



# **Cisco Service Control Application Reporter User Guide**

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OL-8411-01

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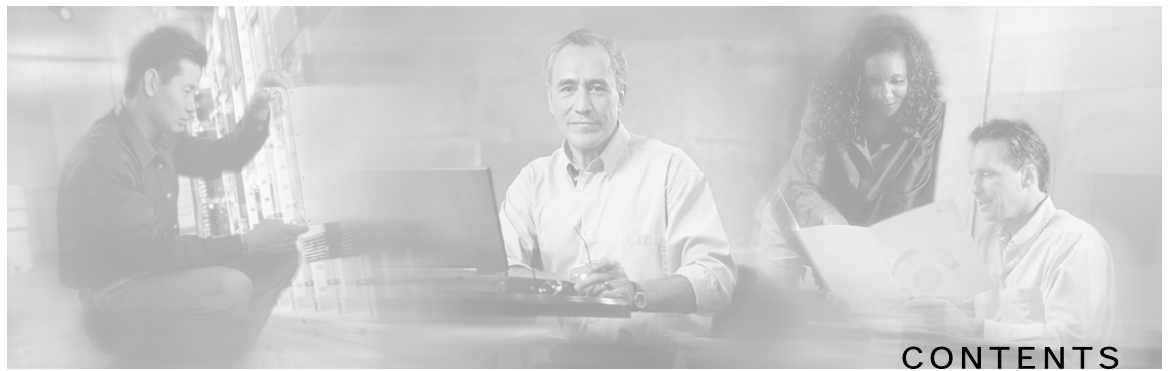
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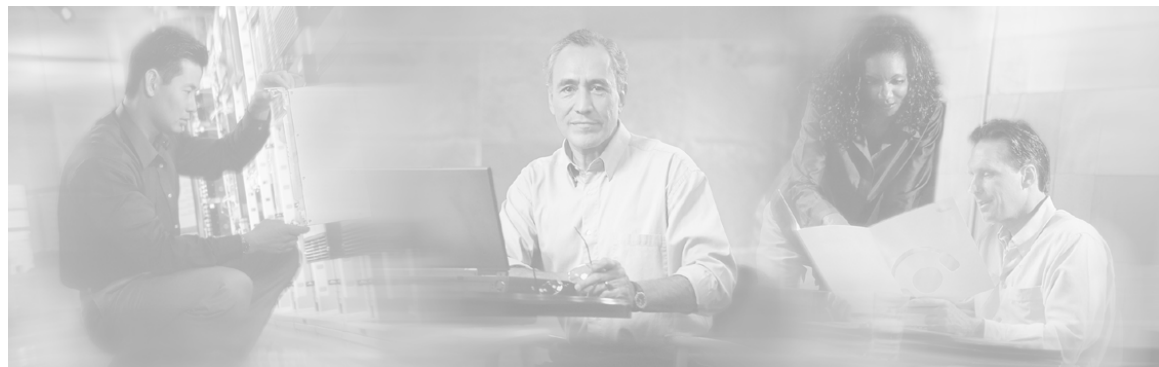
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## Preface

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This preface describes who should read the *Cisco Service Control Application Reporter User Guide*, how it is organized, and its document conventions.

## Document Revision History

Cisco Service Control Release	Part Number	Publication Date
Release 3.0	OL-8411-01	December, 2005

## Audience

This guide is for experienced network administrators who are responsible for generating reports of the daily operation using the *Cisco Service Control Application Reporter*, (*SCA Reporter*).

## Organization

This guide is organized as follows:

Chapter	Title	Description
Chapter 1	<a href="#">Overview</a> (on page 1-1)	Provides a brief overview of the Cisco Service Control solution and describes the components of the system.
Chapter 2	<a href="#">System Overview</a> (on page 2-1)	Provides an introduction to the <i>Cisco Service Control Application Reporter</i> , explains some basic concepts, provides instructions on how to install and launch the <b>SCA Reporter</b> . It also provides Basic terminology and a Quick Start section.
Chapter 3	<a href="#">Using the SCA Reporter</a> (on page 3-1)	Describes basic and advanced configuration of the <b>SCA Reporter</b> . It also describes how to navigate within the GUI.
Chapter 4	<a href="#">Defining the Report</a> (on page 4-1)	Describes the features of the <b>SCA Reporter</b> , including creating a new report, generating a report, modifying an existing report, and deleting a report.
Chapter 5	<a href="#">Working with Reports</a> (on page 4-1)	Describes the available actions for the <b>SCA Reporter</b> , including viewing and adjusting chart display.

Chapter	Title	Description
Chapter 6	<i>Command-Line Interface</i> (on page 6-1)	Explains how the Reporter Command-Line Interface is used to generate reports.
Appendix A	<i>Installing and Upgrading SCA Reporter Templates</i> (on page A-1)	Describes how to install and upgrade <b>SCA Reporter</b> templates.
Appendix B	<i>SCA Reporter as a Tool in SCA BB Console</i> (on page B-1)	Describes the <b>SCA Reporter</b> as a tool in <b>SCA BB Console</b> .
Appendix C	<i>SCA Reporter Templates</i> (on page C-1)	Describes the report parameters of the <b>SCA Reporter</b> templates, organized by template groups.

## Related Documentation

The following publications are available for the *Cisco Service Control Application Reporter*:

- *Cisco Service Control Application for Broadband User Guide*
- *Cisco Service Control Application for Broadband Reference Guide*
- *Cisco Service Control Application for Broadband Developer Guide*

The following publications may also be useful, if available:

- *Cisco SCE 2000 4xGBE Installation and Configuration Guide*
- *Cisco SCE 2000 4/8XFE Installation and Configuration Guide*
- *Cisco SCE 1000 2XGBE Installation and Configuration Guide*

## Conventions

This document uses the following conventions:

Convention	Description
<b>boldface font</b>	Commands and keywords are in <b>boldface</b> .
<i>italic font</i>	Arguments for which you supply values are in <i>italics</i> .
[ ]	Elements in square brackets are optional.
{x   y   z}	Alternative keywords are grouped in braces and separated by vertical bars.
[x   y   z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string, or the string will include the quotation marks.
screen font	Terminal sessions and information the system displays are in <code>screen font</code> .
<b>boldface screen font</b>	Information you must enter is in <b>boldface screen font</b> .

Convention	Description
<i>italic screen font</i>	Arguments for which you supply values are in <i>italic screen font</i> .
→	This pointer highlights an important line of text in an example.
^	The symbol ^ represents the key labeled <b>Control</b> —for example, the key combination <b>^D</b> in a screen display means hold down the <b>Control</b> key while you press the <b>D</b> key.
<>	Non printing characters, such as passwords, are in angle brackets.
[ ]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

Notes use the following conventions:




---

**Note**

Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in this manual.

---

Cautions use the following conventions:




---

**Caution**

Means *reader be careful*. You are capable of doing something that might result in equipment damage or loss of data.

---

Warnings use the following conventions:




---

**Warning**

Means *reader be warned*. You are capable of doing something that might result in bodily injury.

---

## Obtaining Documentation

The following sections provide sources for obtaining documentation from Cisco Systems.

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To access Cisco.com, go to the following website:

<http://www.cisco.com>

## Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

### Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

<http://www.cisco.com/tac>

P3 and P4 level problems are defined as follows:

- P3—Your network is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for *Cisco.com* (on page xi), go to the following website:

<http://tools.cisco.com/RPF/register/register.do>

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

<http://www.cisco.com/tac/caseopen>

## Contacting TAC by Telephone

If you have a priority level 1 (P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.



## Overview

---

This chapter provides a general overview of the Cisco Service Control solution. It introduces the Cisco Service Control concept and the Service Control capabilities. It also briefly describes the hardware capabilities of the Service Control Engine (SCE) platform, as well as the Cisco specific applications that together compose the total Cisco Service Control solution.

This chapter contains the following sections:

- [The Cisco Service Control Concept](#) 1-1
- [Service Control Capabilities](#) 1-2
- [The SCE Platform](#) 1-3
- [Management and Collection](#) 1-4

## The Cisco Service Control Concept

The Cisco Service Control solution is delivered through a combination of purpose-built hardware and specific software solutions that address various Service Control challenges faced by service providers. The SCE platform is designed to support classification, analysis, and control of Internet/IP traffic.

Service Control enables service providers to create profitable new revenue streams while capitalizing on their existing infrastructure. With the power of Service Control, service providers have the ability to analyze, charge for, and control IP network traffic at multi-Gigabit wire line speeds. The Service Control solution also gives service providers the tools they need to identify and target high-margin content-based services, and enable their delivery.

As the downturn in the telecommunications industry has shown, IP service providers' business models need to be reworked to make them profitable. Having spent billions of dollars to build ever larger data links, providers have incurred massive debts and rising costs. At the same time, access and bandwidth have become a commodity where prices continually fall and profits disappear. Service providers have realized that they must offer value-added services to derive more revenue from the traffic and services running on their networks. However, capturing real profits from IP services requires more than simply running those services over data links; it requires detailed monitoring and precise, real-time control and awareness of services as they are delivered. Cisco provides Service Control solutions that allow the service provider to bridge this gap.

## Cisco Service Control Application for Broadband - Service Control for Broadband Service Providers

Service providers of any access technology (DSL, cable, mobile, and so on) targeting residential and business consumers must find new ways to get maximum leverage from their existing infrastructure, while differentiating their offerings with enhanced IP services.

The *Cisco Service Control Application for Broadband (SCA BB)* adds a new layer of service intelligence and control to existing networks that can:

- Report and analyze network traffic at subscriber and aggregate level for capacity planning
- Provide customer-intuitive tiered application services and guarantee application SLAs
- Implement different service levels for different types of customers, content, or applications
- Identify network abusers who are violating the Acceptable Use Policy
- Identify and manage peer-to-peer, NNTP (news) traffic, and spam abusers
- Enforce the Acceptable Use Policy (AUP)
- Integrate Service Control solutions easily with existing network elements and BSS/ OSS systems

## Service Control Capabilities

At the core of the Cisco Service Control solution stands the purpose-built network hardware device: the Service Control Engine (SCE). The core capabilities of the SCE, which support a wide range of applications for delivering Service Control solutions, include:

- Subscriber and application awareness—Application-level drilling into IP traffic for real-time understanding and controlling of usage and content at the granularity of a specific subscriber.
  - Subscriber awareness—The ability to map between IP flows and a specific subscriber for maintaining the state of each subscriber transmitting traffic through the SCE platform, and enforcing the appropriate policy on this subscriber's traffic

Subscriber awareness is achieved using dedicated integrations with subscriber management repositories, such as a DHCP or a Radius server, or via sniffing of Radius or DHCP traffic

- Application awareness—The ability to understand and analyze traffic up to the application protocol layer (Layer 7)

For application protocols implemented using bundled flows (such as FTP, which is implemented using Control and Data flows), the SCE platform understands the bundling connection between the flows and treats them accordingly

- Application-layer, stateful, real-time traffic control—The ability to perform advanced control functions, including granular BW metering and shaping, quota management, and redirection, using application-layer stateful real-time traffic transaction processing. This requires highly adaptive protocol and application-level intelligence.
- Programmability—The ability to quickly add new protocols and easily adapt to new services and applications in the ever-changing service provider environment. Programmability is achieved using the Cisco Service Modeling Language (SML).



Programmability is required for new services to be deployed quickly, and it provides an easy upgrade path for network, application, or service growth.

- Robust and flexible back-office integration—The ability to integrate with existing third-party systems at the Service Provider, including provisioning systems, subscriber repositories, billing systems, and OSS systems. The SCE provides a set of open and well-documented APIs that allows a quick and robust integration process.
- Scalable high-performance service engines—The ability to perform all these operations at wire speed.

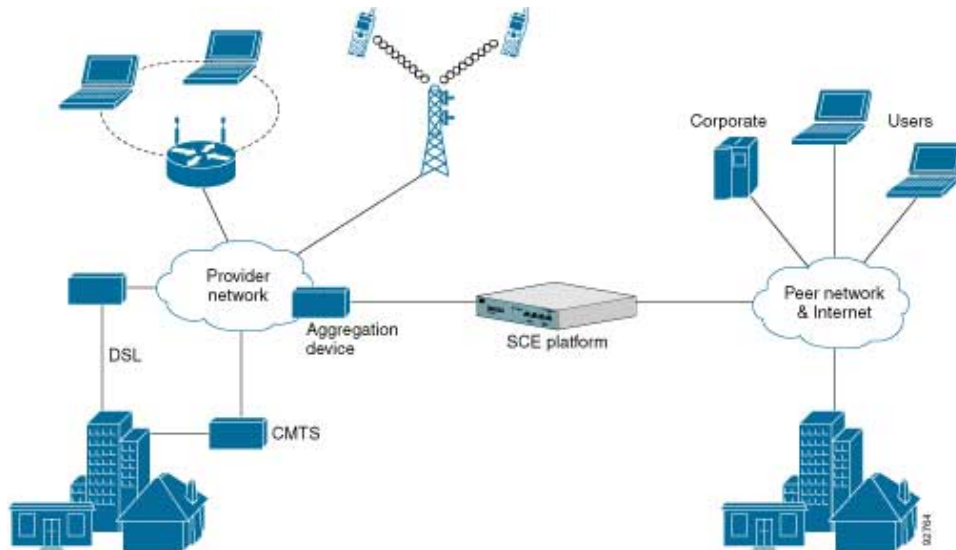
## The SCE Platform

The SCE family of programmable network devices is capable of performing application-layer stateful-flow inspection of IP traffic, and controlling that traffic based on configurable rules. The SCE is a purpose-built network device that uses ASIC components and RISC processors to go beyond packet counting and delve deeper into the contents of network traffic. Providing programmable, stateful inspection of bidirectional traffic flows and mapping these flows with user ownership, the SCE platforms provide a real-time classification of network usage. This information provides the basis of the SCE advanced traffic-control and bandwidth-shaping functionality. Where most bandwidth shaper functionality ends, the SCE provides more control and shaping options including:

- Layer 7 stateful wire-speed packet inspection and classification
- Robust support for over 600 protocols and applications including:
  - General—HTTP, HTTPS, FTP, TELNET, NNTP, SMTP, POP3, IMAP, WAP, and others
  - P2P file sharing—FastTrack-KazaA, Gnutella, BitTorrent, Winny, Hotline, eDonkey, DirectConnect, Piolet, and others
  - P2P VoIP —Skype, Skinny, DingoTel, and others
  - Streaming & Multimedia—RTSP, SIP, HTTP streaming, RTP/RTCP, and others
- Programmable system core for flexible reporting and bandwidth control
- Transparent network and BSS/OSS integration into existing networks
- Subscriber awareness that relates traffic and usage to specific customers

The following diagram illustrates a common deployment of an SCE platform in a network.

Figure 1-1: SCE Platform in the Network



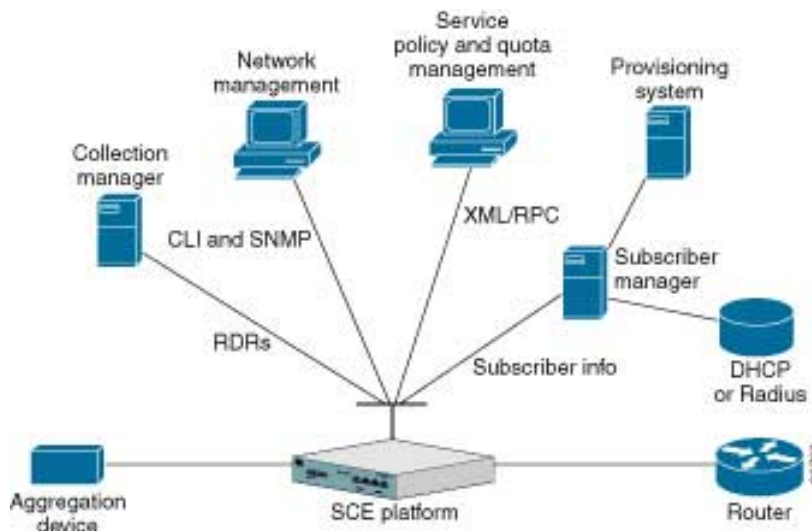
## Management and Collection

The Cisco Service Control solution includes a complete management infrastructure that provides the following management components to manage all aspects of the solution:

- Network management
- Subscriber management
- Service Control management

These management interfaces are designed to comply with common management standards and to easily integrate with existing OSS infrastructure.

Figure 1-2: Service Control Management Infrastructure



## Network Management

Cisco provides complete network FCAPS (Fault, Configuration, Accounting, Performance, Security) Management.

Two interfaces are provided for network management:

- Command Line Interface(CLI)—The CLI is accessible through the Console port or through a Telnet connection; it is used for configuration and security functions
- SNMP—SNMP provides fault management via SNMP traps, as well as performance monitoring functionality

## Subscriber Management

In cases where *SCA BB* is used to enforce different policies on different subscribers, and tracks usage on an individual subscriber basis, the Service Control Subscriber Manager (SM) component may be used as middleware software for bridging between the OSS and the SCE platforms. Subscriber information is stored in the SM database and can then be distributed between multiple platforms according to actual subscriber placement.

The SM provides subscriber awareness, mapping network IDs to subscriber IDs. It obtains subscriber information using dedicated integration modules, which integrate with AAA devices, such as Radius or DHCP servers.

Subscriber information may be obtained in one of two ways:

- Push Mode—The SM pushes subscriber information to the SCE platform automatically upon logon of a subscriber
- Pull Mode—On-demand, in response to a query from the SCE platform to the SM

## Service Configuration Management

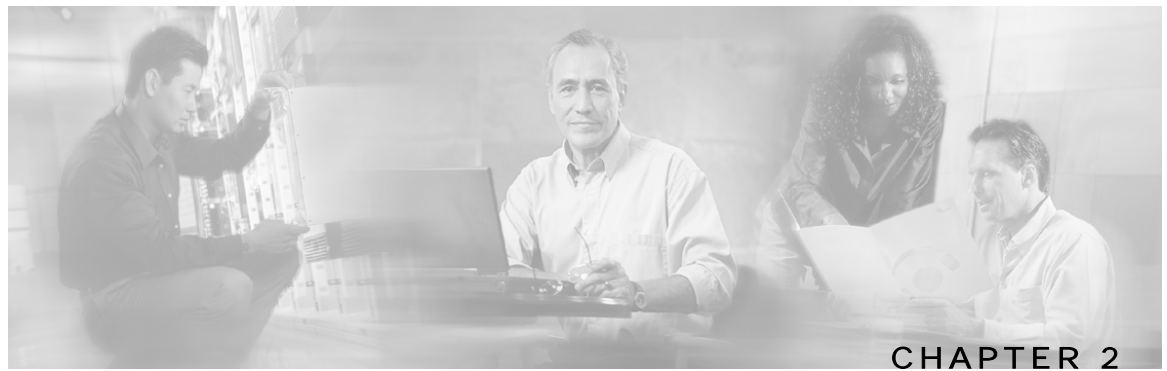
Service configuration management is the ability to configure the general service definitions of a Service Control application. A service configuration file containing settings for traffic classification, accounting & reporting, and control is created and applied to an SCE platform. *SCA BB* provides tools to automate the distribution of these configuration files to SCE platforms, and this simple, standards-based approach makes it easy to manage multiple devices in a large network.

Service Control provides an easy-to-use GUI to edit and create these files, as well as a complete set of APIs to automate their creation.

## Collection

The Service Control solution generates usage data and statistics from the SCE platform and forwards them as Raw Data Records (RDRs), using a simple TCP-based protocol (RDR-Protocol). The Service Control solution provides the Service Control Collection Manager (CM) software as an implementation of a collection system, listening in on RDRs from one or more SCE platforms, and processing them on the local machine. The data is then stored for analysis and reporting functions, as well as simple collection and presentation of data to additional OSS systems such as billing.





