Manage Reports

This chapter contains the following topics:

Reports Overview

Prime Infrastructure reports provide information about system and network health as well as fault information. You can customize and schedule reports to run on a regular basis. Reports can present data in a tabular, or graphical format (or a mixture of these formats). You can also save reports in CSV or PDF format. The CSV or PDF files can be saved on the Prime Infrastructure server for later download, or sent to an e-mail address.

Prime Infrastructure provide the following type of data:

- Current—Provides a snapshot of data that is not time-dependent.
- Historical—Periodically retrieves data from the device and stores it in the Prime Infrastructure database.
- Trend—Generates a report using aggregated data, which is collected and summarized as minimums, maximums, and averages.

With Prime Infrastructure, you can filter these reports based on a specific criteria. You can also export reports, sort reports into logical groups, and archive reports for long-term storage.

Create, Schedule, and Run a New Report

The Report Launch Pad provides access to all Prime Infrastructure reports from a single page. From this page, you can perform all report operations: Create, save, view, schedule, and customize.

To see more report details, hover the cursor over the tooltip next to the report type.

To create, schedule, and run a new report:

Step 1   From the left sidebar, choose **Reports** > **Report Launch Pad**.

Step 2   Locate the report you want to launch, then click **New**.

A new text box, **Last**, is added as part of the **Reporting Period** field which allows you to generate reports for the last 24 hours.

> **Note**   Enter a value between 1–24, i.e. for the last 24 hours.

Step 3   In the Report Details page, enter the report title.

You can edit the **Report Title** field.

> **Note**   If the report name consists of brackets, those reports cannot be opened as it does not comply with the naming convention. You can use the **Copy** option to duplicate the same report and remove the brackets or delete the old report with **Delete** option.

Step 4   Choose the appropriate **Report By** category from the drop down list.

Step 5   The **Report Criteria** field allows you to sort your results depending on the previous **Report By** selection made.

> **Note**   When you want to add a new device in the **Report Criteria** field which has already existing device, make sure that you select the already existing device along with the new device, else the new device will replace the already existing device.
>
> To add a device in the **Devices By Groups Selection** dialog, users must select either a parent group or devices within that group. It is not possible to select a parent group and device belonging to different groups.

> **Note**   If you select the virtual domain checkbox at the top, edit button is enabled when one or more values present in the report criteria filter.

Step 6   Click Edit to open the device selection wizard and select the required device. You can view the device host name along with the device IP during the device selection. Click on Preview tab to confirm the selected devices and click Ok. You can also remove the selected devices.

The parameters shown in the Report Details page depend on the report type you chose. With some reports, you are required to customize the report results. For more information about how to customize a report result, see Customize Report Results, on page 7.

> **Note**   In Client reports, SSIDs are listed only if their Wireless LAN Controllers are mapped to a Virtual Domain.

Step 7   If you plan to run this report later or as a recurring report, enter the required Schedule parameters.

Step 8   To run the report, choose one of the following options:

- Run—Runs the report without saving the report setup.

  > **Note**   By default, the 'Run' button is disabled in the Unique Clients and Users Summary report. You can schedule this report to run during low utilization hours of Prime Infrastructure.

- Save—Saves this report setup without immediately running the report. If you have entered Schedule parameters, the report runs automatically at the scheduled date and time.

- Run and Save—Saves this report setup and runs the report immediately.

  > **Note**   By default, the 'Run and Save' button is disabled in the Unique Clients and Users Summary report. You can schedule this report to run during low utilization hours of Prime Infrastructure.

- Save and Export—Saves the report, runs it, and exports the results to a file. You will be prompted to:

- Select the exported report's file format (CSV or PDF). Exported CSV file is a single .csv file which has capability to hold one million records. If the number of records exceeds one million, then another CSV file will be generated accomodating the remaining records. Finally, both the CSV files will be provided in zip format.

  Note   Above mentioned condition is applicable only for the reports listed under Reports Launchpad which is called as simple reports, while the custom reports will not have this conditional check.

