <value>: Authentication file name. Default is
    .   'auth.enc' in the Cariden configuration
    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .   or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .   authentication details if none found in
    .   authentication file. Otherwise just uses
    .   authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .   is 'net_access.txt' in the Cariden
    .   configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .   as defined in the network access
    .   configuration file.
    -net-access-global-mode <value>: Uses specified network access global mode
    .   as defined in network access configuration
    .   file.
    -net-recorder <off/record/play>: Specifies the network recorder mode. In
    .   'record' mode, messages to and from the
    .   live network are recorded in the
```

```
                    .   net-record-file as the tool is run. In
                    .   'play' mode, network messages from the
                    .   net-record-file are played back through
                    .   the tool as if they came from the live
                    .   network, thus providing offline debugging
                    .   of network collection. In 'off' mode, no
                    .   recording or playback is performed.
                    .   Default is 'off'.
                -net-record-file <file.txt>: The file to record messaged to or playback
                    .   messages from. Used for net-recorder
                    .   operation. In 'record' mode, if the
                    .   log-file option is specified, messages are
                    .   recorded into the log (Default).
                -out-file <file.txt>: The output file with the collected tunnel
                    .   information. Default, if not provided, is
                    .   the plan-file.


            Example:
            snmp_find_rsvp -plan-file /mate/infile.txt -out-file /mate/outplan.txt
            Collects MPLS TE tunnels for routers listed in '/mate/infile.txt' via SNMP
            and writes it to '/mate/outfile.txt'
```

snmp_find_vpn

```
            Usage: snmp_find_vpn options
                .   access a network and collect VPN information


            Generic options:
                -help <true/false>: Prints help message.
                -options-file <value>: Read options from <filename>.
                -version <true/false>: Prints version string
                -no-global-options <true/false>: Inhibits loading of global options file.
                -suppress-progress <true/false>: Do not show progress information. Default
                    .   is true.
                -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                    .   Default = 30.
                -log-file <value>: Keep copies of warnings and errors in this
                    .   file.
                -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                    .   from .txt format of -out-file if parameter
                    .   exists. Default is 'false'.


            Required options:
                -plan-file <file.txt>: File containing at least a <Nodes> table.
                    .   The 'IPAddress' column is used to access
                    .   the routers.
                -vpn-type <value>: A comma-separated list. Extracts VPNs of
                    .   this type. Possible values are 'VPWS', and
                    .   'L3VPN'.


            Optional options:
                -auth-file <value>: Authentication file name. Default is
                    .   'auth.enc' in the Cariden configuration
                    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
                    .   or CARIDEN_HOME/etc).
                -auth-prompt <true/false>: If true (default) will prompt for default
                    .   authentication details if none found in
                    .   authentication file. Otherwise just uses
                    .   authentication file. See mate_auth_init.
                -net-access-file <net_access.txt>: Network access configuration file. Default
```

```
                                .   is 'net_access.txt' in the Cariden
                                .   configuration path.
                            -net-access-router-mode <value>: Uses specified network access router mode
                                .   as defined in the network access
                                .   configuration file.
                            -net-access-global-mode <value>: Uses specified network access global mode
                                .   as defined in network access configuration
                                .   file.
                            -net-recorder <off/record/play>: Specifies the network recorder mode. In
                                .   'record' mode, messages to and from the
                                .   live network are recorded in the
                                .   net-record-file as the tool is run. In
                                .   'play' mode, network messages from the
                                .   net-record-file are played back through
                                .   the tool as if they came from the live
                                .   network, thus providing offline debugging
                                .   of network collection. In 'off' mode, no
                                .   recording or playback is performed.
                                .   Default is 'off'.
                            -net-record-file <file.txt>: The file to record messaged to or playback
                                .   messages from. Used for net-recorder
                                .   operation. In 'record' mode, if the
                                .   log-file option is specified, messages are
                                .   recorded into the log (Default).
                            -out-file <file.txt>: The output file with the collected VPN
                                .   information. Default, if not provided, is
                                .   the plan-file.

                    Example:
                    snmp_find_vpn -plan-file /mate/infile.txt -vpn-type L3VPN
                    Reads Layer 3 VPN information of routers listed in '/mate/infile.txt' via
                    SNMP and writes it to a <VPNNodes> table in '/mate/outfile.txt'
```

snmp_poll

```
                    Usage: snmp_poll options
                        .   access a network and collect traffic measurments

                    Generic options:
                        -help <true/false>: Prints help message.
                        -options-file <value>: Read options from <filename>.
                        -version <true/false>: Prints version string
                        -no-global-options <true/false>: Inhibits loading of global options file.
                        -suppress-progress <true/false>: Do not show progress information. Default
                            .   is true.
                        -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                            .   Default = 30.
                        -log-file <value>: Keep copies of warnings and errors in this
                            .   file.
                        -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                            .   from .txt format of -out-file if parameter
                            .   exists. Default is 'false'.

                    Required options:
                        -plan-file <filename>: File containing at least a <Nodes> table.
                            .   The 'IPAddress' column of the <Nodes>
                            .   table is used to access the routers.

                    Optional options:
                        -auth-file <value>: Authentication file name. Default is
```

```
              .    'auth.enc' in the Cariden configuration
              .    path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
              .    or CARIDEN_HOME/etc).
              -auth-prompt <true/false>: If true (default) will prompt for default
              .    authentication details if none found in
              .    authentication file. Otherwise just uses
              .    authentication file. See mate_auth_init.
              -net-access-file <net_access.txt>: Network access configuration file. Default
              .    is 'net_access.txt' in the Cariden
              .    configuration path.
              -net-access-router-mode <value>: Uses specified network access router mode
              .    as defined in the network access
              .    configuration file.
              -net-access-global-mode <value>: Uses specified network access global mode
              .    as defined in network access configuration
              .    file.
              -net-recorder <off/record/play>: Specifies the network recorder mode. In
              .    'record' mode, messages to and from the
              .    live network are recorded in the
              .    net-record-file as the tool is run. In
              .    'play' mode, network messages from the
              .    net-record-file are played back through
              .    the tool as if they came from the live
              .    network, thus providing offline debugging
              .    of network collection. In 'off' mode, no
              .    recording or playback is performed.
              .    Default is 'off'.
              -net-record-file <file.txt>: The file to record messaged to or playback
              .    messages from. Used for net-recorder
              .    operation. In 'record' mode, if the
              .    log-file option is specified, messages are
              .    recorded into the log (Default).
              -out-file <filename>: The output file with the collected
              .    interface traffic information. Default, if
              .    not provided, is the plan-file.
              -poll-function <value>: Define a list of functions that statistics
              .    should be collected for. Use a ',' to
              .    separate multiple entries. Options are
              .    interfaces, ports, rsvp, ldp, multicast,
              .    vpn, mac, ip-tunnels. Default: interfaces.
              -polling-interval <function=integer>: Time delay, in seconds, between the
              .    beginning of one counter polling and the
              .    beginning of the next. The timeout for
              .    SNMP queries is adjusted accordingly so
              .    that all queries return before the end of
              .    the polling-interval. Use a ',' to
              .    separate multiple entries. Function can be
              .    all, interfaces, rsvp, ldp, multicast, mac
              .    or ip-tunnels.Defaults:
              .    interfaces=60
              .    mac=60
              .    ip-tunnels=60
              .    rsvp=300
              .    ldp=300
              -number-of-samples <function=integer>: How many intervals will be sampled. (One
              .    less than the number of pollings).
              .    Function can be all, interfaces, rsvp,
              .    ldp, multicast or mac. Use a ',' to
              .    separate multiple entries. Default is 1.
              -only-plan-interfaces <true/false>: If true, only polls the interfaces that
              .    are in the <Interfaces> table of the plan.
              .    The default is false for 'ports' and
              .    'vpn', true otherwise.
              -external-ip-only <true/false>: If true (default) calculates total source
```

```
.       and destination traffic for each node by
.       summing traffic over only external
.       interfaces with an IP address. If false,
.       sums over all external interfaces. Note,
.       only relevant if -only-plan-interfaces is
.       false
   -traffic-level-name <value>: The traffic level name. Default is
.       'Default'.
   -qos-queues <QoS queues>: The QoS queues to poll interface
.       measurments for (a ;-delimited list), or
.       '*' to read all queues.By default, no
.       queue measurments are polled.
   -perf-data <true/false>: collect interface traffic and performance
.       data (default=false).
   -discard-over-capacity <true/false>: if true, traffic rates that are higher
.       than the capacity of the interface are
.       discarded. Default=true.


Example:
snmp_poll -plan-file /mate/infile.txt -out-file /mate/outplan.txt
    -poll-function interfaces,rsvp,ldp,multicast
    -polling-interval interfaces=90,rsvp=200
Collects traffic measurments for interfaces, LSPs, LDP flows, and Multicast
flows listed in '/mate/infile.txt' via SNMP and writes them to their new
respective Traffic tables in '/mate/outplan.txt'
```

snmp_poll_interfaces

```
Usage: snmp_poll_interfaces options
.       access a network and collect interface traffic measurments

Generic options:
   -help <true/false>: Prints help message.
   -options-file <value>: Read options from <filename>.
   -version <true/false>: Prints version string
   -no-global-options <true/false>: Inhibits loading of global options file.
   -suppress-progress <true/false>: Do not show progress information. Default
.       is true.
   -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
.       Default = 30.
   -log-file <value>: Keep copies of warnings and errors in this
.       file.
   -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
.       from .txt format of -out-file if parameter
.       exists. Default is 'false'.

Required options:
   -plan-file <file.txt>: File containing at least a <Nodes> and
.       <Interfaces> table. The 'IPAddress' column
.       of the <Nodes> table is used to access the
.       routers.

Optional options:
   -auth-file <value>: Authentication file name. Default is
.       'auth.enc' in the Cariden configuration
.       path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
.       or CARIDEN_HOME/etc).
   -auth-prompt <true/false>: If true (default) will prompt for default
.       authentication details if none found in
.       authentication file. Otherwise just uses
```

```
.    authentication file. See mate_auth_init.
-net-access-file <net_access.txt>: Network access configuration file. Default
.    is 'net_access.txt' in the Cariden
.    configuration path.
-net-access-router-mode <value>: Uses specified network access router mode
.    as defined in the network access
.    configuration file.
-net-access-global-mode <value>: Uses specified network access global mode
.    as defined in network access configuration
.    file.
-net-recorder <off/record/play>: Specifies the network recorder mode. In
.    'record' mode, messages to and from the
.    live network are recorded in the
.    net-record-file as the tool is run. In
.    'play' mode, network messages from the
.    net-record-file are played back through
.    the tool as if they came from the live
.    network, thus providing offline debugging
.    of network collection. In 'off' mode, no
.    recording or playback is performed.
.    Default is 'off'.
-net-record-file <file.txt>: The file to record messaged to or playback
.    messages from. Used for net-recorder
.    operation. In 'record' mode, if the
.    log-file option is specified, messages are
.    recorded into the log (Default).
-out-file <file.txt>: The output file with the collected
.    interface traffic information. Default, if
.    not provided, is the plan-file.
-polling-interval <integer>: Time delay, in seconds, between the
.    beginning of one counter polling and the
.    beginning of the next. Default 60. The
.    timeout for SNMP queries is adjusted
.    accordingly so that all queries return
.    before the end of the polling-interval.
-number-of-samples <integer>: How many intervals will be sampled. (One
.    less than the number of pollings). The
.    highest and lowest measurements are
.    excluded, and the remaining values are
.    averaged. Default is 1.
-only-plan-interfaces <true/false>: If true, only polls the interfaces that
.    are in the <Interfaces> table of the plan.
.    The default is true.
-external-ip-only <true/false>: If true (default) calculates total source
.    and destination traffic for each node by
.    summing traffic over only external
.    interfaces with an IP address. If false,
.    sums over all external interfaces. Note,
.    only relevant if -only-plan-interfaces is
.    false
-traffic-level-name <value>: The traffic level name. Default is
.    'Default'.
-qos-queues <QOS queues>: The QOS queues to poll interface
.    measurments for (a ;-delimited list), or
.    '*' to read all queues.By default, no
.    queue measurments are polled.
-perf-data <true/false>: collect interface traffic and performance
.    data (default=false).
-discard-over-capacity <true/false>: if true, traffic rates that are higher
.    than the capacity of the interface are
.    discarded. Default=true.


Example:
snmp_poll_interfaces -plan-file /mate/infile.txt -out-file /mate/outplan.txt
```

Collects traffic measurments for interfaces listed in '/mate/infile.txt' via
SNMP and writes it to a new column in the same table in '/mate/outplan.txt'

snmp_poll_ldp

```
Usage: snmp_find_ldp options
    .  find the network for LDP info

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <file.txt>: File containing at least a <Nodes> and
    .   <Interfaces> table. The 'IPAddress' column
    .   of the <Nodes> table is used to access the
    .   routers.

Optional options:
    -auth-file <value>: Authentication file name. Default is
    .   'auth.enc' in the Cariden configuration
    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .   or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .   authentication details if none found in
    .   authentication file. Otherwise just uses
    .   authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .   is 'net_access.txt' in the Cariden
    .   configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .   as defined in the network access
    .   configuration file.
    -net-access-global-mode <value>: Uses specified network access global mode
    .   as defined in network access configuration
    .   file.
    -net-recorder <off/record/play>: Specifies the network recorder mode. In
    .   'record' mode, messages to and from the
    .   live network are recorded in the
    .   net-record-file as the tool is run. In
    .   'play' mode, network messages from the
    .   net-record-file are played back through
    .   the tool as if they came from the live
    .   network, thus providing offline debugging
    .   of network collection. In 'off' mode, no
    .   recording or playback is performed.
    .   Default is 'off'.
    -net-record-file <file.txt>: The file to record messaged to or playback
    .   messages from. Used for net-recorder
```

```
                    .   operation. In 'record' mode, if the
                    .   log-file option is specified, messages are
                    .   recorded into the log (Default).
                -out-file <file.txt>: The output file with the collected LDP
                    .   information. Default, if not provided, is
                    .   the plan-file.
                -min-prefix-length <integer>: the minimum prefix length to allow in
                    .   matching LDP IP with interface subnet for
                    .   determining DestNode. All interfaces with
                    .   equal or larger prefix lengths, but less
                    .   than 32, will be considered. Default 27
                    .   (/27 subnet prefix length).

        Example:
        snmp_find_ldp -plan-file /mate/infile.txt -out-file /mate/outplan.txt
        Collects LDP for routers listed in '/mate/infile.txt' via SNMP and writes it
        to '/mate/outfile.txt'
```

snmp_poll_multicast

```
        Usage: snmp_poll_multicast options
            .   poll the network for Multicast statistics

        Generic options:
            -help <true/false>: Prints help message.
            -options-file <value>: Read options from <filename>.
            -version <true/false>: Prints version string
            -no-global-options <true/false>: Inhibits loading of global options file.
            -suppress-progress <true/false>: Do not show progress information. Default
                .   is true.
            -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
                .   Default = 30.
            -log-file <value>: Keep copies of warnings and errors in this
                .   file.
            -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
                .   from .txt format of -out-file if parameter
                .   exists. Default is 'false'.

        Required options:
            -plan-file <file.txt>: File containing at least a <Nodes>,
                .   <MulticastFlows> and <MulticastFlowHops>
                .   table. The 'IPAddress' column of the
                .   <Nodes> table is used to access the
                .   routers.

        Optional options:
            -auth-file <value>: Authentication file name. Default is
                .   'auth.enc' in the Cariden configuration
                .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
                .   or CARIDEN_HOME/etc).
            -auth-prompt <true/false>: If true (default) will prompt for default
                .   authentication details if none found in
                .   authentication file. Otherwise just uses
                .   authentication file. See mate_auth_init.
            -net-access-file <net_access.txt>: Network access configuration file. Default
                .   is 'net_access.txt' in the Cariden
                .   configuration path.
            -net-access-router-mode <value>: Uses specified network access router mode
                .   as defined in the network access
                .   configuration file.
```

```
-net-access-global-mode <value>: Uses specified network access global mode
.    as defined in network access configuration
.    file.
-net-recorder <off/record/play>: Specifies the network recorder mode. In
.    'record' mode, messages to and from the
.    live network are recorded in the
.    net-record-file as the tool is run. In
.    'play' mode, network messages from the
.    net-record-file are played back through
.    the tool as if they came from the live
.    network, thus providing offline debugging
.    of network collection. In 'off' mode, no
.    recording or playback is performed.
.    Default is 'off'.
-net-record-file <file.txt>: The file to record messaged to or playback
.    messages from. Used for net-recorder
.    operation. In 'record' mode, if the
.    log-file option is specified, messages are
.    recorded into the log (Default).
-out-file <file.txt>: The output file with the collected
.    multicast traffic information. Default, if
.    not provided, is the plan-file.
-polling-interval <integer>: Time delay, in seconds, between the
.    beginning of one counter polling and the
.    beginning of the next. Default 300. The
.    timeout for SNMP queries is adjusted
.    accordingly so that all queries return
.    before the end of the polling-interval.
-number-of-samples <integer>: How many intervals will be sampled. (One
.    less than the number of pollings). Default
.    is 1.
-traffic-level-name <value>: The traffic level name. Default is
.    'Default'.

Example:
snmp_poll_multicast -plan-file /mate/infile.txt -out-file /mate/outplan.txt
Collects Multicast statistics for multicast flows in '/mate/infile.txt' via
SNMP and writes it to '/mate/outfile.txt'
```

snmp_poll_rsvp

```
Usage: snmp_poll_rsvp options
.    poll the network for MPLS TE tunnel statistics (Traffic and Actual
Path)

Generic options:
-help <true/false>: Prints help message.
-options-file <value>: Read options from <filename>.
-version <true/false>: Prints version string
-no-global-options <true/false>: Inhibits loading of global options file.
-suppress-progress <true/false>: Do not show progress information. Default
.    is true.
-verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
.    Default = 30.
-log-file <value>: Keep copies of warnings and errors in this
.    file.
-simple-txt-out-file <true/false>: Whether to remove empty tables and columns
.    from .txt format of -out-file if parameter
.    exists. Default is 'false'.
```

```
Required options:
    -plan-file <file.txt>: File containing at least a <Nodes> and
    .   <LSPs> table. The 'IPAddress' column of
    .   the <Nodes> table is used to access the
    .   routers.

