



# Installing the Software Using install Commands

From Cisco IOS XE Cupertino 17.9.1a, Cisco Voice Gateways VG400, VG420, and VG450 are shipped in install mode by default. From Cisco IOS XE 17.12.1a, Cisco Voice Gateway VG410 is also shipped in the install mode. You can boot the platform, and upgrade or downgrade to Cisco IOS XE software versions using a set of **install** commands that are detailed in the following sections.

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## Restrictions for Installing the Software Using install Commands

- ISSU is not covered in this feature.
- Install mode requires a reboot of the system.

## Information About Installing the Software Using install Commands

From Cisco IOS XE Cupertino 17.9.1a release, for devices shipped in install mode, a set of **install** commands can be used for starting, upgrading and downgrading of platforms in install mode. This update is applicable to the Cisco Voice Gateway 400 Series.

The following table describes the differences between Bundle mode and Install mode:

**Table 1: Bundle Mode vs Install Mode**

<b>Bundle Mode</b>	<b>Install Mode</b>
This mode provides a consolidated boot process, using local (hard disk, flash) or remote (TFTP) .bin image.	This mode uses the local (bootflash) packages.conf file for the boot process.
This mode uses a single .bin file.	.bin file is replaced with expanded .pkg files in this mode.

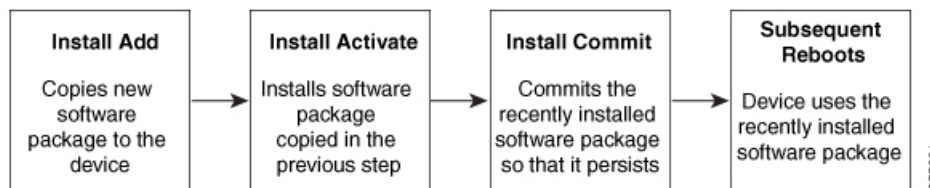
Bundle Mode	Install Mode
CLI: <code>#boot system file &lt;filename&gt;</code>	CLI: <code>#install add file bootflash: [activate commit]</code>
To upgrade in this mode, point the boot system to the new image.	To upgrade in this mode, use the <b>install</b> commands.

## Install Mode Process Flow

The install mode process flow comprises three commands to perform installation and upgrade of software on platforms—**install add**, **install activate**, and **install commit**.

The following flow chart explains the install process with **install** commands:

Process with Install Commit



The **install add** command copies the software package from a local or remote location to the platform. The location can be FTP, HTTP, HTTPS, or TFTP. The command extracts individual components of the .package file into subpackages and packages.conf files. It also validates the file to ensure that the image file is specific to the platform on which it is being installed.

The **install activate** command performs the required validations and provisions the packages previously added using the **install add** command. It also triggers a system reload.

The **install commit** command confirms the packages previously activated using the **install activate** command, and makes the updates persistent over reloads.




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**Note** Installing an update replaces any previously installed software image. At any time, only one image can be installed in a device.

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The following set of install commands is available:

Table 2: List of install Commands

Command	Syntax	Purpose
<b>install add</b>	<b>install add file</b> <i>location:filename.bin</i>	<p>Copies the contents of the image and the package to the software repository. File location may be local or remote. This command does the following:</p> <ul style="list-style-type: none"> <li>• Validates the file-checksum, platform compatibility checks, and so on.</li> <li>• Extracts individual components of the package into subpackages and packages.conf</li> <li>• Copies the image into the local inventory and makes it available for the next steps.</li> </ul>
<b>install activate</b>	<b>install activate</b>	<p>Activates the package added using the <b>install add</b> command.</p> <ul style="list-style-type: none"> <li>• Use the <b>show install summary</b> command to see which image is inactive. This image will get activated.</li> <li>• System reloads on executing this command. Confirm if you want to proceed with the activation. Use this command with the <b>prompt-level none</b> keyword to automatically ignore any confirmation prompts.</li> </ul>