## System Overview

---

The **SCA Reporter** is the Cisco Service Control Application tool that allows you to produce reports based on the traffic analysis performed by the Service Control Engine (SCE) platform. The information is sent from the SCE platform and is stored in a database. The **SCA Reporter** can query and retrieve information from the database and present the results in a comprehensive range of reports, including global monitoring, subscriber monitoring, P2P and traffic discovery statistics reports.

The **SCA Reporter** is a valuable tool for understanding the habits and resource consumption of the applications and subscribers that use your network. It can also be used for judging the efficacy of various rules and the possible impact of their implementation on the network.

The **SCA Reporter** is available only in a deployment with a database. You can generate reports by any one of the following methods:

- Standalone Application
- Command-Line Interface (CLI)—See [Command-Line Interface](#) (on page 6-1)
- Tool of the **SCA BB Console**—See [SCA Reporter as a Tool in SCA BB Console](#) (on page B-1)

The available reports can be presented using a variety of charts (for example, stacked bar and area) or in tabular form. The chart display can be adjusted for various presentation options (for example, 3D). Both tabular and chart reports can be exported to a file. The reports can also be modified by changing the values assigned to the parameters (for example, time boundaries), duplicate reports, export and save reports.

After generating an initial report, you can generate reports using Command Line Interface (CLI) without using the GUI.

**SCA Reporter** consists of visual components (known as "views"). The following are the views and the tasks that are completed in each view:

- *Templates View*—Used to select a template, create a new report instance, and generate a report.
- *Properties View*—Used to view parameters and values of the object in focus, which can be template groups, templates, report instances, and chart display parameters. You can also configure report instance and chart display parameters.
- *Report View*—Used to view the appearance of the report when chart tab is selected and view the data when table tab is selected. When report is selected, you can navigate to the report instance which generated it.

- *Progress View*—Used to monitor reports executed or exported. You can view details and run in the background so you can continue working on other reports.

Generating a report can be divided into three broad steps:

- Step 1** Create a report instance and execute the report from the *Templates View*.
- Step 2** Configure the parameters of the report in the *Properties View*.
- Step 3** Adjust the chart display and view reports in tabular or graphic form, using the *Report View*.

Multiple reports can be generated simultaneously and later exported. While the reports are executing, you can monitor them and put them in the background by utilizing the *Progress View*.

This chapter contains the following sections:

- [System Requirements](#) 2-2
- [Installing the SCA Reporter](#) 2-3
- [Accessing the SCA Reporter](#) 2-7
- [Basic Reporter Terminology](#) 2-8
- [Quick Start](#) 2-9

## System Requirements

The *SCA Reporter* GUI front end can be installed on any computer running Windows 98, Windows 2000, Windows NT, or Windows XP.

The computer should have a minimum of 512 MB of memory. 1024 MB of memory are recommended.

# Installing the SCA Reporter

To install the *SCA Reporter*:

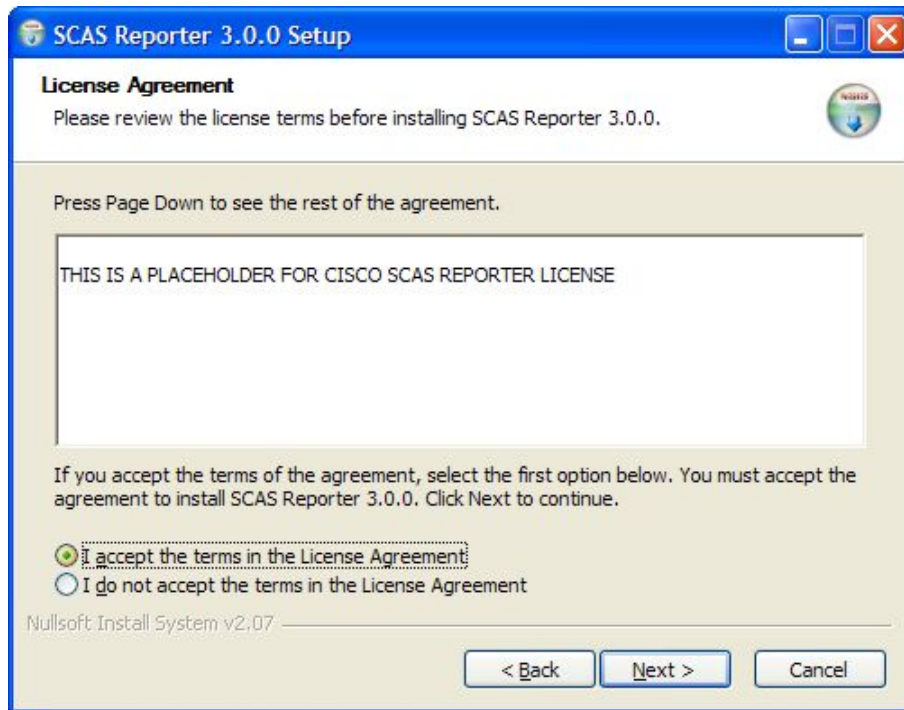
- Step 1** Double click the *SCA Reporter* installation file, SCAS Reporter 3.0.0 Setup.exe.



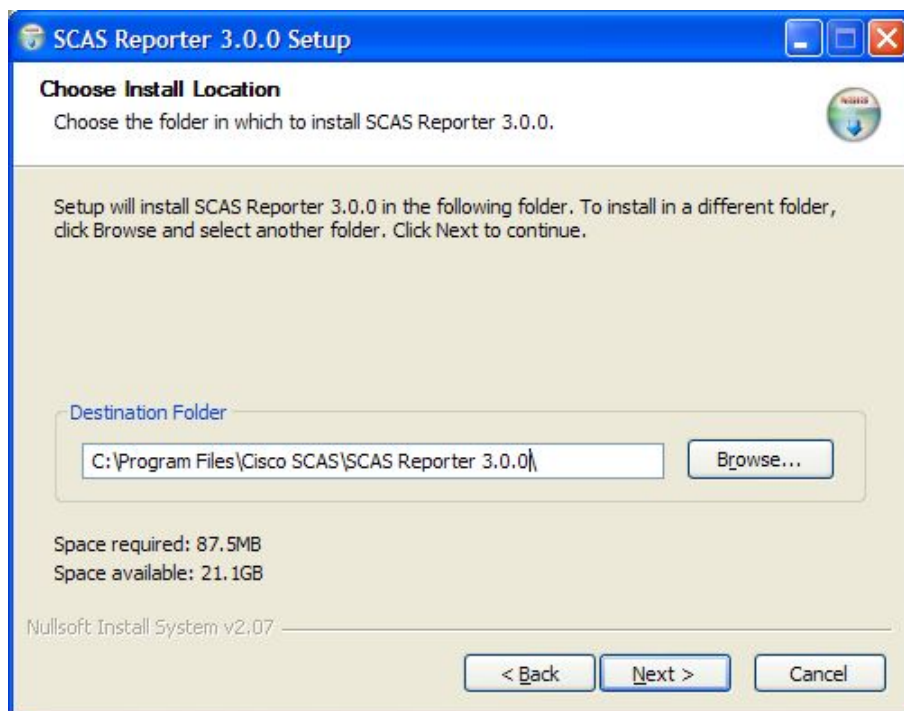
- Step 2** Click **Next** to continue the setup wizard.

## Installing the SCA Reporter

**Step 3** To accept the agreement, click "I accept" radio button.

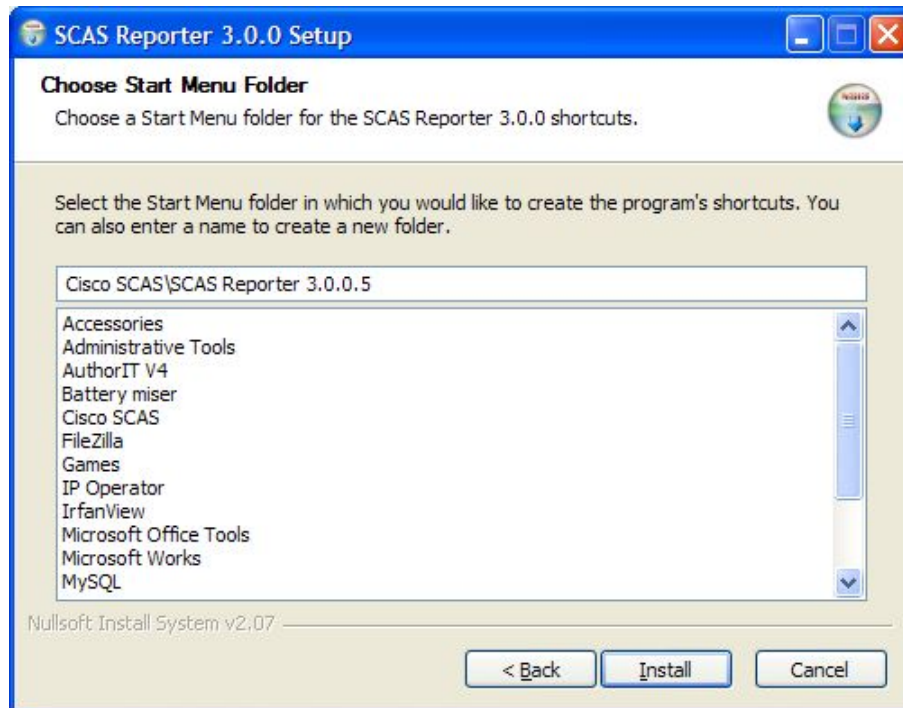
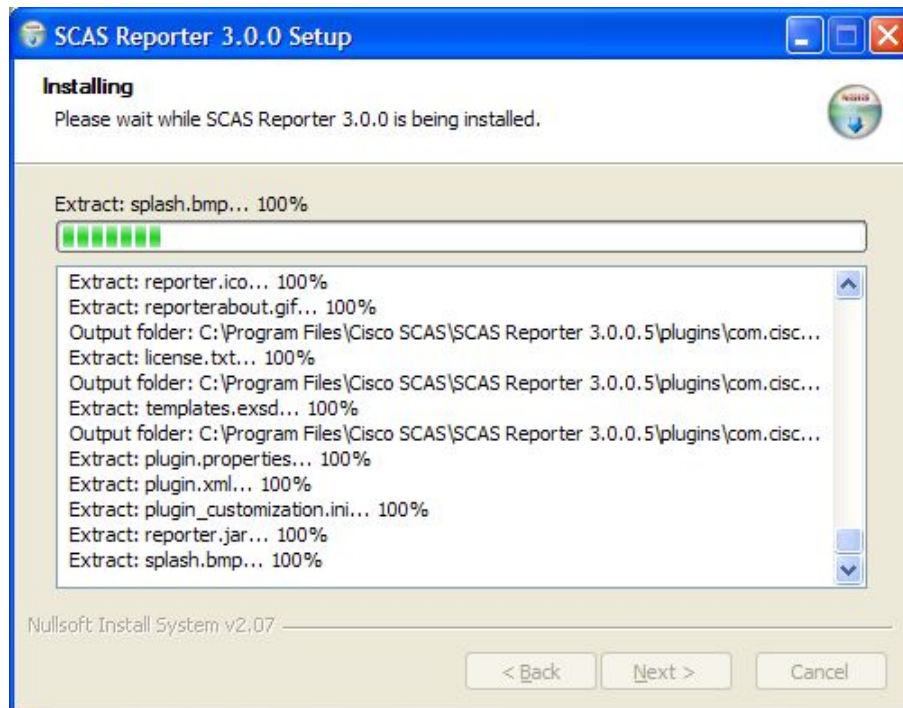


**Step 4** Click Next.



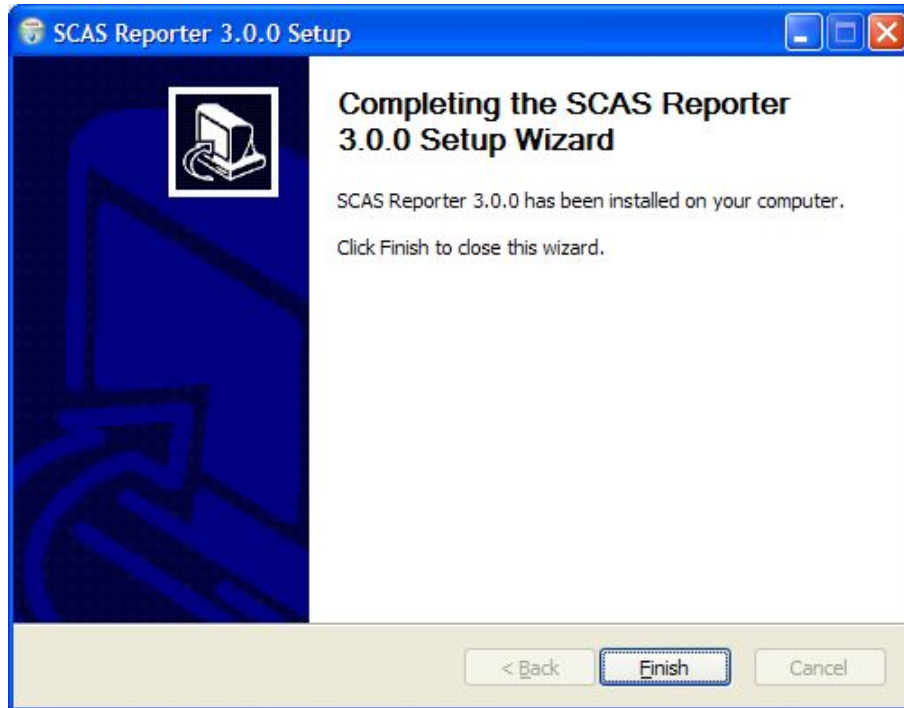
**Step 5** (Optional) Click **Browse** and choose a different destination folder.



**Step 6** Click **Next**.**Step 7** (Optional) Enter a different Start Menu folder in the Start Menu Folder field.**Step 8** Click **Install**.

## Installing the SCA Reporter

**Step 9** Wait until installation is complete.



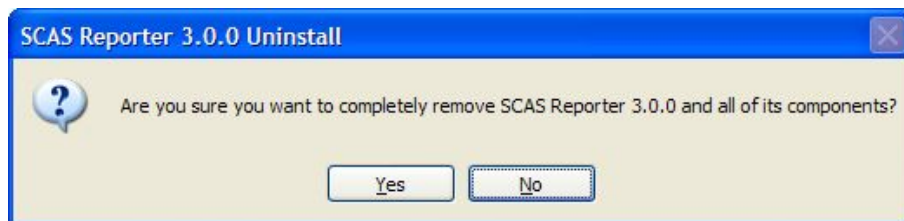
**Step 10** Click **Finish**.

The *SCA Reporter* is installed on the machine.

## Installing the SCA Reporter

To uninstall the *SCA Reporter*:

**Step 1** Select **Start > All Programs > Cisco SCAS > SCAS Reporter 3.0.0 > Uninstall**.



**Step 2** Click **Yes**.



**Step 3** Click **OK**.

The *SCA Reporter* is uninstalled on the machine.

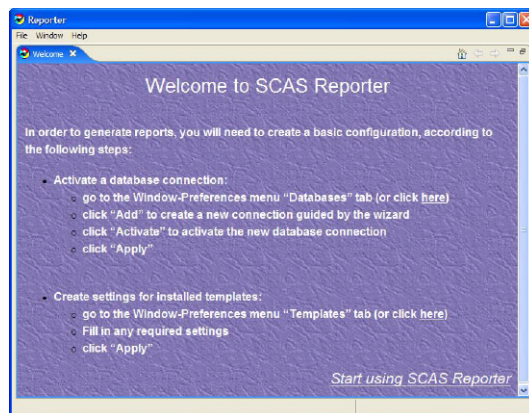
---

## Accessing the SCA Reporter

You can access the **SCA Reporter** from the **Start** menu.

To access the SCA Reporter from the Start Menu:

Select **Start > All Programs > Cisco SCAS > SCAS Reporter 3.0.0 > SCAS Reporter 3.0.0**.



## Exiting the SCA Reporter

To exit the SCA Reporter:

Select **File > Exit**.

**SCA Reporter** disconnects from the database and closes.

---

# Basic Reporter Terminology

This section defines terms and concepts that are necessary for understanding the **SCA Reporter** configuration and operation.

## Repository

The part of the **SCA Reporter** configuration which is associated with a particular Cisco application. It consists of Template Groups and Repository Preferences. An example is “SCA BB 3.0”.

## Template Group

A collection of templates sharing some common theme. An example is “Subscriber Reports”.

## Template

A specification of a particular Report, consisting of parameters and SQL code (which is not visible to the user). An example is “Global Bandwidth per Service”.

## Report

Also known as *Report Instance*, is an instance of a template with some or all parameters having set values.

## Parameter

An item of a template whose value determines some aspect of the Report Instance. An example is “From the last X hours”.

- Some parameters are “Mandatory”—You cannot execute a report if there are mandatory parameters with no value.
- Some parameters have a default value—A value which is used in case the user has not supplied one.

## Repository Preferences

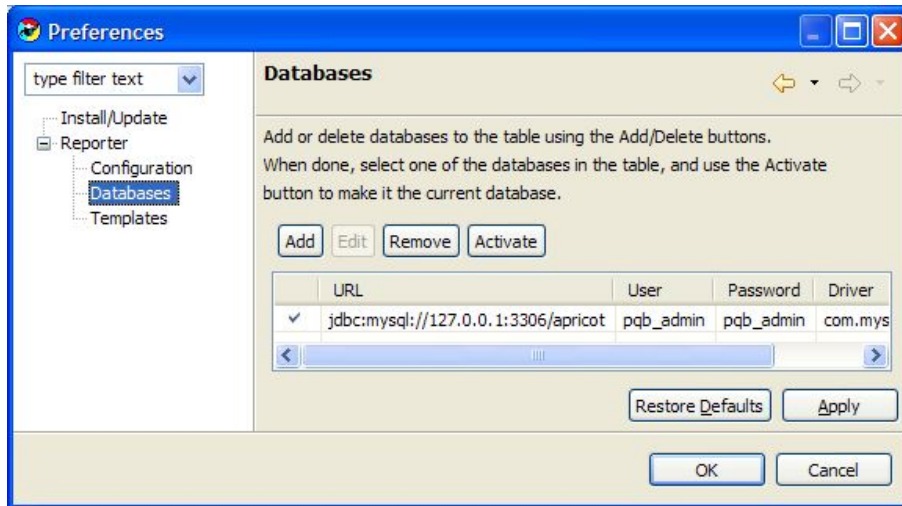
Configuration items which are dictated by the Repository. Normally they are considered mandatory in order to generate reports. The “SCA BB” repository has just one preference, which is the “IP of SCE for policy data” preference.

## Quick Start

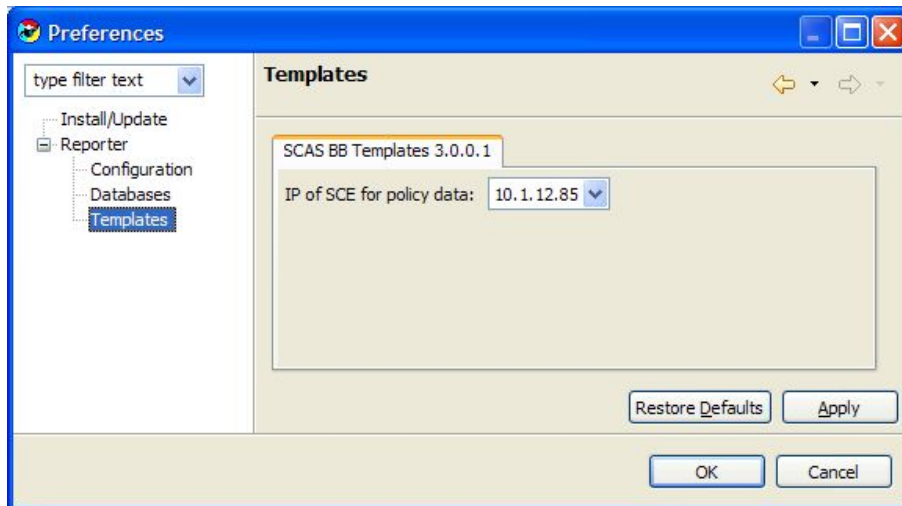
When you initially use the **SCA Reporter**, you must set up and generate your first report, and then you can work with the report.