Optional options:
    -auth-file <value>: Authentication file name. Default is
    .   'auth.enc' in the Cariden configuration
    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .   or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .   authentication details if none found in
    .   authentication file. Otherwise just uses
    .   authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .   is 'net_access.txt' in the Cariden
    .   configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .   as defined in the network access
    .   configuration file.
    -net-access-global-mode <value>: Uses specified network access global mode
    .   as defined in network access configuration
    .   file.
    -net-recorder <off/record/play>: Specifies the network recorder mode. In
    .   'record' mode, messages to and from the
    .   live network are recorded in the
    .   net-record-file as the tool is run. In
    .   'play' mode, network messages from the
    .   net-record-file are played back through
    .   the tool as if they came from the live
    .   network, thus providing offline debugging
    .   of network collection. In 'off' mode, no
    .   recording or playback is performed.
    .   Default is 'off'.
    -net-record-file <file.txt>: The file to record messaged to or playback
    .   messages from. Used for net-recorder
    .   operation. In 'record' mode, if the
    .   log-file option is specified, messages are
    .   recorded into the log (Default).
    -out-file <file.txt>: The output file with the collected tunnel
    .   traffic information. Default, if not
    .   provided, is the plan-file.
    -polling-interval <integer>: Time delay, in seconds, between the
    .   beginning of one counter polling and the
    .   beginning of the next. Default 300. The
    .   timeout for SNMP queries is adjusted
    .   accordingly so that all queries return
    .   before the end of the polling-interval.
    -number-of-samples <integer>: How many intervals will be sampled. (One
    .   less than the number of pollings). Default
    .   is 1.
    -traffic-level-name <value>: The traffic level name. Default is
    .   'Default'.

Example:
snmp_poll_rsvp -plan-file /mate/infile.txt -out-file /mate/outplan.txt
Collects MPLS TE tunnel statistics for tunnels listed in '/mate/infile.txt'
via SNMP and writes it to '/mate/outfile.txt'
```

snmp_test

```
Usage: snmp_test options
    .   test SNMP connectivity with router.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -seed-router <value>: The primary seed router to use.

Optional options:
    -auth-file <value>: Authentication file name. Default is
    .   'auth.enc' in the Cariden configuration
    .   path ($HOME/.cariden/etc, CARIDEN_ROOT/etc
    .   or CARIDEN_HOME/etc).
    -auth-prompt <true/false>: If true (default) will prompt for default
    .   authentication details if none found in
    .   authentication file. Otherwise just uses
    .   authentication file. See mate_auth_init.
    -net-access-file <net_access.txt>: Network access configuration file. Default
    .   is 'net_access.txt' in the Cariden
    .   configuration path.
    -net-access-router-mode <value>: Uses specified network access router mode
    .   as defined in the network access
    .   configuration file.
    -net-access-global-mode <value>: Uses specified network access global mode
    .   as defined in network access configuration
    .   file.
    -net-recorder <off/record/play>: Specifies the network recorder mode. In
    .   'record' mode, messages to and from the
    .   live network are recorded in the
    .   net-record-file as the tool is run. In
    .   'play' mode, network messages from the
    .   net-record-file are played back through
    .   the tool as if they came from the live
    .   network, thus providing offline debugging
    .   of network collection. In 'off' mode, no
    .   recording or playback is performed.
    .   Default is 'off'.
    -net-record-file <file.txt>: The file to record messaged to or playback
    .   messages from. Used for net-recorder
    .   operation. In 'record' mode, if the
    .   log-file option is specified, messages are
    .   recorded into the log (Default).
    -backup-router <value>: The secondary seed router to use for
    .   automatic failover.
    -ping <true/false>: If true, only pings router. Default: false.

Example:
```

```
snmp_test -seed-router 10.1.1.1
Test access to given router through SNMP
```

sr_te_opt

Optimize routings of SR LSPs by minimizing TE metric path length and avoiding specific nodes.

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: A plan file
    -out-file <value>: Output plan file, updated with
    .   (re-)optimized SR LSP Paths.

Optional options:
    -opt-lsps-table <file>: SR LSPS in this table are routed or
    .   rerouted according to criteria specified
    .   in options below. Default is none.
    -metric <value>: Definition of path length that the
    .   optimizer tries to minimize subject to
    .   constraints on node avoidance (see
    -avoid-nodes-tag) and on the length of
    .   segment list (see -max-SL). One of:
    .   'igp' (default): Use interface IGP
    .   metric.
    .   'te': Use interface TEMetric.
    .   'delay': Use circuit delay.
    -metric-fixed-bound <value>: A bound specifying the maximum path metric
    .   that is acceptable. LSPs with path lengths
    .   below or equal to this bound will not be
    .   updated. If omitted (default), no fixed
    .   bound is imposed.
    -metric-percent-margin <value>: A percentage, specifying the amount above
    .   the shortest metric path (taking account
    .   of the node avoidance constraints) that is
    .   acceptable. LSPs with path lengths within
    .   this margin will not be updated. If
    .   omitted (default), no percentage margin is
    .   imposed. Example: if an existing LSP route
    .   has metric length 215, shortest achievable
    .   metric length 200, and the margin is set
    .   to 10, then LSP is within metric bounds
    .   and will not be updated
    -metric-fixed-margin <value>: A fixed value specifying the amount above
    .   the shortest metric path (taking account
    .   of node avoidance constraints) that is
    .   acceptable. LSPs with path lengths within
```

```
.      this margin will not be updated. If
.      omitted (default), no fixed margin is
.      imposed. Example: if an existing LSP route
.      has metric 215, shortest achievable metric
.      length 200, and margin is set to 10, then
.      the LSP is not within metric bounds and
.      will be updated.
-avoid-nodes-tag <value>: If a tag is specified, Segment List (SL)
.      entries will be created to route away from
.      any nodes containing this tag. If omitted,
.      SLs are not optimized for this purpose.
-max-SL <value>: An integer, representation the maximum
.      length of Segment List (SL) (equivalently,
.      max number of Segment IDs (SIDs)) that can
.      be used by an LSP path. If omitted, there
.      is no maximum.
-core-SL <true/false>: If true, nodes in Segment List must be of
.      type 'core'. Default is false.
-lsp-tag <value>: Tag LSPs whose Segment Lists have been
.      updated, with this value. Default is
.      'SROpt'.
```

tab_merger

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .      is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .      Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .      file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .      from .txt format of -out-file if parameter
    .      exists. Default is 'false'.

Required options:

Optional options:
    -tab-file-1 <filename>: <filename> is the tab file to be read
    -tab-file-2 <filename>: <filename> is the tab file to be read
    -key-1 <row-key>: <row-key> specifies how the unique
    .      elements are found in tab-file-1
    -key-2 <row-key>: <row-key> specifies how the unique
    .      elements are found in tab-file-2
    -out-file <filename>: sends output to <filename>.
    -merge-mode [pull|push|erase]: If 'pull', tab-file-1 will copy what it
    .      needs from tab-file-2. If 'push',
    .      tab-file-1 will send all it has to
    .      tab-file-2. If 'erase', tab-file-1 will
    .      delete entries that are T in tab-file-2.
    -compare-method [equality|regex|proximity]: how rows of tab-file-1/key-1 are compared
    .      to rows of tab-file-2/key-2. 'equality'
    .      will only match two rows if the keys match
    .      exactly; 'regex' will treat entries in
    .      tab-file-2 as a regular expression and the
    .      values will be used as formatters;
```

```
                 .    'proximity' chooses the closest string.

          row keys have the following format: keyColumns<Section>valueColumns where
       keyColumns and valueColumns are comma-separated lists of column names
```

table_compare

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -base-file <value>: Base file for comparison. May be .pln file
    .   or .txt MATE table file.

Optional options:
    -other-files <value>: File to compare against base plan, or
    .   regular expression matching multiple files
    .   to compare. Same formats allowed as
    .   base-file.
    -out-file <value>: Output file.
    -summary-file <value>: Output summary file. Default is stdout.
    -tables <value>: comma-separated list of tables. Default is
    .   'none'. 'all'=union of all tables in the
    .   files.
    -key-cols <value>: Columns to use as keys in joining tables
    .   from different files.
    .   'all': all columns,
    .   'default': the default key columns for
    .   this table name (Default).
    .   If single table is selected, can be
    .   comma-delimited list of column names.
    -compare-cols <value>: Columns to compare.
    .   'all': All columns.
    .   'none': none (Default).
    .   If single table is selected, can be
    .   comma-delimited list of column names.
    -show-cols <value>: Columns to show in tables, in addition to
    .   key columns.
    .   'all': all columns,
    .   'none': none,
    .   'diff': the columns with any differences
    .   in the table (default)
    .   If single table is selected, can be
    .   comma-delimited list of column names.
    -show-rows <value>: Determines the rows shown in the table:
    .   'base': all keys in base file
    .   'all': union of all keys in base and other
    .   files
    .   'match': only keys that exist in base and
```

```
                       .    all other files
                       .    'diff': only 'match' rows that contain
                       .    differences in compare cols
                       .
                       -filter <value>: SQL SELECT expression, filtering the
                       .    initial table. Only allowed if one entry
                       .    in -tables.
```

table_delete

```
          Deletes a table or a set of tables in a file.

          Generic options:
              -help <true/false>: Prints help message.
              -options-file <value>: Read options from <filename>.
              -version <true/false>: Prints version string
              -no-global-options <true/false>: Inhibits loading of global options file.
              -suppress-progress <true/false>: Do not show progress information. Default
              .    is true.
              -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
              .    Default = 30.
              -log-file <value>: Keep copies of warnings and errors in this
              .    file.
              -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
              .    from .txt format of -out-file if parameter
              .    exists. Default is 'false'.

          Required options:
              -table-file <value>: Input file.
              -out-file <value>: Output file after deletion.

          Optional options:
              -tables <value>: List of tables to delete.
              -prefixes <value>: List of prefixes of tables to delete. For
              .    example, "User" removes all of
              .    User::mytable, User::my::othertable, etc.

          See also: table_extract, table_replace, table_summary
```

table_edit

For information on the <Edits> table, see the *WAE Design Integration and Development Guide*.

```
          Edits general tables in WAE Design format.

          Generic options:
              -help <true/false>: Prints help message.
              -options-file <value>: Read options from <filename>.
              -version <true/false>: Prints version string
              -no-global-options <true/false>: Inhibits loading of global options file.
              -suppress-progress <true/false>: Do not show progress information. Default
              .    is true.
              -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
              .    Default = 30.
              -log-file <value>: Keep copies of warnings and errors in this
              .    file.
              -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
              .    from .txt format of -out-file if parameter
              .    exists. Default is 'false'.
```

```
Required options:
    -plan-file <value>: Plan file in .txt or .pln format.
    -out-file <value>: Plan file in .txt or .pln format.

Optional options:
    -table <value>: Name of table to edit. Required unless
    .   edits-file used.
    -column <value>: Name of column in table to edit. Required
    .   unless edits-file used.
    -rowfilter <value>: SQL WHERE expression to apply to table.
    .   For example, for Nodes table, "Site =
    .   'ATL' OR Site = 'MIA'".
    .   The default is no filtering: all rows are
    .   selected.
    .   See reference documentation for details of
    .   the SQL implementation in WAE Design.
    -value <value>: Selected values in the column are replaced
    .   by result of this SQL expression. For
    .   example, if column = IGPMetric, value
    .   could be "MAX(1,Delay*100)".
    .   Required unless edits-file used.
    -edits-file <value>: File containing <Edits> table with Columns
    .   'Table', 'Column', 'RowFilter', 'Value'.
    .   If specified, the edits represented by
    .   each row are performed in sequence on the
    .   table file, and table, column, rowfilter
    .   and value. Parameters above are ignored.
```

table_extract

```
Extracts a table or a set of tables from a file. Optionally fills in
simulation and worst case values if the input file is a plan file.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -out-file <value>: Output file for table_extract.

Optional options:
    -plan-file <value>: Input plan file for table_extract. A value
    .   for either this option or -table-file must
    .   be specified.
    -table-file <value>: Input file for table_extract. A value for
    .   either this option or -plan-file must be
    .   specified.
    -tables <value>: Comma separated names of the tables to be
    .   extracted.
    -column-categories <value>: comma separated list of Column categories
```

```
.    to be extracted. This option is only
.    relevant when -plan-file is specified.
.    Example: -column-categories plan,derived
.    Valid values are:
.    'key','plan','simhash','user','derived','s
.    im','simanalysis'
.    .Default: blank meaning ALL CATEGORIES.
-service-class <value>: Service classes to be extracted. This
.    option is only relevant when -plan-file is
.    specified.
-traffic-level <value>: Traffic level. This option is only
.    relevant when -plan-file is specified.
.    Example: Default
-queue <value>: Queue This option is only relevant when
-plan-file is specified. Example: Default
-auto-sim <true/false>: If true (default), perform single-state
.    simulation. This option is only relevant
.    when -plan-file is specified.
-analysis-failure-sets <value>: Failure Sets. This option is only relevant
.    when -plan-file is specified.
.    Example: nodes
-analysis-service-class <value>: This option is only relevant when
-plan-file is specified.
-fail-nodes <value>: comma separated list of node failures.
.    This option is only relevant when
-plan-file is specified. Example:
-fail-nodes nodeA,nodeB
.    Default: blank meaning no node failure.
-fail-circuits <value>: comma separated list of circuit failures.
.    This option is only relevant when
-plan-file is specified. Example:
-fail-circuits cirA,cirB
.    Default: blank meaning no circuit failure.
-fail-srlgs <value>: comma separated list of SRLG failures.
.    This option is only relevant when
-plan-file is specified. Example:
-fail-srlgs srlg1,srlg2
.    Default: blank meaning no SRLG failure.
```

table_replace

```
Replaces tables in a file.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.

Required options:
    -table-file <value>: Input table file.
    -replace-table-file <value>: file (.txt format) containing replacement
```

```
    .   tables.
    -out-file <value>: Output file after replacement.


Optional options:


See also: table_extract, table_delete, table_summary
```

time_plot

```
Usage: time_plot options
Generates a plot from archived plans and presents an overview of the network
over time.

Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -time <timestamp>: Timestamp of plan to retrieve from archive
    .   in UTC format. The format is:
    .   'YYMMDD_HHMM'.
    -out-file <filename>: The name of the plot file.

Optional options:
    -time-zone <+/-integer>: Time zone relative to UTC, e.g., +5, -3.
    .   Default = 0.
    -archive <directory>: Archive directory, from where the summary
    .   files will be retrieved.
    -visual-format <filename>: File containing visual format. Default is
    .   [archive_directory]\default_timeplot_visua
    .   l_format.txt, or
    .   CARIDEN_HOME/etc/archive\default_timeplot_
    .   visual_format.txt if none exists in
    .   archive.
    -duration <day/week/month/year>: The duration to plot. This works in
    .   conjunction with the time option which
    .   specifies the day, week, month or year to
    .   plot. Default: day.
    -duration-shift <start/center/end/calendar>: The duration shift for the plot.
    .   If 'center', places the time in -time in
    .   the middle of the plot. If 'start', starts
    .   time duration from -time. If 'end', ends
    .   time duration at -time. If 'calendar',
    .   selects calendar week, month etc that
    .   contains -time. Default: calendar.
    -type <png/svg/pdf>: The type of plot to create (png, svg or
    .   pdf). Default: 'png'.
    -data-file <filename>: Also write the plotted data into a table
    .   to this file
    -traffic-level <value>: Traffic level to plot. If not specified,
```

```
.    will just pick one.
-ignore-traffic-level <true/false>: Ignores the traffic-level option and plots
.    all the data for all timestamps. If there
.    are more than one traffic levels per
.    timestamp it will pick an arbitrary one.
-plot-properties <plot-properties-file-path>: Creates a tab delimited file with the
.    properties of the plot.


Example:
time_plot -archive /mate -duration day -time 070118_0000_UTC
    -out-file day.png
Creates a plot for archived plans for the day 2007 Jan 18 UTC, and writes it
to 'day.png' in the current directory.
```

trim_as

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .    is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .    Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .    file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .    from .txt format of -out-file if parameter
    .    exists. Default is 'false'.


Required options:
    -plan-file <value>: Input: .pln file to trim.
    -out-file <value>: Output: trimmed .pln file.


Optional options:
    -num-circuits-below <value>: Trim all AS's with connections less than
    .    or equal to this number. Default = 0.
    -traffic-below <value>: Trim all AS's with in and out traffic both
    .    below this number. Default = 0.
    -as-table <file>: File containing <AS> table of AS's to
    .    trim. Default is none. See mate_select.
    -as-include-table <file>: File containing <AS> table of AS's to
    .    leave in the plan. All other external AS's
    .    are trimmed. Only one of this and the
    .    as-table option may be specified at a time.
    -trim-demands <true/false>: If true, moves demands with source or
    .    destination on trimmed AS's, to sources or
    .    destinations within the remaining network.
    .    trimmed demands with common source,
    .    destination and service class are merged.
    .    A simulation will be performed. Default is
    .    false.
    -trimmed-demands-name <value>: Name to assign trimmed demands. Default
    .    'Trimmed'.
```

trim_nodes

```
Generic options:
    -help <true/false>: Prints help message.
    -options-file <value>: Read options from <filename>.
    -version <true/false>: Prints version string
    -no-global-options <true/false>: Inhibits loading of global options file.
    -suppress-progress <true/false>: Do not show progress information. Default
    .   is true.
    -verbosity <value>: Log verbosity. 1 (lowest) to 60 (highest).
    .   Default = 30.
    -log-file <value>: Keep copies of warnings and errors in this
    .   file.
    -simple-txt-out-file <true/false>: Whether to remove empty tables and columns
    .   from .txt format of -out-file if parameter
    .   exists. Default is 'false'.

Required options:
    -plan-file <value>: Input: .pln file to trim.
    -out-file <value>: Output: trimmed .pln file.