Command	Syntax	Purpose
<b>(install activate) auto abort-timer</b>	<b>install activate auto-abort timer</b> <30-1200>	<p>The <b>auto-abort timer</b> starts automatically, with a default value of 120 minutes. If the <b>install commit</b> command is not executed within the time provided, the activation process is terminated, and the system returns to the last-committed state.</p> <ul style="list-style-type: none"> <li>• You can change the time value while executing the <b>install activate</b> command.</li> <li>• The <b>install commit</b> command stops the timer, and continues the installation process.</li> <li>• The <b>install activate auto-abort timer stop</b> command stops the timer without committing the package.</li> <li>• Use this command with the <b>prompt-level none</b> keyword to automatically ignore any confirmation prompts.</li> <li>• This command is valid only in the three-step install variant.</li> </ul>
<b>install commit</b>	<b>install commit</b>	<p>Commits the package activated using the <b>install activate</b> command, and makes it persistent over reloads.</p> <ul style="list-style-type: none"> <li>• Use the <b>show install summary</b> command to see which image is uncommitted. This image will get committed.</li> </ul>

Command	Syntax	Purpose
<b>install abort</b>	<b>install abort</b>	<p>Terminates the installation and returns the system to the last-committed state.</p> <ul style="list-style-type: none"> <li>• This command is applicable only when the package is in activated status (uncommitted state).</li> <li>• If you have already committed the image using the <b>install commit</b> command, use the <b>install rollback to</b> command to return to the preferred version.</li> </ul>
<b>install remove</b>	<b>install remove {file &lt;filename&gt;   inactive}</b>	<p>Deletes inactive packages from the platform repository. Use this command to free up space.</p> <ul style="list-style-type: none"> <li>• <b>file</b>: Removes specified files.</li> <li>• <b>inactive</b>: Removes all the inactive files.</li> </ul>
<b>install rollback to</b>	<b>install rollback to {base   label   committed   id}</b>	<p>Rolls back the software set to a saved installation point or to the last-committed installation point. The following are the characteristics of this command:</p> <ul style="list-style-type: none"> <li>• Requires reload.</li> <li>• Is applicable only when the package is in committed state.</li> <li>• Use this command with the <b>prompt-level none</b> keyword to automatically ignore any confirmation prompts.</li> </ul> <p><b>Note</b> If you are performing install rollback to a previous image, the previous image must be installed in install mode.</p>

The following show commands are also available:

Table 3: List of show Commands

Command	Syntax	Purpose
<b>show install log</b>	<b>show install log</b>	Provides the history and details of all install operations that have been performed since the platform was booted.
<b>show install package</b>	<b>show install package</b> <filename>	Provides details about the .pkg/.bin file that is specified.
<b>show install summary</b>	<b>show install summary</b>	Provides an overview of the image versions and their corresponding install states.
<b>show install active</b>	<b>show install active</b>	Provides information about the active packages.
<b>show install inactive</b>	<b>show install inactive</b>	Provides information about the inactive packages, if any.
<b>show install committed</b>	<b>show install committed</b>	Provides information about the committed packages.
<b>show install uncommitted</b>	<b>show install uncommitted</b>	Provides information about uncommitted packages, if any.
<b>show install rollback</b>	<b>show install rollback</b> {point-id   label}	Displays the package associated with a saved installation point.
<b>show version</b>	<b>show version</b> [rp-slot] [installed   user-interface]   provisioned   running]	Displays information about the current package, along with hardware and platform information.

## Booting the Platform in Install Mode

You can install, activate, and commit a software package using a single command (one-step install) or multiple separate commands (three-step install).

If the platform is working in bundle mode, the one-step install procedure must be used to initially convert the platform from bundle mode to install mode. Subsequent installs and upgrades on the platform can be done with either one-step or three-step variants.

# One-Step Installation or Converting from Bundle Mode to Install Mode



## Note

- All the CLI actions (for example, add, activate, and so on) are executed.
- The configuration save prompt will appear if an unsaved configuration is detected.
- The reload prompt will appear after the second step in this workflow. Use the **prompt-level none** keyword to automatically ignore the confirmation prompts.
- If the prompt-level is set to None, and there is an unsaved configuration, the install fails. You must save the configuration before reissuing the command.

Use the one-step install procedure described below to convert a platform running in bundle boot mode to install mode. After the command is executed, the platform reboots in install boot mode.

Later, the one-step install procedure can also be used to upgrade the platform.

This procedure uses the **install add file activate commit** command in privileged EXEC mode to install a software package, and to upgrade the platform to a new version.