To Generate Your First Report:

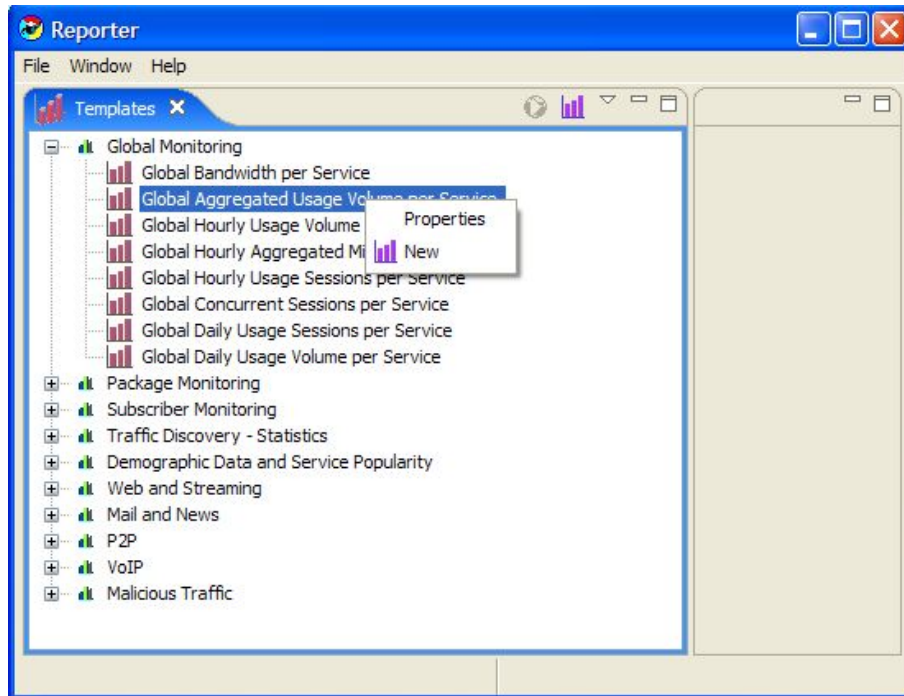
- Step 1** Configure a database for the Reporter to connect to (See [Configuring a Database Connection](#) (on page 3-1)), by adding a database connection, marking it as "Active", and clicking **Apply**.



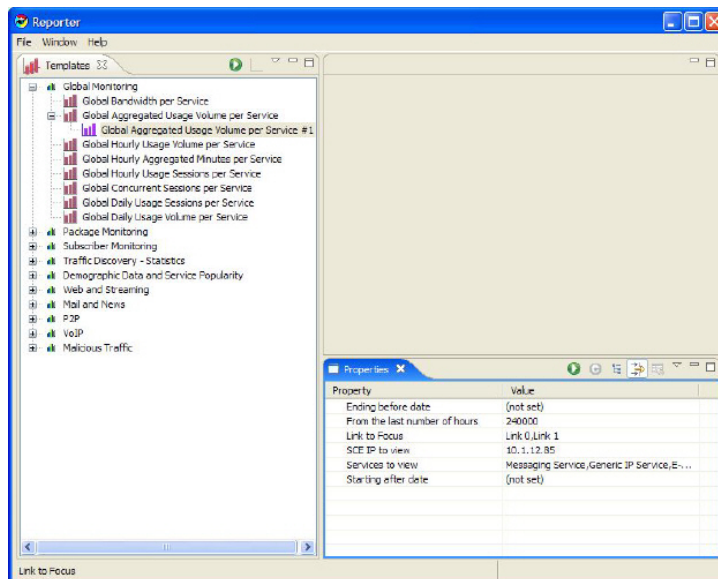
- Step 2** Choose a value for the "SCE IP for policy data" preference (See [Setting IP of SCE for Policy Data](#) (on page 3-5)).



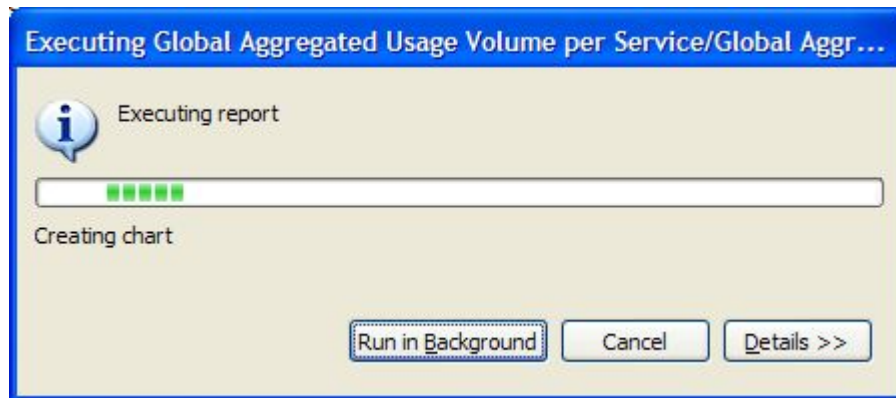
- Step 3** Select a template in the *Templates View* and right click **New** (See *Creating a New Report Instance* (on page 4-2)).



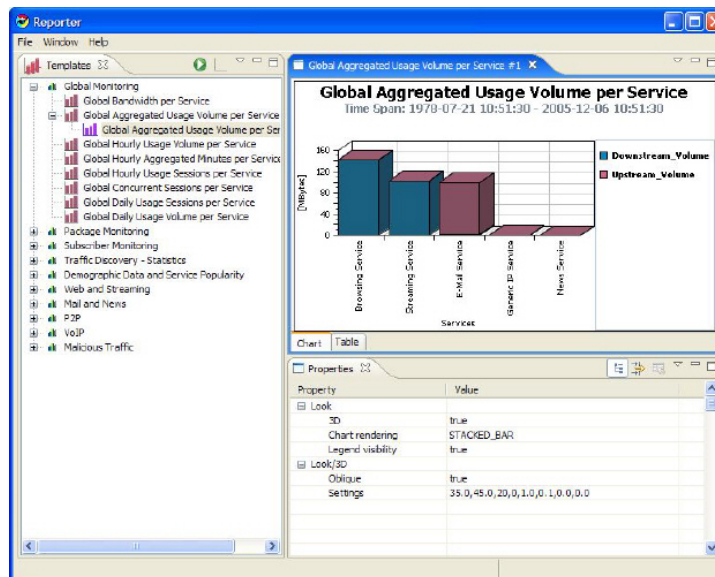
- Step 4** Fill in values for mandatory and other report parameters (See *Configuring Parameters of a Report Instance* (on page 3-15)).



**Step 5** Click **Execute**  to generate the report.



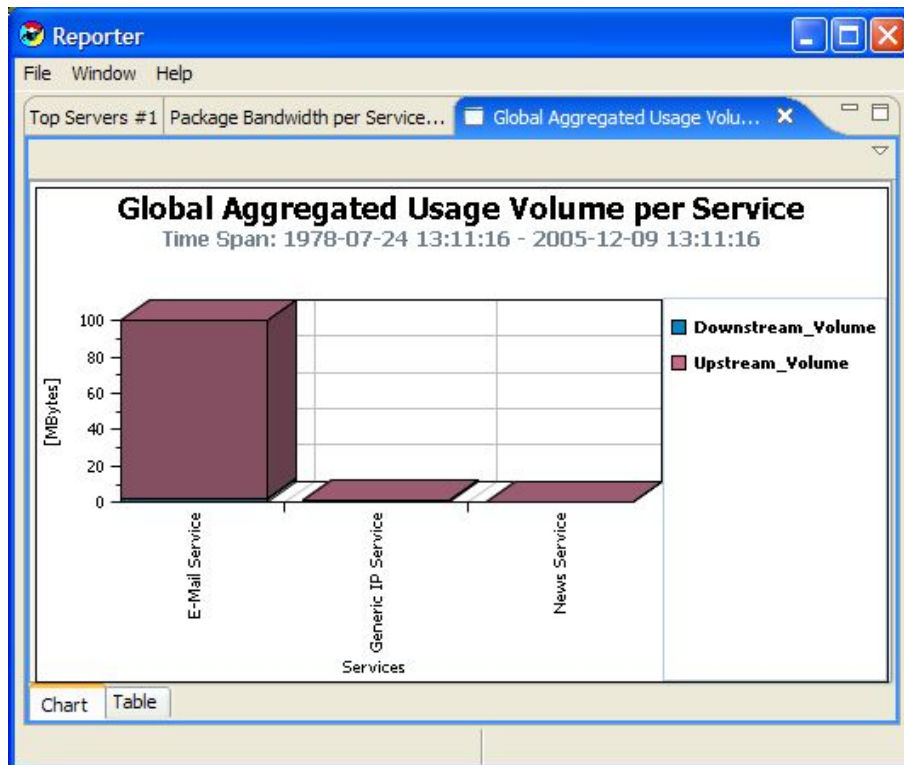
**Step 6** View your Report.



To Work with a Report:

**Step 1** Click on "Services to View" parameter and check only "Email Services", "Generic IP Services", and "News Services".

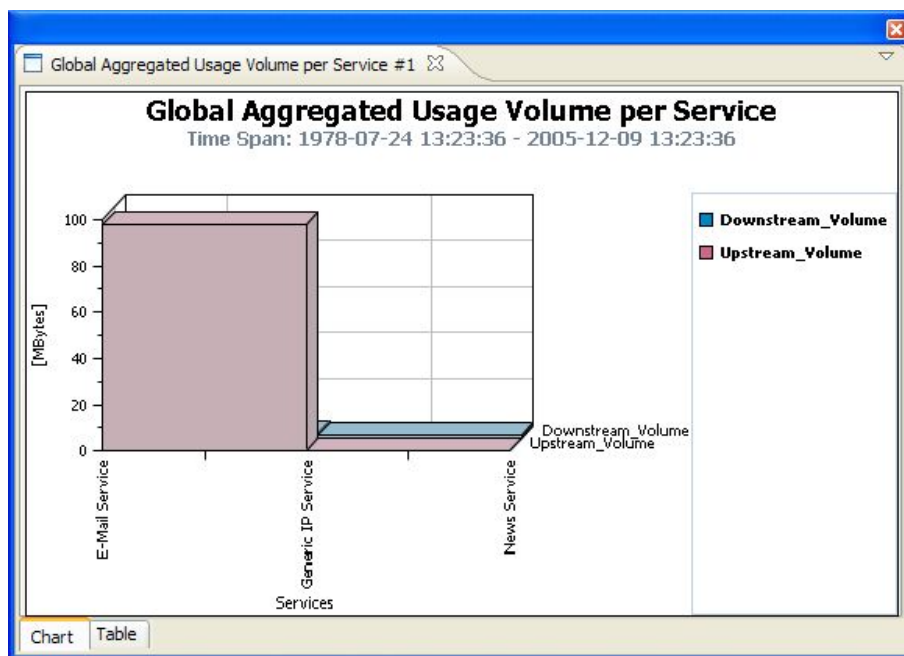
**Step 2** Click **Execute**  to re-generate the report.



**Step 3** Click "Chart Rendering" parameter and change from STACKED\_BAR to STAIR (See [Configuring Parameters of a Chart Display](#) (on page 3-17)).

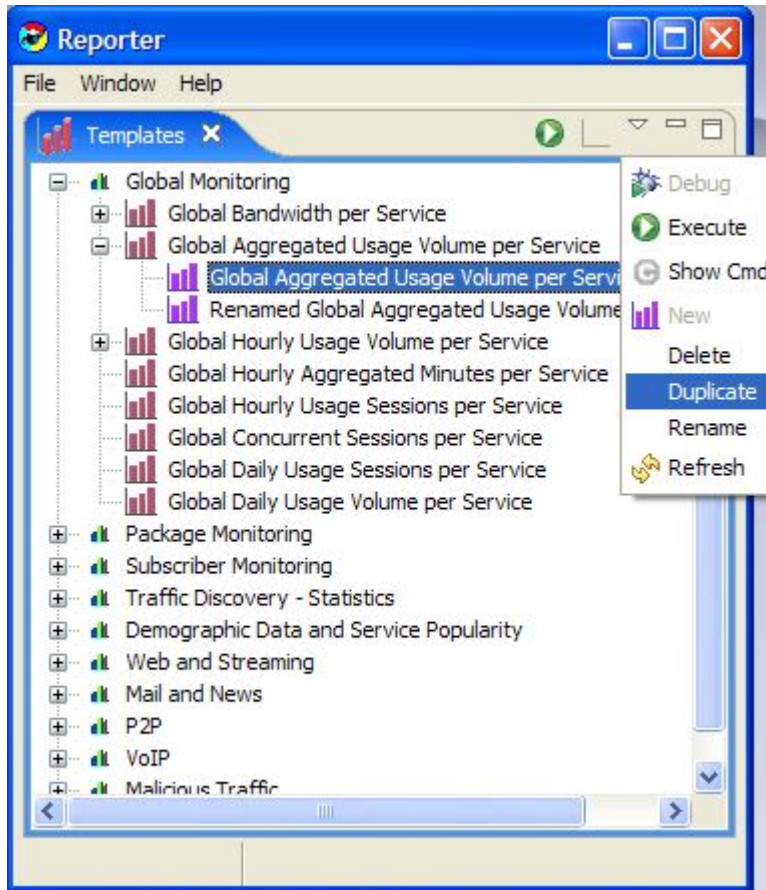
**Step 4** Click "Settings" parameter and change Ambient Light sliding scale.

**Step 5** Click **OK**.





- Step 6** Export the report to a file by selecting **File > Export** (See [Exporting Single or Multiple Reports](#) (on page 5-19)).
- Step 7** Manage the reports by duplicating or renaming by selecting **Menu > Duplicate**.



- Step 8** Exit the **SCA Reporter** (See [Exiting the SCA Reporter](#) (on page 2-7)).





## Using the SCA Reporter

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This chapter explains how to use the GUI, which includes navigating and configuring.

This chapter contains the following sections:

- [Creating a Basic Configuration for the SCA Reporter](#) 3-1
- [Creating an Advanced Configuration for the SCA Reporter](#) 3-6
- [Navigating in the Reporter: Views](#) 3-8

## Creating a Basic Configuration for the SCA Reporter

It is necessary to create a basic configuration for the **SCA Reporter**, which includes connecting to a database, activating the database and setting the IP of the SCE platform for policy data.

After the database is activated, you must select one IP address of an SCE device in the database. The choice is made for each repository, represented by a tab in the Template Preferences dialog. All options presented in the *Templates View* of the **SCA Reporter** (available packages, services, etc.) are determined by the Service Configuration currently applied to the configured SCE platform. Each report is generated according to the SCE device to which it is configured. In the sample configuration, there is only one SCE device connected to the database and one repository preference.

You can also select **Help > Welcome View**, for guidance in creating a basic configuration. On the *Welcome View* are explanations, a short cut to the preferences wizard for activating a database, and another shortcut for setting IP of the SCE platform in the templates preference. In addition, there is a shortcut for starting the **SCA Reporter**.

## Configuring a Database Connection

To activate a Database Connection:

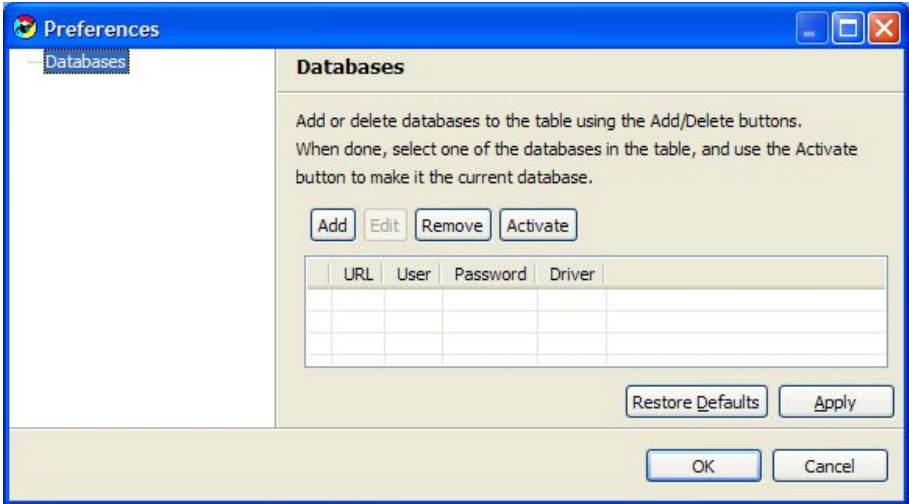
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**Step 1** Select **Window > Preferences > Reporter**, click **Databases**.

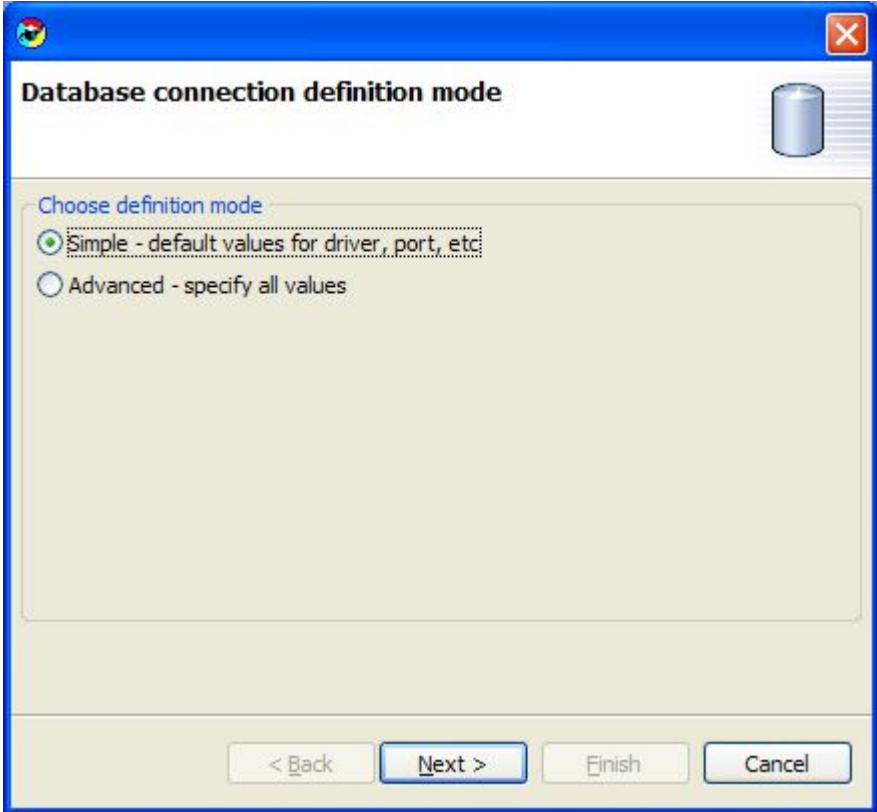
The Databases Preferences window appears.

Creating a Basic Configuration for the SCA Reporter

**Step 2** To add a database, click the **Add** button.



**Step 3** To choose definition mode, select “Simple” or “Advanced” radio box.



- Simple—Default values of driver and IP address. Choose Database Type and fill in Database IP address.