Optional options:
    -node-table <file>: File containing <Nodes> table of nodes to
    .   either exclude (trim) or include (keep),
    .   as determined by exclude-node-table.
    .   Default is none. See mate_select.
    -exclude-node-table <true/false>: If true (default), node-table entries are
    .   excluded (trimmed). If false, node-table
    .   entries included (kept), and all other
    .   nodes are excluded (trimmed).
    -include-nodes-regex <RegExp>: A regular expression specifying the nodes
    .   (by name or IP Address) to include (keep).
    .   Not used if nodes-table specified.
    .   Default '' (not used).
    -exclude-nodes-regex <RegExp>: A regular expression specifying the nodes
    .   (by name or IP Address) to exclude (trim).
    .   Not used if nodes-table or
    .   include-nodes-regex specified. Default ''
    .   (not used).
    -trim-demands <true/false>: If true, moves demands with source or
    .   destination on trimmed nodes, to sources
    .   or destinations within the remaining
    .   network. trimmed demands with common
    .   source, destination and service class are
    .   merged. A simulation will be performed.
    .   Default is false.
    -trimmed-demands-name <value>: Name to assign trimmed demands. Default
    .   'Trimmed'.
```

Plan File Schema Reference

This lists the table schema for WAE Design and WAE Collector plan files.

- Tables by Function—Groups the tables by function and briefly describes each.
- Plan Table Reference—Alphabetical list of plan tables and their contents. You can also find these tables and their contents in the `table_schema.html` file in `$CARIDEN_HOME/docs`. `$CARIDEN_HOME` is the directory in which the WAE Design, WAE Live, and WAE Collector executables and binaries are installed. On Linux, the default `$CARIDEN_HOME` is `/opt/cariden/software/mate/current`.

Tables by Function

Table 3-1   Basic Tables

Table	Description
<Network>	Version of the plan file
<NetworkOptions>	High-level plan options
<TrafficLevels>	Traffic levels

Table 3-2   Circuits and Interface Tables

Table	Description
<Circuits>	Logical circuit with two interfaces
<InterfaceIPAddresses>	Interface IP addresses
<Interfaces>	Node interfaces
<InterfaceTEPriorities>	For each interface, lists the measured unreserved bandwidth per TE priority
<InterfaceTraffic>	Interface traffic

Table 3-3   Demand and External Endpoint Tables

Table	Description
<DemandGroupings>	List of demand groupings, which are filters that define groups of demands
<Demands>	List of demands

Table	Description
<DemandTraffic>	Traffic for each demand
<ExternalEndpoints>	External endpoints used as source and/or destinations in demands
<ExternalEndpointMembers>	Members of external endpoints, including failover priorities, route types (shortest path or traffic balanced), and if applicable, how the traffic is balanced

Table 3-4   External Routing Tables

Table	Description
<AS>	BGP autonomous systems
<ASRelationships>	Autonomous system relationships in a BGP network

Table 3-5   Flow Tables

Table	Description
<FlowTo>	Flow destination
<FlowFrom>	Flow source
<Flows>	Traffic flows
<FlowTraffic>	Flow traffic

Table 3-6   Layer 1 Tables

Table	Description
<ActualL1CircuitPathHops>	Discovered actual L1 circuit hops; although these are not discovered by WAE Collector, if you have a discovered set of L1 circuit hops, you can add them to this table for use in WAE Design
<L1CircuitPathHops>	Models the L1 node or L1 link hops in the L1 circuit path
<L1CircuitPaths>	Models the paths available for the L1 circuits
<L1Circuits>	Bidirectional Layer 1 circuits
<L1Links>	Bidirectional Layer 1 connections (usually fiber) between L1 nodes
<L1LinkWaypoints>	List of the L1 link waypoints
<L1Nodes>	Layer 1 nodes
<L3L1Links>	Models the physical relationship between L3 nodes and L1 nodes

Table 3-7   LSP Tables

Table	Description
<ActualPathHops>	LSP actual paths in a named path
<AdminGroups>	Names of affinities
<LSPPaths>	LSP named paths
<LSPs>	Label switch path
<LSPTraffic>	LSP traffic

Table	Description
<NamedPaths>	Named LSP paths through the network
<NamedPathHops>	Named path hops through the network
<P2MPLSPs>	Point to multipoint LSPs
<SegmentListHops>	List of hops in the segment lists used for segment-routed (SR) LSPs
<SegmentLists>	Names of the segment lists used by SR LSPs

Table 3-8   Multicast Tables

Table	Description
<MulticastFlowDestinations>	Multicast flow destinations
<MulticastFlowExternalHops>	Multicast flow external hops
<MulticastFlowHops>	Multicast flow hops
<MulticastFlows>	Multicast flows
<MulticastFlowTraffic>	Multicast flow traffic

Table 3-9   Network Interface Tables

Table	Description
<NetIntAdjacencySIDs>	
<NetIntBgpPeers>	All BGP peers per node and all discovered eBGP interfaces
<NetIntBgpSpeakers>	BGP ID and ASN per node
<NetIntDemandNameSequence>	Defines the sequence of keys encoded in the Name column of the <Demands> and <DemandTraffic> tables
<NetIntHardwareBackPlane>	Node inventory backplane and serial number data
<NetIntHardwareChassis>	Node inventory chassis and serial number data
<NetIntHardwareContainer>	Node inventory container data
<NetIntHardwareFan>	Node inventory fan and serial number data
<NetIntHardwareModule>	Node inventory module and serial number data
<NetIntHardwareOther>	Node inventory route processor and serial number data
<NetIntHardwarePort>	Node inventory port and serial number data
<NetIntHardwarePowerSupply>	Node inventory power supply and serial number data
<NetIntHardwareSensor>	Node inventory sensor data
<NetIntHistory>	History of the WAE Collector CLI tools that have been executed
<NetIntIfMeasurements>	Raw traffic measurement details for all discovered interfaces per node
<NetIntInterASFlows>	List of ingress and egress points of the flows and information about AS's that each flow passes through; created for and used by BI service deployments
<NetIntInterfaceQueues>	Per-queue interface SNMP data for the WAE Network Interface (NI) server to use

Table	Description
<NetIntInterfaces>	External interfaces that were discovered, but were not included in the plan file
<NetIntInterfaceTraffic>	Traffic for discovered external interfaces
<NetIntIpAddresses>	IP addresses for all discovered interfaces on every node
<NetIntLdp>	All LDP information (ID, destination) per node
<NetIntLdpMeasurements>	Raw LDP traffic measurements per node (in/out, transit)
<NetIntLspMeasurements>	Egress LSP measurement details for all discovered RSVP-TE LSPs
<NetIntMacAddresses>	All discovered MAC addresses associated with border router MAC accounting, interface for BGP pseudonode, and its IP address
<NetIntMacMeasurements>	Raw traffic measurements over a number of samples and their average for all discovered MAC addresses
<NetIntMacTraffic>	Incoming and outgoing traffic rates for discovered MAC addresses
<NetIntMulticastFlowHops>	Multicast flow hops and associated interfaces per node
<NetIntMulticastFlows>	All (S,G) multicast flows going through a node
<NetIntMulticastMeasurements>	Multicast measurements per (S,G) pair and per node
<NetIntNodeInventory>	Processed, consolidated node inventory data with hardware type, name, description, and parent ID
<NetIntPlanFileGenerationTime>	Stores the modified time and creation time of plan files
<NetIntPrefixSIDs>	
<NetIntRouters>	Raw router information that was discovered: vendor information, queue names, and MIB support
<NetIntSubnets>	All subnets discovered per node

Table 3-10   Nodes and Sites Tables

Table	Description
<AnycastGroupMembers>	Lists the nodes within each anycast group
<AnycastGroups>	Lists the anycast groups
<NodeGroupMembers>	Lists the nodes within each node group
<NodeGroups>	List of node groups
<Nodes>	List of nodes
<NodeSiteMappingRules>	Defines the rules used to match nodes to sites.
<NodeTraffic>	Node traffic
<Sites>	List of sites

Table 3-11   Plot and Layout Tables

Table	Description
<ImageMaps>	Contents of the image map file
<PlotLayoutElements>	Plot layout objects

Table	Description
<PlotLayoutOptions>	Options for plot layouts
<PlotLayouts>	Plot layouts
<PlotNodeToNodeOptions>	Interface style between nodes in a site view
<PlotSiteToSiteOptions>	Interface style between sites in the network plot
<PlotViewInterfaces>	User-specified network plot; see the *WAE Design Integration and Development Guide*

Table 3-12   Port Tables (Components of Port Channels/LAGs)

Table	Description
<PortCircuits>	Port circuits
<Ports>	Interface ports
<PortTraffic>	Port traffic

Table 3-13   QoS Tables

Table	Description
<InterfaceQueues>	Queues configured on each interface
<LSPClasses>	List of LSP classes in plan
<Queues>	Names of all queues in the plan
<ServiceClassLSPClassMapping>	List of how demand service classes are mapped to LSP classes, including the priority of the class mapping per service class
<ServiceClasses>	List of service classes in plan
<ServiceClassPolicy>	Policies for service classes (normal operation and worst case)
<ServiceClassQueueMapping>	Mapping of service classes to queues

Table 3-14   Report Tables

Table	Description
<ColumnData>	Manner in which information is stored in the table columns within reports
<Reports>	List of reports generated
<ReportSections>	Section name and contents within the reports
<ReportTableInteractions>	References the sections in the <ReportSections> table and identifies the interactions between the columns in these sections

Table 3-15   Simulation Tables

Table	Description
<SimAnalysisFailureImpacts>	Failures causing maximum utilization elsewhere in the network if an object fails
<SimAnalysisOptions>	Options used to create a stored Simulation Analysis

Table	Description
<SimAnalysisWCLatencyDemands>	Worst-case latency information per demand; created by Simulation Analysis.
<SimAnalysisWCUtilInterfaces>	Worst-case utilization per interface; created by Simulation Analysis.
<SimAnalysisWCUtilL1Link>	Worst-case utilization per L1 link; created by Simulation Analysis.
<SimAnalysisWCUtilVPNs>	Worst-case utilization per VPN; created by Simulation Analysis.

Table 3-16   SRLG Tables

Table	Description
<NodeConfiguredSRLGs>	List of SRLGs configured on nodes
<SRLGCircuits>	Circuits included in SRLGs
<SRLGExternalEndpointMembers>	External endpoint members included in SRLGs
<SRLGL1Nodes>	Layer 1 nodes included in SRLGs
<SRLGL1Links>	Layer 1 links included in SRLGs
<SRLGNodes>	Nodes included in SRLGs
<SRLGPortCircuits>	Port circuits included in SRLGs
<SRLGPorts>	Ports included in SRLGs
<SRLGs>	Shared-risk link groups

Table 3-17   Topology Tables

Table	Description
<InterfaceTopologies>	Interfaces in each topology
<Topologies>	Topologies in the plan file

Table 3-18   VPN Tables

Table	Description
<VPNNodes>	Nodes on which each L2 or L3 VPN is configured
<VPNNodesTraffic>	VPN source and destination traffic for each VPN node
<VPNs>	VPN names, VPN type, and associated service class

Table 3-19   Internal Tables

Table	Description
<Hashes>	Used to track changes to plan files
<SimCacheInterfaces>	Cache for simulated interface traffic
<SimCacheLSPReservation>	Cache for LSP reservations.

Plan Table Reference

Imported Table Schema

<ActualL1CircuitPathHops>

Table 3-20   ActualL1CircuitPathHops Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
L1Circuit	L1 Circuit	Name of the L1 Circuit Path	text	key
L1NodeA	L1 Node A	NodeA of the L1 Circuit Path	text	key
L1NodeB	L1 Node B	NodeB of the L1 Circuit Path	text	key
PathOption	Path Option	Path Option of the L1 Circuit Path	integer	key
Step	Step	Sequence of the hop in the L1 Circuit	integer	key
HopL1NodeA	Hop L1 Node A	L1 Node hop, or Node A of L1 Link hop	text	plan
HopL1NodeB	Hop L1 Node B	Node B of L1 Link hop	text	plan
HopL1Link	Hop L1 Link	Name of L1 Link hop	text	plan
Lambda	Lambda	The wavelength at this hop. If not specified, there is no change of wavelength	integer	plan

<ActualPathHops>

Table 3-21   ActualPathHops Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
LSP	LSP	LSP	text	key
Source	Source	Source	text	key
PathOption	PathOption	PathOption	integer	key
Step	Step	Step	integer	key
Node	Node	Node	text	plan
Interface	Interface	Interface	text	plan
NetIntHop	NetIntHop	NetIntHop	text	plan

<AdminGroups>

Administration groups are used to assign names to affinities.

Table 3-22   AdminGroups Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Affinity	Affinity	(0 to 31)	integer	plan
Name	Name	Name	text	key

<AnycastGroupMembers>

Table 3-23   AnycastGroupMembers Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
AnycastGroup	AnycastGroup	Anycast Group Name	text	key
Node	Node	Name of a Node in the Anycast Group	text	key

<AnycastGroups>

Table 3-24   AnycastGroups Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Anycast Group Name	text	key
SID	SID	Anycast Group Segment Identifier	integer	plan
NumNodes	Num Nodes	Number of Nodes in Anycast Group	integer	derived
NodeList	Node List	List of Nodes in Anycast Group	text	derived

<AS>

This table describes both internal and external BGP autonomous systems (AS's).

Table 3-25   AS Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
ASN	ASN	Autonomous System Number	text	key
Name	Name	Short description	text	plan
Type	Type	External or Internal	text	plan
ExternalMesh	External Mesh	Include or Exclude	text	plan
Description	Description	Free form Description	text	plan
NodeCount	Node Count	Number of nodes in AS	integer	derived

Plan File Name	User Interface Name	Description	Data Type	Category
PeeringCircuit Count	Peering Circuit Count	Number of peering Circuits to AS	integer	derived
OutTraffMeas	Out Traff Meas	Total measured traffic on all peering links out of AS	real	derived
InTraffMeas	In Traff Meas	Total measured traffic on all peering links into AS	real	derived
SumTraffMeas	Sum Traff Meas	In Traff Meas + Out Traff Meas	real	derived
DiffTraffMeas	Diff Traff Meas	In Traff Meas - Out Traff Meas	real	derived
OutTraffSim	Out Traff Sim	Total simulated traffic on all peering links out of AS	real	derived
InTraffSim	In Traff Sim	Total simulated traffic on all peering links into AS	real	derived
Tags	Tags	Tags assigned to the AS	text_list	plan

<ASRelationships>

The autonomous system relationships (ASR) table describes the relationships between neighboring AS's.

Table 3-26   ASRelationships Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
FromAS	From AS	Source AS	text	key
FromASType	From AS Type	Internal or External	text	derived
ToAS	To AS	Destination AS	text	key
ToASType	To AS Type	Internal or External	text	derived
RoutingPolicy	Routing Policy	Shortest Exit or Respect MED	text	plan
RoutingControl	Routing Control	Internal or External	text	derived

<Circuits>

Table 3-27   Circuits Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name	text	plan
NodeA	Node A	Node A	text	key
InterfaceA	Interface A	Interface A	text	key
NodeB	Node B	Node B	text	key
InterfaceB	Interface B	Interface B	text	key

Plan File Name	User Interface Name	Description	Data Type	Category
CapacitySim	Capacity Sim	Simulated Capacity of Circuit	real	derived
Capacity	Capacity	Defined Capacity of Circuit	real	plan
Delay	Delay	One-way Propogation delay across the circuit	real	plan
DelaySim	Delay Sim	Circuit delay if specified. If not specified, derived delay from L1 Circuit	real	derived
Distance	Distance	Circuit distance	real	plan
DistanceSim	Distance Sim	Circuit distance if specified. If not specified, derived distance from L1 Circuit	real	derived
L1CircuitName	L1 Circuit Name	L1 Circuit Name	text	plan
L1CircuitNodeA	L1 Circuit Node A	L1 Circuit Node A	text	plan
L1CircuitNodeB	L1 Circuit Node B	L1 Circuit Node B	text	plan
Protected	Protected	Protected	boolean	plan
Active	Active	Active	boolean	plan
Failed	Failed	Has circuit failed?	boolean	plan
CostInitial	Cost Initial	Initial cost of Circuit	real	plan
CostPerPeriod	Cost Per Period	Cost of Circuit per period	real	plan
Operational	Operational	Is circuit operational?	boolean	derived
SRLGs	SRLGs	SRLG containing the circuit	text	derived
ISISLevelSim	ISIS Level Sim	The common ISIS Levels defined on the two circuit interfaces	text	derived
Intersite	Intersite	Connecting nodes in two different sites?	boolean	derived
IGPMetricDiff	IGP Metric Diff	IGP Metric Difference	integer	derived
TEMetricDiff	TE Metric Diff	TE Metric Difference	integer	derived
TraffMeas	Traff Meas	Maximum Traff Meas of Interfaces	real	derived
UtilMeas	Util Meas	Maximum Util Meas of Interfaces	real	derived
TraffSim	Traff Sim	Maximum Traff Sim of Interfaces	real	derived
UtilSim	Util Sim	Maximum Util Sim of Interfaces	real	derived
Function	Function	Core or Edge	text	derived
Place	Place	Internal or Border	text	derived

Plan File Name	User Interface Name	Description	Data Type	Category
InterfaceIGPMetricA	Interface IGP Metric A	IGP metric of Interface A	integer	derived
InterfaceIGPMetricB	Interface IGP Metric B	IGP metric of Interface B	integer	derived
InterfaceTEMetricA	Interface TE Metric A	TE metric of Interface A	integer	derived
InterfaceTEMetricB	Interface TE Metric B	TE metric of Interface B	integer	derived
SiteA	Site A	Site A	text	derived
SiteB	Site B	Site B	text	derived
ASA	AS A	Autonomous System A	text	derived
ASB	AS B	Autonomous System B	text	derived
ParallelGroupName	Parallel Group Name	GUI circuit parallel group name	text	plan
LastTemplateUpdate	Last Template Update	(For plan templates) last time template was updated with circuit	text	plan
QoSViolationSim	QoS Violation Sim	Max 'QoS Violation Sim' of Interfaces	real	derived
QoSViolationSimPercent	QoS Violation Sim (%)	Max 'QoS Violation Sim (%)' of Interfaces	real	derived
QoSViolationMeas	QoS Violation Meas	Max 'QoS Violation Meas' of Interfaces	real	derived
QoSViolationMeasPercent	QoS Violation Meas (%)	Max 'QoS Violation Meas (%)' of Interfaces	real	derived
WCQoSViolation	WC QoS Violation	Max 'WC QoS Violation' of Interfaces	real	derived
WCQoSViolationPercent	WC QoS Violation (%)	Max 'WC QoS Violation (%)' of Interfaces	real	derived
WCUtil	WC Util	Maximum WC Util of Interfaces	real	derived
