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Introduction

To streamline custom report configuration, Prime Infrastructure provides the Custom Reports feature for several report categories, including:

- Device
- Client
- Security
- Performance

When you select a report or reports from one or more categories, the associated attributes and metrics included in each report are available for selection. Then, you can select the specific attributes or metrics that you need in the report and organize where the data appear in the report layout.

**Note:** For users familiar with the capability to customize reports that they access on the Report Launch Pad, this feature uses similar functionality. You can find customization capabilities for additional report categories and types on the Report Launch Pad.

Based on the type of data that you select, reports can include tabular data, graphical data, such as pie or bar charts, or both types of data.

You also can control the virtual domain or any sub-domains in which users can access and generate the report.

This job introduces you to the process to configure and generate reports by using the Custom Reports feature.

**Tip:** To generate effective custom reports, familiarize yourself with the contents of the reports that you plan to use. That way, you can locate and select the specific data that you want efficiently when selecting report criteria.
Custom Reports Features and Layout

Custom reports provides a more streamlined process for generating custom reports. You access custom reports on the Reports menu.

You select the reports, reporting period, and report type on the Create New Report tab.
When you expand a report category, and select one or more reports, options to select report filters and details become available.

You configure report schedules, including recurrences, when needed, on the **Schedule Report**.
To generate or run reports on following a schedule or on an on-demand basis, after you configure the report, you use the toolbar buttons.

When you generate a report on demand by using the Run or Run and Save buttons on the toolbar, the system opens and navigates you to the View Report tab.

Important Note: If you need to retain the report after running it, click Run and Save.

When you click Run, the system cannot save the report separately after generating it.
Virtual Domain Access to Reports

As part of access control, administrators configure virtual domains, which are logical groupings of network devices. Users can have access to one or several virtual domains.

When you configure a report, it is available only in the domain in which you configure it.

Virtual domains also can contain child domains, or subdomains. When users have access to a parent domain, they also have access to its subdomains.

If the domain in which you are configuring the report contains subdomains, you can save the report so that it is available in the parent domain and all of its subdomains.

This way, the report configuration is available in the Composite Report category to users when they are logged in to the parent domain or one of its subdomains.

Important Notes: When the report runs in a subdomain, it will only include data and metrics from network devices that are included in that subdomain.

When you include a schedule for the report, the system generates the report for the parent domain and all of the subdomains based on the Prime Infrastructure server time.
Skills

To generate custom reports, you need the following experience.

**Proficient**
- Prime Infrastructure user interface navigation and behaviors
- Networking knowledge
- Practical networking experience

Terms

**Composite Report**

The repository in which custom report configurations are stored

When you configure a custom report and apply any save action, the system saves the report configuration for later use. The report configuration does not contain data.

**Note:** The system saves report configurations by title, and you cannot duplicate report titles.

To generate a new report by using an existing composite report configuration, you need to use a unique report title.
Scheduled Run Results

The repository in which generated pre-defined reports or custom reports are stored.

When you configure a report and apply one of the following actions, the system saves the report configuration in Composite Reports and makes the completed report available in a list on the Scheduled Run Results page:

- Save with a schedule
  The system saves the report each time the schedule generates it.
- Run and save with a schedule
- Save and export
- Save and export with a schedule

**Important Notes:** To obtain a report that is generated following a schedule, the schedule must include saving the file to the server’s destination folder.

When you use the **Save and Email** action, the system captures the report that was generated and mailed on the **Scheduled Run Results** page, but does not include a copy of the report.

...continued on next page
When you open the **Scheduled Run Results** page by using the menu…

![Scheduled Run Results page](image)

…it lists all of the reports available, regardless of how they are generated.

To filter the list based on the method it was generated:

- In the **Report Generation Method** drop-down list, select the method, and then click **Go**.

![Report Generation Method](image)

The system refreshes the list to include the applicable reports, and the page name changes to indicate the sort method.

![Filtered Report List](image)

...continued on next page
When the system opens the **Scheduled Run Results** page based on your custom report actions, the system applies the sort method automatically and indicates it in the page title as it does when you sort manually.
Configuring Custom Reports Process

Process Overview

To configure and generate a custom report:

1. On the Custom Reports page, select reports, reporting period, and report type.
2. Configure the report criteria, and then determine whether you need to schedule the report to run at a future time, to run the report now and at a future time, or to run the report immediately.
   - To run the report at a future time or to run the report now and at a future time, go to step 3.
   - To generate the report immediately, go to step 4.
3. Schedule the report.
4. Generate the report.