- Choose whether to send an email when the report has been generated. If you choose this option, you must enter the destination email address and the email subject line content, and choose whether you want the exported file included as an attachment to the email.

When you are finished, click **OK**.

Note   The Status column displays the Report progress status. Refresh the page to know the updated status.

- Save and Email—Saves the report, runs it, exports the results as a file, and emails the file. You will be prompted to:
  - Select the exported report file format.

    Note   File size limitation for sending mail will always dependent on user's SMTP server.

  - Enter the destination email address and the email subject line content.

    Note   In Prime Infrastructure, selecting the **Export Format** as CSV and clicking the **Save and Email** option will send the CSV file in the zip format, if the file holds more than 15k records. A file with less than 15k records will be sent as a plain CSV file.

When you are finished, click **OK**.

Note   The Status column displays the Report progress status. Refresh the page to know the updated status.

- Cancel—Returns to the previous page without running or saving this report.

Related Topics

Combine Reports in Prime Infrastructure

Two or more reports can be combined and information can be filtered based on requirements. Users can select multiple reports and combine them instead of creating special reports for different scenarios. Composite reports can be created from a pre-defined list of supported reports.

To create a new composite report:

Step 1   Choose **Reports** > **Reports Launch Pad**. You can create a new report in one of the following ways:

a)   From the left sidebar menu, choose **Composite** > **Compostie Report** and then click **New**.

b)   On the Report Launch Pad page, scroll down to view the Composite section, then click **New**.

Step 2   In the New Custom Composite Report page, enter the report title.

A new text box, **Last**, is added as part of the **Reporting Period** field which allows users to generate reports for the last 24 hours.

Note   You must enter the value in hours.

Step 3   From the **Report Category** drop-down list, choose a category.

Step 4   Select the required reports from the available list and add them to the **Selected Reports** text box. You can also remove the selected reports.

Step 5   Choose the appropriate **Report By** category from the drop-down list. The categories differ for each report.

Step 6   The **Report Criteria** field allows you to sort your results depending on the previous **Report By** selection made. Click **Edit** to open the Filter Criteria page and select the required filter criteria.

Step 7   If you plan to run this report later or as a recurring report, enter the Schedule parameters given in the **Schedule** section.

Step 8   To run the report, choose one of the following options:

- Run—Click to run the report without saving the report setup.
- Save—Click to save the report setup without immediately running the report. If you have entered the Schedule parameters, the report runs at the scheduled date and time.
- Run and Save—Click to save the report setup and run the report immediately.
- Save and Export—Click to save the report, run it, and export the results to a file or as an email attachment. For this you need to:
  - Choose the exported report file format (CSV or PDF). Exported CSV file is a single .csv file which has capability to hold one million records.
  - Check the first check box if you want to send an email when the report has been generated. You must enter the destination email address and email subject line content.
  - Check the second check box if you want the exported file to be included as an attachment in the email.

Click **OK**.

- Save and Email—Click to save the report, run it, export the results as a file, and email the file. You will be prompted to:
  - Choose the exported report file format.

    Note   File size limitation for sending mail will always dependent on users SMTP server.

  - Enter the destination email address and email subject line content.

  Note   In Prime Infrastructure 3.8, selecting the **Export Format** as CSV and clicking the **Save and Email** option will send the CSV file in the zip format, if the file holds more than 15k records. A file with less than 15k records will be sent as a plain CSV file.

Click **OK**.

- Cancel—Click to return to the previous page without running or saving the report.

You can access the saved composite reports from the Saved Reports Template.

Create Custom Reports

Custom Reports feature is not supported in Operations-Center environment.

Step 1   Choose **Reports** > **Custom Reports**

Step 2   Enter **Report title** in the custom reports page.

Step 3   Drag and Drop the required reports from the **Available Options** pane to the **Selected Options** pane.

Step 4   Choose the reporting period from **Reporting Period** drop down list or from **Select date** range.