WCTraffic	WC Traffic	Maximum WC Traffic of Interfaces	real	derived
WCFailure	WC Failure	Failure causing WC Util	text	derived
WCTrafficLevel	WC Traffic Level	Traffic Level causing WC Util	text	derived
WCServiceClass	WC Service Class	Service Class causing WC Util	text	derived
FailureImpact	Failure Impact	Maximum increased utilization over network under failure of this circuit	real	derived

Plan File Name	User Interface Name	Description	Data Type	Category
FIInterface	Failure Impact Interface	Interface with maximum failure impact	text	derived
Tags	Tags	Tags assigned to the circuit	text_list	plan
InterfaceATags	Interface A Tags	Tags assigned to the Interface A	text_list	derived
InterfaceBTags	Interface B Tags	Tags assigned to the Interface B	text_list	derived
NodeATags	Node A Tags	Tags assigned to the Node A	text_list	derived
NodeBTags	Node B Tags	Tags assigned to the Node B	text_list	derived
SiteATags	Site A Tags	Tags assigned to the Site A	text_list	derived
SiteBTags	Site B Tags	Tags assigned to the Site B	text_list	derived

<ColumnData>

Table 3-28   ColumnData Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Table	Table	Table	text	key
Column	Column	Column	text	key
Type	Type	Type	text	plan
Decimals	Decimals	Decimals	integer	plan
DisplayName	DisplayName	DisplayName	text	plan
Tooltip	Tooltip	Tooltip	text	plan
Shown	Shown	Shown	boolean	plan

<DemandGroupings>

Table 3-29   DemandGroupings Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of Demand Grouping	text	key
SourceSiteEquals	Source Site Equals	Only include Demands with Source Site	text	plan
SourceASEquals	Source AS Equals	Only include Demands with this Source AS	text	plan
SourceNodeEquals	Source Node Equals	Only include Demands with this Source Node	text	plan
SourceEndpointEquals	Source Endpoint Equals	Only include Demands with this Source External Endpoint	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
DestSiteEquals	Dest Site Equals	Only include Demands with Destination Site	text	plan
DestASEquals	Dest AS Equals	Only include Demands with this Destination AS	text	plan
DestNodeEquals	Dest Node Equals	Only include Demands with this Destination Node	text	plan
DestEndpointEquals	Dest Endpoint Equals	Only include Demands with this Destination External Endpoint	text	plan
DemandNameEquals	Demand Name Equals	Only include Demands with this Name	text	plan
ServiceClassEquals	Service Class Equals	Only include Demands with this Service Class	text	plan
SourceNodeMatches	Source Node Matches	Only include Demands with matching Source Node	text	plan
DestNodeMatches	Dest Node Matches	Only include Demands with matching Destination Node	text	plan
TagsInclude	Tags Include	Only include Demands with this Tag	text	plan
SourceSiteTagsInclude	Source Site Tags Include	Only include Demands whose source site includes this tag	text	plan
DestSiteTagsInclude	Dest Site Tags Include	Only include Demands whose destination site includes this tag	text	plan
SourceNodeTagsInclude	Source Node Tags Include	Only include Demands whose source node includes this tag	text	plan
DestNodeTagsInclude	Dest Node Tags Include	Only include Demands whose destination node includes this tag	text	plan
SourceASTagsInclude	Source AS Tags Include	Only include Demands whose source AS includes this tag	text	plan
DestASTagsInclude	Dest AS Tags Include	Only include Demands whose destination AS includes this tag	text	plan
GrowthTrafficTotal	Growth Traffic Total	Growth plan: Final total after growth	real	plan
GrowthTrafficPercent	Growth Traffic (%)	Growth plan: Percent traffic growth	real	plan
GrowthTrafficInc	Growth Traffic Inc	Growth plan: Traffic increment	real	plan

<Demands>

Demands specify the required traffic transmission through the network. An individual demand specifies how much traffic of a particular type (for example, service class) is required to be sent from a particular node, or set of nodes, to another node, or set of nodes, in the network. Each traffic set in the network can specify a different traffic level per demand, allowing simulations of the same demand structure under different traffic regimes.

Table 3-30   Demands Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Demand name	text	key
Source	Source	Source node	text	key
SourceSite	Source Site	Source Site	text	derived
SourceAS	Source AS	Source AS	text	derived
Destination	Destination	Destination node	text	key
DestinationSite	Destination Site	Destination Site	text	derived
DestinationAS	Destination AS	Destination AS	text	derived
ServiceClass	Service Class	Service Class	text	key
Active	Active	Is Demand Active?	boolean	plan
Reroutable	Reroutable	Is Demand reroutable?	boolean	plan
Cast	Cast	Uni or Multi	text	derived
PrivateLSPName	Private LSP Name	The name of the private LSP for this demand	text	plan
PrivateLSPSource	Private LSP Source	The source node of the private LSP for this demand	text	plan
Topology	Topology	Demand is routed over this Topology	text	plan
BW	Traffic	Traffic demand in Mbps	real	derived
GrowthPercent	Growth %	Percent Demand TraffMeas growth in one period	real	derived
ECMPMinPercent	ECMP Min %	Smallest ECMP split over demand route	real	derived
AverageLatency	Average Latency	Average latency over all ECMP sub-routes	real	derived
MinimumLatency	Minimum Latency	Minimum latency over all ECMP sub-routes	real	derived
MaximumLatency	Maximum Latency	Maximum latency over all ECMP sub-routes	real	derived
MinPossibleLatency	Min Possible Latency	Latency of shortest possible path	real	derived
DiffMinPossibleLatency	Diff Min Possible Latency	"Maximum Latency" minus "Min Possible Latency"	real	derived

Plan File Name	User Interface Name	Description	Data Type	Category
PercentDiffMinPossibleLatency	% Diff Min Possible Latency	"Diff Min Possible Latency" as percent of Min Possible Latency	real	derived
LatencyBound	Latency Bound	Latency Bound	real	plan
DiffLatencyBound	Diff Latency Bound	"Latency Bound" minus "Maximum Latency"	real	derived
PathMetric	Path Metric	Sum of IGP metrics over route	integer	derived
IGPMetric	IGP Metric	IGP metrics of the shortest route	integer	derived
Routed	Routed	Is demand routed?	boolean	derived
Intersite	Intersite	Sources and Destinations in two different sites?	boolean	derived
UtilConformant	Util Conformant	No interfaces on path violate QoS Bound for Demand Service Class	boolean	derived
CostbyCapacity	Cost by Capacity	Circuit cost of demand as routed, scaled by proportion of demand traffic to total interface capacity	real	derived
CostbyUtil	Cost by Util	Circuit cost of demand as routed, scaled by proportion of demand traffic to total interface traffic	real	derived
WCLatency	WC Latency	Simulated worst-case latency	real	derived
WCLatencyFailures	WC Latency Failures	Failures causing worst-case latency	text	derived
Tags	Tags	Tags assigned to the demand	text_list	plan
SourceNodeTags	Source Node Tags	Tags assigned to the demand source node	text_list	derived
DestNodeTags	Dest Node Tags	Tags assigned to the demand destination node	text_list	derived

<DemandTraffic>

Table 3-31   DemandTraffic Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Demand name	text	key
Source	Source	Demand source	text	key
Destination	Destination	Demand destination	text	key
ServiceClass	Service Class	Demand service class	text	key

Plan File Name	User Interface Name	Description	Data Type	Category
TrafficLevel	Traffic Level	Traffic Level	text	key
Traffic	Traffic	Traffic	real	plan
GrowthPercent	Growth %	Percentage Traffic Growth Rate in One Period	real	plan

<ExternalEndpointMembers>

Table 3-32   ExternalEndpointMembers Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Endpoint	Endpoint	Name of External Endpoint	text	key
Member	Member	Member of the External Endpoint. This is any currently supported endpoint, ie node, AS{}, AS{}:node	text	key
Priority	Priority	Routing Priority. Default is 1. Possible values: 1,2,3,...	integer	plan
TrafficBalance Percent	Traffic Balance (%)	May be empty, or a positive real. Determines how the traffic is split between all member endpoints with the same priority. If empty, shortest path is used.	real	plan
Type	Type	'ShortestPath' (Default), 'FixTraffic', or 'DeduceTraffic'. If 'ShortestPath', traffic routed to/from members of same priority based on shortest path. If 'FixTraffic', traffic routed to member based on TrafficBalance percentage. 'DeduceTraffic' same as 'FixTraffic', but TrafficBalance may be modified during Demand Deduction to fit measured traffic.	text	plan
Protected	Protected	Is External Endpoint Member protected?	boolean	plan
Active	Active	Is External Endpoint Member active?	boolean	plan
Failed	Failed	Is External Endpoint Member failed?	boolean	plan
Operational	Operational	Is External Endpoint Member operational?	boolean	derived

<ExternalEndpoints>

Table 3-33   ExternalEndpoints Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of external endpoint	text	key
Tags	Tags	Tags assigned to the external endpoint	text_list	plan

<FlowFrom>

Table 3-34   FlowFrom Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
FlowID	FlowID	FlowID	integer	key
Node	Node	Node	text	key

<Flows>

Table 3-35   Flows Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
FlowID	Flow ID	Flow ID	integer	key
From	From	List of From Nodes	text	derived
FromType	From Type	List containing Source, Interior, or Border	text	plan
To	To	List of To Nodes	text	derived
ToType	To Type	List containing Dest, Interior, or Border	text	plan
TraffMeas	Traff Meas	Measured Traffic	real	derived
Tags	Tags	Tags assigned to the Flow	text_list	plan

<FlowTo>

Table 3-36   FlowTo Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
FlowID	FlowID	FlowID	integer	key
Node	Node	Node	text	key

<FlowTraffic>

Table 3-37   FlowTraffic Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
FlowID	FlowID	FlowID	integer	key
From	From	List of From Nodes	text	derived
FromType	From Type	List containing Source, Interior, or Border	text	derived
To	To	List of To Nodes	text	derived
ToType	To Type	List containing Dest, Interior, or Border	text	derived
TrafficLevel	Traffic Level	Traffic Level	text	key
Queue	Queue	Queue	text	key
TraffMeas	Traff Meas	Traff Meas	real	plan

<Hashes>

Table 3-38   Hashes Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Hash name	text	key
Value	Value	Hash value	text	plan

<ImageMaps>

Table 3-39   ImageMaps Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of image map file	text	key
Image	Image	The content of the image map file	BLOB	plan

<InterfaceIPAddresses>

Table 3-40   InterfaceIPAddresses Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node	text	key
Interface	Interface	Interface	text	key

Plan File Name	User Interface Name	Description	Data Type	Category
IPv4Address	IPv4Address	IPv4Address	text	plan
IPv4PrefixLength	IPv4PrefixLength	IPv4PrefixLength	integer	plan
IPv6Address	IPv6Address	IPv6Address	text	plan
IPv6PrefixLength	IPv6PrefixLength	IPv6PrefixLength	integer	plan

\<InterfaceQueues\>

Table 3-41   InterfaceQueues Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Source node of the interface queue	text	key
Interface	Interface	Interface of the interface queue	text	key
Queue	Queue	Name of the queue	text	key
Priority	Priority	Priority of the queue	integer	plan
Weight	Weight	Round robin weight of the queue	real	plan
PoliceLimit	Police Limit	Police limit of the queue	real	plan
TraffMeas	Traff Meas	Measured traffic of the queue	real	derived
TraffSim	Traff Sim	Simulated traffic of the queue	real	derived
UtilMeas	Util Meas	Measured traffic / simulated capacity	real	derived
UtilSim	Util Sim	Simulated traffic / simulated capacity	real	derived
PolicyGroup	Policy Group	Interface QoS Policy Group	text	derived
CapacitySim	Capacity Sim	Simulated Capacity of Interface	real	derived
QoSBoundSim	QoS Bound Sim	Max Traff Sim before QoS violated	real	derived
QoSBoundSimPercent	QoS Bound Sim (%)	QoS Bound Sim as % of Capacity	real	derived
QoSViolationSim	QoS Violation Sim	Traff Sim minus 'QoS Bound Sim'. Positive if QoS Bound violated.	real	derived
QoSViolationSimPercent	QoS Violation Sim (%)	QoS Violation Sim as % of Capacity	real	derived
QoSBoundMeas	QoS Bound Meas	Max Traff Meas before QoS violated	real	derived

Plan File Name	User Interface Name	Description	Data Type	Category
QoSBoundMeasPercent	QoS Bound Meas (%)	QoS Bound Meas as % of Capacity	real	derived
QoSViolationMeas	QoS Violation Meas	Traff Meas minus 'QoS Bound Meas'. Positive if QoS Bound violated	real	derived
QoSViolationMeasPercent	QoS Violation Meas (%)	QoS Violation Sim as % of Capacity	real	derived
WCQoSBound	WC QoS Bound	QoS Bound for Worst-Case Violation	real	derived
WCQoSBoundPercent	WC QoS Bound (%)	Worst-Case QoS Bound as % of Capacity	real	derived
WCQoSViolation	WC QoS Violation	WC Traffic minus 'WC QoS Bound'. Positive if QoS Bound violated	real	derived
WCQoSViolationPercent	WC QoS Violation (%)	Worst-Case QoS violation as % of Capacity	real	derived
WCTraffic	WC Traffic	Worst case traffic	real	derived
WCUtil	WC Util	Worst case traffic / simulated capacity	real	derived

<Interfaces>

Each line specifies an interface. However, some circuit properties are also specified. Circuit properties need to be identical for the two interfaces on the same circuit. Note that this table contains the same information as, and can be substituted by, the `<Circuits>` table.

Table 3-42   Interfaces Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node name	text	key
Interface	Interface	Interface name	text	key
IGPMetric	IGP Metric	IGP metric or cost	integer	plan
MetricISISLevel1	Metric ISIS Level 1	If specified, the ISIS Level 1 metric. Default is the 'Metric' column entry.	integer	plan
Capacity	Capacity	Configured Capacity on Interface.	real	plan
PolicyGroup	Policy Group	Interface QoS Policy Group	text	plan
TEMetric	TE Metric	Configured TE Metric of the Interface	integer	plan
TEEnabled	TE Enabled	Is TE enabled on interface?	boolean	plan

Plan File Name	User Interface Name	Description	Data Type	Category
ResvBW	Resv BW	RSVP Reservable Bandwidth, in traffic units. See also ResvBWPercent.	real	plan
ResvBWPercent	Resv BW Percent	RSVP Reservable Bandwidth, as percentage of Capacity Sim. Used if ResvBW not specified.	real	plan
ResvBWSim	Resv BW Sim	Effective RSVP Reservable Bandwidth, used in simulation. Derived from ResvBW and ResvBWPercent.	real	derived
PCMinLinks	PC Min Links	Required number of operational port channels	integer	plan
PCMinBW	PC Min BW	Required available port channel bandwidth	real	plan
FRREnabled	FRR Enabled	T if FRR protection enabled for this interface.	boolean	plan
Area	Area	OSPF Area. Used if Network Options IGP set to OSPF	text	plan
ISISLevel	ISIS Level	Level 2 (Default), Level 1 or Level1-2. Used if Network Options IGP set to ISIS	text	plan
Affinities	Affinities	Affinities assigned to Interface (MPLS)	text	plan
Description	Description	User defined description for the interface	text	plan
NetIntIndex	NetIntIndex	IfIndex of interface	integer	plan
NetIntContainerIndex	NetIntContainerIndex	IfIndex of the container interface	integer	plan
NetIntType	NetIntType	Interface type	integer	plan
NetIntAdminStatus	NetIntAdminStatus	Administrative status of the interface	text	plan
NetIntOperStatus	NetIntOperStatus	Operational status of the interface	text	plan
NetIntSubnet	NetIntSubnet	Subnet the interface belongs to	text	plan
RemoteNode	Remote Node	Remote Node name	text	derived
RemoteInterface	Remote Interface	Remote Interface name	text	derived
Site	Site	Site name	text	derived
RemoteSite	Remote Site	Remote Site name	text	derived
Circuit	Circuit	Circuit name	text	derived
EIGRPDelay	EIGRP Delay	Configured delay for EIGRP in microseconds.	real	plan

Plan File Name	User Interface Name	Description	Data Type	Category
SID	SID	Adjacency Segment Identifier	integer	plan
Delay	Delay	One-way transmission latency	real	derived
DelaySim	Delay Sim	Simulated one-way transmission latency	real	derived
DistanceSim	Distance Sim	Circuit distance if specified. If not specified, derived distance from mapped L1 Circuit	real	derived
Topology	Topology	List of Topologies on the interface	text	derived
Function	Function	Core or Edge	text	derived
Place	Place	Internal or Border	text	derived
Intersite	Intersite	Connecting nodes in two different sites?	boolean	derived
TraffSim	Traff Sim	Simulated traffic	real	derived
TraffSimLSP	Traff Sim LSP	Simulated traffic through the interface, contained in LSPs	real	derived
TraffSimNonLSP	Traff Sim Non LSP	Simulated traffic through the interface, not contained in LSPs	real	derived
SrcTraffSim	Src Traff Sim	Simulated traffic through interface sourced at node	real	derived
TransitTraffSim	Transit Traff Sim	Simulated traffic through interface transit through node	real	derived
TraffMeas	Traff Meas	Measured traffic	real	derived
GrowthPercent	Growth %	Percent Interface TraffMeas growth in one period	real	derived
CapacitySim	Capacity Sim	Simulated Capacity of the circuit	real	derived
Queue	Queue	The current Queue on the Interface	text	derived
UtilSim	Util Sim	Simulated utilization	real	derived
UtilMeas	Util Meas	Measured utilization	real	derived
QoSBoundSim	QoS Bound Sim	Max Traff Sim before QoS violated	real	derived
QoSBoundSimPercent	QoS Bound Sim (%)	QoS Bound Sim as % of Capacity	real	derived
QoSViolationSim	QoS Violation Sim	Traff Sim minus 'QoS Bound Sim'. Positive if QoS Bound violated.	real	derived
QoSViolationSimPercent	QoS Violation Sim (%)	QoS Violation Sim as % of Capacity	real	derived

Plan File Name	User Interface Name	Description	Data Type	Category
QoSBoundMeas	QoS Bound Meas	Max Traff Meas before QoS violated	real	derived
QoSBoundMeasPercent	QoS Bound Meas (%)	QoS Bound Meas as % of Capacity	real	derived
QoSViolationMeas	QoS Violation Meas	Traff Meas minus 'QoS Bound Meas'. Positive if QoS Bound violated	real	derived
QoSViolationMeasPercent	QoS Violation Meas (%)	QoS Violation Sim as % of Capacity	real	derived
WCQoSBound	WC QoS Bound	Worst-Case QoS Bound	real	derived
WCQoSBoundPercent	WC QoS Bound (%)	Worst-Case QoS Bound as % of Capacity	real	derived