## SUMMARY STEPS

1. **enable**
2. **install add file location: *filename* [activate commit]**
3. **exit**

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<b>enable</b> <b>Example:</b> Device>enable	Enables privileged EXEC mode. Enter your password, if prompted.
Step 2	<b>install add file location: <i>filename</i> [activate commit]</b> <b>Example:</b> See the following examples: <ul style="list-style-type: none"> <li>• <b>VG400:</b> <pre>Device#install add file bootflash:vg400-universalk9-ED-V179-THROTTLE-LATEST-20220428-010838-V1790-23.SSA.bin activate commit</pre> </li> <li>• <b>VG410:</b> <pre>Device# install add file bootflash:vg4x0-universalk9.17.12.01a.SPA.bin activate commit</pre> </li> </ul>	Copies the software install package from a local or remote location (through FTP, HTTP, HTTPS, or TFTP) to the platform and extracts the individual components of the .package file into subpackages and packages.conf files. It also performs a validation and compatibility check for the platform and image versions, activates the package, and commits the package to make it persistent across reloads.  The platform reloads after this command is run.
Step 3	<b>exit</b> <b>Example:</b>	Exits privileged EXEC mode and returns to user EXEC mode.

	Command or Action	Purpose
	Device# exit	

## Three-Step Installation



### Note

- All the CLI actions (for example, add, activate, and so on) are executed.
- The configuration save prompt will appear if an unsaved configuration is detected.
- The reload prompt will appear after the install activate step in this workflow. Use the **prompt-level none** keyword to automatically ignore the confirmation prompts.

The three-step installation procedure can be used only after the platform is in install mode. This option provides more flexibility and control to the customer during installation.

This procedure uses individual **install add**, **install activate**, and **install commit** commands for installing a software package, and to upgrade the platform to a new version.

### SUMMARY STEPS

1. **enable**
2. **install add file location: filename**
3. **show install summary**
4. **install activate [auto-abort-timer <time>]**
5. **install abort**
6. **install commit**
7. **install rollback to committed**
8. **install remove {file filesystem: filename | inactive}**
9. **show install summary**
10. **exit**

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>enable</b> <b>Example:</b> Device>enable	Enables privileged EXEC mode. Enter your password, if prompted.
<b>Step 2</b>	<b>install add file location: filename</b> <b>Example:</b> See the following examples: <ul style="list-style-type: none"> <li>• <b>VG400:</b>                Device#install add file                bootflash:vg400-universal-9.ED_V179_THROTTLE_LATEST_2020428_010838_V17_9_0_23.SSA.bin             </li> </ul>	Copies the software install package from a remote location (through FTP, HTTP, HTTPS, or TFTP) to the platform, and extracts the individual components of the .package file into subpackages and packages.conf files.



	Command or Action	Purpose
	<ul style="list-style-type: none"> <li>• <b>VG410:</b></li> </ul> <pre>Device#install add file bootflash:vg100-nvme-sal9-BID_V172_THR0TLE_LATEST_20230828_043130_V17_12_1_1_SSP.bin</pre>	
<b>Step 3</b>	<b>show install summary</b> <b>Example:</b> <pre>Device#show install summary</pre>	(Optional) Provides an overview of the image versions and their corresponding install state.
<b>Step 4</b>	<b>install activate [auto-abort-timer &lt;time&gt;]</b> <b>Example:</b> <pre>Device# install activate auto-abort-timer 120</pre>	Activates the previously added package and reloads the platform. <ul style="list-style-type: none"> <li>• When doing a full software install, do not provide a package filename.</li> <li>• In the three-step variant, <b>auto-abort-timer</b> starts automatically with the <b>install activate</b> command; the default for the timer is 120 minutes. If the <b>install commit</b> command is not run before the timer expires, the install process is automatically terminated. The platform reloads and boots up with the last committed version.</li> </ul>
<b>Step 5</b>	<b>install abort</b> <b>Example:</b> <pre>Device#install abort</pre>	(Optional) Terminates the software install activation and returns the platform to the last committed version. <ul style="list-style-type: none"> <li>• Use this command only when the image is in activated state and not when the image is in committed state.</li> </ul>
<b>Step 6</b>	<b>install commit</b> <b>Example:</b> <pre>Device#install commit</pre>	Commits the new package installation and makes the changes persistent over reloads.
<b>Step 7</b>	<b>install rollback to committed</b> <b>Example:</b> <pre>Device#install rollback to committed</pre>	(Optional) Rolls back the platform to the last committed state.
<b>Step 8</b>	<b>install remove {file filesystem: filename   inactive}</b> <b>Example:</b> <pre>Device#install remove inactive</pre>	(Optional) Deletes the software installation files. <ul style="list-style-type: none"> <li>• <b>file:</b> Deletes a specific file.</li> <li>• <b>inactive:</b> Deletes all the unused and inactive installation files.</li> </ul>
<b>Step 9</b>	<b>show install summary</b> <b>Example:</b> <pre>Device#show install summary</pre>	(Optional) Displays information about the current state of the system. The output of this command varies according to the <b>install</b> commands run prior to this command.