Process Steps

Task 1: Select Reports, Reporting Period, and Report Type

You have the Custom Reports page open. The Create New Report tab is active by default.
To configure overarching report options, follow these steps:

1. On Create New Report tab, in the Report Title field, type a meaningful name for the report.
   
   **Note:** If you are running an on-demand report and do not need to schedule or save it, the report title is not required.

2. When working in a virtual domain that includes subdomains in which you also want to make the report available, select the Create the report in the current virtual domain and each of its sub-domains check box.
   
   **Tip:** To see the subdomains associated with the active domain, click the View Sub-Virtual Domains link. A pop-up window lists the subdomains.

When you select the check box, the system displays the report title extension _Virtual Domain Name and updates the toolbar to include only the Save button.

When you save the report, the system applies the report title extension so that the report is available in all of its subdomains.
In this case, you continue to configure the overarching report options and report criteria.

If you want the system to generate the report, you need to configure a report schedule.

**Note:** You can save the report without configuring scheduling. If you save only, then users can access the report in the parent domain or applicable subdomain on the Report Launch Pad under Composite Report, and schedule or run it, as needed.

3. To select a report from which you want to include data, in the Available Options section, expand a category, and then double-click the name of each report.

The report name moves to the Selected Options section.

**Tip:** You also can drag a report name from the Available Options section to the Selected Options section to select it.
This action makes the report customization features available.

**Important Note:** The report customization features default to include all of the report data and all sub-reports, when applicable.

4. To select additional reports, repeat step 3, and then go to step 5.

**Note:** You can include up to five separate reports from which to configure criteria.
5. To configure the time period that you want the report to include:
   - To select a standard time period from the last hour to the last year, in the **Reporting Period** drop-down list, select the time period.
   - To select a custom reporting period, in the **Select Date | From Date** and **To Date** fields, select the date range.

![Reporting Period dropdown](image)

**Important Note:** You must select a pre-defined or custom reporting time period in order for the system to generate the report successfully.

6. To define the number of items to include the report:
   - To include only the data points reporting the highest metrics based on the report criteria, select **Summary View**.

   **Note:** When you apply a summary view and use the **Run** action, the summary includes the first 10 data points reporting the highest metrics on the **View Report** tab. If you generate a .CSV- or .PDF-formatted file, the summary includes the first 20 data points reporting the highest metrics.

   - To include all of the data points reporting metrics based on the report criteria, select **Detailed View**.

7. To configure the report criteria, **go to task 2**.
Task 2: Configure Report Criteria

You configure report criteria so that the report includes only the data relevant for report users. To configure report criteria by selecting filters and by selecting data attributes in sub-reports. When you select a report in the Selected Options section, the filters and sub-reports associated with the report become available for editing.

The Select Filters tab provides high-level categories by which you can filter report data. The filter options on this tab vary based on the data available in the specific report. The following screenshots illustrate how filters vary.
Some reports also can include sub-reports. Sub-reports can have different data points, referred to as attributes, based on the metrics that the sub-report accesses.

**Important Note:** The report customization features default to include all of the report data and all sub-reports, when applicable.

As noted in task 1, filters, sub-reports, or customization options are not available for some reports.

To configure report criteria, follow these steps:

1. In the **Selected Options** section, select a report.

2. On the **Step 1: Select Filters** tab, in the **Report Type** drop-down list, when available, select a data category.
3. Optionally, in the **Report By** drop-down list, select a method or category by which to organize the data.

![Report By drop-down list](image1)

4. Optionally, to more narrowly define the report criteria:
   a. Beside the **Report Criteria** field, click **Edit Filter**.

![Edit Filter dialog box](image2)

The **Edit Filter** dialog box opens.

b. In the **Edit Filter** dialog box, select the specific items that you want to include in the report, and then click **Apply**.

   **Note:** The dialog box can contain groups and lists of detailed data. Based on what you select at a group or category level refines the information in the dialog box.

   **Tip:** You can select more than one group or device by pressing **Ctrl** on the keyboard and clicking each entry that you want.
5. Based on the report, continue to select filter criteria, as needed, and then go to step 6.
6. To include or exclude sub-reports or sub-report attributes, click the **Edit Sub Reports** tab.

   **Note:** Some reports might contain only one or no sub-reports.

For the active sub-report in the drop-down list, the **Attributes** section lists the data points that are available to include in the report.