**Define new database connection**

Database type and location

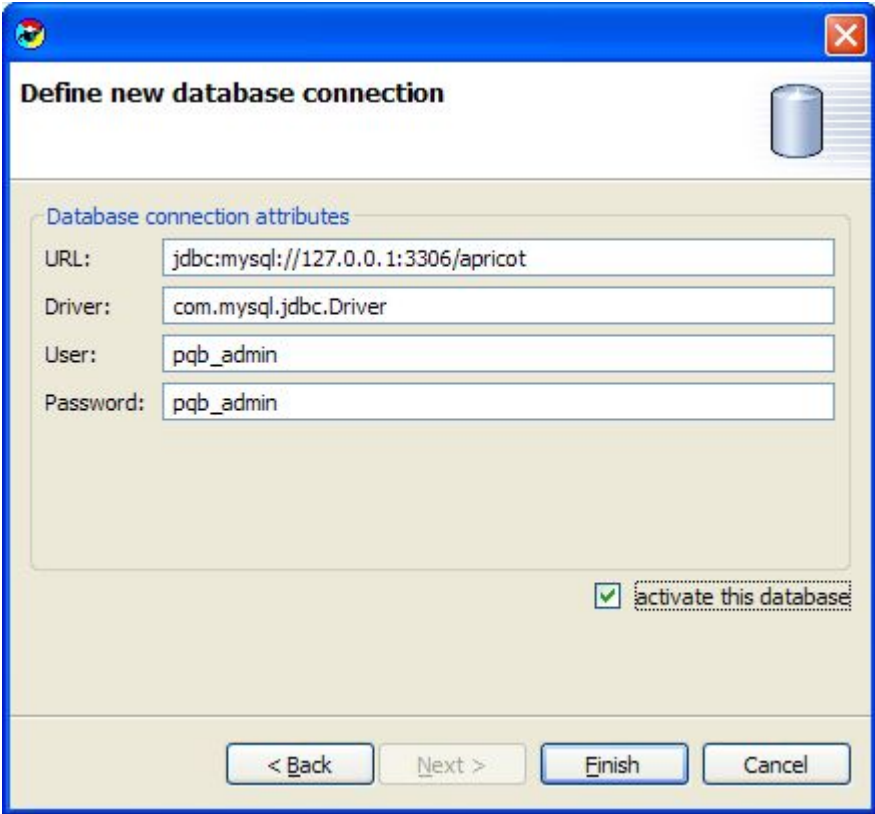
Database type: MySQL

Database IP address: 127.0.0.1

activate this database

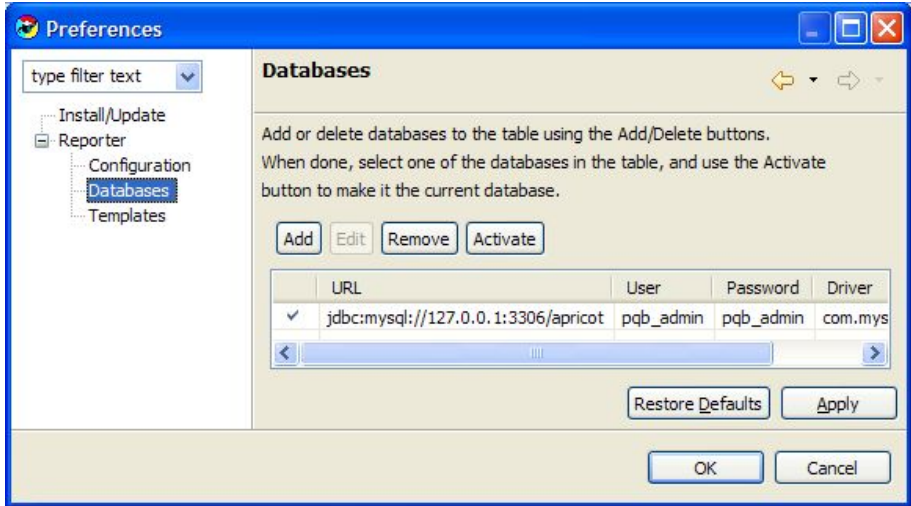
< Back   Next >   Finish   Cancel

- Advanced—Specify all values. Fill in URL, Driver, User, and Password.



**Step 4** Check the "Activate this Database" check box.

**Step 5** Click **Finish**.



**Step 6** Click **Apply**.

The system activates the database.

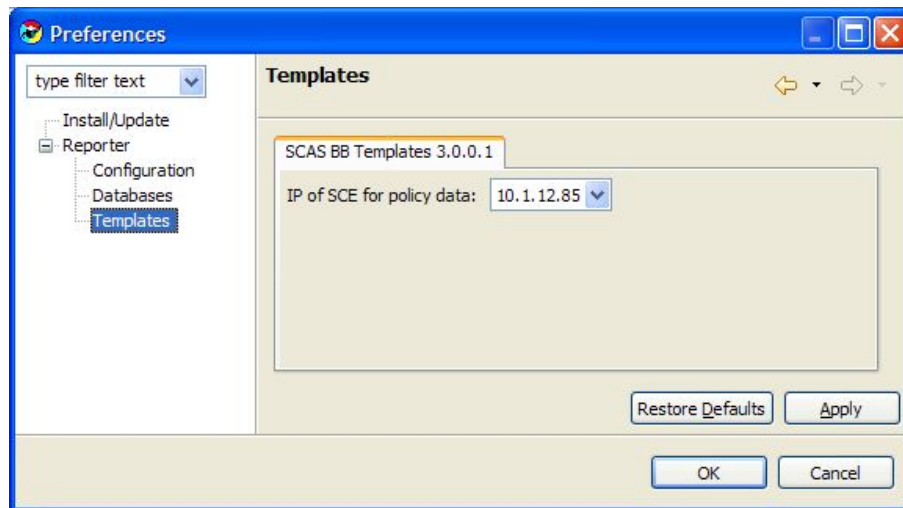


**Note** Clicking "Apply" is necessary to set the "IP of SCE for policy data" parameter (See [Setting IP of SCE for policy data](#) (on page 3-5)).

## Setting IP of SCE for Policy Data

To Set IP of SCE platform for policy data:

**Step 1** Select **Window > Preferences > Reporter > Templates**.



**Step 2** Click the **IP of the SCE for policy data** to select the IP of SCE for the SCA BB Templates Repository.

**Step 3** Click **Apply**.

The IP of the SCE platform is set for policy data.



**Note** There may be more than one SCE platform, but you only choose one, when they all have the same policy data.

**Note**

There may be cases where more than one Repository (set of templates) are available in the Reporter. Two tabs would be set in the Template Preferences when Setting IP for Policy data. In each, you choose one SCE platform. In this case, there would be two sets of Template Groups in the *Templates View*.

## Creating an Advanced Configuration for the SCA Reporter

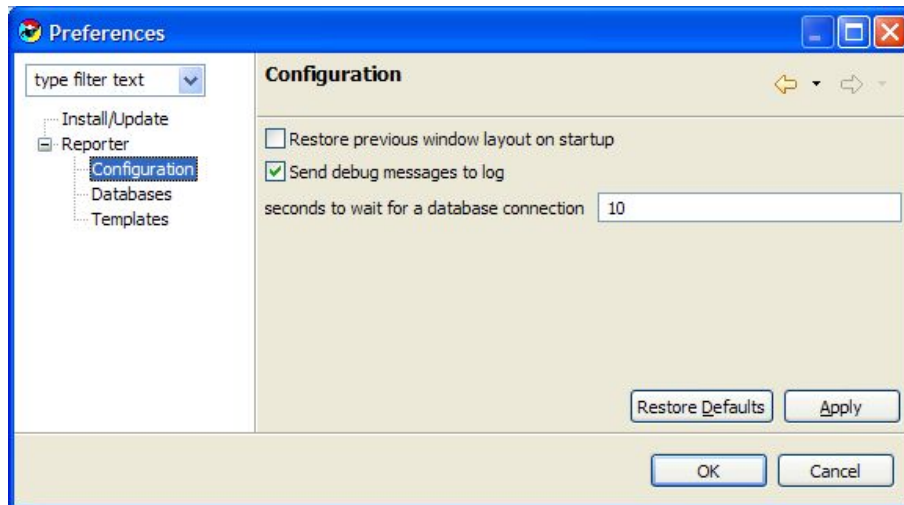
You can also create an advanced configuration to allow some functions of the **SCA Reporter** to be configurable. For example you can set the following:

- Whether to send debug messages to log
- Number of seconds to wait for a database connection

### Sending Debug Messages to Log

To Send Debug Messages to Log:

**Step 1** Select **Window > Preferences > Reporter** click **Configuration**.



**Step 2** Check "Send Debug Messages to Log".

**Step 3** Click **Apply**.

The system applies the preferences to the session.

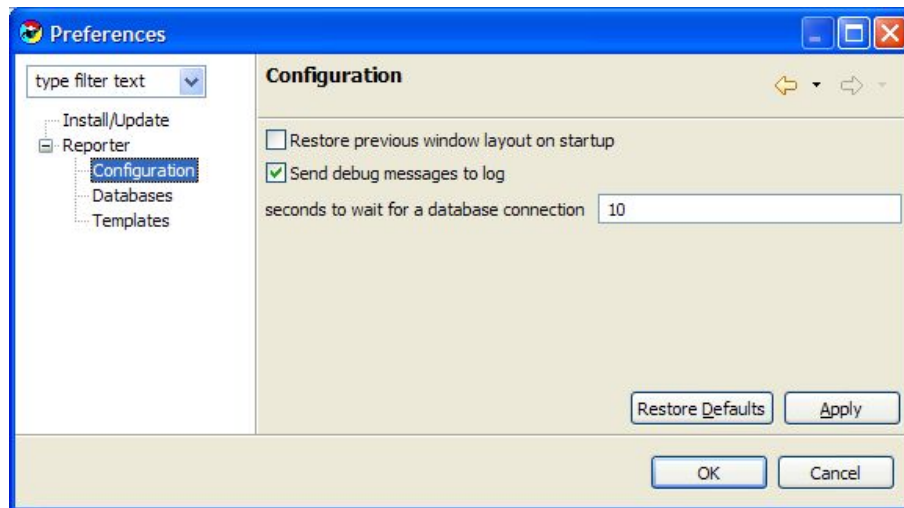
**Warning:** Sending debug messages to log can cause the log file to grow rapidly.



## Configuring Seconds to Wait for Database Connection

To Configure Seconds to Wait for a Database Connection:

**Step 1** Select **Window > Preferences > Reporter > Configuration**.




**Step 2** Type seconds to wait for a database connection. This parameter dictates how long **The Reporter** tries to connect to a database, in case the database does not respond immediately.

**Step 3** Click **Apply**.

The system applies the preferences to the session.



**Note**

Back and Forward Icons  can be used to navigate to previous configurations and return to the current window.

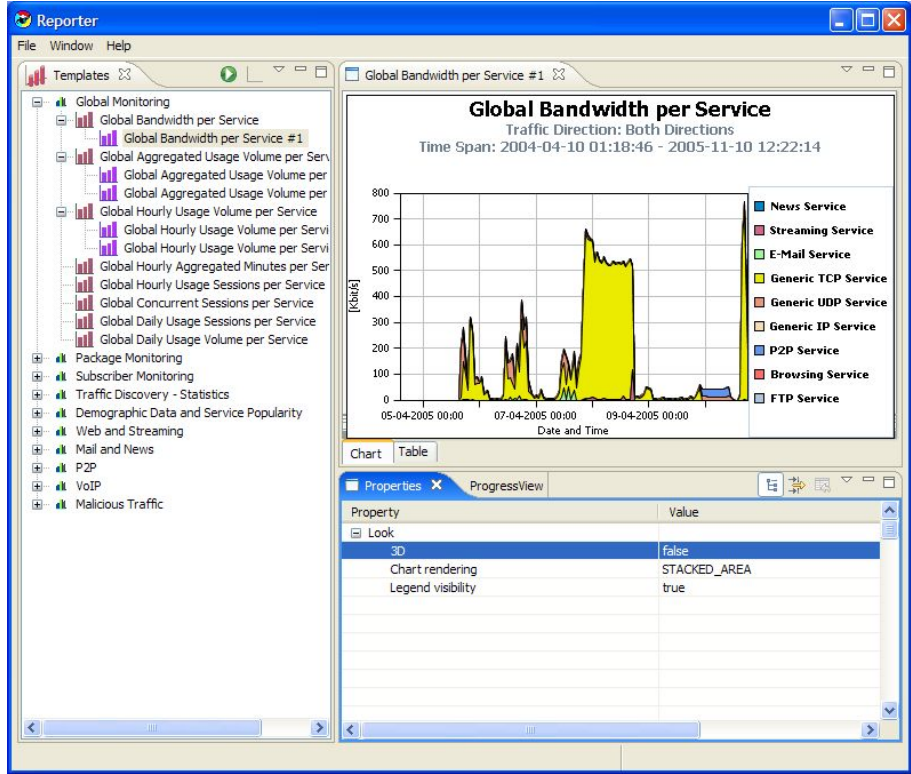
# Navigating in the Reporter: Views

You can navigate to Template Groups, Templates, and Report Instances in the *Templates View*. When you select an item, it is in focus and the *Properties View* shows the properties of the item.

The *Report View* first appears when a report is generated. You can navigate to the report instance that generated the report by choosing the menu item **Go to Report**.

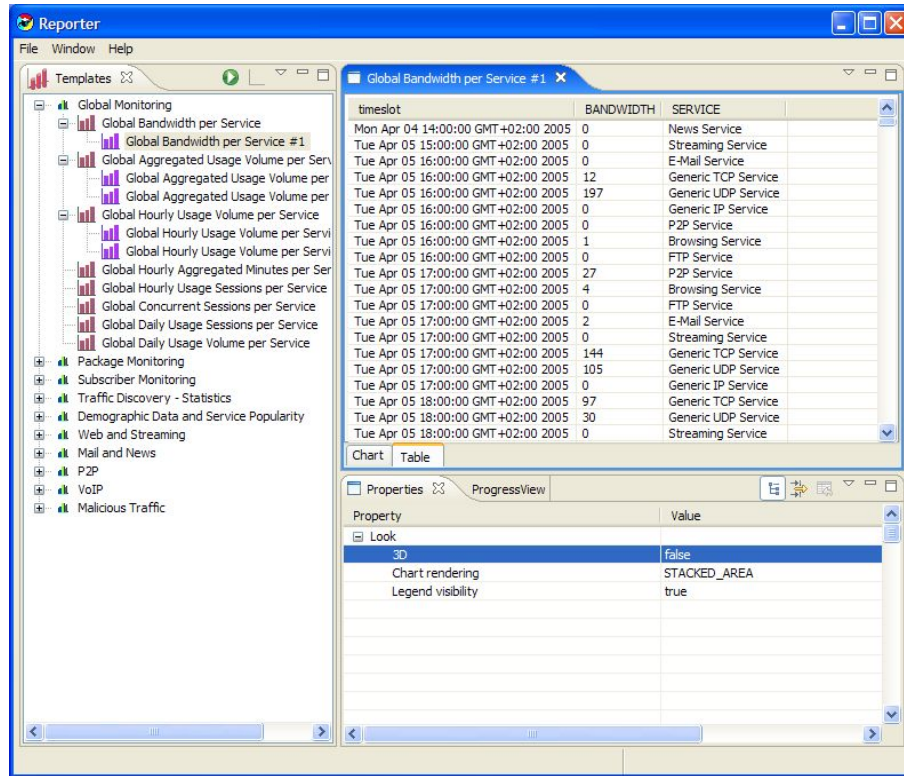
The *Templates* and *Properties Views* are labeled, while the *Report View* contains reports with the name of each report on each upper tab. For example, the upper tab of a Report may be labeled "Global Hourly Usage per Volume Service". In the following figure, the Report Chart is displayed and the lower tab labeled "Chart" is selected (orange on top):

Figure 3-1: Reporter Window with Views



You can also select the lower tab labeled "Table" to view the raw data as shown in the following figure:

Figure 3-2: Report View - Table Tab



## Reporter Menu Items

The following table contains the menus, options, and descriptions of the **SCA Reporter** Menu bar.

Table 3-1 SCA Reporter Menu

Menu	Option	Description	Comments
File	Export	Saves the report to a file.	Opens Export Wizard and must choose Chart or Table. See <i>Exporting Single or Multiple Reports</i> (on page 5-19).
	Exit	Closes the <b>SCA Reporter</b> .	
Window	Preferences	Install/Update Templates.	See <i>Installing and Upgrading SCA Reporter Templates</i> (on page A-1).
		Databases.	Add, remove, or activate databases. See <i>Configuring a Database Connection</i> (on page 3-1).

Menu	Option	Description	Comments
		Templates.	Create settings for installed templates. See <a href="#">Setting IP of SCE for Policy Data</a> (on page 3-5).
		Configuration.	Configure database connection timeout and debug messages to log. See <a href="#">Configuring Seconds to Wait for Database Connection</a> (on page 3-7) and <a href="#">Sending Debug Messages to Log</a> (on page 3-6).
Help	Welcome	Welcome View.	Link to Databases and Templates Preferences.
		Create a basic configuration.	See <a href="#">Creating a Basic Configuration for the SCA Reporter</a> (on page 3-1).
	Help Contents	Find Information.	See <a href="#">Accessing On-Line Help</a> (on page 3-21).
	Search Help	Find Information by entering text.	See <a href="#">Accessing On-Line Help</a> (on page 3-21).
	Manage Configuration	Opens Product Configuration Window, which allows you to scan for updates, view installed history, show activities and add an extension location for browser.	
	Find and Install	Opens <b>Install/Update Wizard</b> for new/current features.	See <a href="#">Installing and Upgrading SCA Reporter Templates</a> (on page A-1).
	About SCA Reporter	Current Version of <b>SCA Reporter</b> , license, plug-in details, confirmation details, confirmation details with system summary and error log.	See <a href="#">Installing and Upgrading SCA Reporter Templates</a> (on page A-1).

## Viewing Menu Items

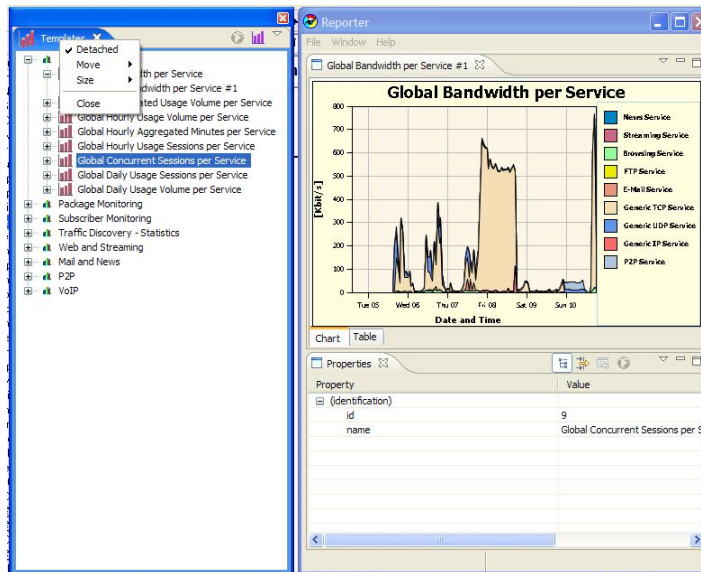
The GUI has a menu for each of the views. When the menu is clicked, all the available actions for that view appear. Menu items can be selected from the menu of each view, but there are icons on the tab of the view for frequently used actions.

One way you can personalize the window layout is to detach a view checking the "Detached" menu item. You can also detach by dragging the view (See Window Layout). Some other available actions are:

- Move—You can move a View or a Tab Group
- Size—You can change the size of a pane from the left, right, top, or bottom

The following is an example of the *Templates View* after it has been detached from the Reporter.

Figure 3-3: Detached Template View






## Help Menu

The Help menu accesses a number of sub-menus. for the following sub-menus:

- Welcome (See [Creating a Basic Configuration for the SCA Reporter](#) (on page 3-1))
- Help Contents (See [Accessing On-Line Help](#) (on page 3-21))
- Search (See [Accessing On-Line Help](#) (on page 3-21))
- Manage Configuration, Provides a description of the current configuration
- Find and Install (See [Installing and Upgrading SCA Reporter Templates](#) (on page A-1))
- About SCAS Reporter
  - Plug-in Details (See [Installing and Upgrading SCA Reporter Templates](#) (on page A-1))

## Properties View

The *Properties View* always shows the properties of the item which is selected in the view which happens to be in focus. The following actions affect how the properties are presented:

- Showing Advanced Properties—To view all the parameters or just mandatory parameters, click the **Show Advanced Properties**  icon .
- Showing Categories—To view the parameters with their categories or without their categories, click the **Show Categories**  icon.
- Resetting Parameter's Value—Clicking the **Restore Default Value**  icon while a parameter is highlighted, performs the following:
  - When a parameter is not mandatory, it is unset.