	Command or Action	Purpose
Step 10	<b>exit</b> <b>Example:</b> Device#exit	Exits privileged EXEC mode and returns to the user EXEC mode.

## Upgrading in Install Mode

Use either the one-step installation or the three-step installation to upgrade the platform in install mode.

## Downgrading in Install Mode

Use the **install rollback** command to downgrade the platform to a previous version by pointing it to the appropriate image, provided the image you are downgrading to was installed in install mode.

The **install rollback** command reloads the platform and boots it with the previous image.



**Note** The **install rollback** command succeeds only if you have not removed the previous file using the **install remove inactive** command.

Alternatively, you can downgrade by installing the older image using the **install** commands.

## Terminating a Software Installation

You can terminate the activation of a software package in the following ways:

- When the platform reloads after activating a new image, the auto-abort-timer is triggered (in the three-step install variant). If the timer expires before issuing the **install commit** command, the installation process is terminated, and the platform reloads and boots with the last committed version of the software image.

Alternatively, use the **install auto-abort-timer stop** command to stop this timer, without using the **install commit** command. The new image remains uncommitted in this process.

- Using the **install abort** command returns the platform to the version that was running before installing the new software. Use this command before issuing the **install commit** command.

## Configuration Examples for Installing the Software Using install Commands

The following is an example of the one-step installation or converting from bundle mode to install mode:

```
install-vg400# install add file
bootflash:vg400-universalk9.BLD_V179_THROTTLE_LATEST_20220428_010838_V17_9_0_23.SSA.bin
activate commit
```

```

*May 11 23:45:54.588: %INSTALL-5-INSTALL_START_INFO: R0/0: install_mgr: Started install
add_activate_commit
bootflash:vg400-universalk9.BLD_V179_THROTTLE_LATEST_20220428_010838_V17_9_0_23.SSA.bininstall_add_activate_commit:
START Wed May 11 23:45:54 UTC 2022
install_add: Adding IMG
--- Starting initial file syncing ---
Copying
bootflash:vg400-universalk9.BLD_V179_THROTTLE_LATEST_20220428_010838_V17_9_0_23.SSA.bin
from R0 to R0
Info: Finished copying to the selected
Finished initial file syncing

--- Starting Add ---
Performing Add on all members
 [1] Finished Add package(s) on R0
Checking status of Add on [R0]
Add: Passed on [R0]
Finished Add

Image added. Version: 17.09.01.0.5

install_activate: Activating IMG
Following packages shall be activated:
/bootflash/vg400-firmware_sm_dsp_sp2700.BLD_V179_THROTTLE_LATEST_20220428_010838_V17_9_0_23.SSA.pkg
/bootflash/vg400-mono-universalk9.BLD_V179_THROTTLE_LATEST_20220428_010838_V17_9_0_23.SSA.pkg
/bootflash/vg400-rpboot.BLD_V179_THROTTLE_LATEST_20220428_010838_V17_9_0_23.SSA.pkg

This operation may require a reload of the system. Do you want to proceed? [y/n]y

--- Starting Activate ---
Performing Activate on all members
 [1] Activate package(s) on R0

*May 11 23:47:07.393: %INSTALL-5-INSTALL_AUTO_ABORT_TIMER_PROGRESS: R0/0: rollback_timer:
Install auto abort timer will expire in 7200 seconds [1] Finished Activate on R0
Checking status of Activate on [R0]
Activate: Passed on [R0]
Finished Activate

--- Starting Commit ---
Performing Commit on all members
 [1] Commit package(s) on R0
 [1] Finished Commit on R0
Checking status of Commit on [R0]
Commit: Passed on [R0]
Finished Commit operation

SUCCESS: install_add_activate_commit Wed May 11 23:47:53 UTC 2022

install-vg400#
*May 11 23:47:53.019: %INSTALL-5-INSTALL_COMPLETED_INFO: R0/0: install_mgr: Completed install
add_activate_commitMay 11 23:4350: %PMAN-5-EXITACTION: R0/0: pvp: Process manager is
exiting: reload action requested

Initializing Hardware ...

:
Press RETURN to get started!

