Monitoring Prime Central and the Applications

This section describes how to monitor the health status of Prime Central and the individual applications. It contains the following topics:

- Monitoring the Health of Prime Central and the Applications, page 1

Monitoring the Health of Prime Central and the Applications

The following figure shows the Suite Monitoring portlet, where you monitor Prime Central and the individual applications for any changing conditions that might impact operation.

Figure 1: Suite Monitoring Portlet
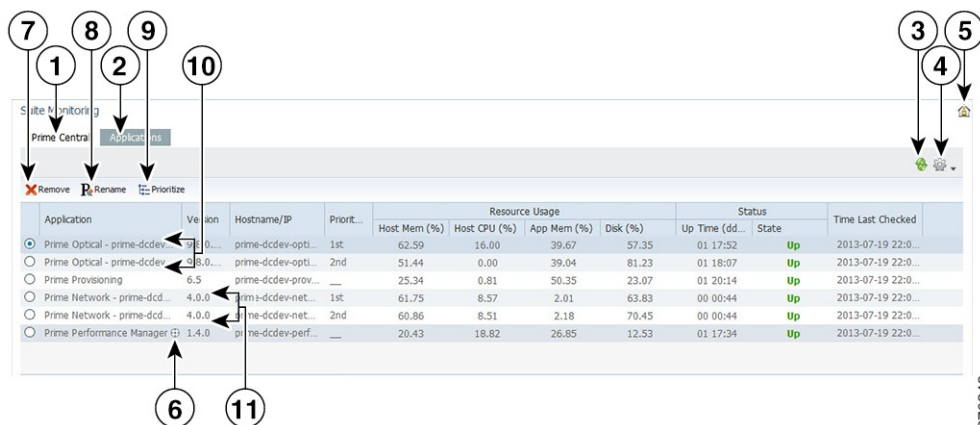
1	Prime Central tab	7	Remove icon
2	Applications tab	8	Rename icon
3	Refresh icon, with last updated time stamp	9	Prioritize icon
4	Settings icon	10	Multiple instances of Prime Optical

5	(When the portlet is maximized) Return to Home icon	11	Multiple instances of Prime Network
6	Quick view icon	—	—

Procedure

Step 1 From the Prime Central menu, choose **Administration** > **System** > **Suite Monitoring**.

Step 2 In the Suite Monitoring portlet, click the **Prime Central** tab, where you can monitor the information described in the Table 1: Prime Central and Application Monitoring Information.
If multiple Prime Central integration layer profiles are installed, all profiles are shown. For example:

- Integration Layer - Core—The integration layer core components.

- Integration Layer - Messaging—A separate Java Message Service (JMS) broker that enables the integration layer messaging framework to be configured as a JMS cluster for messaging service high availability.

Step 3 Click the **Applications** tab. For each application, you can monitor the information described in the Table 1: Prime Central and Application Monitoring Information. If multiple instances of Prime Network or Prime Optical are installed, all instances are shown by their service name (not their hostname).
Prime Central supports multiple instances of Prime Network and Prime Optical, for a total of five instances, in any combination. For example:

- Five instances of Prime Network

- Five instances of Prime Optical

- Three instances of Prime Network, plus two instances of Prime Optical (or vice versa)

- Four instances of Prime Optical, plus one instance of Prime Network (or vice versa)

Note While Prime Central allows you to monitor more than five instances of Prime Network and Prime Optical, we scale-certified up to only three instances. If you choose to monitor more than five instances, proceed with caution.

Step 4 To rename multiple instances of Prime Network or Prime Optical:

a) In the Applications tab, select an application instance and click Rename.
You cannot rename an application that has only one instance.

b) Enter the new instance name, which can contain letters (A-Z, a-z), numbers (0-9), and the following special characters: spaces ( ), hyphens (-), underscores (_), and periods (.).

c) Click **OK**.

Prime Central and Application Monitoring Information

The following table describes the high-level information you can monitor for Prime Central and the applications running in your network.