A new text box, **Last**, is added as part of the **Reporting Period** field which allows users to generate reports for the last 24 hours.

Note   You must enter the value in hours.

Step 5   Choose the **Summary View** or **Detailed View** as required.

- **Summary view**

  - When you run the report - Displays the top 10 records per tabular subreports.

  - When you export the report as CSV/PDF - Displays the top 20 records per tabular subreports.

- **Detailed view**

  - When you run the report - Displays up to top 1000 records per tabular subreports, where each table is paginated on the screen.

  - When you export the report as PDF - Displays up to 1000 records per tabular subreports.

  - When you export the report as CSV - Displays all records per tabular subreports.

Note   The above stated views effects only the tabular data.

Step 6   Enter the **Report Criteria**. This field allows you to enter the details based on the selected reports.

Step 7   Click **Edit** to open the Filter Criteria page and select the required filter criteria.

Step 8   Click **Edit Sub Reports** and select the sub reports. Each sub reports will be loaded with different values based on the report criteria to customize the report.

Step 9   Enable All/Disable All Sub reports or Enable/Disable selected Sub report(s) depending on your requirements. The combination of reports is known as composite reports.

Note   Hover your mouse cursor over Enable/Disable link, to see which reports are enabled/disabled.

Step 10   You can **Enable** or **Disable** the Sub reports for the combination of reports known as composite reports.

Step 11   Once you enable the sub report, select the sub report values. User can customize each subreport by selecting the attribute to be diplayed on the tabular report and the fields based on which the tabular subreports need to be sorted as either ascending or descending order. To re-order the attributes by dragging and dropping them to a specific location.

Step 12   Click **Apply** and **Run** report. The selected field values are displayed in the table once you generate the report summary.

Step 13   If you disable the sub report, the remaining sub reports for other report criteria were displayed in the table with the default field values in the report summary.

Step 14   If you plan to run this report later or as a recurring report, click the Schedule Report tab and set the following parameters.

- Drag the slider to turn on Scheduling.

- Select the Export Format as CSV or PDF. Exported CSV file is a single .csv file which has capability to hold one million records.

- Select the Destination as File or Email. Enter the email id, if you choose Email as destination.

- Choose the Start/Date time.

- Select the appropriate Recurrence Option.

Step 15 To run the report, choose one of the following options.

- **Run**—Runs the report without saving the report setup.

- **Save**—Saves this report setup without immediately running the report. If you have entered Schedule parameters, the report runs automatically at the scheduled date and time.

- **Run** and **Save**— Click to save this report setup and run the report immediately.

- **Save** and **Export**—Click to save the report, runs it, and exports the results to a file. You will be prompted to:

  - Select the file format (CSV or PDF) of the exported report.

  - Choose whether to send an email when the report is generated. If you choose this option, you must enter the destination email address and the email subject line content, and choose whether you want the exported file included as an attachment to the email.

  - Click **OK.** If the CSV file fails to open correctly, make sure you specify a comma as the List Separator in one of the following locations:

    - Control Panel > Region/Language/Region and Language >Formats > Additional Settings

    - In Excel: File > Options > Advanced > Use System Separators.

- **Save** and **Email**—Click to save the report, run it, export the results as a file, and email the file. You will be prompted to:

  - Select the exported report file format.

    Note   File size limitation for sending mail will always dependent on users SMTP server.

  - Enter the destination email address and the email subject line content.

    Note   In Prime Infrastructure 3.8, selecting the **Export Format** as CSV and clicking the **Save and Email** option will send the CSV file in the zip format, if the file holds more than 15k records. A file with less than 15k records will be sent as a plain CSV file.

  - Click **OK**.

- **Cancel**—Click to return to the previous page without running or saving this report.

Step 16   **Custom Chart Options** - Once the report is generated, the **View Report** tab is enabled automatically and report output is displayed. The subreports generated as charts which has the small chart icon in the top left of each charts. Click on the smart chart icon, which allows you to plot different customized visualizations of charts such as Pie chart, Bar chart, Line Chart etc, on the data.