Blue check marks beside attributes indicate items that the report will include by default.

The system also selects some or all of the optional attributes by default, which it indicates with green check marks.

In some cases, you can include or exclude any optional attributes based on your requirements.

In some cases, optional attributes are not selected by default, but are available for you to select, as needed.
7. To include or exclude sub-report data:
   a. In the **Select Sub Report** drop-down list, select the dependent report name.
   b. For reports that provide more than one sub-report, to include or exclude all of the data in the sub-report:
      - To include data from the sub-report, beside the **Select Sub Report** field, accept the default selection of **Enable**.
      - **Important Note:** All sub-reports are enabled by default, which means the report will include all of the associated attributes in each sub-report. Ensure that you select and disable each sub-report that has data that you do not need to include in the report.

      ![Image of Select Filters and Edit Sub Reports]

      - To exclude all of the data in a sub-report, click **Disable**. The related data points become unavailable.

      ![Image of Select Sub Report and Attributes]

      ![Image of Data Field Sorting]
8. For an enabled sub-report, to select individual data points, in the Attributes list:
   - To include a data point, accept the default selection of the item, indicated by the green check mark.
   - To exclude a data point, click the data point entry, which removes the green check mark.

9. To organize the layout of the report, in the Attributes list, drag each data point entry to the position that you want.
10. To indicate a sort order to the report data that is active on the page, in the **Data Field Sorting** section:
   a. In the **Sort By** drop-down list, select the sort criteria.
   b. To define the sort order, beside the **Sort By** drop-down list:
      ❖ To sort the data in ascending order, accept the default selection of **Asc**.
      ❖ To sort the data in descending order, click **Desc**.
      ❖ To exclude a data point in the sort criteria, accept the default selection of **NONE**.

   ![Data Field Sorting](image)

   **Note:** The data sorting fields are not hierarchal or dependent in any way. The system will sort the column that you identify regardless of the field that you configure.

11. To include data from another sub-report, return to step 7, and then go to step 12.

   **Note:** When you organize sub-reports attributes and include more than one sub-report, the report formats the data in top down order. This means that the data attributes in the sub-report that appears higher in the list will appear first in the report.

   ![Select Sub Report](image)

   The attributes for each sub-report then appear based on the organization and sort order that you apply.

12. Determine whether you need to schedule the report to run at a future time, to run the report now and at a future time, or to run the report immediately.

   ❖ To save and run the report at a future time or to save and run the report now and at a future time, click **Apply**, and then **schedule the report**.
   ❖ To run the report immediately, or save the report immediately, referred to as on-demand, click **Apply**, and then **generate the report**.
Scheduling Reports

Overview

In most cases, you schedule reports when you need to obtain current or historical information at a specific time or at regular intervals, for example, running access point interface utilization reports during peak hours to monitor usage or running them weekly to identify trends.

You also schedule reports when you are generating them in the domain that you are logged into and all of its subdomains.

You configure report schedules on the Schedule Report tab. You then take actions to save the report schedule and generate the report by using the buttons on the toolbar.
Process Steps

You schedule reports to run at future times on the **Schedule Report** tab, and then use the applicable save action to retain the report schedule.

To schedule the report, follow these steps:

1. To run a report immediately or to configure it to run following a schedule, on the **Custom Reports** page, click the **Schedule Report** tab.

2. On the **Schedule Report** tab, click **Scheduling**.
This action makes the scheduling functions available.

The .CSV file format is selected by default.

The file output destination indicates the default location on the server that an administrator configured.

The title that you added on the Create New Report page will populate in the filename. When you configure the report to run in the active domain and its subdomains, the system includes the domain extension to the filename, also.

Note: Administrators configure the report storage location on the Prime Infrastructure server in Administration.

3. To configure the report file format:
   - When following the schedule, to generate the report in .CSV format, accept the default selection of CSV.
   - When following the schedule, to generate the report in .PDF format, click PDF.
4. When following the schedule, to configure whether the system saves the report or sends it in e-mail, beside **Destination:**
   - To save the report to the designated file location on the server, accept the default selection of **File**.
   - To send the report as an attachment in e-mail, click **Email**, and then, in the field below the destination, type each recipient’s e-mail address separated by commas and without spaces.

   **Important Note:** If you have a space anywhere in the **Email To** field, the system will prompt you to enter a valid e-mail address.