Table 1: Prime Central and Application Monitoring Information

Field	Description
Prime Central	
Component	Name of the Prime Central component.
Version	Prime Central version that is running.
Hostname/IP	Hostname or IP address of the Prime Central portal.
Resource Usage	Percentage of memory, CPU, and disk space that the application process has used, in terms of preconfigured thresholds. Stable memory consumption reflects a healthy network. • If the Prime Central integration layer does not return values, the Resource Usage fields show Not Available. • If the Prime Central integration layer returns invalid values, the Resource Usage fields show Unknown.
Status	Number of days, hours, and minutes (in *dd:hh:mm* format) that the Prime Central component has been running, plus the current state (Up or Down). The Prime Central integration layer shows Up when a ping to it succeeds.
Time Last Checked	Time stamp when the Prime Central portal was most recently monitored.
Applications	
Application	Name of the installed application.
Version	Version number of the application.
Hostname/IP	Hostname or IP address of the application.
Priority to Launch	Priority level of the Prime Network or Prime Optical instance, when multiple instances of the application are installed.

Field	Description
Resource Usage	Percentage of host memory, host CPU, application memory, and disk space that the application process has used, in terms of preconfigured thresholds. • If the application does not return values, the Resource Usage fields show Not Available. • If the application returns invalid values, the Resource Usage fields show Unknown. **Note** Due to the nature of garbage collection in Java, application memory utilization fluctuates depending on the system load and the timing of the garbage collection. If the application memory utilization continues to increase and never decreases, contact the Cisco Technical Assistance Center.
Status	Length of time that the application has been running, plus the current state (Up or Down). If the application does not respond to a ping, the State field shows Down. **Note** If you are in the process of taking a screenshot of the VM running associated Prime applications (such as Prime Optical) and view the Suite Monitoring portlet, the portlet may momentarily indicate that those applications are down. The Suite Monitoring portlet will update shortly thereafter and reflect that the applications are up and running.
Time Last Checked	Time stamp when the application was most recently monitored.

Suite Monitoring Information in the Quick View

In the Suite Monitoring portlet, the quick view displays additional component or application information when the cursor rests over the icon shown in the following figure.

Figure 2: Quick View

Prioritizing Application Instances

If multiple instances of Prime Network or Prime Optical are installed, specify which instance has priority for functions such as cross-launching and collecting data. When the instance with the highest priority is down, Prime Central will cross-launch or collect data from the next instance in line.

Procedure

Step 1 From the Prime Central menu, choose **Administration** > **System** > **Suite Monitoring**.

Step 2 In the Suite Monitoring portlet, click the **Applications** tab.

Step 3 Click **Prioritize**.

Step 4 In the Prioritize window, click the application instance and use the **Move up** and **Move down** arrows to configure the desired priority.

Step 5 Click **OK**.
The instance priority is displayed in the Applications tab. For example, the Prime Network instance with the highest priority is the instance that cross-launches when you choose **Inventory** > **Common Inventory** > **Devices** > **Device Details via Prime Network**.

Monitoring System Activity

At the bottom of the Prime Central home page, all users can view a tabular listing of bulk system activity. Click the **Message Center** (item 10 in the following figure), which shows bulk system requests that affect applications, including jobs that succeed or fail on the individual applications.

The quick view displays detailed job information when the cursor rests over the icon (item 11) in the following figure.