```

The following is an example of the three-step installation:

```

install-vg400# install add
bootflash:vg400-universalk9_npe.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.bin

*May 12 00:11:54.785: %INSTALL-5-INSTALL_START_INFO: R0/0: install_mgr: Started install add

bootflash:vg400-universalk9_npe.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.bininstall_add:
  START Thu May 12 00:11:54 UTC 2022
install_add: Adding IMG
--- Starting initial file syncing ---
Copying
bootflash:vg400-universalk9_npe.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.bin
from R0 to R0
Info: Finished copying to the selected
Finished initial file syncing

--- Starting Add ---
Performing Add on all members
  [1] Finished Add package(s) on R0
Checking status of Add on [R0]
Add: Passed on [R0]
Finished Add

Image added. Version: 17.09.01.0.158205

SUCCESS: install_add
/bootflash/vg400-universalk9_npe.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.bin
Thu May 12 00:12:26 UTC 2022

install-vg400#
*May 12 00:12:26.874: %INSTALL-5-INSTALL_COMPLETED_INFO: R0/0: install_mgr: Completed install
add bootflash:/vg400-universalk9_npe.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.bin
install-vg400#

install-vg400# install activate

*May 12 00:14:37.594: %INSTALL-5-INSTALL_START_INFO: R0/0: install_mgr: Started install
activate NONEinstall_activate: START Thu May 12 00:14:37 UTC 2022
install_activate: Activating IMG
Following packages shall be activated:
/bootflash/vg400-firmware_sm_dsp_sp2700.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.pkg
/bootflash/vg400-mono-universalk9_npe.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.pkg
/bootflash/vg400-rpboot.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.pkg

This operation may require a reload of the system. Do you want to proceed? [y/n]y

--- Starting Activate ---
Performing Activate on all members

*May 12 00:18:06.168: %INSTALL-5-INSTALL_AUTO_ABORT_TIMER_PROGRESS: R0/0: rollback_timer:
Install auto abort timer will expire in 7200 seconds [1] Activate package(s) on R0
  [1] Finished Activate on R0
Checking status of Activate on [R0]
Activate: Passed on [R0]
Finished Activate

SUCCESS: install_activate Thu May 12 00:18:27 UTC 2022

install-vg400#
*May 12 00:18:27.511: %INSTALL-5-INSTALL_COMPLETED_INFO: R0/0: install_mgr: Completed install
activateMay 12 00:18:36.881: %PMAN-5-EXITACTION: R0/0: pvp: Process manager is exiting:
reload action requested

```

```
Initializing Hardware ...
:
:

Press RETURN to get started!

install-vg400>

install-vg400# install commit

*May 12 01:20:23.889: %INSTALL-5-INSTALL_START_INFO: R0/0: install_mgr: Started install
commitinstall_commit: START Thu May 12 01:20:23 UTC 2022
--- Starting Commit ---
Performing Commit on all members
  [1] Commit packages(s) on R0
  [1] Finished Commit packages(s) on R0
Checking status of Commit on [R0]
Commit: Passed on [R0]
Finished Commit operation

SUCCESS: install_commit Thu May 12 01:20:31 UTC 2022

install-vg400#
*May 12 01:20:31.351: %INSTALL-5-INSTALL_COMPLETED_INFO: R0/0: install_mgr: Completed install
commit
```