## Navigating in the Reporter: Views

- Otherwise, when a parameter is mandatory and has a default value, it is reset to the default value.
- Otherwise, the parameter is not changed.

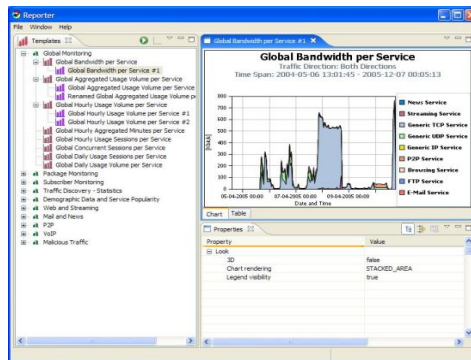
When you want to change the value of a parameter, you can select the parameter and re-configure it (See *Configuring Parameters of a Report Instance* (on page 3-15) and *Configuring Parameters of a Chart Display* (on page 3-17)). For example when you reconfigure "Services to View" by unchecking one of the services, re-execute the report for the new report to appear without the service.

In the following example notice the actions and how they affect the displayed parameters in the *Properties View*.

To shift the displayed parameters in the Properties View:

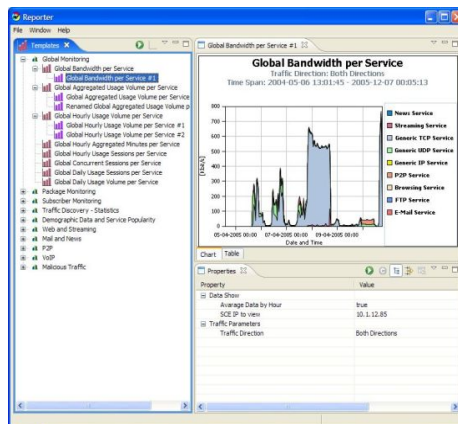
### Step 1 Generate a Report from the Template "Global Bandwidth per Service."

The parameters in the *Properties View* are Chart Display parameters.



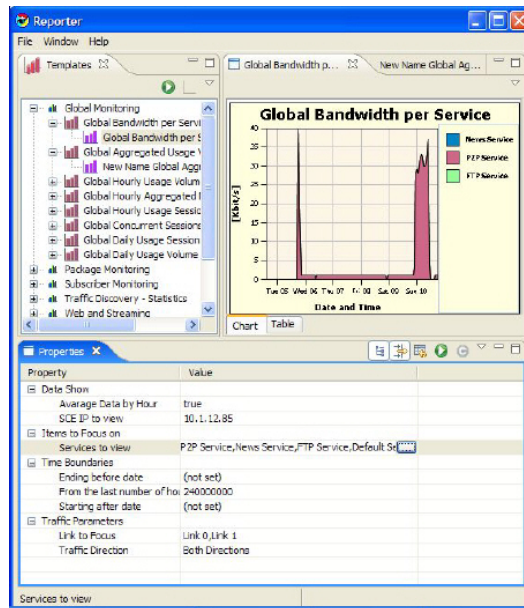
### Step 2 From the Report View, select Menu > Go to Report.

The parameters that are displayed in the *Properties View* shifts from Chart Display parameters to Report Instance parameters. The report instance used to generate the report is selected and the View in focus shifts from the *Report View* to the *Templates View*. The mandatory parameters are displayed.



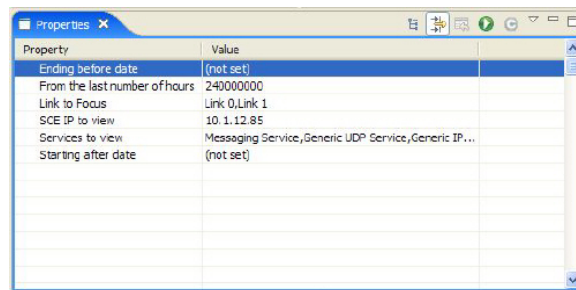
### Step 3 From the Properties View, select Menu > Show Advanced Properties.

All the parameters are displayed.



**Step 4** Click **Show Categories** to toggle viewing parameters with or without displaying categories.

Category names are removed from the *Properties View*.

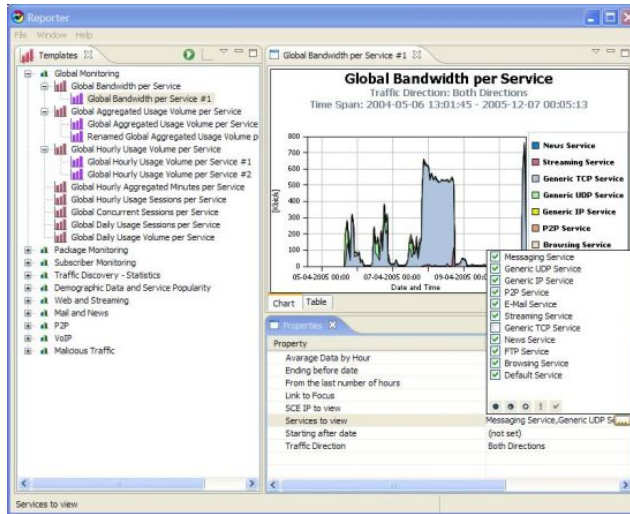


**Step 5** Click the "Services to View" parameter and uncheck "Generic TCP Service".

**Step 6** Click the "Check"  icon to select the new choices.

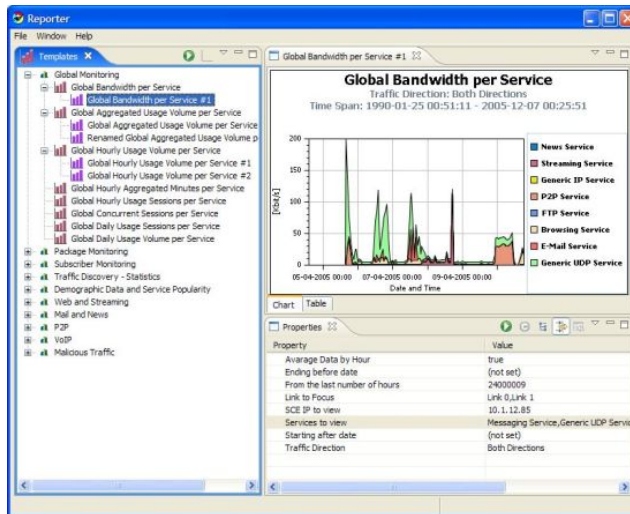
## Navigating in the Reporter: Views

The "Services to View" parameter is updated.



**Step 7** Click the **Execute** icon from the *Properties View*.

Generic TCP Service is removed from the legend and from the graph.





## Configuring Parameters

When working with reports, you may want to assign values to report instance parameters. You would use a similar method to assign values to chart display parameters. The field is applied to the value of the parameter in different ways depending on the type of parameter. In report parameters, the new value is applied the next time the report is generated. In chart display parameters the value is applied as soon as the field is applied.

The following are the types of parameters:






- No Value—When no value is assigned, "(not set)" appears.



- Free Text—Number or Character are typed.
- Boolean—When a parameter of this type is selected, the value toggles between True and False.
- Date—Pop-up dialog with date and time to be selected.
- Single Choice—Drop-down menu  Icon is clicked to show the dialog box and a single choice is selected.
- Multiple Choice—Pop-up dialog  Icon is clicked to show dialog boxes where more than one choice can be checked.

The icons present in the Multiple Choice dialog window are described in the following table.

**Table 3-2** Parameter Option Icons

Icon	Option	Description
	Select All	Select all boxes by checking all
	Invert Selection	Uncheck the checked boxes and the check the unchecked
	Select None	Uncheck all boxes
	Cancel	Exit Parameter Option Dialog without saving
	OK	Save and Exit Parameter Option Dialog



#### Note

Some parameters are mutually exclusive. "From the last Number hours" and "Starting after Date and Time" cannot both be implemented, even if they are both selected. For example, if you want to define the time frame to begin at a specified time, rather than to cover a specified number of hours previous, select "Starting after Date". When "From the last Number hours" is also chosen, the report time frame will be according to the Date and Time values, even when "From the last number hour" is selected.

## Configuring Parameters of a Report Instance

The following is an example of assigning values to report instance parameters.

To Assign Values to Report Instance Parameters:

**Step 1** From the *Templates View*, choose (or create) a report instance.

The report instance is selected in the *Templates View* and the report parameters are displayed in the *Properties View*.

**Step 2** Choose the parameter to be modified.

## Navigating in the Reporter: Views

**Step 3** (Optional) Click **Show Advanced Properties** when the parameter is not in view.

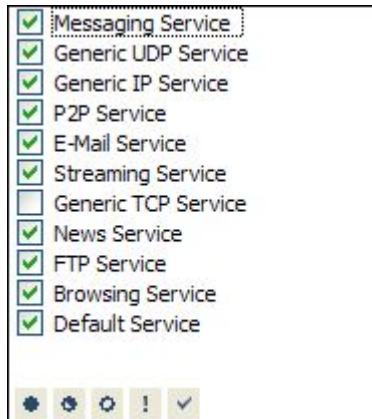
**Step 4** Click the row of Traffic Direction parameter and select a value.

Drop-down menu of parameter values appears and choice is made.

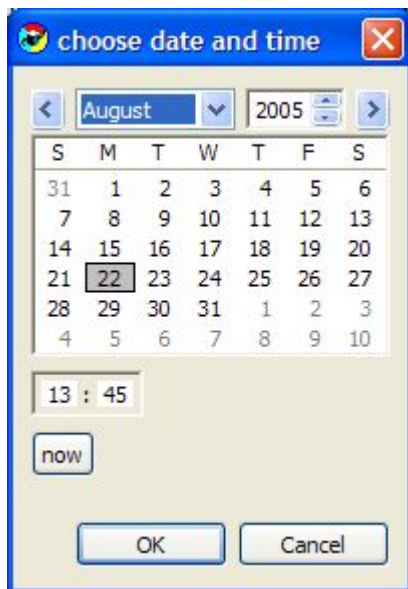


**Step 5** Click on the row of "Services to View" parameter and check the services you want to view.

**Step 6** Click the "Check"  icon to select the new choices.



**Step 7** Click the row of "Ending Before Date" parameter.



**Step 8** Select date and time and click **OK**.

**Step 9** Click **Execute**.

The Report is generated with the configured values.

## Configuring Parameters of a Chart Display

You can configure chart display parameters which are those in the Look category of the *Properties View*. When you commit to the changes, the chart display updates. There are also adjustments that are made directly in the *Report View* (See [Adjusting Chart Display](#) (on page 5-7)).

The following is a table displays the Chart Display parameters and their descriptions:

Table 3-3 Chart Display Parameters

Categories	Parameters	Type	Default	Values	Comments
Look	3D	Boolean	False	True, False	Chart is Three dimensional when True. When False, the Look/3D Parameters are not displayed
	Chart Rendering	Single Choice	Stacked Area	Several Types	Several ways that the chart can be presented.
	Legend Visibility	Boolean	True	True, False	Legend is visible when True.
Look/3D	Oblique	Boolean	True	True, False	Rotation of a 3D chart so that there is always 90 degrees between x and y axes.
	Settings	Multiple Choice	35, 45, 20, 0, 1.0, 0.1, 0.0, 0.0	Ranges	Sliding scales of characteristics such as rotation & elevation. One value is chosen from each

To Assign Values to Chart Display Parameters:

**Step 1** From the *Templates View*, choose (or create) a report instance.

The report instance is selected in the *Templates View* and the Report Definition parameters are displayed in the *Properties View*.

**Step 2** Click **Execute**.

The Report is selected in the *Report View* and the Chart Display parameters are displayed in the *Properties View*.

**Step 3** Select the "Chart Rendering" field. From the drop-down list, choose the type of chart you want to render.

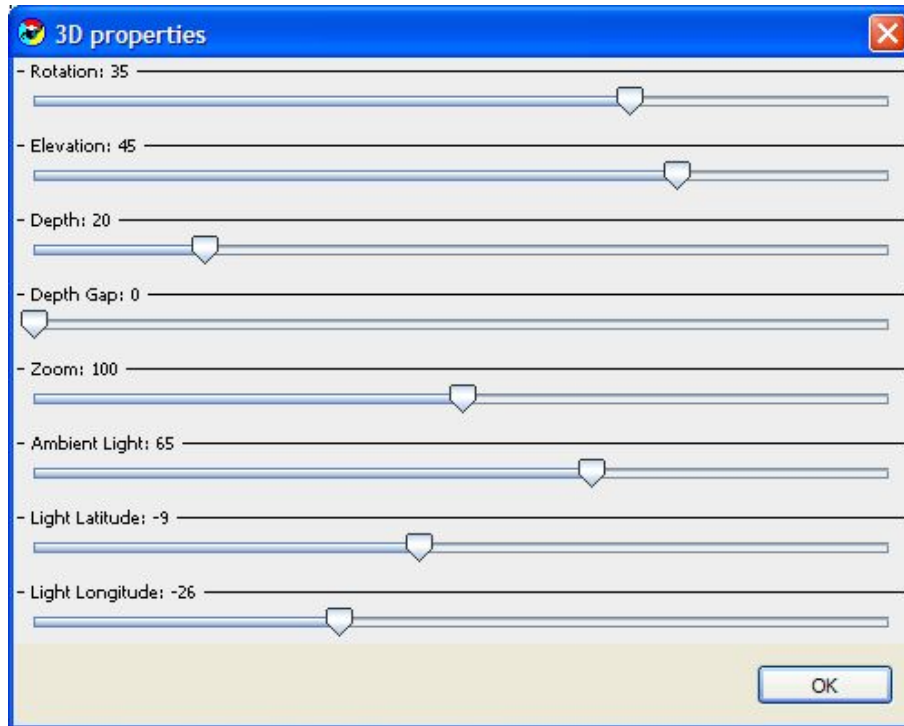
The report is updated.



**Step 4** (Optional) To display the chart in 3D, click 3D parameter.

The value changes from false to true and the 3D Look category parameters appear.

- Step 5** (Optional) When the 3D parameter is set to true, select "Settings" parameter and set the 3D properties with the sliding scale.



- Step 6** Click **OK**.

New values are assigned to the Settings parameter and changes can be viewed in the *Report View*.



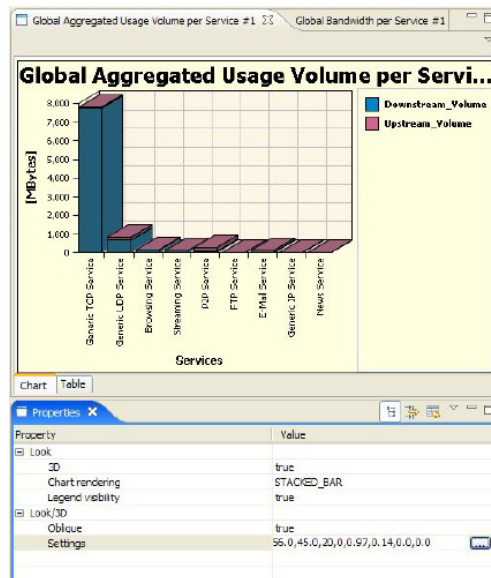
**Note** For Chart Rendering, you must choose one of the following values: BAR, STACKED\_BAR, STACKED100\_BAR, SUPERIMPOSED\_BAR, AREA, STACKED\_AREA, STACKED100\_AREA, POLYLINE, STACKED\_POLYLINE, STACKED100\_POLYLINE, SCATTER, STAIR, STACKED\_STAIR, STACKED100\_STAIR, SUMMED\_STAIR, PIE.



**Note** For Settings, you can choose from among the following sliding scales where the ranges are given: Rotation (-90 .. 90), Elevation (-90 .. 90), Depth (0..100), Depth Gap (0 .. 100), Zoom (0 .. 200), Ambient Light (0.. 100), Light Longitude (-90 .. 90), Light Latitude (-90 .. 90).

To configure Chart Display parameters - Look Category:

- Step 1** Set 3D to True.
- Step 2** Set Chart Rendering to "Stacked Bar".
- Step 3** Set Legend Visibility to True.
- Step 4** Drag Legend.



**Note** When 3D is true, oblique and settings parameters can be configured..

To configure Chart Display Properties - Look/3D Category:

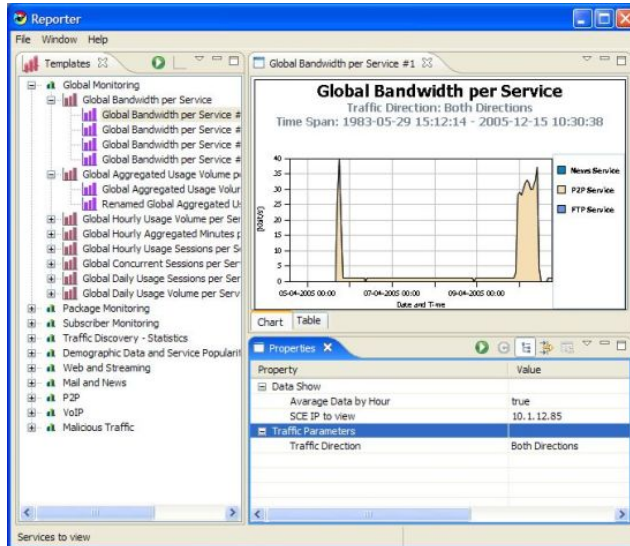
- Step 1** Set Oblique to true when the perspective of a 3D representation so the angle between the x axis and the y axis is always 90 degrees.
- Step 2** Configure settings.

## Configuring Parameters: Example

To configure Average Data by Hour:

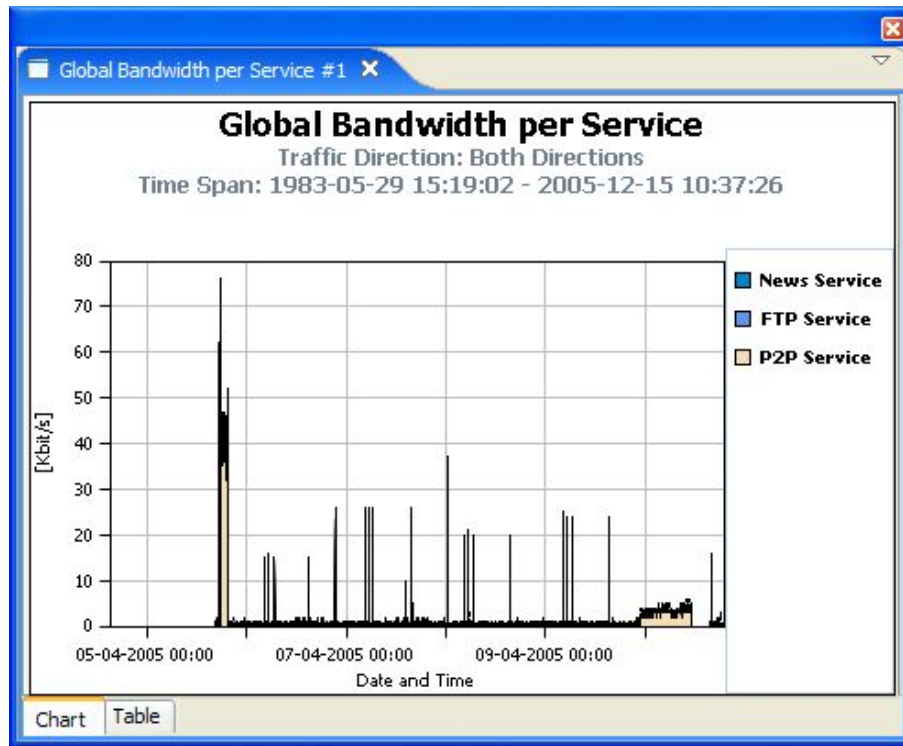
**Step 1** Click the *Report Instance*.