Note	These custom charts are applicable only for on screen mode (on the live interactive mode) and not on save reports and export reports actions.

Step 17 Choose **Administration > Dashboards > Job Dashboard > User Jobs**.

Step 18 Click Report Status to view the status of the job.

Step 19 Click the report name to view the last five job instances. However, you will not be able to perform any actions available under **Edit** and **Job** Series drop-down lists.

If a report has been saved for a specific report type, you can access the current reports from the Report Launch Pad. You cannot change or update generated reports for all sub domains at the same time. You can open and change the reports individually through their respective sub domains. To update all reports, delete the reports created on sub domains and regenerate virtual domain reports with the changes. If you upgrade the Prime Infrastructure server to a higher version, you must delete and recreate the reports that were already modified and saved in the older version.

Customize Report Results

Many reports allow you to customize their results, letting you include or exclude different types of information. Reports that support this feature display a Customize button. Click this button to access the Create Custom Report page and customize the report results.

To customize a report result:

Step 1 Choose the report you want to customize:

 a) Create a new report. Click **Reports** > **Report Launch Pad**.

 b) Customize a recurring report. Click **Reports** > **Saved Report Templates** and, then click the report name hyperlink.

Step 2 In the Report Details page, click **Customize**.

Step 3 On the Create Custom Report page, complete the required information, then click **Apply** to confirm the changes.

Step 4 Click **Save** in the Report Details page.

Scheduled Reports in Cisco Prime Infrastructure

You can schedule a report to run itself hourly, daily, weekly, or monthly and send the results automatically through email or to another server using SFTP. Before scheduling a report, you need to provide the repository for the reports to be saved.

Note	SFTP feature configuration is not mandatory. However, if you need to use SFTP feature, you need to save the external repository in the system settings. Once the configuration is complete, you will be able to modify the settings, but cannot remove the settings.

To set the repository path:

Step 1   Choose **Administration** > **Settings** > **System Settings**.

Step 2   In the **System Settings** tab, choose **General** > **Report**.

Step 3   Provide the **Repository Path** and **File Retain Period** for Scheduled Reports and On Demand Reports.

Step 4   If you require the reports to be sent to an external server through SFTP, provide the **External Server Settings** details such as **Server Host**, **Server Port**, **User Name**, **Password**, and the **Repository Path** (where the reports need to be stored in the external server).

Step 5   Click **Save**.

To Schedule a Report:

Step 6   Choose **Reports** > **Report Launch Pad**.

Step 7   In the **Report Launch Pad** page, select the report you need to schedule.

Step 8   In the report page, update the **Settings** parameters.

Step 9   Select the **Scheduling** checkbox to enable scheduling.

   a) Select the **Export Format** as CSV or PDF. Exported CSV file is a single .csv file which has capability to hold one million records.

   b) Select the **Destination** as **File**, **Email**, or **Sftp**. Enter the email id, if you choose **Email** as destination.

>   **Note**   **File** and **Sftp** parameters are not editable. The paths are populated from Report Settings.

   c) Choose the **Start/Date** time.

   d) • Select the appropriate **Recurrence Option**.

Step 10   To run the report, choose one of the following options.

   • **Run**—Runs the report without saving the report setup.

      • Click **Export Report**, to run and export the reports to a desired destination.

      • Click **Email Report**, to run and send the reports in an email message.

>   **Note**   You can choose to export and email the reports at the same time by clicking both the checkboxes at the same time. However, this option will not save the reports.

   • **Save**—Saves this report setup without immediately running the report. If you have entered Schedule parameters, the report runs automatically at the scheduled date and time.

   • **Run** and **Save**— Click to save this report setup and run the report immediately.

   • **Save** and **Export**—Click to save the report, runs it, and exports the results to a file. You will be prompted to:

      • Select the file format (CSV or PDF) of the exported report. Exported CSV file is a single .csv file which has capability to hold one million records.