5. To select a report schedule, in the **Start Date/Time** field, select the date and time by using the calendar picker.

   **Important Note:** The time that you schedule the report to generate applies to the Prime Infrastructure server time.
   For reference, the server time appears below the field.
   On this page, the server time does not update automatically. It shows the server time based on the most recent time you opened or refreshed the Custom Reports page.
   Use caution when refreshing the page to see the current server time. The system will not retain any report configuration that you have added.
6. To configure a recurring publishing schedule:
   a. Beside **Recurrence**, click the repetition interval.

   Based on the selection, additional repetition intervals become available below the buttons.

   ![Recurrence Options](image)

   b. Select the repetition interval or intervals.

7. To save report schedules, save report configurations, and run reports, refer to the **Generating Reports**.
Generating Reports

Overview

The Custom Report toolbar provides the immediate actions that you can take to:

- Generate on-demand reports.
- Save report configurations.
- Save report files.
- Schedule reports to run based on operational or business requirements.
- Send report availability notifications by using e-mail.

When you configure a report schedule, which includes the ability to configure report output, save, and notification behaviors, you can combine those actions with the ones available on the toolbar.

This topic addresses taking toolbar actions independently and in combination with report schedule configurations.

Based on the domain or domains in which they are saved, the custom reports that system users configure and save are organized and available in the Composite Report category on the Report Launch Pad.
Generating On-Demand Reports

To generate a report immediately:

- Click **Run**.

  The system runs the report, and then opens and navigates to the **View Report** tab, which presents the report results.

  You can scroll or navigate through the report pages. You cannot save the report.

---

**Important Note:** If you configure a schedule and then click **Run**, the system generates and presents the report, but does not save it or generate it following the schedule.
Saving Report Configurations

**Note:** When you are scheduling a report that will generate in the active domain and all of its subdomains, saving the schedule is the only action that you can take.

![Screenshot of Configuring Custom Reports Process](image)

**Without a Schedule**

To save the report configuration without generating a report:

- Click **Save**.

  The system saves the report configuration and navigates to the **Composite Report** page on the **Report Launch Pad**. The report configuration remains available for running on demand and for schedule configuration.

**Note:** The page lists reports alphabetically by title by default.
Administrators configure the length of time that the system retains reports in its repository.

Tip: It is helpful to know the file retention period on the server to help ensure that you have access to the report configurations or generated reports that you need. You also can save reports generated locally or send them to recipients, as needed.

With a Schedule

When you save a report configuration that includes a schedule, the system generates the report following the schedule and saves each generated report on the Scheduled Run Results page.

Users can identify the report by title and see the timestamp when the report was generated.

The system retains the reports in this repository following the retention time period that an administrator has configured.
Generating Reports and Saving Reporting Configurations

Without a Schedule

To generate the report immediately and save the report configuration for future use:

- **Click Run and Save.**

  The system runs the report, and opens the View Report tab, which presents the report results.

  It also saves the report configuration in the Composite Report category.

  **Tip:** When you run and save a report, the page refreshes its navigation so that you can access the report.

  You can click the Composite Report link in the page title to open the Composite Report category on the Report Launch Pad.
With a Schedule

When you configure a schedule, the system takes the same actions as when generating the report without a schedule.

It also generates additional reports in the format that you indicate in the schedule until the schedule expires.

...and makes the generated reports available on the Scheduled Run Results page.
Saving Report Configurations and Generating Report Files

Without a Schedule

To save the report configuration and generate the report so that it is available to other users:

1. Click **Save and Export**.

   The **Export Report** dialog box opens.

2. In the **Export Format** drop-down list, accept **.CSV** or select **.PDF**.

3. To continue:
   - To generate the report, go to step 5.

   The system generates the report, and navigates to the **Report Launchpad** page.

   To configure the system to send e-mail messages when the report is ready, go to step 4.
4. To receive an e-mail message or send a message to others as a notification that the report is ready:
   a. Select the **Send me an email when report has been generated** check box.
   b. In the **Email To** field, type the e-mail address or addresses separated by commas and without spaces.
      
      **Important Note:** If you have a space anywhere in the **Email To** field, the system will prompt you to enter a valid e-mail address.
   c. In the **Subject** field, type a report title and meaningful description.
      
      **Important Note:** Consider including the exact report title in the **Subject** line of the message.
      The body of the e-mail message provides a link to the report but does not indicate the report title.
      