Mandatory parameters are visible in the *Properties View*. In this case, Average Data by Hour, SCE IP to View and Traffic Direction. When any of the parameters is not set, the report cannot be generated.



**Step 2** Configure Average Data by Hour to False.

**Step 3** Select **Menu > Execute** report.



## Accessing On-Line Help

You can access relevant parts of this user guide from the **SCA Reporter**.

To access on-line help:

---

From the **Help** menu, choose **Help Contents**.

On-line help opens in a separate window.

---

You can also search on-line help from within the current tool.

To search on-line help:

---

**Step 1** From the **Help** menu, choose **Search**.

A new area containing a Help tab is added next to the current tool.

**Step 2** Enter a word, phrase, or more complex search expression in the **Search expression** field.

The Go button is enabled.

---

Click >> (**Expand**) for an explanation of how to construct search expressions.

---

**Step 3** Click **Go**.

Help topics containing your search expression are listed under Local Help.

**Step 4** Click on a help topic to view its contents.

---

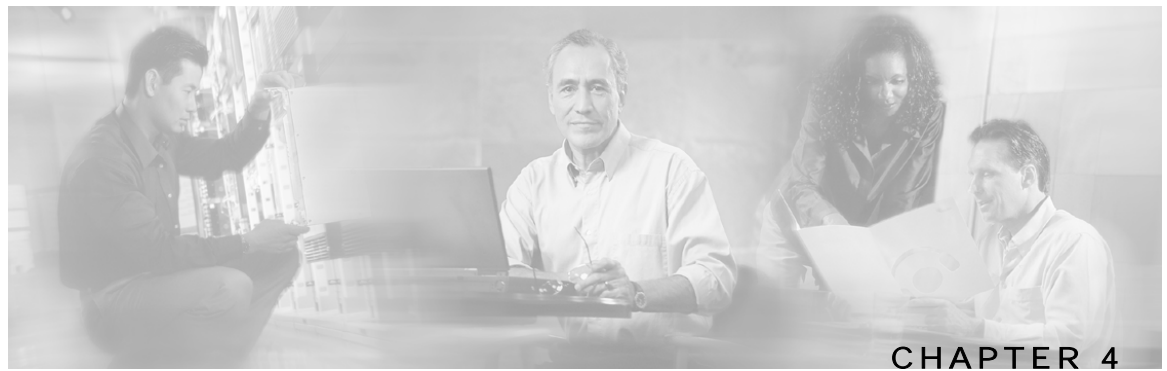
You can bookmark topics for later reference.

---

**Step 5** By clicking the appropriate link at the bottom of the Help tab you can switch to:

- All topics
  - Related topics
  - Bookmarks
-





## Defining the Report

---

This chapter contains the following sections:

- [Creating a New Report Instance](#) 4-2
- [Duplicating an Existing Report Instance](#) 4-3
- [Modifying an Existing Report Instance](#) 4-3
- [Renaming an Existing Report Instance](#) 4-5
- [Deleting a Report Instance](#) 4-7

The **SCA Reporter** supplies templates for a wide variety of reports, such as:

- Global or package hourly or daily usage volume per service
- Top server/clients/protocols/web hosts/email senders/newsgroups
- Subscriber hourly or daily usage volume per service
- Top P2P consumers/uploaders/downloaders/protocols
- Global, package, or subscriber bandwidth per service

The *Properties View* presents all the parameters of the report, both mandatory and non-mandatory, so that you can select the desired values. For example, if you want to see global bandwidth per service, create a new report from the *Templates View* of the **SCA Reporter**. The *Properties View* allows you to specify the desired service(s), traffic direction, and time frame (either start/end time or previous number of hours). For a complete description of all templates (see [SCA Reporter Templates](#) (on page C-1)).

The report is defined in the *Templates View*. When the report is generated, it appears in the *Report View*. The *Properties View* displays the chart display parameters. To view the report instance parameters, go to report instance in the *Templates View*. This shifts the parameters that appear in the *Properties View*. You can duplicate the existing report instance. After that, modify the report instance by adjusting the chart display and report instance parameters. Renaming the original or duplicated report instance helps manage the reports. You can delete the report instance when you no longer require it (See [Properties View](#) (on page 3-11)).

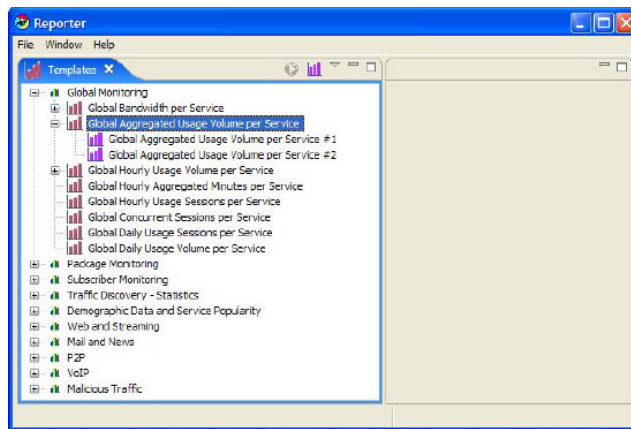
When you create a report, you select the desired report template and then specify values for the various report parameters.

The precise procedure for defining a report varies, depending on the report selected and the number of changes made to the basic report description. Also, the exact steps in selecting specific values for parameters may vary. Therefore, the following example is intended only as a general guide to the process of creating a new report instance.

## Creating a New Report Instance

The following example illustrates defining the "Global Aggregated usage Volume per service" report.

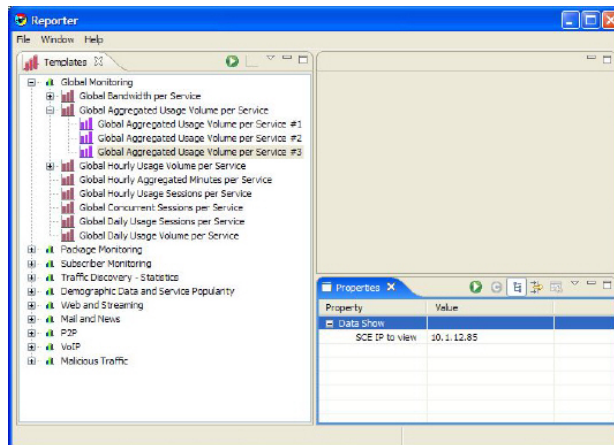
Figure 4-1: Templates View - Initial



To create a new report:

- Step 1** Select from the *Templates View* "Global Monitoring" Group > "Global Aggregated usage Volume per Service" Template > **New**.

A new report instance is displayed and the mandatory parameters appear in the *Properties View*.



- Step 2** Click **Execute**  action.

The report is generated with default values. The *Report View* and the *Properties View* appear.

When mandatory parameters are set, the Chart Display parameters (Look category) appear in the *Properties View*. An error may appear when the mandatory parameters are not all defined.

## Duplicating an Existing Report Instance

You can duplicate an existing report instance. Use this feature when you want to create a report that is very similar to a report you have already defined, rather than starting "from scratch".

To create a duplicate report instance:

---

**Step 1** From the *Templates View*, click on a *Report Instance*.

**Step 2** Click **Menu > Duplicate**.

The report is duplicated.

---

## Modifying an Existing Report Instance

You can locate and then modify an existing Report Definition.

To modify an existing report instance:

---

**Step 1** Do one of the following:

- Select an existing report from the *Report View*, click **Menu > Go to Report**.
- Select a report instance from the *Templates View*.

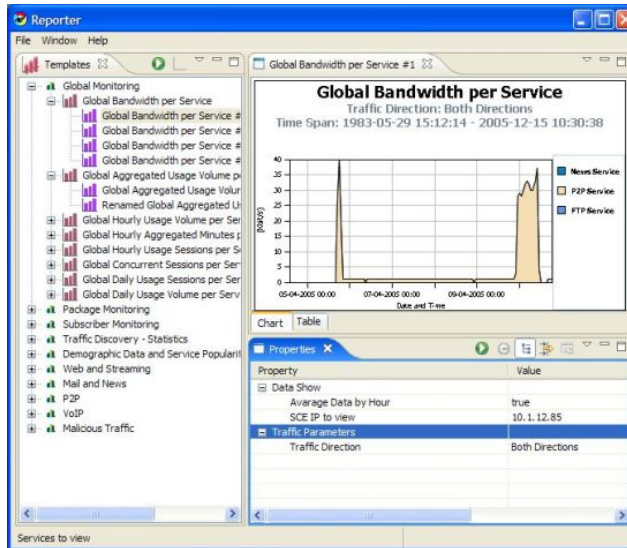
The existing report instance is selected in the *Templates View* and the report instance parameters are displayed in the *Properties View*.

**Step 2** Click **Show Advanced Properties** to view the mandatory parameters or all the parameters.

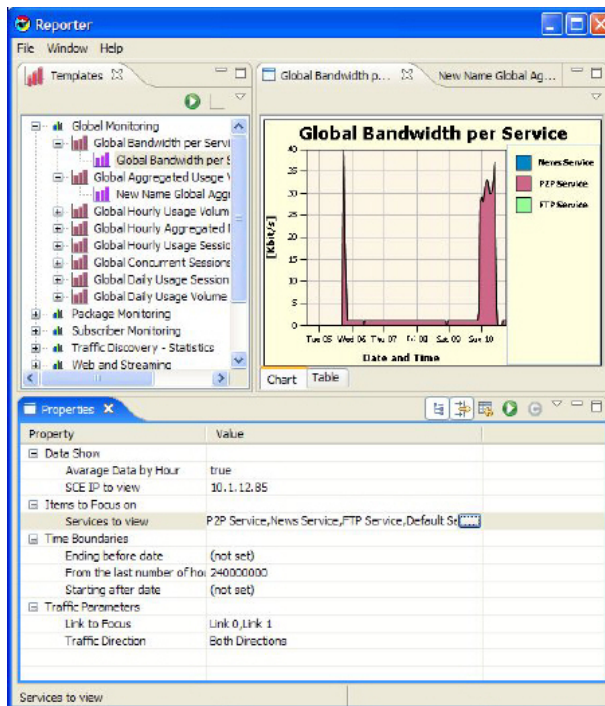
One of the following sets of data is viewed in the *Properties View*.

## Modifying an Existing Report Instance

- Mandatory Parameters.

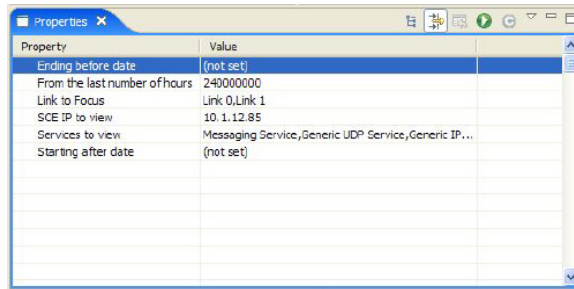


- All of the Parameters.



**Step 3** Click **Show Categories** to view the parameters without the Categories in the *Properties View*.

The Categories are not displayed.



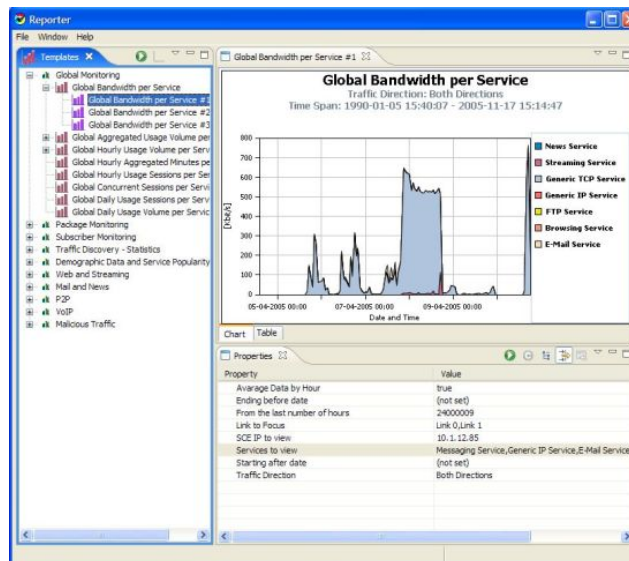
Property	Value
Ending before date	(not set)
From the last number of hours	24000000
Link to Focus	Link 0,Link 1
SCE IP to view	10.1.12.85
Services to view	Messaging Service,Generic UDP Service,Generic IP...
Starting after date	(not set)

**Step 4** Edit the parameters by clicking on the row of the parameter and commit to the changes. Change the Services to view; Uncheck "Generic UDP Service" and "P2P Service" & Check "Service".

The changes are saved for the next time the report is executed.

**Step 5** Click **Execute** .

The report is regenerated and the *Report Views* appears. The Chart Display Parameters are displayed in the *Properties View*.



## Renaming an Existing Report Instance

You can rename an existing report instance. This is useful when the same report is generated on a regular basis. The date or other identifying information can be included in the name of the report.

To rename a report instance:

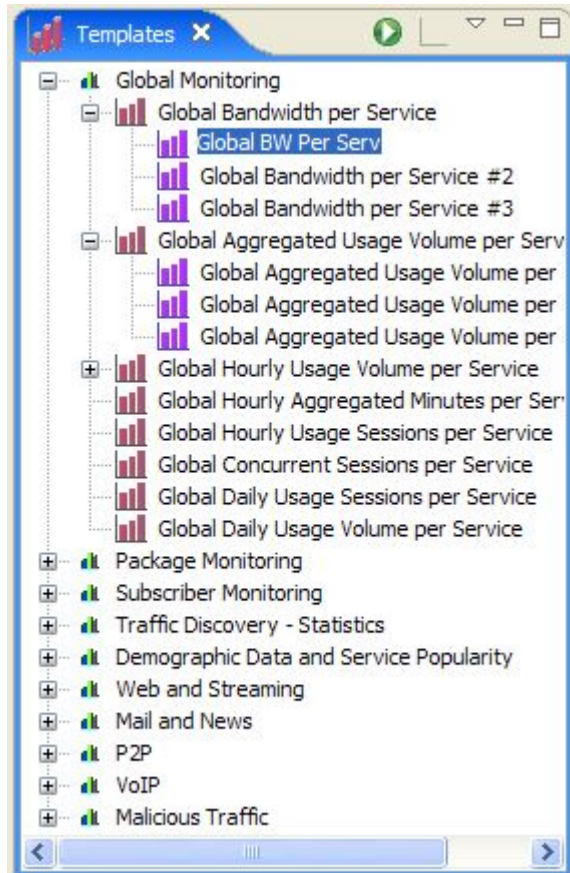
**Step 1** From the *Templates View*, choose a report instance.

## Renaming an Existing Report Instance

The Report Instance is highlighted.

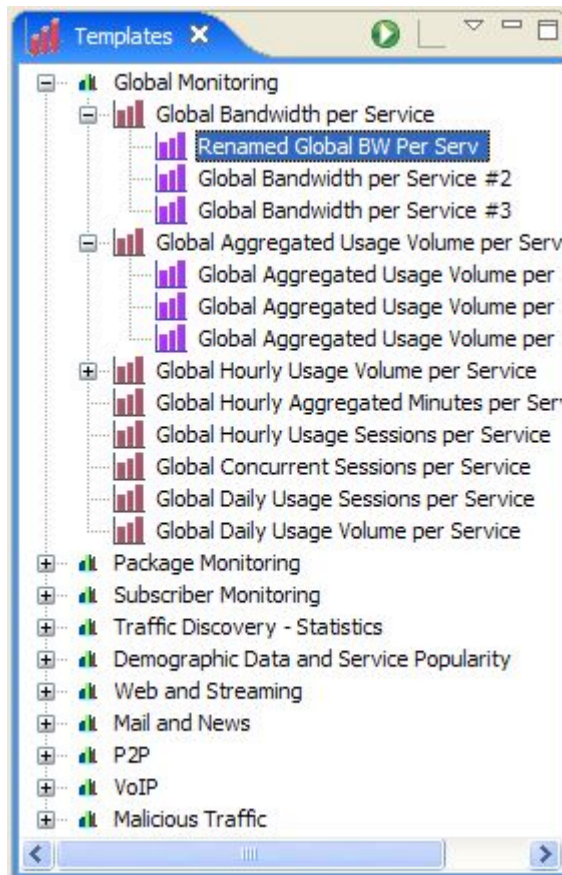
**Step 2** Click **Menu > Rename**.

The Report Instance is highlighted and the Report Instance name can be edited.



**Step 3** Type in a new name and press **Enter**.

The report instance is listed as the new name.



## Deleting a Report Instance

You can delete a report instance.

To delete a report instance:

---

**Step 1** From the *Templates View*, choose a report instance, (or several instances, by using the CTRL key when selecting).

**Step 2** Click **Menu > Delete**.

Each Report Instance is deleted.

---

**Note**

---

You can select several report instances by holding **Control** while clicking them, and then delete them all at once.

---





# Working with Reports

While you use the *Templates View* to define and generate a report, the generated report appears in the *Report View* of the **SCA Reporter**. The report is displayed in chart or tabular form. You can adjust a chart display, save it, and export it to a file.

This chapter contains the following sections:







- [Report Actions](#) 5-1
- [Generating a Report](#) 5-3
- [Viewing Reports](#) 5-5
- [Adjusting Chart Display](#) 5-7
- [Exporting Single or Multiple Reports](#) 5-19

## Report Actions












The Views found on the **SCA Reporter**, display menu items. Some available commonly used actions have icons for easy navigation.




The Actions and their icons, where relevant, are described in the following table.

**Table 5-1** Actions

Action	Icon	Description	Comments
Home		Opens <i>Welcome View</i>	
Navigate to Previous Topic		When displayed, supports navigation to previous topic.	Preferences dialog.
Navigate to Next Topic		When displayed, supports navigation to next topic.	Preferences dialog.
Minimize		Minimizes View.	Common to all Views.
Restore		Restores View.	Common to all Views.
Maximize		Maximizes View.	Common to all Views.

## Report Actions

Action	Icon	Description	Comments
Close		Closes View.	Common to all Views -  Red when curser is on it.
Menu		Displays all the available actions for the View.	Common to all Views - Has different Actions depending on the View.
Execute		Generates the selected report.	<i>Properties and Templates View.</i>
New or Report (From Legend)		Creates new Report Instance.	<i>Templates View</i> - When Report Template is selected, the icon is new. <i>Report View</i> - When Legend Item right clicked, Subset of Template Groups and Templates View appears, choose template & click ok, then the report instance is created (modified)  may appear when New Report not available for instance, when Template Group is selected instead of Template.
Refresh		Refreshes <i>Templates View</i> so only the Report Groups are displayed	<i>Templates View.</i>
New Cmd		Opens a Window with CLI for the report.	<i>Templates View</i> - The CLI commands are placed on the clipboard and can be pasted on the Notepad and edited and then executed from Shell or Command Prompt.
Delete	No Icon	Deletes the report.	<i>Templates View.</i>
Duplicate	No Icon	Creates a copy of the report instance.	<i>Templates View.</i>
Rename	No Icon	Highlights the report instance so you can rename it.	<i>Templates View.</i>
Show Categories		Toggles between displaying parameters with and without categories.	<i>Properties View.</i>
Show Advanced Properties		Toggles between displaying mandatory parameters and all parameters.	<i>Properties View.</i>
Restore Default Value		Restores parameter default value.	<i>Properties View</i> - Default values can be a value or "not set". Mandatory parameters have a value. Default values of non-mandatory parameters may have the value "not set".
Go to Report	No Icon	Navigates from selected Report in Report View to Report Instance in Template View.	<i>Report View.</i>

Action	Icon	Description	Comments
Export Raw Data	No Icon	Opens browsers to save the report data.	<i>Report View.</i>
Show List		Indicator that there are many reports that have been executed. When you click, those reports are listed.	<i>Report View</i> - To display a report, choose from the bold reports. the number refers to how many reports are not in view. In this example there are 3.
Preferences	No Icon	Dialog appears for choosing preference for whether to show system tasks or not. Sleeping (waiting) tasks are shown in both cases.	<i>Progress View</i>  - Icon which appears when there are system tasks running.
Remove All Finished Tasks		Removes all tasks.	<i>Progress View.</i>

## Generating a Report

You can generate a report that has already been defined. The reports are found in the *Templates View*. You can duplicate, modify, rename or delete the reports (See [Defining the Report](#) (on page 4-1)). You can also generate multiple reports, put the process in the background, and continue working on other reports.