WCQoSViolation	WC QoS Violation	WC Traffic minus 'WC QoS Bound'. Positive if QoS Bound violated	real	derived
WCQoSViolationPercent	WC QoS Violation (%)	Worst-Case QoS violation as % of Capacity	real	derived
TEMetricSim	TE Metric Sim	Simulated TE Metric of the Interface	integer	derived
LSPResv	LSP Resv	Bandwidth reserved by LSPs	real	derived
LSPUtil	LSP Util	LSP Reservation as a percentage of Reservable BW	real	derived
TraffMinusLSPResv	Traff-LSP Resv	"Traff Sim" minus "LSP Resv"	real	derived
LSPAvailBW	LSP Avail BW	Bandwidth available for LSPs: "Resv BW Sim" minus "LSP Resv"	real	derived
IPAddress	IP Address	Interface IP address	text	derived
Protected	Protected	Is Circuit protected?	boolean	derived
Active	Active	Is Circuit active?	boolean	derived
AS	AS	Autonomous System of "Node"	text	derived
RemoteAS	Remote AS	Autonomous System of "Remote Node"	text	derived
WCUtil	WC Util	Simulated worst case utilization	real	derived
WCFailures	WC Failures	Failures causing worst case utilization	text	derived
WCTraffLevel	WC Traff Level	Traffic Level causing worst case utilization	text	derived
WCServiceClass	WC Service Class	Service Class causing worst case utilization	text	derived

Plan File Name	User Interface Name	Description	Data Type	Category
WCTraffic	WC Traffic	Traffic in the worst case	real	derived
AbsMeasDiff	Abs Meas Diff	|"Traff Meas" minus "Traff Sim"|	real	derived
MeasDiffOver CapPercent	Meas Diff/Cap (%)	"Abs Meas Diff" as percent of Capacity	real	derived
FailureImpact	Failure Impact	Maximum increased utilization over network under failure of this circuit	real	derived
FIInterface	Failure Impact Interface	Interface with maximum failure impact	text	derived
NodeTags	Node Tags	Tags assigned to the Node	text_list	derived
RemoteNodeTags	Remote Node Tags	Tags assigned to the Remote Node	text_list	derived
SiteTags	Site Tags	Tags assigned to the Site	text_list	derived
RemoteSiteTags	Remote Site Tags	Tags assigned to the Remote Site	text_list	derived
Tags	Tags	Tags assigned to the interface	text_list	plan

<InterfaceTEPriorities>

Table 3-43   InterfaceTEPriorities Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node Name	text	key
Interface	Interface	Interface Name	text	key
TEPriority	TEPriority	TE Priority. Integer from 0 to 7. 0 is the highest priority.	integer	key
UnreservedBW Meas	UnreservedBW Meas	Measured unreserved bandwidth.	real	plan

<InterfaceTopologies>

Table 3-44   InterfaceTopologies Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Interface node	text	key
Interface	Interface	Interface name	text	key
Topology	Topology	Name of topology defined on the interface	text	key

<InterfaceTraffic>

Table 3-45   InterfaceTraffic Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node	text	key
Interface	Interface	Interface	text	key
TrafficLevel	Traffic Level	Traffic Level	text	key
Queue	Queue	Queue	text	key
TraffMeas	TraffMeas	TraffMeas	real	plan
GrowthPercent	Growth %	Growth %	real	plan
IPAddress	IP Address	IP Address	text	derived

<L1CircuitPathHops>

Table 3-46   L1CircuitPathHops Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
L1Circuit	L1 Circuit	Name of the L1 Circuit Path	text	key
L1NodeA	L1 Node A	NodeA of the L1 Circuit Path	text	key
L1NodeB	L1 Node B	NodeB of the L1 Circuit Path	text	key
PathOption	Path Option	Path Option of the L1 Circuit Path	text	key
Type	Type	Exclude, Loose or Strict	text	plan
Step	Step	Sequence of the hop in the L1 Circuit	integer	key
HopL1NodeA	Hop L1 Node A	L1 Node hop, or Node A of L1 Link hop	text	plan
HopL1NodeB	Hop L1 Node B	Node B of L1 Link hop	text	plan
HopL1Link	Hop L1 Link	Name of L1 Link hop	text	plan
Lambda	Lambda	The wavelength at this hop. If not specified, there is no change of wavelength	integer	plan
LambdaSim	Lambda Sim	The simulated wavelength at this hop. If not specified, there is no change of wavelength	integer	derived

<L1CircuitPaths>

Table 3-47   L1CircuitPaths Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
L1Circuit	L1 Circuit	L1 Circuit Name	text	key
L1NodeA	L1 Node A	L1 Node A	text	key
L1NodeB	L1 Node B	L1 Node B	text	key
PathOption	Path Option	Path Option	integer	key
Standby	Standby	Whether the L1 Circuit Path is on Standby. Default is T.	boolean	plan
Active	Active	Whether the L1 Circuit Path is active.	boolean	plan
Routed	Routed	Whether L1 circuit Path follows actual path, simulated path, or not routed	text	derived
Established	Established	Is there a route under no failure?	boolean	derived
Operational	Operational	Whether all correspondent L1 links are operational.	boolean	derived
FeasibilityMetricSim	Feasibility Metric Sim	The sum of the Feasibility Metric of the L1 links over which the L1 Circuit Path is routed	real	derived
Lambda	Lambda	The initial wavelength of the L1 Circuit Path	integer	plan
LambdaSim	Lambda Sim	The simulated initial wavelength of the L1 Circuit	integer	derived
AutoLambda	Auto Lambda	If set to true, the wavelength is automatically selected.	boolean	plan
Distance	Distance	Distance of the L1 Circuit Path	real	plan
DistanceSim	Distance Sim	Simulated distance of the L1 Circuit Path	real	derived
Delay	Delay	One-way transmission latency of the L1 Circuit Path	real	plan
DelaySim	Delay Sim	Simulated one-way transmission latency of the L1 Circuit Path	real	derived
FeasibleTransmission	Feasible Transmission	T if the L1 circuit Path adheres to the FeasibilityLimit, F if not, na otherwise	boolean	derived

Plan File Name	User Interface Name	Description	Data Type	Category
LambdaBlocking	Lambda Blocking	T if the L1 Circuit Path is routed on path that has wavelength blocking, F if not, na if wavelength not specified	boolean	derived
SetupPriority	Setup Priority	Integer between 0 and 7. Default is 7. L1 Circuit Path with smaller values are routed first.	integer	plan
Tags	Tags	Tags	text_list	plan

<L1Circuits>

Table 3-48   L1Circuits Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name	text	key
L1NodeA	L1 Node A	L1 Node A	text	key
L1NodeB	L1 Node B	L1 Node B	text	key
ActivePath	Active Path	Path Option of Active Path, requested of simulation.	integer	plan
ActivePathSim	Active Path Sim	Path Option of Active Path, simulated.	integer	derived
MinRoutedPaths	Min Routed Paths	Minimum number of routed L1 Circuit Paths.	integer	plan
DistanceSim	Distance Sim	Simulated distance of the L1 circuit	real	derived
DelaySim	Delay Sim	Simulated one-way transmission latency	real	derived
BW	BW	The bandwidth of the L1 Circuit.	real	plan
BWSim	BW Sim	Derived. Set to 'BW' if specified. Otherwise, set to mapped Circuit or PortCircuit 'Capacity'. Otherwise zero.	real	derived
Established	Established	Is there a route under no failure?	boolean	derived
Operational	Operational	Whether all correspondent L1 links are operational.	boolean	derived
DisjointGroup	Disjoint Group	Disjoint Group membership for explicit L1 Circuit path initializer	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
DisjointPriority	Disjoint Priority	Disjoint priority for explicit L1 Circuit path initializer	integer	plan
FeasibilityMetricSim	Feasibility Metric Sim	The sum of the Feasibility Metric of the L1 links over which the L1 Circuit is routed	real	derived
FeasibilityLimit	Feasibility Limit	The feasibility limit.	real	plan
LambdaSim	Lambda Sim	The simulated initial wavelength of the L1 Circuit	integer	derived
Routed	Routed	Whether L1 circuits follows actual path, simulated path, or not routed	text	derived
LambdaBlocking	Lambda Blocking	T if the L1 Circuit is routed on path that has wavelength blocking, F if not, na if wavelength not specified	boolean	derived
FeasibleTransmission	Feasible Transmission	T if the L1 circuit adheres to the FeasibilityLimit, F if not, na otherwise	boolean	derived
Tags	Tags	Tags	text_list	plan

<L1Links>

Table 3-49   L1Links Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name	text	key
Description	Description	Description	text	plan
L1NodeA	L1 Node A	L1 Node A	text	key
L1NodeB	L1 Node B	L1 Node B	text	key
Metric	Metric	Defined metric of the L1Link	real	plan
Distance	Distance	Distance of the L1Link	real	plan
Delay	Delay	Defined delay the L1Link	real	plan
CircuitBWSim	Circuit BW Sim	Total 'BW Sim' of Circuits through L1 Link.	real	derived
NumL1CircuitPaths	Num L1 Circuit Paths	Number of L1 Circuit Paths with paths routed through this link	integer	derived
NumCircuits	Num Circuits	Number of Circuits mapped to L1 Circuits through this link	integer	derived

Plan File Name	User Interface Name	Description	Data Type	Category
NumPortCircuits	Num Port Circuits	Number of Port Circuits mapped to L1 Circuits through this link	integer	derived
Operational	Operational	Operational	boolean	derived
FeasibilityMetric	Feasibility Metric	The feasibility metric of the L1 Link	real	plan
ResvL1CircuitPaths	Resv L1 Circuit Paths	Number of L1 Circuit Paths that can be reserved with paths through this L1 Link	integer	plan
ResvL1CircuitPathsSim	Resv L1 Circuit Paths Sim	Set to ResvL1CircuitPaths if specified. Otherwise, set to Max L1 Circuit Paths.	integer	derived
UtilSim	Util Sim	Utilization of the L1 link by L1 circuits, which is the NumL1CircuitPaths as a percentage of Max L1 Circuits	real	derived
AvailL1CircuitPaths	Avail L1 Circuit Paths	Number of L1 circuit paths that can additionally have paths through this L1 link, which is the ResvL1CircuitPathsSim value minus NumL1CircuitPaths value	integer	derived
WCNumL1CircuitPaths	WC Num L1 Circuit Paths	Worst case number of L1 Circuit Paths with paths through this L1 Link	integer	derived
WCUtilSim	WC Util Sim	Worst case util of L1 link	real	derived
MaxL1CircuitPaths	Max L1 Circuit Paths	The maximum number of L1 Circuit Paths that the L1 link can carry.	integer	plan
FailureImpact	Failure Impact	Maximum increased utilization over network under failure of this L1 Link	real	derived
FIInterface	Failure Impact Interface	Interface with maximum failure impact	text	derived
Protected	Protected	Protected	boolean	plan
Active	Active	Active	boolean	plan
Failed	Failed	Failed	boolean	plan
Tags	Tags	Tags	text_list	plan

\<L1LinkWaypoints\>

Table 3-50   L1LinkWaypoints Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
L1NodeA	L1 Node A	L1 Node A	text	key
L1NodeB	L1 Node B	L1 Node B	text	key
L1LinkName	L1 Link Name	L1 Link Name	text	key
Order	Order	Order of the Waypoint starting from L1 Node A of the L1 Link.	integer	plan
Longitude	Longitude	Longitude of the Waypoint	real	plan
Latitude	Latitude	Latitude of the Waypoint	real	plan
Description	Description	Description	text	plan

\<L1Nodes\>

Table 3-51   L1Nodes Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name	text	key
Description	Description	Description	text	plan
Site	Site	Site	text	plan
Protected	Protected	Is layer 1 node protected?	boolean	plan
Active	Active	Is layer 1 node active?	boolean	plan
Failed	Failed	Is layer 1 node failed?	boolean	plan
IPAddress	IPAddress	Loopback IP Address	text	plan
IPManage	IPManage	Management IP Address	text	plan
FailureImpact	Failure Impact	Maximum increased utilization over network under failure of this L1 Node	real	derived
FIInterface	Failure Impact Interface	Interface with maximum failure impact	text	derived
Vendor	Vendor	L1 Node vendor name (or enterprise id)	text	plan
Model	Model	L1 Node model number.	text	plan
OS	OS	L1 Node Operating System Type and SW version.	text	plan
Operational	Operational	Is layer 1 node operational?	boolean	derived
Longitude	Longitude	Layer 1 node longitude	real	plan

Plan File Name	User Interface Name	Description	Data Type	Category
Latitude	Latitude	Layer 1 node latitude	real	plan
Tags	Tags	Tags	text_list	plan

<L3L1Links>

Table 3-52   L3L1Links Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node connected to a L1 Node	text	key
L1Node	L1 Node	L1 Node connected to a Node	text	key

<LSPClasses>

Table 3-53   LSPClasses Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of LSP QoS Class	text	key

<LSPPaths>

LSP paths are used to associated named paths with LSPs. Each LSP can have one primary and several secondary named paths associated with it. Primary paths have a PathOption value of 1 while secondaries have greater values. LSP paths can also override the setup bandwidth of the LSP, allowing for different named paths to be require different bandwidth reservations.

Table 3-54   LSPPaths Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
LSP	LSP	LSP name	text	key
Source	Source	Source node	text	key
Destination	Destination	Destination node	text	derived
PathName	Path Name	Path name	text	plan
SetupBW	Setup BW	Bandwidth	real	plan
PathOption	Path Option	Path Option	integer	key
SetupPri	SetupPri	Setup Priority	integer	plan
HoldPri	HoldPri	Hold Priority	integer	plan
Include	Include	Routed interfaces must include all these affinities	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
IncludeAny	Include Any	Routed interfaces must include at least one of these affinities	text	plan
Exclude	Exclude	Routed interfaces must not include any of these affinities	text	plan
HopLimit	Hop Limit	Limits the number of hops in the LSP Path	integer	plan
Standby	Standby	Standby	boolean	plan
ActualPath	Actual	'T' if has actual path, 'F' otherwise	boolean	derived
SLName	SLName	Segment List Name.	text	plan
PathMetric	Path Metric	Sum of IGP Metrics over Path	integer	derived
ShortestPathMetric	Shortest Path Metric	Sum of IGP Metrics over shortest Path	integer	derived
DelaySim	Delay Sim	Simulated one-way transmission latency	real	derived
Active	Active	Whether the LSP Path is active	boolean	plan
Routed	Routed	Routed	boolean	derived
SourceNodeTags	Source Node Tags	Tags assigned to the LSP source node	text_list	derived
DestNodeTags	Dest Node Tags	Tags assigned to the LSP destination node	text_list	derived
LSPTags	LSPTags	Tags assigned to the LSP	text_list	derived
NetIntPathType	NetIntPathType	Type of path - RSVP/SR	text	plan

\<LSPs\>

Explicit routes taken by LSPs defined here are specified in the \<LSPPaths\> and \<NamedPaths\> tables.

Table 3-55   LSPs Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	LSP name	text	key
Source	Source	Source node	text	key
Destination	Destination	Destination node	text	plan
NetIntDestination	NetIntDestination	NetInt Destination	text	plan
SetupBW	Setup BW	Setup Bandwidth	real	plan
SetupPri	SetupPri	Setup Priority	integer	plan
HoldPri	HoldPri	Hold Priority	integer	plan

Plan File Name	User Interface Name	Description	Data Type	Category
SetupBWSim	Setup BW Sim	Simulated Setup Bandwidth	real	derived
SetupPriSim	SetupPri Sim	Simulated Setup Priority	integer	derived
HoldPriSim	HoldPri Sim	Simulated Hold Priority	integer	derived
DelaySim	Delay Sim	Simulated one-way transmission latency	real	derived
MinDelaySim	Min Delay Sim	One-way transmission latency on path with smallest latency	real	derived
Active	Active	Is this LSP Active?	boolean	plan
Private	Private	Is this a private LSP?	boolean	plan
Topology	Topology	LSP is routed over this Topology	text	plan
Class	Class	LSP QoS Class	text	plan
P2MPLSP	P2MP LSP	Point to MultiPoint LSP	text	plan
SID	SID	Binding Segment Identifier	integer	plan
ActualResolved	Actual Resolved	T if all actual path hops are resolved in plan, F if not, na if no path.	boolean	derived
Include	Include	Routed interfaces must include all these affinities	text	plan
IncludeAny	Include Any	Routed interfaces must include at least one of these affinities	text	plan
Exclude	Exclude	Routed interfaces must not include any of these affinities	text	plan
IncludeSim	Include Sim	Routed interfaces must include all these affinities	text	derived
IncludeAnySim	IncludeAny Sim	Routed interfaces must include at least one of these affinities	text	derived
ExcludeSim	Exclude Sim	Routed interfaces must not include any of these affinities	text	derived
Loadshare	Loadshare	Loadshare parameter for parallel LSPs	real	plan
HopLimit	Hop Limit	Limits the number of hops in the LSP	integer	plan
TraffMeas	Traff Meas	Measured traffic	real	derived
TraffSim	Traff Sim	Simulated traffic in LSP	real	derived
TraffSimMinusSetupBWSim	TraffSim-SetupBWSim	"Traff Sim" minus "Simulated Setup BW"	real	derived
TraffMeasMinusSetupBWSim	TraffMeas-SetupBWSim	"Traff Meas" minus "Simulated Setup BW"	real	derived

Plan File Name	User Interface Name	Description	Data Type	Category
AbsMeasDiff	Abs Meas Diff	|"Traff Meas" minus "Traff Sim"|	real	derived
Routed	Routed	Whether LSP follows actual path, simulated path, or not routed	text	derived
Intersite	Intersite	Sources and Destinations in two different sites?	text	derived
ShortestTEPath	Shortest TE Path	Does LSP take shortest TE Metric path?	boolean	derived
ActivePathSim	Active Path Sim	Path Option of Active Path, simulated	text	derived
ActivePath	Active Path	Path Option of Active Path, requested of simulation	integer	plan
NumPathsTried	# Paths Tried	Number of Paths tried: 0 = none defined, 1 = primary, 2 = secondary, ...	integer	derived
NamedPaths	Named Paths	Named Path used, or 'Dynamic' if none	text	derived
MetricType	Metric Type	Autoroute, FA (forwarding adjacency), or FRR (Fast Reroute)	text	plan
Metric	Metric	Static autoroute metric or FA metric	integer	plan
TEPathMetric	TE Path Metric	Sum of TE Metrics over selected LSP path.	integer	derived
ShortestTEPathMetric	Shortest TE Path Metric	Sum of TE Metrics over shortest TE path	integer	derived
TEPathMetricMinusShortest	TE Path Metric - Shortest	'TE Path Metric' minus 'Shortest TE Path Metric'	integer	derived
Type	Type	Type of LSP. Either 'RSVP' or 'SR'.	text	plan
SLName	SLName	Segment List Name.	text	plan
FRREnabled	FRR Enabled	T if FRR protection enabled for this LSP.	boolean	plan
FRRInterface	FRR Interface	(FRR LSPs only) Interface bypassed by FRR LSP.	text	plan
NetIntFRRInterface	NetIntFRRInterface	(FRR LSPs only) External Interface bypassed by FRR LSP.	text	plan
FRRType	FRR Type	(FRR LSPs only) Type of protection: Link or Node.	text	simhash,derived
FRRDestinationGroup	FRR Destination Group	(SR FRR LSPs only) Destination Group.	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
NumHops	Num Hops	Number of interface hops on path	integer	derived