Figure 3: Message Center
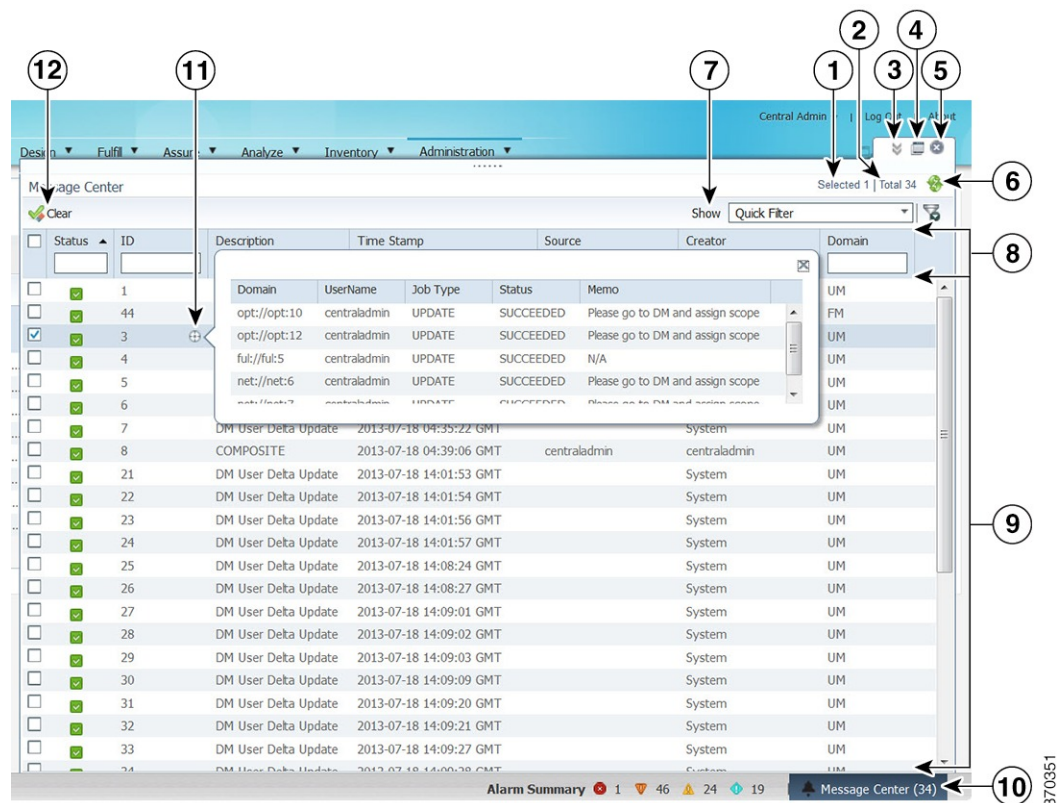
1	Number of selected table rows	7	Show drop-down list and Filter icon
2	Total table rows	8	Filter parameters area
3	Pull up/pull down toggle icon	9	Properties pane
4	Pull out icon	10	Message Center area
5	Close icon	11	Quick view icon
6	Refresh icon, with last updated time stamp	12	Clear icon

The following table describes the Message Center information, where:

- Users with administrator-level privileges can see their own bulk job records, plus any system-generated jobs.

- Users without administrator-level privileges can see only their own bulk job records.

Table 2: Message Center Fields

Field	Description
Status	Whether the job succeeded, failed, or is still pending.
ID	ID that Prime Central assigns to the bulk job.
Description	Description of the bulk job. The following are the four most common operations logged in the Message Center: • CREATE—New users have been created in one or multiple Prime Carrier Management applications, such as Prime Network and Prime Optical. • UPDATE—User information has been updated in one or multiple applications. • DELETE—Users have been deleted from one or multiple applications. • COMPOSITE—Indicates a combination of the three previous operations (such as the creation of a new user in Prime Network and the update of a user's information in Prime Optical.
Time Stamp	Date and time the job was logged.
Source	Name of the entity on which the bulk job ran; for example, a username for a user management-related job.
Creator	Name of the user who created the bulk job.
Domain	Prime Central component or application on which the bulk job occurred.

Note the following:

- After using the CLI to import new users into Prime Central 1.5.2 the messages that are normally generated after adding new users are not logged in to the Message Center.

- A user cannot view the messages generated for another user that performed fault or user management operations.

- A `DM User Delta Update` message is logged whenever a Prime Carrier Management application is brought online after being in the Down state previously.