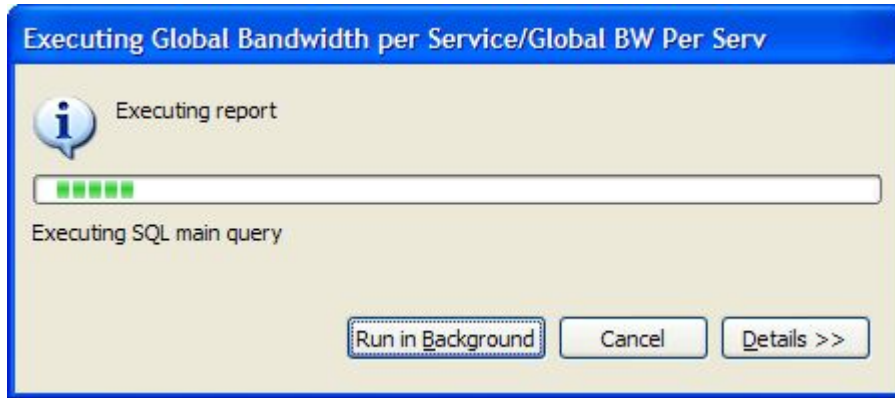
To Generate a Report When Report Instance is selected:

- 
- Step 1** From the *Templates View*, click on a Report Instance.  
The report instance parameters are displayed in the *Properties View*.
- Step 2** Click **Execute**.  
The report is re-generated and appears in the *Report View*.
- 

To generate Multiple Reports:

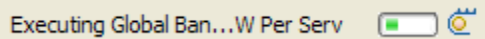
- 
- Step 1** From *Templates View*, select the Report Instances while pressing **Control**.  
The selected report instances are highlighted.
- Step 2** Click **Execute**.

Progress dialog appears while reports are being generated.



**Step 3** Do one of the following:

- Wait until tasks end while viewing system task status at the bottom right corner of the Reporter.



- Click **Details**.



The status of all the reports that are being generated is displayed.

- Click **Run in Background**.

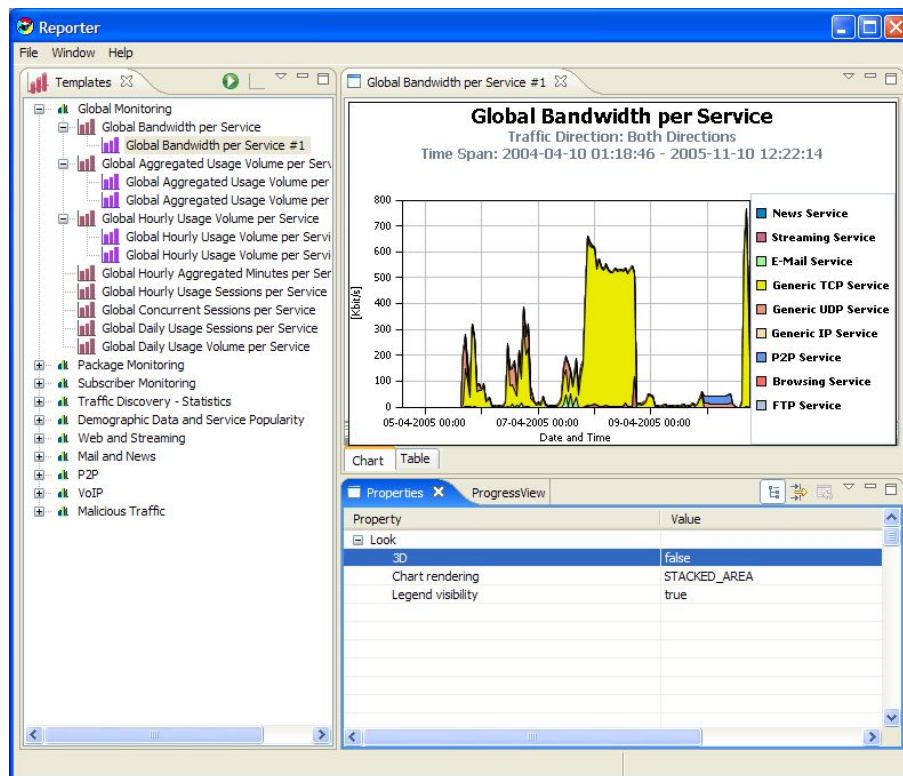
The reports continue running in the background. When the system completes the tasks, the reports are displayed in the *Report View*.



**Note** It is possible to interrupt a running report by clicking **Cancel** in its *Progress View*. It sometimes takes a while for the Database Server to acknowledge a cancel request, but you can still move the cancelled report to the background and continue your work uninterrupted.

## Viewing Reports

There are two possible ways of viewing reports in the *Report View*; chart and table. Click the appropriate tab located on the left side of each report to select the desired view.



## Viewing Reports

The screenshot shows the Reporter application interface. On the left is a tree view of report templates. The main window displays a table titled "Global Bandwidth per Service #1". Below the table is a Properties pane with a "Look" section.

timeslot	BANDWIDTH	SERVICE
Mon Apr 04 14:00:00 GMT+02:00 2005	0	News Service
Tue Apr 05 15:00:00 GMT+02:00 2005	0	Streaming Service
Tue Apr 05 16:00:00 GMT+02:00 2005	0	E-Mail Service
Tue Apr 05 16:00:00 GMT+02:00 2005	12	Generic TCP Service
Tue Apr 05 16:00:00 GMT+02:00 2005	197	Generic UDP Service
Tue Apr 05 16:00:00 GMT+02:00 2005	0	Generic IP Service
Tue Apr 05 16:00:00 GMT+02:00 2005	0	P2P Service
Tue Apr 05 16:00:00 GMT+02:00 2005	1	Browsing Service
Tue Apr 05 16:00:00 GMT+02:00 2005	0	FTP Service
Tue Apr 05 17:00:00 GMT+02:00 2005	27	P2P Service
Tue Apr 05 17:00:00 GMT+02:00 2005	4	Browsing Service
Tue Apr 05 17:00:00 GMT+02:00 2005	0	FTP Service
Tue Apr 05 17:00:00 GMT+02:00 2005	2	E-Mail Service
Tue Apr 05 17:00:00 GMT+02:00 2005	0	Streaming Service
Tue Apr 05 17:00:00 GMT+02:00 2005	144	Generic TCP Service
Tue Apr 05 17:00:00 GMT+02:00 2005	105	Generic UDP Service
Tue Apr 05 17:00:00 GMT+02:00 2005	0	Generic IP Service
Tue Apr 05 18:00:00 GMT+02:00 2005	97	Generic TCP Service
Tue Apr 05 18:00:00 GMT+02:00 2005	30	Generic UDP Service
Tue Apr 05 18:00:00 GMT+02:00 2005	0	Streaming Service

The Properties pane shows the following settings:

Property	Value
3D	false
Chart rendering	STACKED_AREA
Legend visibility	true

The table is useful for locating specific information.

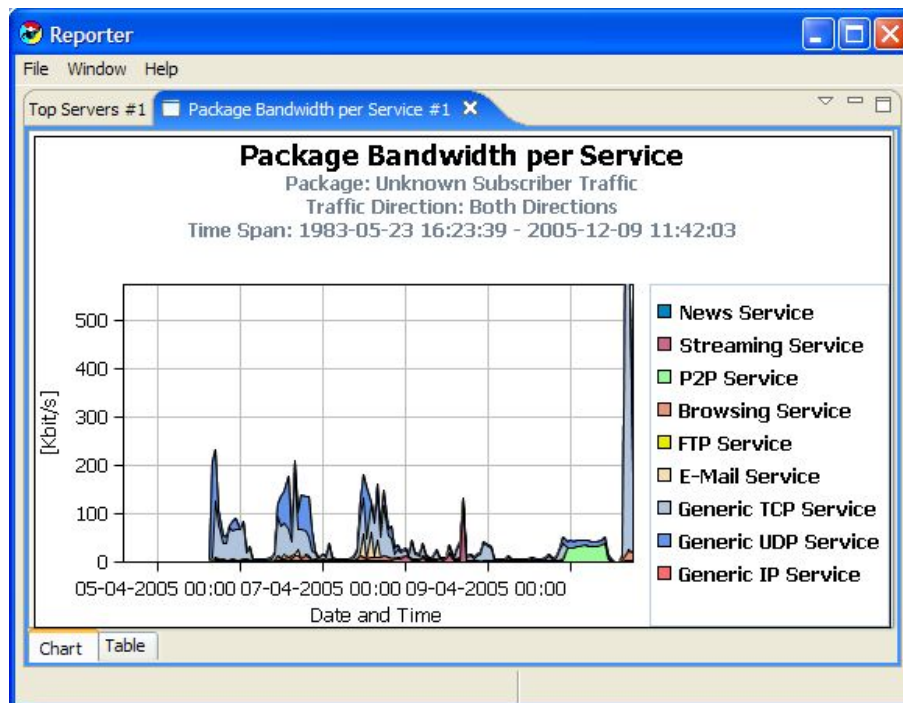
## Adjusting Chart Display

You can change the appearance and type of any report chart by modifying chart display parameters, such as 3D and chart rendering. Some other possibilities for changing the appearance are the following:

- Dragging the legend to a different spot in the report.
- Hiding the legend, while the graph remains the same.
- Hiding items from the legend, causing the corresponding part of the graph to be removed from view.
- Zoom in or out, drag the graph so that the desired section is in focus.

To adjust the chart display:

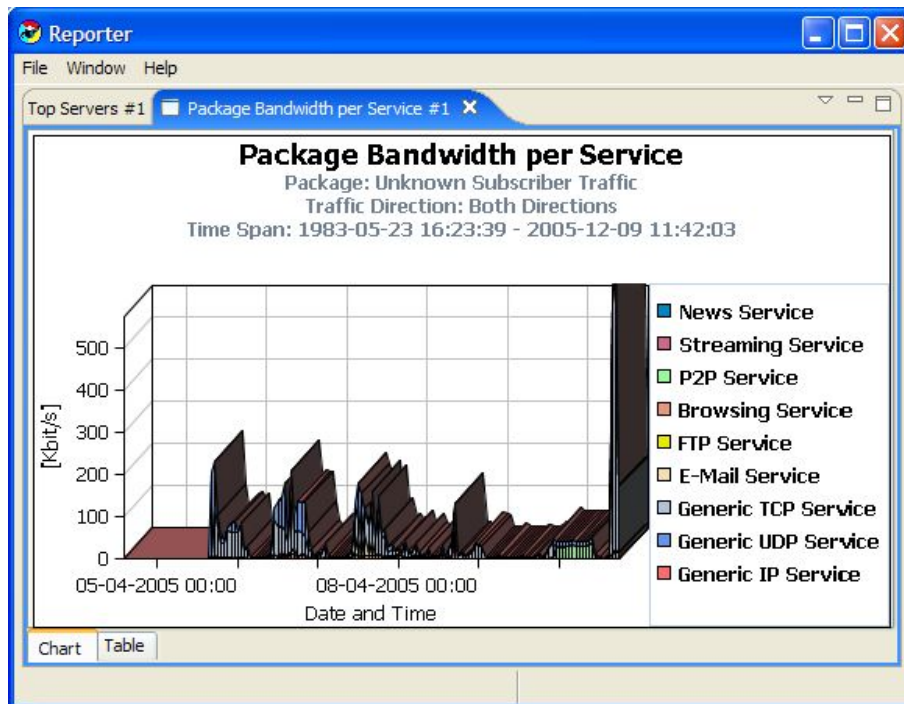
### Step 1 Select a Report.



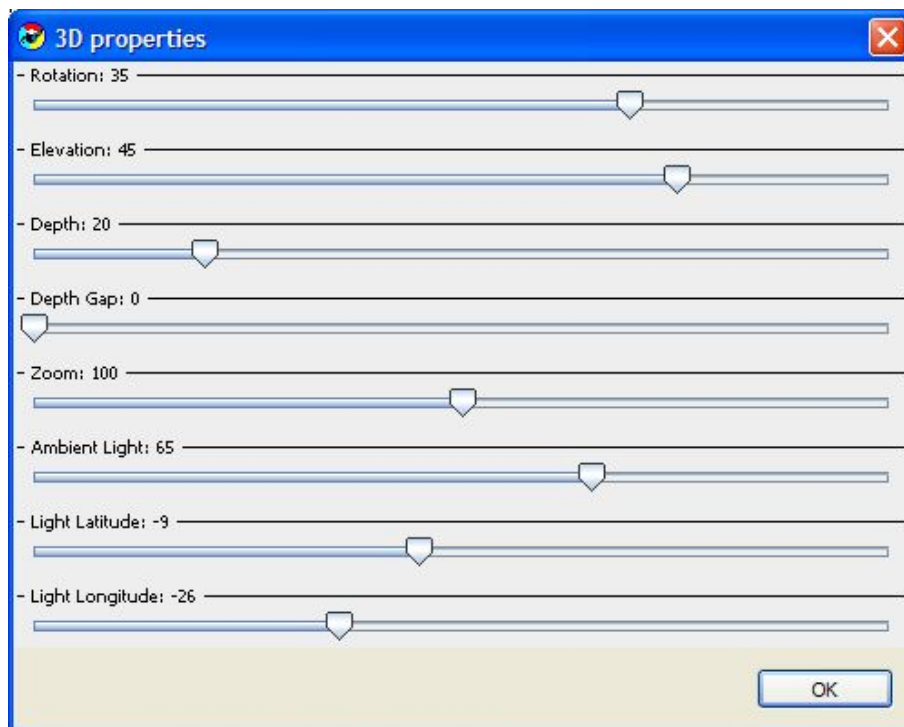
## Adjusting Chart Display

**Step 2** Configure the Chart Display parameters by changing 3D from false to true.

The chart display adjusts to display a 3D chart and the Look/3D category appears in the *Properties View*.

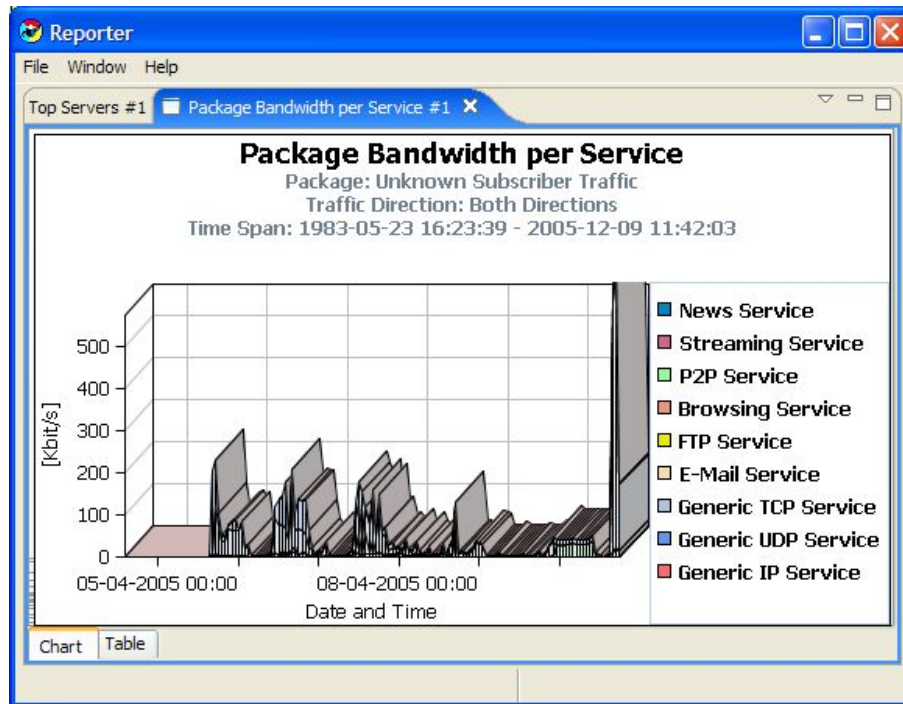


**Step 3** Click on Settings parameter and then click on box on the side.





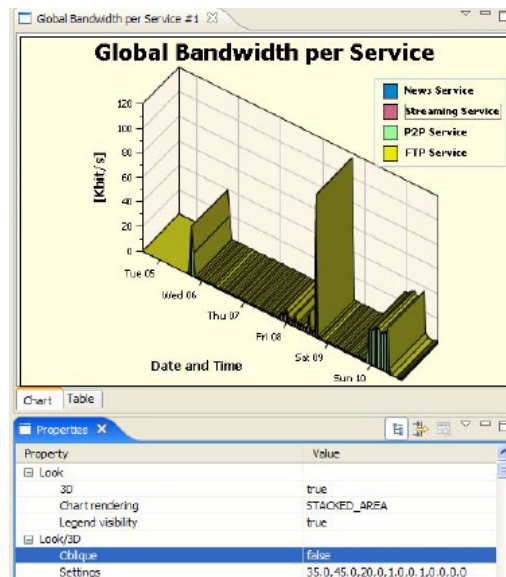
**Step 4** Move the Ambient Light sliding scale to the right, to lighten the graph.



To adjust the 3D Properties and view outcome:

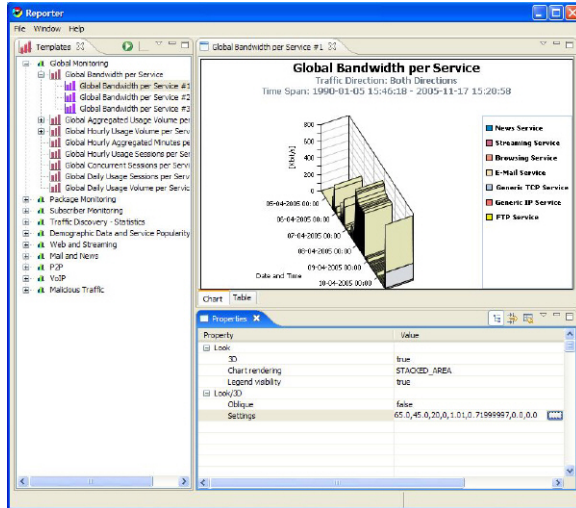
**Step 1** Change Chart Display parameter, Oblique to false.

The angle between the x and y axes is changed from 90 degrees.

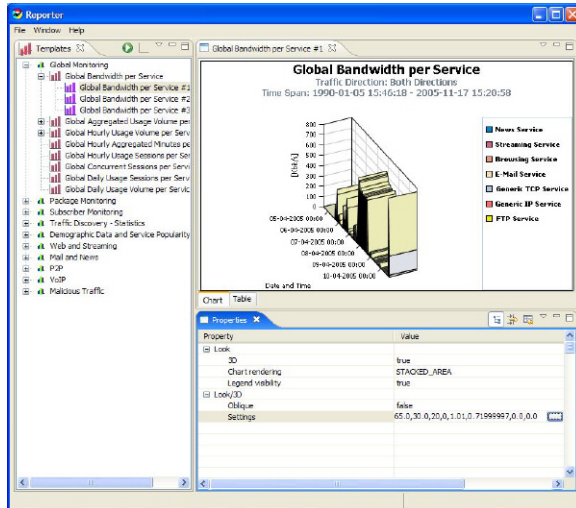


## Adjusting Chart Display

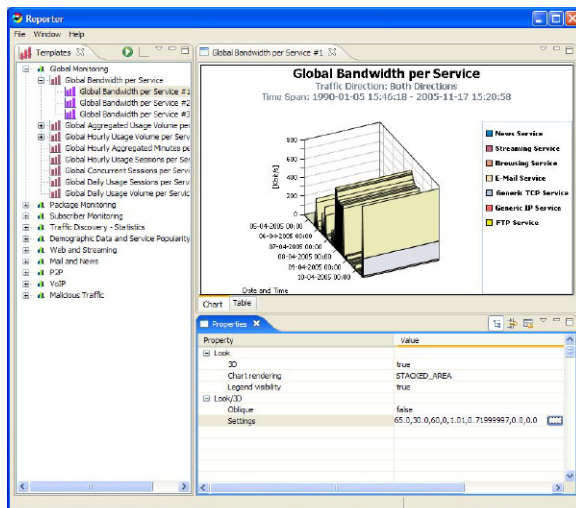
**Step 2** Change "Rotation" sliding scale in the Settings parameter from 35° to 65° and click **OK**.