      • Choose whether to send an email when the report is generated. If you choose this option, you must enter the destination email address and the email subject line content, and choose whether you want the exported file included as an attachment to the email.

      • Click **OK.** If the CSV file fails to open correctly, make sure you specify a comma as the List Separator in one of the following locations:

         • Control Panel > Region/Language/Region and Language >Formats > Additional Settings

         • In Excel: File > Options > Advanced > Use System Separators.

- **Save** and **Email**—Click to save the report, run it, export the results as a file, and email the file. You will be prompted to:

    - Select the exported report file format.

        Note   File size limitation for sending mail will always dependent on users SMTP server.

    - Enter the destination email address and the email subject line content.

    - Click **OK**.

- **Cancel**—Click to return to the previous page without running or saving this report.

To view all scheduled reports in Prime Infrastructure, choose **Reports** > **Scheduled Run Results**.

The scheduled report tasks are not visible outside the Virtual Domain they run in. The results of the scheduled report tasks are visible in the Reports Run Results page of the respective domains.

The list of scheduled runs can be sorted by report category, report type, time frame, and report generation method.

You can click on the icon next to **Go** button to export the list of scheduled reports to CSV only when the reports are available.

For information about the fields on this page, see the Scheduled Run Results page in Field Reference for Cisco Prime Infrastructure Reports.

Saved Report Templates

Saved report templates are available at **Reports** > **Saved Report Templates**. From the Saved Report Templates page, you can create report templates and manage saved report templates. You can also enable, disable, delete, copy or run saved reports, and you can filter and sort report templates by category, type, and status. You can click on the icon next to **Go** button to export the saved reports to CSV only when the reports are available. For information about the fields on the Saved Report Templates page and filtering saved report templates, see Field Reference for Cisco Prime Infrastructure Reports.

The Saved Report Templates page displays the following information:

- Report Title—Identifies the user-assigned report name.

Click the report title to view the details for this report.

- Report Type—Identifies the specific report type.

- Scheduled—Indicates whether this report is enabled or disabled.

- Virtual Domain—Identifies the name of the virtual domain under which this report is scheduled.

- Run Now—Click the **run** icon to immediately run the current report.

Note Post the Prime Infrastructure version upgrade to 3.8, if you wish to run any of the saved reports that has column level updates, you must save the report details once and then click the **Run** button. This is recommended to avoid missing the progressions done by the owner/proprietor to the report.

When you execute any domain based report for a sub virtual domain, the report displays all of the device attributes that are mapped to the virtual domain where you are currently logged-in.

Select a report from the **Saved Report Templates** and click the **Copy** button to create a replica of that particular report.

Note You can only create a replication of simple reports and not the custom, composite, and expired reports.

Prime Infrastructure Report Data Retention Periods

The report shows hourly, daily or weekly data depending on the data retention period configured by choosing **Administration** > **Settings** > **System Settings** > **Data Retention**. The data is retrieved from the database based on the following conditions.

If the period is:

1. Up to last 1 day, the data is fetched from raw table.
2. From last 2 days to 4 weeks, the data is fetched from a hourly aggregated table.
3. From previous month calendar to last 12 week, the data is fetched from daily aggregated table.
4. From last 6 months to last 1 year, the data is fetched from a weekly aggregated table.

The valid range for performance data retention period is:

1. Short term Data Retain Period:1 to 31 days.
2. Long term Data Retain Period: 2 to 756 days.
3. Medium term Data Retain Period: 7 to365 days.
4. Hourly Data Retain Period: Valid Range: is 1 to 31 hours.
5. Daily Data Retain Period: 7 to 365 hours.
6. Weekly Data Retain Period: 2 to 108 hours.

Click **Advanced Settings** option to edit age and max records for each table. While saving, both age and max records values will be saved in the database. During the next data clean up job execution, pruning will happen based on either by age or max records whichever limit is reached first.

For detailed information about Prime Infrastructure reports, see Field Reference for Cisco Prime Infrastructure Reports.