The following is an example of downgrading in install mode:

```
install-vg400# install add file bootflash:vg400-universalk9.17.08.01a.SPA.bin activate
commit

*May 12 02:13:24.633: %INSTALL-5-INSTALL_START_INFO: R0/0: install_mgr: Started install
add_activate_commit bootflash:vg400-universalk9.17.08.01a.SPA.bininstall_add_activate_commit:
START Thu May 12 02:13:24 UTC 2022
install_add: Adding IMG
--- Starting initial file syncing ---
Copying bootflash:vg400-universalk9.17.08.01a.SPA.bin from R0 to R0
Info: Finished copying to the selected
Finished initial file syncing

--- Starting Add ---
Performing Add on all members
  [1] Finished Add package(s) on R0
Checking status of Add on [R0]
Add: Passed on [R0]
Finished Add

Image added. Version: 17.08.01.0.1526

install_activate: Activating IMG
Following packages shall be activated:
/bootflash/vg400-firmware_sm_dsp_sp2700.17.08.01a.SPA.pkg
/bootflash/vg400-mono-universalk9.17.08.01a.SPA.pkg
/bootflash/vg400-rpboot.17.08.01a.SPA.pkg

This operation may require a reload of the system. Do you want to proceed? [y/n]y

--- Starting Activate ---
Performing Activate on all members
```

```

[1] Activate package(s) on R0

*May 12 02:17:10.699: %INSTALL-5-INSTALL_AUTO_ABORT_TIMER_PROGRESS: R0/0: rollback_timer:
Install auto abort timer will expire in 7200 seconds [1] Finished Activate on R0
Checking status of Activate on [R0]
Activate: Passed on [R0]
Finished Activate

--- Starting Commit ---
Performing Commit on all members
[1] Commit package(s) on R0
[1] Finished Commit on R0
Checking status of Commit on [R0]
Commit: Passed on [R0]
Finished Commit operation

SUCCESS: install_add_activate_commit Thu May 12 02:17:55 UTC 2022

install-vg400#
*May 12 02:17:55.312: %INSTALL-5-INSTALL_COMPLETED_INFO: R0/0: install_mgr: Completed install
add_activate_commitMay 12 02:18:08.796: %PMAN-5-EXITACTION: R0/0: pvp: Process manager is
exiting: reload action requested

Initializing Hardware ...
:
:
Press RETURN to get started!

install-vg400# show version
Cisco IOS XE Software, Version 17.08.01a
Cisco IOS Software [Cupertino], ISR Software (X86_64_LINUX_IOSD-UNIVERSALK9-M), Version
17.8.1a, RELEASE SOFTWARE (fc3)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2022 by Cisco Systems, Inc.
Compiled Wed 20-Apr-22 13:16 by mcpre

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GPL code under the terms of GPL Version 2.0. For more details, see the
documentation or "License Notice" file accompanying the IOS-XE software,
or the applicable URL provided on the flyer accompanying the IOS-XE
software.

ROM: 16.12(2r)

install-vg400 uptime is 1 minute
Uptime for this control processor is 4 minutes
System returned to ROM by Install
System image file is "bootflash:packages.conf"
Last reload reason: Install

This product contains cryptographic features and is subject to United
States and local country laws governing import, export, transfer and
use. Delivery of Cisco cryptographic products does not imply

```

third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at: <http://www.cisco.com/wwl/export/crypto/tool/stqrg.html>

If you require further assistance please contact us by sending email to [export@cisco.com](mailto:export@cisco.com).

Suite License Information for Module:'esg'

```
-----
Suite                Suite Current      Type                Suite Next reboot
-----
```

Technology Package License Information:

```
-----
Technology           Technology-package  Technology-package
Current              Type                Next reboot
-----
```

Technology	Technology-package Current	Technology-package Type	Technology-package Next reboot
uck9	uck9	Smart License	uck9
securityk9	None	Smart License	None
ipbase	ipbasek9	Smart License	ipbasek9

The current throughput level is 35000 kbps

Smart Licensing Status: Smart Licensing Using Policy

```
cisco VG400-8FXS (1RU) processor with 1654554K/3071K bytes of memory.
Processor board ID FGL2517L2XS
Router operating mode: Autonomous
2 Gigabit Ethernet interfaces
8 Voice FXS interfaces
32768K bytes of non-volatile configuration memory.
4194304K bytes of physical memory.
6598655K bytes of flash memory at bootflash:.
```

Configuration register is 0x2102

install-vg400#

The following is an example of terminating a software installation:

```
install-vg400# install abort
install_abort: START Tue May 03 18:31:20 UTC 2022
```

This operation may require a reload of the system. Do you want to proceed? [y/n]y

```
--- Starting Abort ---
Performing Abort on all members
 [1] Abort packages(s) on R0
Checking status of Abort on [R0]
Abort: Passed on [R0]
Finished Abort operation
```

```

SUCCESS: install_abort Tue May 03 18:32:43 UTC 2022
install-vg400#May  3 18:32:48.735: %PMAN-5-EXITACTION: R0/0: pvp: Process manager is exiting:
  reload action requested

Initializing Hardware ...
:
:
  Press RETURN to get started!

install-vg400>

```

The following are sample outputs for show commands:

### show install log

```

install-vg400# show install log
[0|install_op_boot]: START Thu May 12 06:22:15 Universal 2022
[0|install_op_boot]: END SUCCESS  Thu May 12 06:22:17 Universal 2022