Description	Description	User defined description for the LSP	text	plan
DisjointGroup	Disjoint Group	Disjoint Group membership for explicit path initializer	text	plan
DisjointPriority	Disjoint Priority	Disjoint priority for explicit path initializer	integer	plan
PCEP	PCEP	Is this LSP a PCEP LSP?	boolean	plan
Autobandwidth	Autobandwidth	Is autobandwidth enabled on LSP?	boolean	plan
TEMetricDisabled	TEMetricDisabled	If false (default), the LSP is routed using TE metrics. If true, IGP metrics are used.	boolean	plan
Tags	Tags	Tags assigned to the LSP	text_list	plan
SourceNodeTags	Source Node Tags	Tags assigned to the LSP source node	text_list	derived
DestNodeTags	Dest Node Tags	Tags assigned to the LSP destination node	text_list	derived
IncludeAnyDemandsTags	Include Any Demands Tags	Allowed demand tags, or empty for all	text_list	plan
NetIntType	NetIntType	LSP type	text	plan
NetIntIndex	NetIntIndex	SNMP index of the LSP	text	plan
NetIntAdminStatus	NetIntAdminStatus	Administrative status of the LSP	text	plan
NetIntOperStatus	NetIntOperStatus	Operational status of the LSP	text	plan
NetIntActivePath	NetIntActivePath	The active path for the LSP	integer	plan
NetIntLastPathChange	NetIntLastPathChange	Last Path Change	integer	plan
NetIntTunnelInterfaceId	NetIntTunnelInterfaceId	Tunnel Id	integer	plan

<LSPTraffic>

Table 3-56   LSPTraffic Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name	text	key
Source	Source	Source	text	key

Plan File Name	User Interface Name	Description	Data Type	Category
TrafficLevel	Traffic Level	Traffic Level	text	key
Queue	Queue	Queue	text	key
TraffMeas	TraffMeas	TraffMeas	real	plan
SourceIP	Source IP	Source IP	text	derived

<MulticastFlowDestinations>

Table 3-57   MulticastFlowDestinations Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
S	S	Source	text	key
G	G	Receiver	text	key
Destination	Destination	Destination	text	key

<MulticastFlowExternalHops>

Table 3-58   MulticastFlowExternalHops Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
S	S	Source group of the multicast flow	text	key
G	G	Receiver group of the multicast flow	text	key
Direction	Direction	The direction of the external hop	text	key
Node	Node	The name of the hop interface source	text	key
Interface	Interface	The name of the external hop interface	text	key
Index	Index	The index of the external hop	integer	key

<MulticastFlowHops>

Table 3-59   MulticastFlowHops Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
S	S	Source group of the multicast flow	text	key
G	G	Receiver group of the multicast flow	text	key
Node	Node	The name of the hop interface source	text	key
Interface	Interface	The name of the hop interface	text	key

<MulticastFlows>

Table 3-60   MulticastFlows Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
S	S	Source group of the multicast flow	text	key
G	G	Receiver group of the multicast flow	text	key
TraffMeas	TraffMeas	Measured traffic	real	derived
Tags	Tags	Tags assigned to the Multicast Flows	text_list	plan

<MulticastFlowTraffic>

Table 3-61   MulticastFlowTraffic Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
S	S	Source	text	key
G	G	Receiver	text	key
TrafficLevel	Traffic Level	Traffic Level	text	key
Queue	Queue	Queue	text	key
TraffMeas	TraffMeas	TraffMeas	real	plan

<NamedPathHops>

Named path hops are used to create explicit paths across the network by specifying segments that must be used or excluded. Each line specifies a segment and its type, either strict, loose, or exclude. Loose segments can use any set of objects to reach the target router while strict segments must go directly to it. Exclude segments define interfaces or nodes that must never be used. You can specify a path using a combination of strict and loose segments.

- Each row represents one segment in the path and should be given in the correct order.

- Both Node and Interface are required unless an IP Address is given.

Table 3-62   NamedPathHops Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of the path	text	key
Source	Source	Source node of the path	text	key
Step	Step	Sequence of the hop in the path	integer	key
Node	Node	Node hop	text	plan
Interface	Interface	Interface hop	text	plan
NetIntHop	NetIntHop	An NetInt hop	text	plan
Type	Type	Exclude, Loose or Strict	text	plan
IPAddress	IP Address	IP Address of the hop node or interface	text	derived

<NamedPaths>

Named Paths are used to create explicit paths across the network. This table lists the named paths, even those with no hops.

Table 3-63   NamedPaths Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of the path	text	key
Source	Source	Name of the source of the NamedPath	text	key
Active	Active	Is the path active?	boolean	plan
Resolved	Resolved	T if all hops in path are resolved in plan, F if not, na if no hops.	boolean	derived

\<NetIntAdjacencySIDs>

Table 3-64   NetIntAdjacencySIDs Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node name	text	key
Prefix	Prefix	Adjacency found on node	text	key
AdjacencySID	AdjacencySID	Adjacency SID	integer	plan
Flags	Flags	Flags that are set among F, B, L, S	text	plan
RemoteNode	Remote Node	Remote Node Name	text	plan

\<NetIntBgpPeers>

Table 3-65   NetIntBgpPeers Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Router	Router	Router IP Address	text	key
RemoteAddr	RemoteAddr	Remote IP Address of BGP session	text	key
PeerId	PeerId	Peer Id for the BGP session	text	key
As	As	Remote As for the BGP session	text	plan
State	State	Peer state for the BGP session	integer	plan
Status	Status	Peer AdminStatus for the BGP session	integer	plan
LocalAddr	LocalAddr	Local IP Address of BGP session	text	plan
ExitInterface	ExitInterface	IfIndex of the exit interface for the BGP session	text	plan
MultihopExit	MultihopExit	BGP session has multi-hop exit	text	plan

\<NetIntBgpSpeakers>

Table 3-66   NetIntBgpSpeakers Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Router	Router	Router IP Address	text	key
BgpId	BgpId	BGP Id of the router	text	plan
As	As	ASN of the router	text	plan

<NetIntDemandNameSequence>

Table 3-67   *NetIntDemandNameSequence Table Columns*

Plan File Name	User Interface Name	Description	Data Type	Category
Sequence	Sequence	Sequence number of the field in Name column of Demand table	text	plan
Name	Name	Name of the field	text	plan

<NetIntHardwareBackPlane>

Table 3-68   *NetIntHardwareBackPlane Table Columns*

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address	text	key
SnmpId	SnmpId	Index of the hardware	integer	key
ParentId	ParentId	Index of the parent hardware	integer	plan
Model	Model	Vendor-specific model name	text	plan
Name	Name	Name of the hardware	text	plan
Description	Description	Description	text	plan
SerialNumber	SerialNumber	Serial number of the Hardware	text	plan
NumChildren	NumChildren	Number of hardware it contains, derived value	integer	plan
ParentTable	ParentTable	Parent NetIntHardware table name, derived value	text	plan
SlotNumber	SlotNumber	Physical position of the hardware	integer	plan

<NetIntHardwareChassis>

Table 3-69   *NetIntHardwareChassis Table Columns*

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address	text	key
SnmpId	SnmpId	Index of the hardware	integer	key
ParentId	ParentId	Index of the parent hardware	integer	plan
Model	Model	Vendor-specific model name	text	plan
Name	Name	Name of the hardware	text	plan
Description	Description	Description	text	plan
SerialNumber	SerialNumber	Serial number of the Hardware	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
NumChildren	NumChildren	Number of hardware it contains, derived value	integer	plan
ParentTable	ParentTable	Parent NetIntHardware table name, derived value	text	plan
SlotNumber	SlotNumber	Physical position of the hardware	integer	plan

\<NetIntHardwareContainer\>

Table 3-70   NetIntHardwareContainer Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address	text	key
SnmpId	SnmpId	Index of the hardware	integer	key
ParentId	ParentId	Index of the parent hardware	integer	plan
Model	Model	Vendor-specific model name	text	plan
Name	Name	Name of the hardware	text	plan
Description	Description	Description	text	plan
SerialNumber	SerialNumber	Serial number of the Hardware	text	plan
NumChildren	NumChildren	Number of hardware it contains, derived value	integer	plan
ParentTable	ParentTable	Parent NetIntHardware table name, derived value	text	plan
SlotNumber	SlotNumber	Physical position of the hardware	integer	plan

\<NetIntHardwareFan\>

Table 3-71   NetIntHardwareFan Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address	text	key
SnmpId	SnmpId	Index of the hardware	integer	key
ParentId	ParentId	Index of the parent hardware	integer	plan
Model	Model	Vendor-specific model name	text	plan
Name	Name	Name of the hardware	text	plan
Description	Description	Description	text	plan
SerialNumber	SerialNumber	Serial number of the Hardware	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
NumChildren	NumChildren	Number of hardware it contains, derived value	integer	plan
ParentTable	ParentTable	Parent NetIntHardware table name, derived value	text	plan
SlotNumber	SlotNumber	Physical position of the hardware	integer	plan

\<NetIntHardwareModule\>

Table 3-72   NetIntHardwareModule Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address	text	key
SnmpId	SnmpId	Index of the hardware	integer	key
ParentId	ParentId	Index of the parent hardware	integer	plan
Model	Model	Vendor-specific model name	text	plan
Name	Name	Name of the hardware	text	plan
Description	Description	Description	text	plan
SerialNumber	SerialNumber	Serial number of the Hardware	text	plan
NumChildren	NumChildren	Number of hardware it contains, derived value	integer	plan
ParentTable	ParentTable	Parent NetIntHardware table name, derived value	text	plan
SlotNumber	SlotNumber	Physical position of the hardware	integer	plan

\<NetIntHardwareOther\>

Table 3-73   NetIntHardwareOther Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address	text	key
SnmpId	SnmpId	Index of the hardware	integer	key
ParentId	ParentId	Index of the parent hardware	integer	plan
Model	Model	Vendor-specific model name	text	plan
Name	Name	Name of the hardware	text	plan
Description	Description	Description	text	plan
SerialNumber	SerialNumber	Serial number of the Hardware	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
NumChildren	NumChildren	Number of hardware it contains, derived value	integer	plan
ParentTable	ParentTable	Parent NetIntHardware table name, derived value	text	plan
SlotNumber	SlotNumber	Physical position of the hardware	integer	plan

\<NetIntHardwarePort\>

Table 3-74   NetIntHardwarePort Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address	text	key
SnmpId	SnmpId	Index of the hardware	integer	key
ParentId	ParentId	Index of the parent hardware	integer	plan
Model	Model	Vendor-specific model name	text	plan
Name	Name	Name of the hardware	text	plan
Description	Description	Description	text	plan
SerialNumber	SerialNumber	Serial number of the Hardware	text	plan
NumChildren	NumChildren	Number of hardware it contains, derived value	integer	plan
ParentTable	ParentTable	Parent NetIntHardware table name, derived value	text	plan
SlotNumber	SlotNumber	Physical position of the hardware	integer	plan

\<NetIntHardwarePowerSupply\>

Table 3-75   NetIntHardwarePowerSupply Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address	text	key
SnmpId	SnmpId	Index of the hardware	integer	key
ParentId	ParentId	Index of the parent hardware	integer	plan
Model	Model	Vendor-specific model name	text	plan
Name	Name	Name of the hardware	text	plan
Description	Description	Description	text	plan
SerialNumber	SerialNumber	Serial number of the Hardware	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
NumChildren	NumChildren	Number of hardware it contains, derived value	integer	plan
ParentTable	ParentTable	Parent NetIntHardware table name, derived value	text	plan
SlotNumber	SlotNumber	Physical position of the hardware	integer	plan

<NetIntHardwareSensor>

Table 3-76   NetIntHardwareSensor Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address	text	key
SnmpId	SnmpId	Index of the hardware	integer	key
ParentId	ParentId	Index of the parent hardware	integer	plan
Model	Model	Vendor-specific model name	text	plan
Name	Name	Name of the hardware	text	plan
Description	Description	Description	text	plan
SerialNumber	SerialNumber	Serial number of the Hardware	text	plan
NumChildren	NumChildren	Number of hardware it contains, derived value	integer	plan
ParentTable	ParentTable	Parent NetIntHardware table name, derived value	text	plan
SlotNumber	SlotNumber	Physical position of the hardware	integer	plan

<NetIntHistory>

Table 3-77   NetIntHistory Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Time	Time	Time for the completion of the tool run	text	plan
Revision	Revision	Software revision of the tool run	text	plan
ToolRun	ToolRun	Name of the tool run	text	plan
Options	Options	Options used (non-default)	text	plan
Comment	Comment	Special comment for tool run	text	plan

<NetIntIfMeasurements>

Table 3-78   NetIntIfMeasurements Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address where traffic is collected	text	key
MeasType	MeasType	The type of measurements taken (Counter, Rate)	text	plan
NetIntIndex	NetIntIndex	The SNMP index of the Interface	integer	key
Interface	Interface	Interface name	text	plan
Queue	Queue	Name of the queue	text	key
OutOctets_avg	OutOctets_avg	Average of out octet traffic rate (Mbps)	real	plan
OutOctets_samples	OutOctets_samples	List of out octet samples	text	plan
InOctets_avg	InOctets_avg	Average of in octet traffic rate (Mbps)	real	plan
InOctets_samples	InOctets_samples	List of in octet samples	text	plan
OutPackets_avg	OutPackets_avg	Average of out packet rate (Mbps)	real	plan
OutPackets_samples	OutPackets_samples	List of out packet samples	text	plan
InPackets_avg	InPackets_avg	Average of in packet rate (Mbps)	real	plan
InPackets_samples	InPackets_samples	List of in packet samples	text	plan
InErrors_avg	InErrors_avg	Average of in packet error rate (pps)	real	plan
InErrors_samples	InErrors_samples	List of in packet error samples	text	plan
OutDiscards_avg	OutDiscards_avg	Average of out packet discard rate (pps)	real	plan
OutDiscards_samples	OutDiscards_samples	List of out packet discard samples	text	plan
OutOctetDiscards_avg	OutOctetDiscards_avg	Average of out octet discard rate (Mbps)	real	plan
OutOctetDiscards_samples	OutOctetDiscards_samples	List of out octet discard samples	text	plan

<NetIntInterASFlows>

Table 3-79   NetIntInterASFlows Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
SourceAS	SourceAS	Originating AS of the flow	text	key
FromNeighbor AS	FromNeighborA S	Incoming Peering AS of the flow	text	key
IngressNode	IngressNode	Ingress Node of the flow	text	key
IngressInterfac e	IngressInterface	Ingress Interface of the flow	text	key
EgressNode	EgressNode	Egress Interface of the flow	text	key
EgressInterfac e	EgressInterface	Egress Node of the flow	text	key
ToNeighborAS	ToNeighborAS	Outgoing Peering AS of the flow	text	key
ASPath	ASPath	Comma-separated list of ASNs between ToNeighbor and DestinationAS	text	key
DestinationAS	DestinationAS	Destination AS of the flow	text	key
IPProtocolVers ion	IPProtocolVersio n	IP Protocol Version for the flow (either 'v4' or 'v6')	text	plan
Extras	Extras	List of additional fields, seperated by semicolon captured from microflow used for demand aggregation	text	plan
Traffic	Traffic	Measured traffic of the flow, scaled by the traffic polled on the IngressInterface	real	plan

<NetIntInterfaceQueues>

Table 3-80   NetIntInterfaceQueues Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Source node of the interface queue	text	key
Interface	Interface	Interface of the interface queue	text	key
Queue	Queue	Name of the queue	text	key
NetIntIndex	NetIntIndex	Index of Interface Queue	text	key

<NetIntInterfaces>

Table 3-81   NetIntInterfaces Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node name	text	key
Interface	Interface	Interface name	text	key
IGPMetric	IGP Metric	IGP metric or cost	integer	plan
MetricISISLevel1	Metric ISIS Level 1	If specified, the ISIS Level 1 metric. Default is the 'Metric' column entry.	integer	plan
Capacity	Capacity	Configured Capacity on Interface.	real	plan
PolicyGroup	Policy Group	Interface QoS Policy Group	text	plan
TEMetric	TE Metric	Configured TE Metric of the Interface	integer	plan
TEEnabled	TE Enabled	Is TE enabled on interface?	boolean	plan
ResvBW	Resv BW	RSVP Reservable Bandwidth, in traffic units. See also ResvBWPercent.	real	plan
PCMinLinks	PC Min Links	Required number of operational port channels	integer	plan
PCMinBW	PC Min BW	Required available port channel bandwidth	real	plan
FRREnabled	FRR Enabled	T if FRR protection enabled for this interface.	boolean	plan
Area	Area	OSPF Area. Used if Network Options IGP set to OSPF	text	plan
ISISLevel	ISIS Level	Level 2 (Default), Level 1 or Level1-2. Used if Network Options IGP set to ISIS	text	plan
Affinities	Affinities	Affinities assigned to Interface (MPLS)	text	plan
Description	Description	User defined description for the interface	text	plan
NetIntIndex	NetIntIndex	IfIndex of interface	integer	plan
NetIntContainerIndex	NetIntContainerIndex	IfIndex of the container interface	integer	plan
NetIntType	NetIntType	Interface type	integer	plan
NetIntAdminStatus	NetIntAdminStatus	Administrative status of the interface	text	plan
NetIntOperStatus	NetIntOperStatus	Operational status of the interface	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
NetIntSubnet	NetIntSubnet	Subnet the interface belongs to	text	plan
Type	Type	Interface type (L1 or L2)	text	plan
Aggregated	Aggregated	T if Interface is Aggregated, F otherwise.	boolean	plan
AggregatedInside	Aggregated Inside	Interface that aggreagtes this interface	text	plan
OnTopOf	On Top Of	Physical component of the interface	text	plan
NetIntNetMask	NetIntNetMask	Interface net mask	text	plan
NetIntSrlg	NetIntSrlg	Srlgs configured on the interface	text	plan
VPNNode	VPNNode	VPN Node associated with this interface	text	plan