- You are not allowed to clear Message Center items whose status is Pending.

Monitoring Prime Provisioning Service Requests

Users with the appropriate role can add the following portlets to monitor Prime Provisioning service requests (SRs):

- Device SR Count portlet (Figure 4: Device SR Count Portlet—Most Failed Services and Figure 5: Device SR Count Portlet—Most Successful Services figures)

- SR Summary portlet (Figure 6: SR Summary Portlet figure)

Procedure

Step 1   On the Prime Central home page, click the **Add Portlets** icon.

Step 2   In the Add Portlets dialog box, click **Cisco Prime**.

Step 3   Select the following portlets and click **Add**:

- **Device SR Count**

- **SR Summary**

Step 4   Click the Close (**X**) icon to close the Add Portlets dialog box.

Device SR Count Portlet

The Device SR Count portlet displays in bar chart format the top 10 devices with the most failed or successful SRs for the last 24 hours. Note that:

- Devices with failed SRs are shown in red (first figure below).

- Devices with successful SRs are shown in blue (second figure below).

- The vertical axis (y-axis) shows the SR count.

- The horizontal axis (x-axis) shows the device name.

You can toggle the display between successful and failed SRs by clicking the radio buttons **Devices with Most Failed Services** and **Devices with Most Successful Services**.

You can view the data in table format by clicking **View as Grid**.

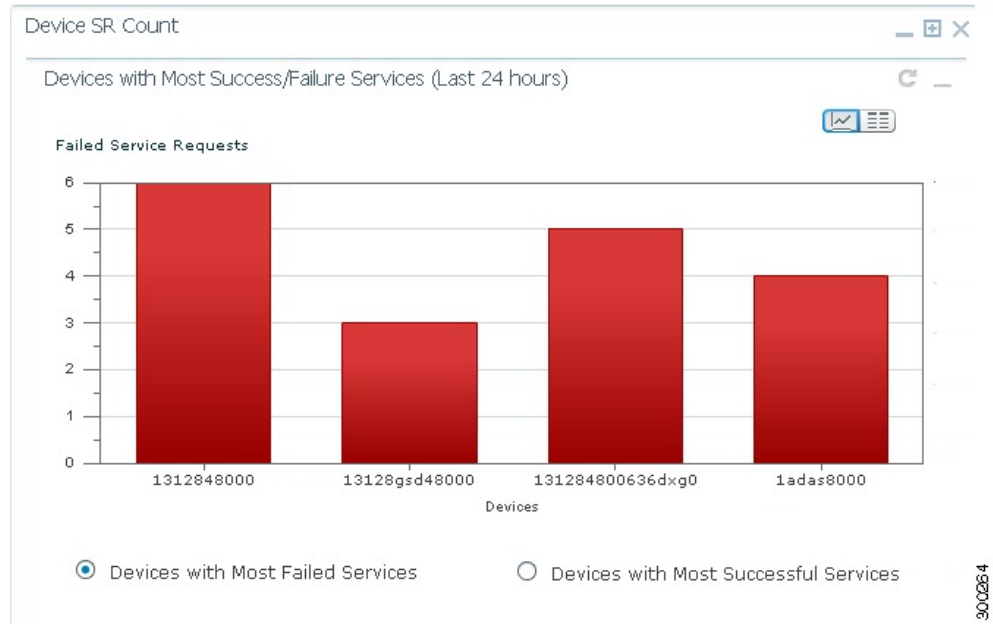*Figure 4: Device SR Count Portlet—Most Failed Services*

Figure 5: Device SR Count Portlet—Most Successful Services

SR Summary Portlet

The SR Summary portlet (see the following figure) provides a count of Prime Provisioning SRs in different states and lists the SRs deployed for the last seven days. The portlet contains the following charts:

- Service Request State pie chart—Displays the number of SRs in different states. SRs are grouped into three main categories:

  - Broken (includes SRs in FAILED_DEPLOY, INVALID, BROKEN, LOST, and FAILED_AUDIT states)

  - Working (includes SRs in DEPLOYED and FUNCTIONAL states)

  - To be deployed (includes SRs in WAIT_DEPLOY, REQUESTED and PENDING states)

    You can view SRs in different states by checking the BROKEN, WORKING, and TO BE DEPLOYED check boxes.