```

### show install summary

```

install-vg400# show install summary
[ R0 ] Installed Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
           C - Activated & Committed, D - Deactivated & Uncommitted
-----

```

Type	St	Filename/Version
IMG	C	17.09.01.0.5

```

-----
Auto abort timer: inactive
-----

```

### show install package filesystem: filename

```

install-vg400# show install package
bootflash:vg400-universalk9.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.bin
  Package: vg400-universalk9.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.bin
  Size: 648938943
  Timestamp:
  Canonical path:
/bootflash/vg400-universalk9.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.bin

```

```

  Raw disk-file SHA1sum:
    80700b261910c44785f46cac327b3aa81ed42edb
  Header size:      1152 bytes
  Package type:     30000
  Package flags:    0
  Header version:   3

```

```

  Internal package information:
  Name: rp_super
  BuildTime: 2022-04-26_20.04
  ReleaseDate: 2022-04-27_02.02
  BootArchitecture: i686
  RouteProcessor: goldbeach
  Platform: VG400
  User: mcpre
  PackageName: universalk9
  Build: BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6
  CardTypes:

```

Package is bootable from media and tftp.



Package contents:

```
Package: vg400-mono-universalk9.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.pkg
Size: 606901316
Timestamp:
```

```
Raw disk-file SHA1sum:
 53642fa806fa46a262aa247118272e49b48f14c0
Header size:      1092 bytes
Package type:     30000
Package flags:    0
Header version:   3
```

```
Internal package information:
Name: mono
BuildTime: 2022-04-26_20.04
ReleaseDate: 2022-04-27_02.02
BootArchitecture: i686
RouteProcessor: goldbeach
Platform: VG400
User: mcpre
PackageName: mono-universalk9
Build: BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6
CardTypes:
```

Package is bootable from media and tftp.  
Package contents:

```
Package:
vg400-firmware_sm_dsp_sp2700.BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6.SSA.pkg
Size: 2094140
Timestamp:
```

```
Raw disk-file SHA1sum:
 3cc7413e84187ee831a8b92fde7516ccff8f68b2
Header size:      1084 bytes
Package type:     40000
Package flags:    0
Header version:   3
```

```
Internal package information:
Name: firmware_sm_dsp_sp2700
BuildTime: 2022-04-26_20.04
ReleaseDate: 2022-04-27_02.02
BootArchitecture: none
RouteProcessor: goldbeach
Platform: VG400
User: mcpre
PackageName: firmware_sm_dsp_sp2700
Build: BLD_POLARIS_DEV_LATEST_20220427_001035_V17_9_0_6
CardTypes:
```

Package is not bootable.

### show install active

```
install-vg400# show install active
[ R0 ] Active Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
             C - Activated & Committed, D - Deactivated & Uncommitted
-----
Type  St  Filename/Version
-----
IMG   C   17.09.01.0.5
```

```
-----
Auto abort timer: inactive
-----
```

### show install inactive

```
install-vg400# show install inactive
[ R0 ] Inactive Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
           C - Activated & Committed, D - Deactivated & Uncommitted
-----
```

```
Type  St  Filename/Version
-----
```

```
No Inactive Packages
```

### show install committed

```
install-vg400# show install committed
[ R0 ] Committed Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
           C - Activated & Committed, D - Deactivated & Uncommitted
-----
```

```
Type  St  Filename/Version
-----
```

```
IMG   C   17.09.01.0.5
-----
```

```
-----
Auto abort timer: inactive
-----
```

### show install uncommitted

```
install-vg400# show install uncommitted
[ R0 ] Uncommitted Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
           C - Activated & Committed, D - Deactivated & Uncommitted
-----
```

```
Type  St  Filename/Version
-----
```

```
No Uncommitted Packages
```

## Troubleshooting Software Installation Using install Commands

**Problem** Troubleshooting the software installation

**Solution** Use the following show commands to view installation summary, logs, and software versions.

- **show install summary**
- **show install log**
- **show version**
- **show version running**

**Problem** Other installation issues

**Solution** Use the following commands to resolve installation issue:

- **dir** <install directory>

- **more location:***packages.conf*
- **show tech-support install:** this command automatically runs the **show** commands that display information specific to installation.
- **request platform software trace archive target bootflash <location>:** this command archives all the trace logs relevant to all the processes running on the system since the last reload, and saves this information in the specified location.