Place	Place	external, port or duplicate	text	plan
IPAddress	IP Address	Interface IP address	text	plan
FlowReceived	FlowReceived	True if a flow was received for the interface.	boolean	plan

\<NetIntInterfaceTraffic>

Table 3-82   NetIntInterfaceTraffic Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node	text	key
Interface	Interface	Interface	text	key
TrafficLevel	Traffic Level	Traffic Level	text	key
Queue	Queue	Queue	text	key
TraffMeas	TraffMeas	TraffMeas	real	plan
GrowthPercent	Growth %	Growth %	real	plan
NetIntInTraffMeas	NetIntInTraffMeas	NetIntInTraffMeas	real	plan
NetIntPacketsOut	NetIntPacketsOut	NetIntPacketsOut	real	plan
NetIntPacketsIn	NetIntPacketsIn	NetIntPacketsIn	real	plan
NetIntErrorPacketsIn	NetIntErrorPacketsIn	NetIntErrorPacketsIn	real	plan
NetIntDropPacketsOut	NetIntDropPacketsOut	NetIntDropPacketsOut	real	plan

Plan File Name	User Interface Name	Description	Data Type	Category
NetIntDropTraffOut	NetIntDropTraffOut	NetIntDropTraffOut	real	plan
FlowTrafficEstimate	FlowTrafficEstimate	T if the InterASFlows through this interface are estimated, because there are multiple AS's on this interface, and FromNeighbor cannot be resolved.	boolean	plan
FlowTraffic	FlowTraffic	Equal to the sum of flows traffic on interface.	real	plan
FlowTrafficRatio	FlowTrafficRatio	Equal to SNMP Measurement of Interface / sum of flows traffic on interface.	real	plan

<NetIntIpAddresses>

Table 3-83   NetIntIpAddresses Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address	text	key
IpAddress	IpAddress	IP Address	text	key
NetIntIndex	NetIntIndex	IfIndex of coresponding to IP Address	integer	plan
NetPrefixLength	NetPrefixLength	Prefix length for IP Address	integer	plan
AddressFamily	AddressFamily	IPv4 or IPv6	text	plan

<NetIntLdp>

Table 3-84   NetIntLdp Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address where LDP found	text	key
DestNode	DestNode	Destination Node for the LDP	text	plan
LspID	LspID	LSP Id (IP address) of the LDP	text	plan
NetMask	NetMask	LSP net mask of the LDP	text	plan
Index	Index	SNMP table index of the LDP	text	key
OutIfIndex	OutIfIndex	IfIndex of interface where LDP flows out of	integer	plan

<NetIntLdpMeasurements>

Table 3-85   NetIntLdpMeasurements Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address where traffic is collected	text	key
MeasType	MeasType	The type of measurements taken (Counter, Rate)	text	plan
NetIntIndex	NetIntIndex	The SNMP index of the LDP	text	key
OutOctets_avg	OutOctets_avg	Average of out octet LDP traffic rate (Mbps)	real	plan
OutOctets_samples	OutOctets_samples	List of out octet samples	text	plan
TransitOctets_avg	TransitOctets_avg	Average of transit octet LDP traffic rate (Mbps)	real	plan
TransitOctets_samples	TransitOctets_samples	List of transit octet samples	text	plan
InOctets_avg	InOctets_avg	Average of in octet LDP traffic rate (Mbps)	real	plan
InOctets_samples	InOctets_samples	List of in octet samples	text	plan

<NetIntLspMeasurements>

Table 3-86   NetIntLspMeasurements Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address where traffic is collected	text	key
MeasType	MeasType	The type of measurements taken (Counter, Rate)	text	plan
NetIntIndex	NetIntIndex	The SNMP index of the LSP	text	key
OutOctets_avg	OutOctets_avg	Average of out octet LSP traffic rate (Mbps)	real	plan
OutOctets_samples	OutOctets_samples	List of out octet samples	text	plan

\<NetIntMacAddresses>

Table 3-87   NetIntMacAddresses Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node name	text	key
NetIntIndex	NetIntIndex	MAC Accounting table index	text	key
MAC	MAC	Source MAC address	text	key
Interface	Interface	The interface name for BGP PSN	text	plan
IPv4Address	IPv4Address	Source interface IPv4 address	text	plan
IPv6Address	IPv6Address	Source interface IPv6 address	text	plan

\<NetIntMacMeasurements>

Table 3-88   NetIntMacMeasurements Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address where traffic is collected	text	key
MeasType	MeasType	The type of measurements taken (Counter, Rate)	text	plan
NetIntIndex	NetIntIndex	MAC Accounting index	text	key
MAC	MAC	Source MAC address	text	key
OutOctets_avg	OutOctets_avg	Average of out octet traffic rate (Mbps)	real	plan
OutOctets_samples	OutOctets_samples	List of out octet samples	text	plan
InOctets_avg	InOctets_avg	Average of in octet traffic rate (Mbps)	real	plan
InOctets_samples	InOctets_samples	List of in octet samples	text	plan

\<NetIntMacTraffic>

Table 3-89   NetIntMacTraffic Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node name	text	key
Interface	Interface	The interface name for BGP PSN	text	key

Plan File Name	User Interface Name	Description	Data Type	Category
MAC	MAC	Source MAC address	text	key
TrafficLevel	Traffic Level	Traffic Level	text	key
OutTraffMeas	OutTraffMeas	Outgoing traffic measurement (Mbps)	real	plan
InTraffMeas	InTraffMeas	Incoming traffic measurement (Mbps)	real	plan

<NetIntMulticastFlowHops>

Table 3-90   NetIntMulticastFlowHops Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address where multicast found	text	key
S	S	Source group of the multicast flow hop	text	key
G	G	Receiver group of the multicast flow hop	text	key
NetMask	NetMask	Source net mask	text	plan
Index	Index	IfIndex of multicast hop	integer	plan

<NetIntMulticastFlows>

Table 3-91   NetIntMulticastFlows Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address where multicast found	text	key
S	S	Source group of the multicast flow	text	key
G	G	Receiver group of the multicast flow	text	key
NetMask	NetMask	Source net mask	text	plan
Index	Index	IfIndex of multicast route	integer	plan

\<NetIntMulticastMeasurements\>

Table 3-92   *NetIntMulticastMeasurements Table Columns*

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node IP Address where traffic is collected	text	key
MeasType	MeasType	The type of measurements taken (Counter, Rate)	text	plan
S	S	Source group of the multicast flow	text	key
G	G	Receiver group of the multicast flow	text	key
OutOctets_avg	OutOctets_avg	Average of out octet multicast traffic rate (Mbps)	real	plan
OutOctets_samples	OutOctets_samples	List of out octet samples	text	plan

\<NetIntNodeInventory\>

Table 3-93   *NetIntNodeInventory Table Columns*

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node Name	text	key
Id	Id	Index of the hardware	integer	key
Type	Type	Hardware Type	text	plan
Name	Name	Name of the hardware	text	plan
Description	Description	Description	text	plan
SerialNumber	SerialNumber	Serial number of the Hardware	text	plan
ParentId	ParentId	Index of parent hardware	integer	plan

\<NetIntPlanFileGenerationTime\>

Table 3-94   *NetIntPlanFileGenerationTime Table Columns*

Plan File Name	User Interface Name	Description	Data Type	Category
Time	Time	The last modified time/creation time of the plan file	text	key

<NetIntPrefixSIDs>

Table 3-95   NetIntPrefixSIDs Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node name	text	key
Prefix	Prefix	Prefix found on node	text	key
PrefixSID	PrefixSID	Prefix SID	integer	plan
Flags	Flags	Flags that are set among R, N, P, E, L	text	plan
Anycast	Anycast	Is this SID an Anycast SID?	boolean	plan

<NetIntRouters>

Table 3-96   NetIntRouters Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
SysName	SysName	System name of router	text	key
IpAddress	IpAddress	IP Address of router	text	plan
Vendor	Vendor	Vendor of router	text	plan
Description	Description	Router description	text	plan
SwDesc	SwDesc	Router software description	text	plan
EntityDesc	EntityDesc	Router entity description	text	plan
MulticastMIB	MulticastMIB	The MIB used for multicast	text	plan
RsvpMIB	RsvpMIB	The MIB used for RSVP	text	plan
LdpMIB	LdpMIB	The MIB used for LDP	text	plan
FlowSampling Rate	FlowSamplingR ate	NetFlow sampling rate	integer	plan
ServiceClasses	ServiceClasses	A list of service classes supported on the router	text	plan
ServiceClassIn dexes	ServiceClassInd exes	The indexes of the supported service classes	text	plan
RE0CPU1m	RE0CPU1m	Percent CPU utilization in the last 1 min (first)	integer	plan
RE0CPU5m	RE0CPU5m	Percent CPU utilization in the last 5 min (first)	integer	plan
RE0Mem	RE0Mem	CPU Memory utilization(first)	integer	plan
RE1CPU1m	RE1CPU1m	Percent CPU utilization in the last 1 min (second)	integer	plan

Plan File Name	User Interface Name	Description	Data Type	Category
RE1CPU5m	RE1CPU5m	Percent CPU utilization in the last 5 min (second)	integer	plan
RE1Mem	RE1Mem	CPU Memory utilization(second)	integer	plan

\<NetIntSubnets\>

Table 3-97   NetIntSubnets Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node name	text	key
Subnet	Subnet	Subnet found on node	text	key
IGPmetric	IGPmetric	IGP metric or cost	integer	plan
RemoteNode	RemoteNode	Remote node subnet is connected to	text	plan

\<Network\>

The version of the plan file is specified in this table.

Table 3-98   Network Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Property	Property	Property	text	key
Value	Value	Value	text	plan

\<NetworkOptions\>

Table 3-99   NetworkOptions Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Option	Option	Plan option	text	key
Value	Value	Value of the plan option	text	plan

<NodeConfiguredSRLGs>

Table 3-100   NodeConfiguredSRLGs Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Name of the node	text	key
SRLG	SRLG	SRLG name	text	key

<NodeGroupMembers>

Table 3-101   NodeGroupMembers Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
NodeGroup	Node Group	Node Group Name	text	key
Node	Node	Name of a Node in the Node Group	text	key

<NodeGroups>

Table 3-102   NodeGroups Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Node group name	text	key
NumNodes	Num Nodes	Number of Nodes in Node Group	integer	derived
NodeList	Node List	List of Nodes in Node Group	text	derived

<Nodes>

Table 3-103   Nodes Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Node name	text	key
Site	Site	Site containing node	text	plan
Function	Function	Core or Edge	text	plan
Protected	Protected	Is Node protected?	boolean	plan
Active	Active	Is Node active?	boolean	plan
Type	Type	Physical or Virtual	text	plan
ISISArea	ISIS Area	Used if Network Options IGP set to ISIS	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
AS	AS	Autonomous System of node	text	plan
BGPID	BGP ID	BGP ID number	text	plan
SID	SID	Node Segment Identifier	integer	plan
AvoidTransit	Avoid Transit	Node is not used for transit traffic	text	plan
TotalTraffSim	Total Traff Sim	Total simulated source/destination/transit traffic in Node	real	derived
SrcTraffSim	Src Traff Sim	Simulated source/ingress traffic from the node	real	derived
DestTraffSim	Dest Traff Sim	Simulated destination/egress traffic to the node	real	derived
TransitTraffSim	Transit Traff Sim	Simulated transit traffic through the node	real	derived
SrcTraffMeas	Src Traff Meas	Total measured traffic entering the model at Node	real	derived
DestTraffMeas	Dest Traff Meas	Total measured traffic exiting the model at Node	real	derived
LSPCount	LSP Count	Number of LSPs through Node	integer	derived
ECMPMax	ECMP Max	Maximum number of ECMP splits out of Node	integer	derived
FailureImpact	Failure Impact	Maximum increased utilization over network under failure of this Node	real	derived
FIInterface	Failure Impact Interface	Interface with maximum failure impact	text	derived
IPAddress	IP Address	Loopback IP Address	text	plan
SiteLongitude	Site Longitude	Longitude of Site containing Node	real	derived
SiteLatitude	Site Latitude	Latitude of Site containing Node	real	derived
X	X	Node X coordinate	real	derived
Y	Y	Node Y coordinate	real	derived
SiteX	Site X	X coordinate of Site containing Node	real	derived
SiteY	Site Y	Y coordinate of Site containing Node	real	derived
Shown	Shown	Is node shown in the current layout	boolean	derived
InterfaceCount	Interface Count	Number of attached interfaces in the model	integer	derived

Plan File Name	User Interface Name	Description	Data Type	Category
Description	Description	User defined description for the Node	text	plan
Vendor	Vendor	Node vendor name (or enterprise id)	text	plan
Model	Model	Node model number	text	plan
OS	OS	Node Operating System Type and SW version	text	plan
IPManage	IP Manage	Management IP Address	text	plan
CostInitial	Cost Initial	Initial cost of Node	real	plan
CostPerPeriod	Cost Per Period	Cost of Node per period	real	plan
LastTemplateUpdate	Last Template Update	(For plan templates) last time template was updated with node	text	plan
Longitude	Longitude	Node longitude	real	plan
Latitude	Latitude	Node latitude	real	plan
Failed	Failed	Is Node failed?	boolean	plan
Operational	Operational	Is Node operational?	boolean	derived
Tags	Tags	Tags assigned to the node	text_list	plan
SiteTags	Site Tags	Tags assigned to the node's site	text_list	derived
ASTags	AS Tags	Tags assigned to the node's AS	text_list	derived
NetIntSNMP_Error	NetIntSNMP_Error	A list of tools where SNMP faild	text	plan
NetIntSource	NetIntSource	Source of node (IGP or Explicit)	text	plan
NetIntRE0CPU1m	NetIntRE0CPU1m	Percent CPU utilization in the last 1 min (first)	integer	plan
NetIntRE0CPU5m	NetIntRE0CPU5m	Percent CPU utilization in the last 5 min (first)	integer	plan
NetIntRE0Mem	NetIntRE0Mem	CPU Memory utilization(first)	integer	plan
NetIntRE1CPU1m	NetIntRE1CPU1m	Percent CPU utilization in the last 1 min (second)	integer	plan
NetIntRE1CPU5m	NetIntRE1CPU5m	Percent CPU utilization in the last 5 min (second)	integer	plan
NetIntRE1Mem	NetIntRE1Mem	CPU Memory utilization(second)	integer	plan

<NodeSiteMappingRules>

Table 3-104   NodeSiteMappingRules Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Order	Order	Rules are applied in this order	integer	key
NodeMatches	Node Matches	Regex matching node names	text	plan
SiteExpression	Site Expression	Site name expression. May use references in 'Node Matches'.	text	plan

<NodeTraffic>

Table 3-105   NodeTraffic Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node	text	key
TrafficLevel	Traffic Level	Traffic Level	text	key
Queue	Queue	Queue	text	key
SrcTraffMeas	SrcTraffMeas	SrcTraffMeas	real	plan
DestTraffMeas	DestTraffMeas	DestTraffMeas	real	plan

<P2MPLSPs>

Table 3-106   P2MPLSPs Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of the P2MP LSP	text	key
Source	Source	Source node	text	key
SubLSPCount	Sub LSP Count	Number of Sub LSPs	integer	derived
TraffSim	Traff Sim	Simulated traffic in P2MP LSP	real	derived
Routed	Routed	All subLSPs follow 'Actual' paths, some 'Simulated' paths, 'Partial' routed, or all 'Unrouted'.	text	derived
ShortestPath	Shortest Path	Do all subLSPs take shortest IGP path distance?	boolean	derived
DisjointGroup	Disjoint Group	Disjoint Group membership for explicit path initializer	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
DisjointPriority	Disjoint Priority	Disjoint priority for explicit path initializer	integer	plan
Tags	Tags	Tags assigned to the P2MP LSP	text_list	plan

<PlotLayoutElements>

Table 3-107   PlotLayoutElements Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
PlotLayoutName	Plot Layout Name	Name of plot layout	text	key
ElementSite	Element Site	Name of a Site to be plotted in layout	text	key
ElementNode	Element Node	Name of a Node to be plotted in layout	text	key
ElementInterface	Element Interface	Name of an interface to be plotted in layout	text	key
ElementL1Node	Element L1 Node	Name of a L1 Node to be plotted in layout	text	key
X	X	X Coordinate	real	plan
Y	Y	Y Coordinate	real	plan
Shown	Shown	Is site shown or hidden in layout?	boolean	plan
LabelDir	Label Dir	Direction for the label	text	plan

<PlotLayoutOptions>

Table 3-108   PlotLayoutOptions Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
PlotLayoutName	Plot Layout Name	Name of plot layout	text	key
PlotLayoutType	PlotLayoutType	Layout Type	text	key
Property	Property	Layout Property	text	key
Value	Value	Layout Property Value	text	plan

<PlotLayouts>

Table 3-109   PlotLayouts Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of plot layout	text	key
PlotLayoutType	PlotLayoutType	Visual Type, Design or Weathermap	text	plan

<PlotNodeToNodeOptions>

Table 3-110   PlotNodeToNodeOptions Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
NodeA	Node A	Name of first Node	text	key
NodeB	Node B	Name of second Node	text	key
PlotLayoutName	Plot Layout Name	Name of plot layout	text	key
InterfaceStyle	Interface Style	Style of Interfaces between Nodes	text	plan

<PlotSiteToSiteOptions>

Table 3-111   PlotSiteToSiteOptions Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
SiteA	Site A	Name of first Site	text	key
SiteB	Site B	Name of second Site	text	key
PlotLayoutName	Plot Layout Name	Name of plot layout	text	key
InterfaceStyle	Interface Style	Style of Interfaces between Sites	text	plan

<PlotViewInterfaces>

Table 3-112   PlotViewInterfaces Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
PlotView	PlotView	PlotView	text	key
Node	Node	Node	text	key
Interface	Interface	Interface	text	key

Plan File Name	User Interface Name	Description	Data Type	Category
Color	Color	Color	text	plan
FillPercent	FillPercent	FillPercent	real	plan
FillBound	FillBound	FillBound	real	plan

\<PortCircuits\>

Table 3-113   PortCircuits Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of Port Circuit	text	plan
Description	Description	Description	text	plan
NodeA	Node A	Node containing Port A	text	key
NodeB	Node B	Node containing Port B	text	key
PortA	Port A	Port on one side of Port Circuit	text	key
PortB	Port B	Port on other side of Port Circuit	text	key
SiteA	Site A	Site containing Port A	text	derived
SiteB	Site B	Site containing Port B	text	derived
InterfaceA	Interface A	Container interface of Port A	text	derived
InterfaceB	Interface B	Container interface of Port B	text	derived
L1CircuitName	L1 Circuit Name	L1 Circuit Name	text	plan
L1CircuitNodeA	L1 Circuit Node A	L1 Circuit Node A	text	plan
L1CircuitNodeB	L1 Circuit Node B	L1 Circuit Node B	text	plan
Capacity	Capacity	Defined capacity of Port Circuit	real	plan
CapacitySim	Capacity Sim	Simulated Capacity of Port Circuit	real	derived
Active	Active	Active	boolean	plan
Failed	Failed	Failed	boolean	plan
