System Administration Guide

For Collector, MATE Live, and MATE Design Archive UIs

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Overview

The System UI enables you to manage system-wide configurations that apply to the MATE Live and MATE Design Archive applications and to the Collector UI.

- Licenses—Describes how to install licenses, and view relevant information, such as their licensed features and expiration dates.
- Server Status—Describes the system-wide status information about the device: system load, memory, and disk space.
- User Management—Describes how to add, edit, activate/de-activate, and delete users and their roles from the local user database.
- LDAP Server—Describes how to configure access to the LDAP server for user authentication, and configure mappings between LDAP groups and system roles.
- SMTP Server—Describes how to configure access to the SMTP server used for emailing MATE Live reports.
- Troubleshooting—A few tips on troubleshooting the Collector server and MATE Live application.

Related Topics

- *WAE Platform Configuration Guide*
- *MATE Live Configuration Guide*
- *MATE Design Archive User and Administration Guide*
- *MATE GUI Visualization Guide*

CHAPTER **2**

Server Status

Access: Web home page

Access: System->Server Status

The parent Server Status page shows the status of the system load, free memory, and free disk space.

Each section is a "parent" section that reflects the status of its worst-performing unit being measured.

- System status shows the worst system load average for 1-, 5-, and 15-minute intervals.
- Memory status shows the amount of memory that is available on the device.
- Disk status shows the lowest available disk space for any of its partition types.

If you are on the Server Status page or if you are on the home page, then this information is updated every two minutes. To refresh the status sooner, click the Refresh icon in the top right of the page.

Click anywhere in the parent section to see more details.

System

The System section shows the status of the average system load for three intervals: 1 minute, 5 minutes, and 15 minutes. If the system status of any one of these intervals is worse than the other, that is the status that shows in the parent system section.

Clicking on the parent section shows the individual status of each of these intervals, as well as their load, and the top five processes contributing to the system load.

Load

The Load column identifies the system load (for the given time interval). The load is relative to the number of processor cores available. On a device with only one core, 1.0 means it is exactly at capacity (100% utilization), and any number over 1 means there are backup of processes waiting to run. This full-capacity number doubles to 2 on a dual-core system, to 4 on a quad-core, and this trend continues as the number of cores increases.

The number that is most likely indicative of your average load is the 5- or 15-minute interval, depending on how you are using the device. The closer the number moves to its full-capacity mark, the more likely it is you need to find a way to handle more processes.

Status

The load average is based on the load divided by the number of cores. For example, if the load is 1 and there are 4 cores, the system load average is 25%. Following are the percentages that affect the status.

Interval	Green	Yellow	Red
	x = Load Average		
1 minute	x < 250%	250% <=x< 300%	x >= 300%
5 minutes	x < 200%	200% <=x< 250%	x >= 250%
15 minutes	x < 100%	100% <=x< 200%	x >= 200%

Memory

The Memory section shows the status on total memory that is available for the device.

Clicking on the Memory section provides total memory, free memory, and the status of the system-wide available memory. It also lists the amount of buffer and swap memory that is available.

Buffer memory is the portion of the hard drive's memory that is set aside as a temporary holding place for data that is to be sent to or received from an external device. Swap memory is the reserved amount of memory on the hard drive.

Following are the percentages that affect the status.

Green	Yellow	Red
x = Total Amount of Available Memory		
x > 25%	25% <=x< 10%	x <= 10%

Disk

The Disk section shows the status of disk space that is available for the device. Each partition type is measured, and if any one of these partition types is worse than the other, that is the status that shows in the parent Disk section. For instance, if disk partition type ext4 in /net/akd1 is red (low disk space available) and the rest of the types are green (sufficient disk space available), the color showing in the parent Disk section is red.

Clicking on the parent section shows the individual status of each of these partition types, as well as their paths. For each type-path combination, the amount free space and total space are also listed.

Following are the percentages that affect the status.

Green	Yellow	Red
x = Total Amount of Available Disk Space		
x > 15%	15% <=x< 5%	x <= 5%

Licenses

Access: System->Licenses

All web-based products use a dedicated license, and each license grants specific usage rights for software features.