- Service Request Operation bar chart—Displays the number of SRs that were added, modified, or deleted in the last seven days. The date is displayed in *mm/dd/yy* format.

You can view either chart in table format by clicking **View as Grid**.

Figure 6: SR Summary Portlet
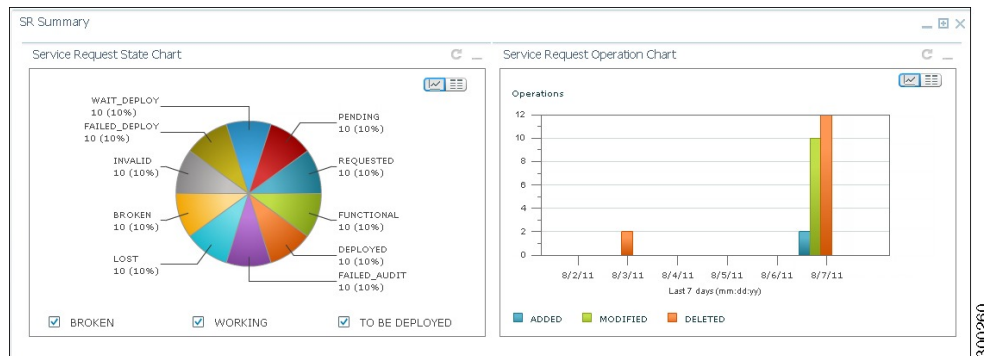
Changing the Prime Central Transport Type Policy

From the UNIX command line, you can configure Prime Central to use SSL or Java New I/O (NIO) as the connection transport type.

The following procedure is optional. Complete it only if you want to change the Prime Central transport type from SSL to NIO (or vice versa) after installation.

Procedure

Step 1 As the primeusr user, log in to the Prime Central portal with the primeusr password that you specified during installation.

Step 2 Change directories to the *installation-directory*/install/scripts folder.

Step 3 Enter the following command:
./ilModifyTransportTypeUtil

Step 4 At the following prompts, enter your Prime Central administrative username and password
```
Enter Prime Central admin username:
Enter Prime Central admin user password:
```

Step 5 At the following prompt, enter **nio** or **ssl**:
```
Enter Connection Transport Type [ssl/nio]:
```
For example, to change the transport type to SSL, the script usage is as follows:

```
primeusr@prime-dev-lnx [~/install/scripts]# ./ilModifyTransportTypeUtil
Enter Prime Central admin username:
centraladmin
Enter Prime Central admin user password:
Enter Connection Transport Type [ssl/nio]:
ssl
```
Note After the ilModifyTransportTypeUtil script is run at least once, the output is available in the *installation-directory*/install/logs/ilModifyTransportTypeUtil.log file.

Step 6 As the primeusr user, log in to the Prime Central portal and enter the following commands to restart it:
portalctl stop

portalctl start

Removing an Application Manager from the Suite Monitoring Portlet

The following steps remove application information—including the user roles specific to that application—from the Prime Central database.

To completely unregister an application from Prime Central, see "Unregistering an Application from Prime Central" in the .

Procedure

Step 1 From the Prime Central menu, choose **Administration** > **System** > **Suite Monitoring**.

Step 2 In the Suite Monitoring portlet, click the **Prime Central** or the **Applications** tab.

Step 3 Click the radio button for the application that you want to remove.

Step 4 Click **Remove**.
In the Prime Central tab, if a component cannot be removed, the Remove icon is dimmed.

Step 5 At the confirmation prompt, click **Yes**.