Operational	Operational	Is Port operational?	boolean	derived
Protected	Protected	Protected	boolean	plan
Tags	Tags	Tags	text_list	plan

<Ports>

Table 3-114   Ports Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node containing Port	text	key
Port	Port	Port name	text	key
RemoteNode	Remote Node	Remote Node (if Port Circuit defined)	text	derived
RemotePort	Remote Port	Remote Port (if Port Circuit defined)	text	derived
L1Node	L1 Node	L1 Node attached to the Port	text	plan
RemoteL1Node	Remote L1 Node	Remote L1 Node (if Port Circuit defined)	text	derived
Description	Description	Description	text	plan
MACAddress	MAC Address	MAC Address	text	plan
Site	Site	Site containing Port	text	derived
Interface	Interface	Container interface of Port	text	plan
TraffMeas	Traff Meas	Measured traffic	real	derived
Capacity	Capacity	Defined Capacity of the Port Circuit	real	plan
UtilMeas	Util Meas	Measured utilization	real	derived
CapacitySim	Capacity Sim	Simulated capacity of the Port	real	derived
Active	Active	Active	boolean	plan
Failed	Failed	Failed	boolean	plan
Operational	Operational	Is Port operational?	boolean	derived
Protected	Protected	Protected	boolean	plan
Tags	Tags	Tags	text_list	plan
NetIntPortIndex	NetIntPortIndex	IfIndex of port	integer	plan
NetIntInterfaceIndex	NetIntInterfaceIndex	IfIndex of interface	integer	plan
NetIntActorPortIndex	NetIntActorPortIndex	Local port num of agg port	integer	plan
NetIntRemotePortIndex	NetIntRemotePortIndex	Port num of agg port by proto partner	integer	plan
LACPMuxState	LACPMuxState	Mux State of the Aggregation Port	integer	plan

<PortTraffic>

Table 3-115   PortTraffic Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node containing port	text	key
Port	Port	Port Name	text	key
TrafficLevel	Traffic Level	Traffic Level	text	key
Queue	Queue	Queue	text	key
TraffMeas	TraffMeas	TraffMeas	real	plan

<Queues>

Table 3-116   Queues Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of the queue	text	key

<Reports>

Table 3-117   Reports Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name	text	key
DateCreated	DateCreated	DateCreated	text	plan

<ReportSections>

Table 3-118   ReportSections Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name	text	key
Report	Report	Report	text	key
Type	Type	Type	text	plan
DisplayIndex	DisplayIndex	DisplayIndex	integer	plan
DisplayName	DisplayName	DisplayName	text	plan
Contents	Contents	Contents	text	plan

<ReportTableInteractions>

Table 3-119   ReportTableInteractions Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Report	Report	Name of Report	text	key
Section	Section	Name of Report Table Section	text	key
Reference	Reference	Name of Reference	text	key
ReferenceType	Reference Type	'Table' or 'Object'	text	plan
Table	Table	If ReferenceType is 'Table', then this is the name of the GUI table listing the object (minus spaces). Eg 'L1Nodes', 'P2MPLSPs', etc. Otherwise ignored.	text	plan
SourceJoinColumns	SourceJoinColumns	If ReferenceType is 'Table', then this is a comma-separated list of columns in the report table that will be used to map the rows of the table to rows in the destination table. Most likely these are object columns.	text	plan
DestJoinColumns	DestJoinColumns	If ReferenceType is 'Table', then this is a comma-separated list of columns in the destination GUI table. The list should be the same length as SourceJoinColumns.	text	plan
ObjectColumn	ObjectColumn	If ReferenceType is 'Object', then this is a column in the report table that contains a WAE Design object string definition, eg 'ct{A|B|C|D}', 'if{A|B}', etc.	text	plan

<SegmentListHops>

Table 3-120   SegmentListHops Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Segment List Name	text	key
Step	Step	Position of segment in stack	integer	key
SegmentNode	Segment Node	Segment list node hop	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
SegmentInterface	Segment Interface	Egress interface of Segment Node. Defines an interface segment.	text	plan
SegmentAnycastGroup	Segment AnycastGroup	Segment list anycast group hop	text	plan

\<SegmentLists>

Table 3-121   SegmentLists Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Segment List Name	text	key

\<ServiceClasses>

Table 3-122   ServiceClasses Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name	text	key

\<ServiceClassLSPClassMapping>

Table 3-123   ServiceClassLSPClassMapping Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
ServiceClass	Service Class	Service Class to be mapped to LSP Class	text	plan
Priority	Priority	Priority of class mapping	integer	plan
LSPClass	LSPClass	LSP Class that the Service Class maps onto, or 'Drop'	text	plan

\<ServiceClassPolicy>

Table 3-124   ServiceClassPolicy Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
ServiceClass	Service Class	Service Class	text	key
InterfacePolicyGroup	Interface Policy Group	Interface Policy Group	text	key

Plan File Name	User Interface Name	Description	Data Type	Category
ServiceUtilBound	Service Util Bound	Service Util Bound	real	plan
ServiceWCUtilBound	Service WC Util Bound	Service WC Util Bound	real	plan

<ServiceClassQueueMapping>

Table 3-125   ServiceClassQueueMapping Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
ServiceClass	Service Class	Service Class	text	key
Queue	Queue	Queue	text	key

<SimAnalysisFailureImpacts>

Table 3-126   SimAnalysisFailureImpacts Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
FailureSet	FailureSet	Failure Set	text	plan
TraffLevel	TraffLevel	TraffLevel	text	plan
ServiceClass	ServiceClass	ServiceClass	text	plan
Failure	Failure	Failure	text	plan
FailureImpactNode	FailureImpactNode	FailureImpactNode	text	plan
FailureImpactInterface	FailureImpactInterface	FailureImpactInterface	text	plan
QoSViolationSimPercent	QoS Violation Sim (%)	QoS Violation Sim (%)	real	plan
FailureImpactUsage	FailureImpactUsage	FailureImpactUsage	real	plan
FailureImpactSimCap	FailureImpactSimCap	FailureImpactSimCap	real	plan
FailureImpactServiceCap	FailureImpactServiceCap	FailureImpactServiceCap	real	plan
FailureImpactPotentialCap	FailureImpactPotentialCap	FailureImpactPotentialCap	real	plan
FailureImpactNoFailEffCap	FailureImpactNoFailEffCap	FailureImpactNoFailEffCap	real	plan

<SimAnalysisOptions>

Table 3-127   SimAnalysisOptions Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Option	Option	Option	text	plan
Value	Value	Value	text	plan

<SimAnalysisWCLatencyDemands>

Table 3-128   SimAnalysisWCLatencyDemands Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
FailureSet	FailureSet	Failure Set	text	key
Name	Name	Name of the demand	text	plan
Source	Source	Source of the demand	text	plan
Destination	Destination	Destination of the demand	text	plan
ServiceClass	ServiceClass	Service class of the demand	text	plan
WCFailure	WCFailure	Scenario for the worst latency	text	plan
WCLatency	WCLatency	Worst latency for demand in failure set	real	plan

<SimAnalysisWCUtilInterfaces>

Table 3-129   SimAnalysisWCUtilInterfaces Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
FailureSet	FailureSet	Failure Set	text	key
WCTraffLevel	WCTraffLevel	WCTraffLevel	text	plan
Node	Node	Node	text	key
Interface	Interface	Interface name	text	key
WCServiceClass	WCServiceClass	WCServiceClass	text	plan
WCFailure	WCFailure	WCFailure	text	plan
WCTraffic	WCTraffic	WCTraffic	real	plan
WCUtil	WCUtil	WCUtil	real	plan
WCQoSBound	WCQoSBound	WCQoSBound	real	plan
DiffWCQoSBound	DiffWCQoSBound	DiffWCQoSBound	real	plan

Plan File Name	User Interface Name	Description	Data Type	Category
DiffWCQoSBoundPerc	DiffWCQoSBoundPerc	DiffWCQoSBoundPerc	real	plan
SimulatedCapacity	SimulatedCapacity	SimulatedCapacity	real	plan
ServiceCapacity	ServiceCapacity	ServiceCapacity	real	plan

\<SimAnalysisWCUtilL1Link\>

Table 3-130   SimAnalysisWCUtilL1Link Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name	text	key
NodeA	NodeA	NodeA	text	key
NodeB	NodeB	NodeB	text	key
FailureSet	FailureSet	FailureSet	text	plan
WCFailure	WCFailure	WCFailure	text	plan
WCNumL1CirPath	WCNumL1CirPath	Maximum number of L1 circuit paths on this L1 link	integer	plan
WCUtilSim	WCUtilSim	Maximum simulated util on this L1 link	real	plan

\<SimAnalysisWCUtilVPNs\>

Table 3-131   SimAnalysisWCUtilVPNs Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of VPN	text	key
Type	Type	'P2P' or 'Layer2' or 'Layer3'	text	key
FailureSet	FailureSet	Failure Set	text	plan
WCUtil	WCUtil	Maximum 'WC Util' of Interfaces used by VPN	real	plan
WCFailure	WCFailure	Failures causing WCUtil	text	plan
WCTraffLevel	WCTraffLevel	Traffic Level causing WCUtil	text	plan
WCQoSViolation	WCQoSViolation	Max 'WC QoS Violation' of interfaces used by VPN	real	plan
WCQoSViolationPerc	WCQoSViolationPerc	Max 'WC QoS Violation (%)' of interfaces used by VPN	real	plan

<SimCacheInterfaces>

Table 3-132   SimCacheInterfaces Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node	text	key
Interface	Interface	Interface	text	key
TrafficLevel	TrafficLevel	TrafficLevel	text	key
ServiceClass	ServiceClass	ServiceClass	text	plan
Queue	Queue	Queue	text	key
SimTraffic	SimTraffic	SimTraffic	real	plan
SimCap	SimCap	SimCap	real	plan
ServiceCap	ServiceCap	ServiceCap	real	plan
NoFailCap	NoFailCap	NoFailCap	real	plan

<SimCacheLSPReservation>

Table 3-133   SimCacheLSPReservation Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node	text	key
Interface	Interface	Interface	text	key
SimTraffic	SimTraffic	SimTraffic	real	plan

<Sites>

Table 3-134   Sites Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Site name	text	key
DisplayName	Display Name	Site display name	text	plan
LocationCode	Location Code	Location name	text	plan
ParentSite	Parent Site	Name of parent site	text	plan
Protected	Protected	Is Site protected?	boolean	plan
Active	Active	Is Site active?	boolean	plan
Failed	Failed	Is Site failed?	boolean	plan
Longitude	Longitude	Site longitude	real	plan
Latitude	Latitude	Site latitude	real	plan
X	X	Site X Coordinate	real	derived

Plan File Name	User Interface Name	Description	Data Type	Category
Y	Y	Site Y Coordinate	real	derived
Shown	Shown	Is site shown in the current layout	boolean	derived
Layer	Layer	Layer 1 and/or Layer 3	text	derived
NodeCount	Node Count	Number of nodes in site	integer	derived
L1NodeCount	L1 Node Count	Number of L1 nodes in site	integer	derived
IntInterfaceCount	Int Interface Count	Number of interfaces within site	integer	derived
ExtInterfaceCount	Ext Interface Count	Number of external interfaces	integer	derived
SrcTraffSim	Src Traff Sim	Total simulated traffic from site	real	derived
DestTraffSim	Dest Traff Sim	Total simulated traffic to site	real	derived
Tags	Tags	Tags assigned to the site	text_list	plan

<SRLGCircuits>

Table 3-135   SRLGCircuits Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
SRLG	SRLG	SRLG name	text	key
NodeA	NodeA	Name of the local node of the circuit	text	key
InterfaceA	InterfaceA	Name of the local interface of the circuit	text	key
NodeB	NodeB	Name of the remote node of the circuit	text	key
InterfaceB	InterfaceB	Name of the remote interface of the circuit	text	key

<SRLGExternalEndpointMembers>

Table 3-136   SRLGExternalEndpointMembers Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
SRLG	SRLG	Name of the SRLG	text	key
EndPoint	EndPoint	Name of the External Endpoint	text	key
Member	Member	Name of the External Endpoint Member	text	key

<SRLGL1Links>

Table 3-137   SRLGL1Links Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
SRLG	SRLG	SRLG name	text	key
L1NodeA	L1 Node A	L1 Node A of the L1Link contained in the SRLG	text	key
L1NodeB	L1 Node B	L1 Node B of the L1Link contained in the SRLG	text	key
Name	Name	Name of the L1Link contained in the SRLG	text	key

<SRLGL1Nodes>

Table 3-138   SRLGL1Nodes Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
SRLG	SRLG	SRLG name	text	key
L1Node	L1Node	Name of the L1 node contained in the SRLG	text	key

<SRLGNodes>

Table 3-139   SRLGNodes Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
SRLG	SRLG	SRLG name	text	key
Node	Node	Name of the node	text	key

<SRLGPortCircuits>

Table 3-140   SRLGPortCircuits Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
SRLG	SRLG	SRLG name	text	key
NodeA	NodeA	Name of the local node of the port circuit.	text	key
PortA	PortA	Name of the local port.	text	key

Plan File Name	User Interface Name	Description	Data Type	Category
NodeB	NodeB	Name of the remote node of the port circuit.	text	key
PortB	PortB	Name of the remote port.	text	key

\<SRLGPorts\>

Table 3-141   SRLGPorts Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
SRLG	SRLG	SRLG name	text	key
Node	Node	Node of the port.	text	key
Port	Port	Name of the port.	text	key

\<SRLGs\>

Table 3-142   SRLGs Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	SRLG name	text	key
NumNodes	Num Nodes	Number of nodes in SRLG	integer	derived
NodeList	Node List	List of nodes in the SRLG	text_list	derived
NumInterfaces	Num Interfaces	Number of interfaces in SRLG	integer	derived
InterfaceList	Interface List	List of interfaces in the SRLG	text_list	derived
NumCircuits	Num Circuits	Number of circuits in SRLG	integer	derived
CircuitList	Circuit List	List of circuits in the SRLG	text_list	derived
NumL1Nodes	Num L1 Nodes	Number of L1 Nodes in SRLG	integer	derived
L1nodeList	L1 node List	List of L1 Nodes in the SRLG	text_list	derived
NumL1Links	Num L1 Links	Number of L1 Links in SRLG	integer	derived
L1linkList	L1 link List	List of L1 Links in the SRLG	text_list	derived
NumPorts	Num Ports	Number of ports in SRLG	integer	derived
PortList	Port List	List of ports in the SRLG	text_list	derived
NumPortCircuits	Num Port Circuits	Number of port circuits in SRLG	integer	derived
PortCircuitList	Port Circuit List	List of port circuits in the SRLG	text_list	derived
NumExternalEndpointMembers	Num External Endpoint Members	Number of External Endpoint Members in SRLG	integer	derived

Plan File Name	User Interface Name	Description	Data Type	Category
ExternalEndpointMemberList	External Endpoint Member List	List of External Endpoint Members in the SRLG	text_list	derived
Active	Active	Active	boolean	plan
FailureImpact	Failure Impact	Maximum increased utilization over network under failure of this SRLG	real	derived
FIInterface	Failure Impact Interface	Interface with maximum failure impact	text	derived
Description	Description	Description of the SRLG	text	plan
Failed	Failed	Is this SRLG failed?	boolean	plan

<Topologies>

Table 3-143   Topologies Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of Topology	text	key

<TrafficLevels>

Table 3-144   TrafficLevels Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name	text	key

<VPNNodes>

Table 3-145   VPNNodes Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node on with the VPN Node is configured	text	key
Type	Type	Type of the VPN Node	text	key
Name	Name	Name of the VPN Node	text	key
VPN	VPN	The VPN to which this VPN Node belongs	text	plan
Description	Description	VPN Node description	text	plan
RTImport	RT Import	Imported Route Target	text	plan

Plan File Name	User Interface Name	Description	Data Type	Category
RTExport	RT Export	Exported Route Target	text	plan
RD	RD	Route Distinguisher	text	plan
TotalConnect	Total Connect	Number of VPN Nodes connected to this one	integer	derived
VPNConnect	VPN Connect	Of TotalConnect, number in the same VPN	integer	derived
NumVPNNodes	Num VPN Nodes	Number of nodes in the VPN this VPN Node belongs to	integer	derived
SrcTraffMeas	Src Traff Meas	Measured source traffic	real	derived
DestTraffMeas	Dest Traff Meas	Measured destination traffic	real	derived
Tags	Tags	Tags assigned to the VPN Node	text_list	plan
NetIntVirtualCircuitType	NetIntVirtualCircuitType	VPN virtual circuit-type	text	plan

<VPNNodesTraffic>

Table 3-146   VPNNodesTraffic Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Node	Node	Node on with the VPN Node is configured	text	key
Type	Type	'P2P' or 'Layer2' or 'Layer3'	text	key
Name	Name	Name of the VPN Node	text	key
TrafficLevel	Traffic Level	Traffic Level	text	key
Queue	Queue	Queue	text	key
SrcTraffMeas	Src Traff Meas	Measured source traffic	real	plan
DestTraffMeas	Dest Traff Meas	Measured destination traffic	real	plan

<VPNs>

Table 3-147   VPNs Table Columns

Plan File Name	User Interface Name	Description	Data Type	Category
Name	Name	Name of VPN	text	key
Type	Type	Type of the VPN Node	text	key
Connectivity	Connectivity	'RT': VPN Connectivity determined by Route Targets 'Full Mesh': Full connectivity between all VPN Nodes	text	key

Plan File Name	User Interface Name	Description	Data Type	Category
ServiceClass	Service Class	ServiceClass of the VPN	text	plan
NumNodes	Num Nodes	Number of VPN Nodes	integer	derived
Tags	Tags	Tags assigned to the VPN	text_list	plan
UtilMeas	Util Meas	Maximum Util Meas of Interfaces used by VPN	real	derived
UtilSim	Util Sim	Maximum Util Sim of Interfaces used by VPN	real	derived
TotalSrcTraffMeas	Total Src Traff Meas	Total measured source traffic	real	derived
TotalDestTraffMeas	Total Dest Traff Meas	Total measured destination traffic	real	derived
WCUtil	WC Util	Maximum 'WC Util' of Interfaces used by VPN	real	derived
WCFailures	WC Failures	Failures causing WCUtil	text	derived
WCTrafficLevel	WC Traffic Level	Traffic Level causing WCUtil	text	derived
QoSViolationSim	QoS Violation Sim	Max 'QoS Violation Sim' of interfaces used by VPN	real	derived
QoSViolationSimPercent	QoS Violation Sim (%)	Max 'QoS Violation Sim (%)' of interfaces used by VPN	real	derived
QoSViolationMeas	QoS Violation Meas	Max 'QoS Violation Meas' of interfaces used by VPN	real	derived
QoSViolationMeasPercent	QoS Violation Meas (%)	Max 'QoS Violation Meas (%)' of interfaces used by VPN	real	derived
WCQoSViolation	WC QoS Violation	Max 'WC QoS Violation' of interfaces used by VPN	real	derived
WCQoSViolationPercent	WC QoS Violation (%)	Max 'WC QoS Violation (%)' of interfaces used by VPN	real	derived
Latency	Latency	Max Latency of Demands used by VPN	real	derived
WCLatency	WC Latency	Max 'WC Latency' of Demands used by VPN	real	derived
WCLatencyFailures	WC Latency Failures	Failure causing WC Latency	text	derived