This page gives immediate information on which licenses are installed, including the expiration date and the number of nodes for which it is valid. This page also lists the Cisco license version number, which is not the same as the product's release number.

- To view a list of the details about a license, click the Features button.
- To install a new license, click the Upload License button.

The lower left identifies on which host the license is installed, and where the license is located.

Upload Licenses

Step 1 Select System->Licenses.

Step 2 Click Upload Licenses.

Step 3 Click Select Licenses.

    a. Browse to the location or enter the name of the license file (.lic extension), and click Open.

    b. If there is already a license installed, the default is to replace the existing license. To merge the two licenses instead, select the merge option. If you are uncertain whether you have a complete set of desired features in the new license, we recommend that you merge the licenses.

    c. Click Upload License.

Step 4 Verify the license installed correctly by locating it on the System->Licenses page.

Related Topics

- User Management
- LDAP Server

User Management

Access: System->Users

This page enables you to manage users in a local database. You can add, edit, delete users and their passwords, as well as activate and de-activate them. Users are assigned roles, which sets their permissions for using the MATE web UIs (MATE Live and MATE Design Archive), Collector UI, and the System UI. These roles cannot be set on a per product basis.

When the system verifies a user, it first checks this local database. If it cannot find the user, it checks the LDAP Server database.

User and Admin Roles

Each user can be assigned one or more roles: administrator or user.

- Administrator—Can see and use all of the products and applications. With this role, you have these permissions.
  - **–** Add and delete other users, edit their information (including password), temporarily enable or disable them, and assign them roles.
  - **–** Upload templates to the server through the MATE GUI.
  - **–** Configure the Collector UI and augmented snapshots for collecting data.
  - **–** Configure application settings.
  - **–** Configure licenses.
  - **–** Configure the SMTP and LDAP servers.
- User—Can use all of the application tasks that are available outside of the above scope.

Default Roles and Passwords

There are two default login and password combinations, one for each role.

Note To increase security, we recommend that you immediately change both of these default passwords. See the User Fields section.

Default Username	Default Password	Default Role
admin	cariden	Administrator
user	cariden	User

User Fields

Required Fields

- Add User—Add new users and passwords, assign roles, activate and de-activate user access, and edit any of this information. Users cannot access the UI unless they are administratively added. The exception is they can use the default user login and password if those are available.

- Username—Login name for all the web UIs. Once the username is saved, neither the administrator, nor the user can change it.

- Password—When adding users, you must enter a password for them. Note that users can change their passwords once they log into the UI. Once a password is added, it remains in effect until changed even though it is not visible on the page.

- Roles—This option determines whether users can perform administrative functions. For more information, see the User and Admin Roles section.

- Active—Turn UI access on and off for existing users. This is a convenient way to temporarily disable users, for example, if they have to be away for an extended period.

Optional Fields

- Edit (pencil icon)—Edit all user information, and activate or de-activate user access.

- Delete (trash can icon)—Permanently delete users from accessing the UI. The exception is they can use the default user login and password if those are available. There is no undo.

- Description—Summary explanation to give more information about this user.

- First Name—First name of the user.

- Last Name—Last name of the user.

- Advanced Config—This is for advanced configuration editing only. Consult your support representative for assistance.

Related Topics

- LDAP Server

- Licenses

LDAP Server

Access: System->LDAP Server

This page enables you to configure access to an LDAP server. Additionally, use this page to configure mappings between LDAP groups and system roles that are defined in the User Management page. The benefit to using the LDAP server for authentication is that you can centrally assign roles to large groups, rather than having to set them individually for users.

When the system attempts to verify a user, it first checks the local database that is configured through the User Management page. If it cannot find the user, it checks the LDAP server database to find any groups containing that user.

For the LDAP server to be used, the following prerequisites must be met.

- The LDAP server must be configured to work with this system, including having groups and specified users within them, lookup keys, and the client (this system) credentials (username and password).