      ![Image of e-mail message example](attachment://message_example.png)
      
      When the recipient uses the link, the application opens the **Export Results** page, which lists all of the available exported reports.
      Having the exact report title helps the recipient recognize the report of interest.
      
      ![Image of Export Results page](attachment://export_results.png)
      
      d. To include the report as an attachment in the file format that you indicated, select the **Include the generated report as an attachment** check box.
5. Click **OK**.

A system message opens while the report is generating. When the report is complete, the **Export Results** (Scheduled Run Results) page opens.

You can review the report details or download the report.

The system also saves the report configuration **Composite Report category** on the **Report Launch Pad**.

When you include an e-mail notification, the recipients receive the message immediately.

When users click the link in the message…

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Report export completed. Please use the following link to show the exported report in NCS.

...the system opens the **Scheduled Run Results** page filtered by the **On-demand Export** report generation method.

When you include e-mail notification, and attach the report file, the recipients receive the message with the attachment immediately.

The report remains available on the **Scheduled Run Results** page and in the **Composite Report** category on the **Report Launch Pad**.
With a Schedule

If the report includes a schedule, you can configure behaviors for the report when the system generates it following the schedule that are the same or vary from those that you configure in the dialog box.

To save and export a report with a schedule:

1. On the **Schedule Report** tab, configure the behaviors that you want the system follow when it generates the report following the schedule.
2. In the **Export Report** dialog box, configure the behavior of the report that the system generates immediately.

The report that the system generates immediately is available on the **Scheduled Run Results** page in the **On-demand Export** report generation method category. The system navigates to the filtered page automatically.

You also can see the scheduled report in the **Scheduled** report generation method category then, the system will follow the configuration on the **Schedule Report** tab when it generates the report following the schedule.

The report remains available in the **Composite Report** category on the **Report Launch Pad**.
Saving Report Configurations and Sending Report Files in E-Mail

Without a Schedule

To save the report configuration and send the generated report in an e-mail message:

1. On the toolbar, click Save and Email.
   The Email Report dialog box opens.

   ![Email Report Dialog Box]

2. In the Email Report dialog box, in the Email To field, type the addresses of each person who requires the report, separated by commas and without spaces.
   **Important Note:** If you have a space anywhere in the Email To field, the system will prompt you to enter a valid e-mail address.

3. In the Subject line, type a meaningful report description.

4. Click OK.

   A system message opens while the report is generating. When the report is complete, the Email Results page opens, indicating whether the system mailed the report successfully.

   ![Email Results Page]

   The system send the e-mail message with the report attached to each recipient.
   **Important Note:** If you send an e-mail message to more than one recipient, and any recipient’s e-mail address is incorrect, none of the recipients will receive the message and the system notifies you of the delivery failure.

   The report remains available in the Composite Report category on the Report Launch Pad.
With a Schedule

If the report includes a schedule, you can configure behaviors for the report when the system generates it following the schedule that are the same or vary from those that you configure in the dialog box.

To save a report with a schedule and send it in an e-mail message immediately:

1. On the Schedule Report tab, configure the behaviors that you want the system follow when it generates the report following the schedule.

2. In the Email Report dialog box, configure the behavior of the report that the system generates and sends immediately in an e-mail message.

The report that the system generates immediately is available on the Scheduled Run Results page in the On-demand Email report generation method category. The system navigates to the filtered page automatically.

You also can see the scheduled report in the Scheduled report generation method category.

Then, the system will follow the configuration on the Schedule Report tab when it generates the report following the schedule.

The report remains available in the Composite Report category on the Report Launch Pad.
Video Demonstration

Watching Videos

To watch a video:

- Click a video link below, which opens an MP4 file.

Based on your system and configuration, you might need to start the video manually.

Note: Video download and streaming times can vary.

Evaluating Access Point Usage

Watch the Video

To review the features available when configuring custom reports, watch the Evaluating Access Point Usage video.

Approximate runtime: 09:30
Links

To Product Information

Visit the Cisco Web site to learn more about Cisco® Prime Infrastructure.

Visit the Cisco Web site to review or download technical documentation.

To Training

Visit the Cisco Web site to access other Cisco® Prime Infrastructure learning opportunities.

Visit the Cisco Web site to access learning opportunities for other Cisco products.

To Contact Us

Send us a message with questions or comments about this job aid.

Note: Please send messages that address the content of this job aid or other training questions only.

Please follow your regular business process to request technical support or address technical or application-related questions.