- The LDAP server must be configured from this page. It must also be enabled, and there must be at least one group in the Groups to Roles Mapping table that matches a group in the LDAP server database.

Note Contact your LDAP administrator for the information required to complete this page.

LDAP Server Fields

Using the LDAP server is not mandatory. The following sections identify required and optional fields based on the assumption are you are configuring the LDP server to use it.

Required Fields

- Server—LDAP server IP address or FQDN, which is the server's hostname with the DNS domain name appended to the end.

    FQDN format: <LDAP_hostname>.<domain>.com

- Protocol—Protocol used to reach the LDAP server.

    - LDAP—Transmits communication in clear text.

    - LDAPS—Transmits communication that is encrypted and secure.

- Port—Port used to reach the LDAP server.

- LDAP Client Username—Client username for logging into the LDAP server. This system is the client.

- Password—Client password for the LDAP client username.

- Search Base—Comma-separated list of lookup keys that the LDAP server uses to locate and validate users in the LDAP database.

- Groups to Roles Mapping—Add, edit, and delete groups, and map roles to those groups. These groups must exist on the LDAP server.

Optional Fields

- Enabled—Select or deselect to enable or disable use of the LDAP server for user authentication. This must be selected to use the LDAP server for authentication.

- Accept Any SSL Certificates—Applicable only if LDAPS is selected as the protocol. Use this option if you do not expect the LDAP server to have a valid SSL certificate for establishing encrypted communication with this system. If this option is not selected, the communication cannot be established unless the certificate used by the LDAP server to establish communication is valid.

- Edit (pencil icon)—Edit group information or roles.

- Delete (trash can icon)—Permanently delete groups from accessing the UI. There is no undo.

- Advanced Config—This is for advanced configuration editing only. Consult your support representative for assistance.

Related Topics

- User Management

- Licenses

SMTP Server

Access: System->SMTP Server

This page enables you to configure the SMTP server used for emailing MATE Live reports. If the SMTP server is not configured, the email feature for scheduled MATE Live reports will not work.

SMTP Fields

Using the SMTP server is not mandatory. If you do not wish to use it, set the Encryption field to None, and then no other fields are required. The following sections identify required and optional fields based on the assumption are you are configuring the SMTP server to use it.

Required Fields

- Server—SMTP server IP address or FQDN, which is the server's hostname with the DNS domain name appended to the end.

  FQDN format: <SMTP_hostname>.<domain>.com

- Username—Username of the SMTP server.
- Password—Authentication password for the SMTP server.
- From Address—The address from which the emailed report is sent. For example, this could be a support address so that recipients could respond for assistance.
- Encryption—The type of encryption to use when mailing MATE Live reports.
  - SSL—Encrypt the communication between the SMTP server and the device to which the emailed report is going.
  - STARTTLS—Convert an insecure connection to use either TLS or SSL.
  - None—Do not use encryption. This is not recommended since the SMTP server is emailing reports containing your network data.
- Port—Port that the SMTP server uses when sending emails.

Optional Fields

- Advanced Config—This is for advanced configuration editing only. Consult your support representative for assistance.

Related Topics

- *MATE Live Configuration Guide*
- *MATE Live User Guide*

Troubleshooting

To ease troubleshooting of the Collector server and the MATE Live application, use the `mate_tech_support` CLI tool. This tool creates a tar file of support information and puts it into the `/tmp/MATE_TS` directory by default. If needed, you can then send this .tgz file to your support representative. To change the directory in which the results are stored, use the `-tar-path` option.

Example: This creates a tar file of MATE Live and Collector support information and puts the output into the `/troubleshooting` directory.

```
mate_tech_support -tar-path /troubleshooting
```

From the Collector UI, there are numerous tools available for troubleshooting the collection process, including a Node List table that identifies the status of every node in the collection, Status and Log pages for viewing errors and warnings, and a Download Diagnostics tool for creating a file containing the state of the server during the last collection.

From the MATE Live UI, Settings->General Settings page, you can view the status of the most recently collected data that MATE Live received.

Related Topics

- *WAE Platform Configuration Guide*
- *MATE Live Configuration Guide*