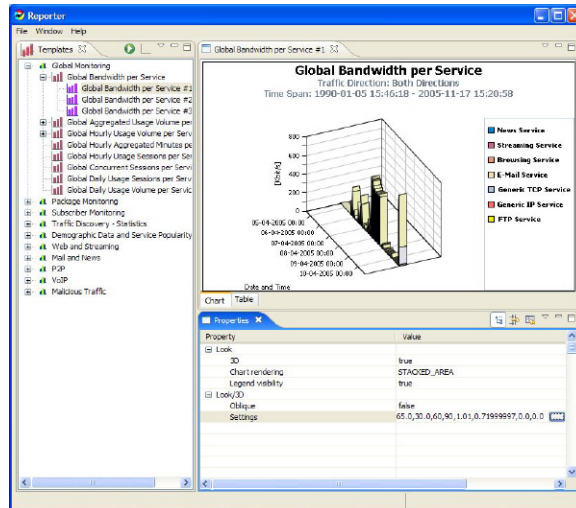
**Step 3** Change Elevation from 45° to 30° and click **OK**.



**Step 4** Change Depth from 20 to 60 and click **OK**.

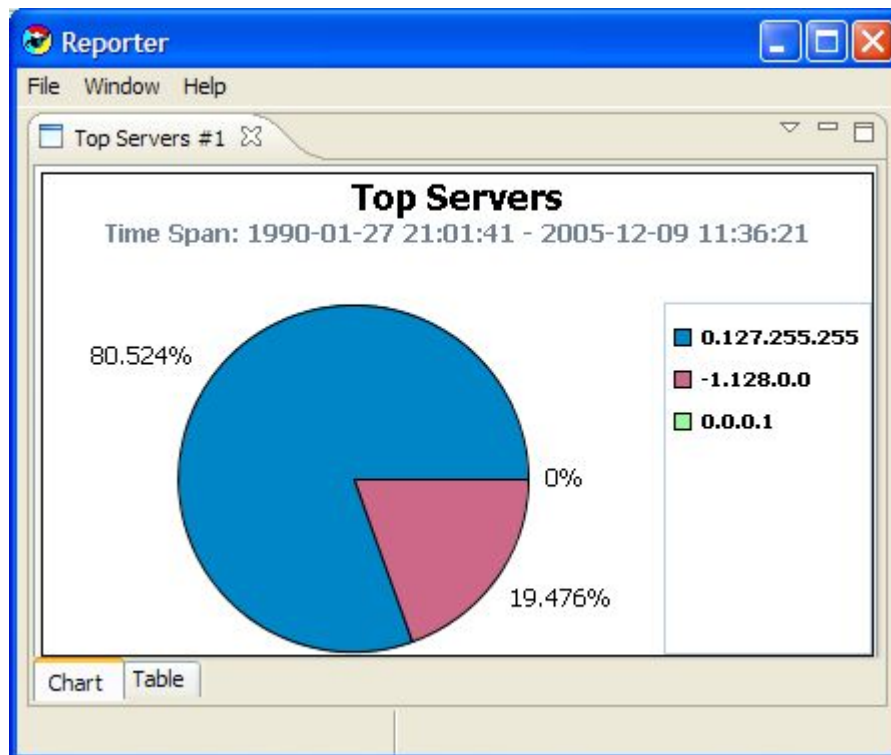


**Step 5** Change Depth Gap from 0 to 90 and click **OK**.



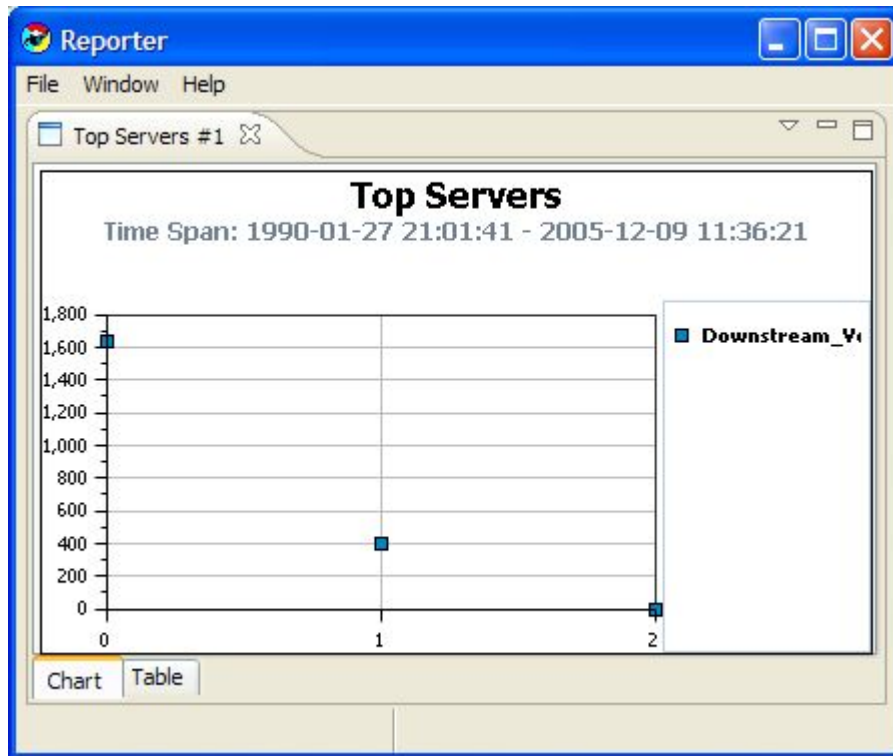
To Choose Type of chart:

**Step 1** Set Chart Display parameter, Chart rendering to Pie Chart.



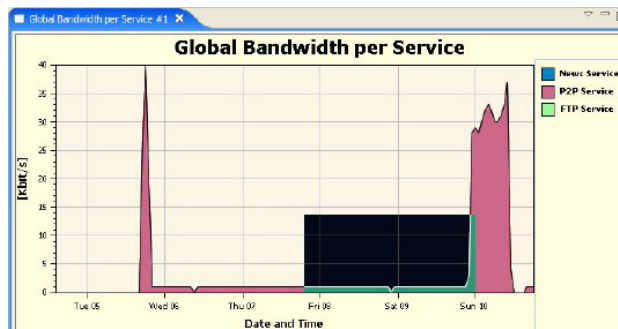
## Adjusting Chart Display

**Step 2** Set Chart Display parameter, Chart rendering to Scatter.

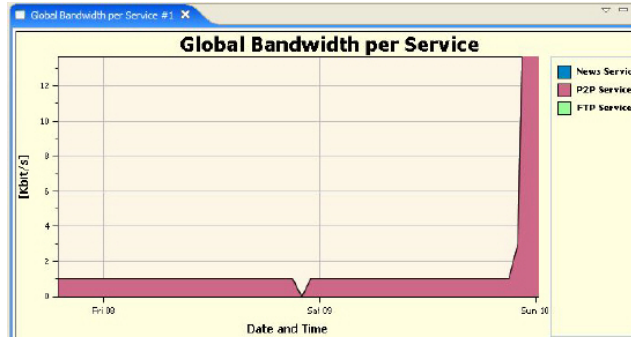


To Zoom-In - 2D graph:

Mark off a rectangle by dragging the mouse over the chart.



A plus icon appears and the view zooms in.

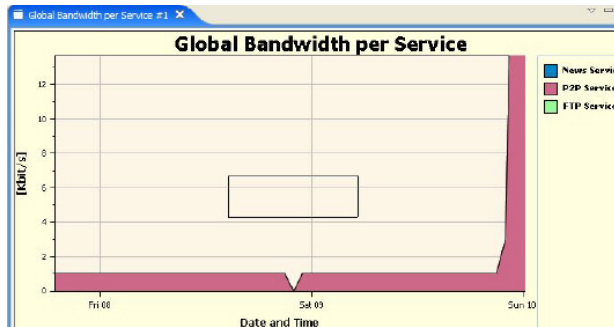


**Note** When a small rectangle is marked, the zoom in is a large magnification. When a large rectangle is marked, the magnification is relatively small.

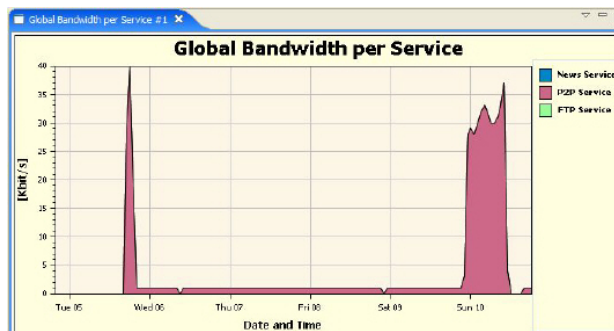
To Zoom Out - 2D graph:

Mark off a rectangle by dragging the mouse over the chart while holding **Shift**.

A minus icon appears and the view zooms out.



The graph zooms out.

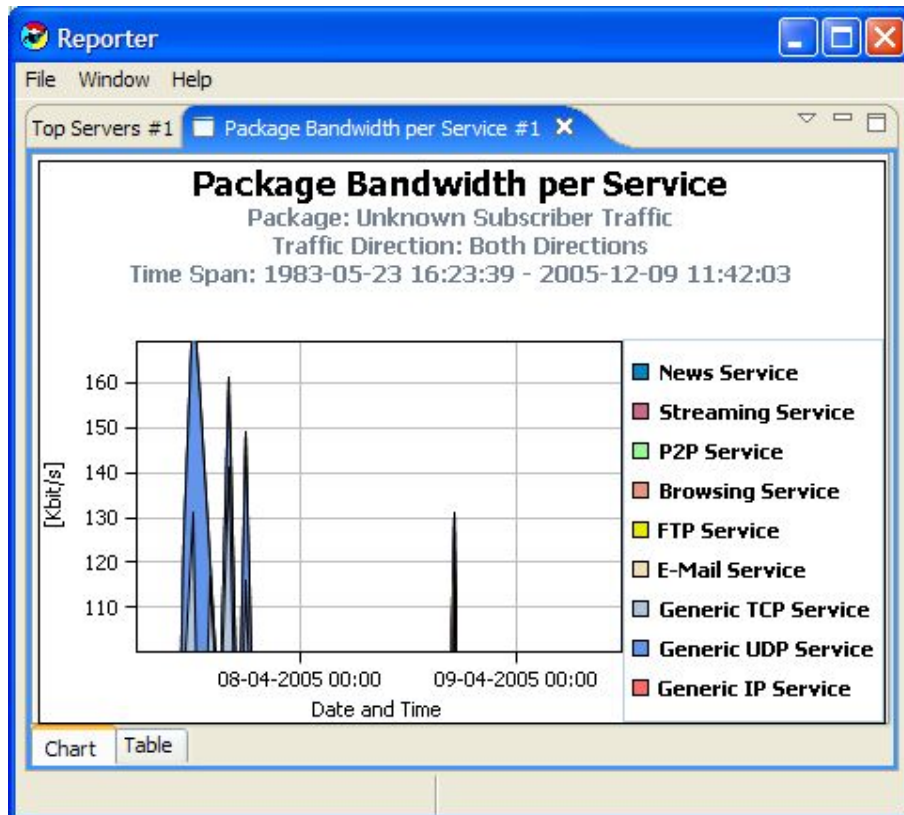




**Note** Zooming works similarly for 3D.

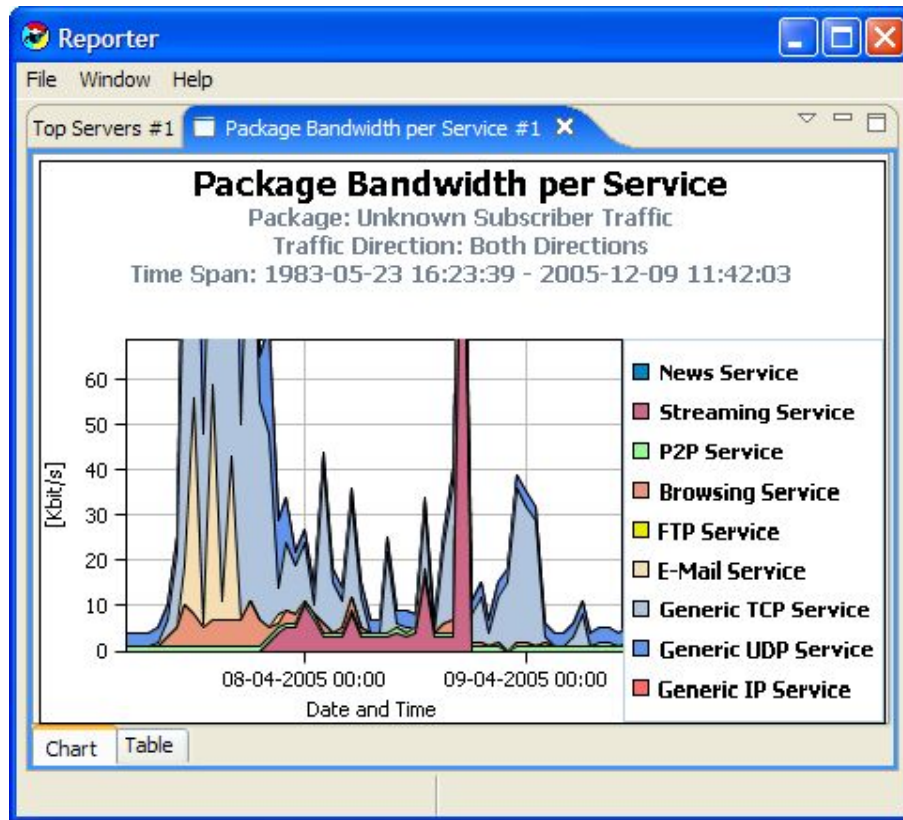
To Drag the Graph:

**Step 1** Zoom in to the top part of a chart.



**Step 2** To move the chart down, right click, while dragging the chart.

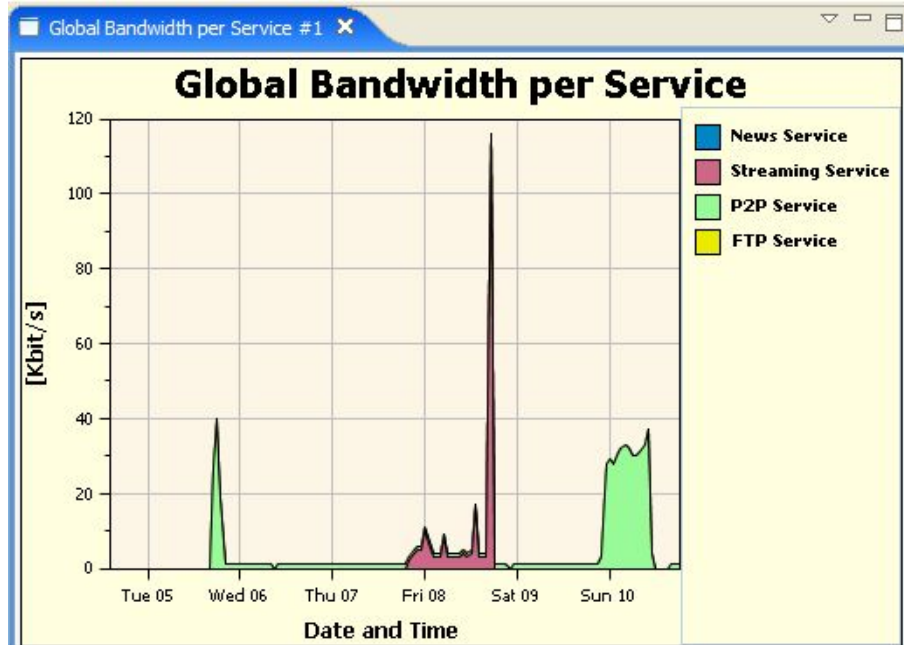
The graph moves up and the bottom of the chart is viewed.



## Adjusting Chart Display

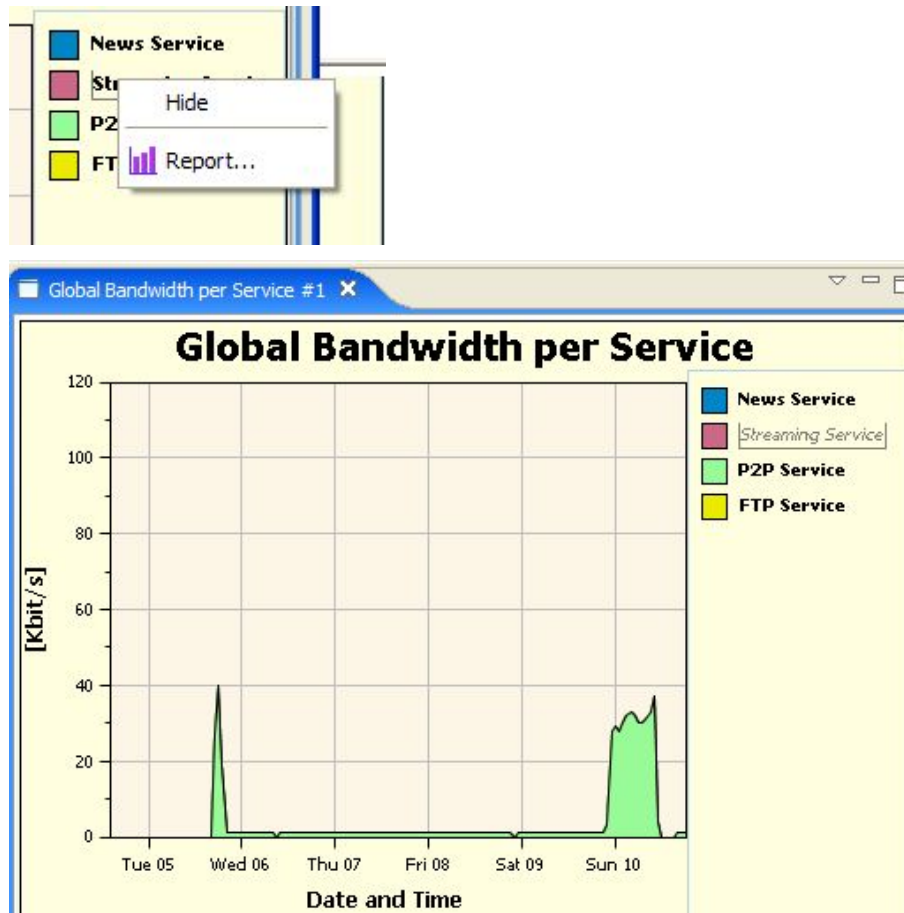
To Hide Services:

Right Click on the "Streaming Service" in the legend and choose **Hide**.





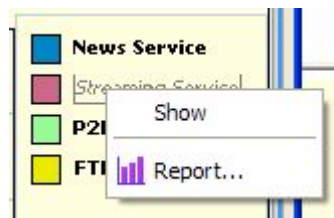
The service is dimmed out and the service is removed from the chart.



To Show Services that have been Hidden:

**Step 1** Right Click on the "Streaming Service" in the legend and choose **Show**.

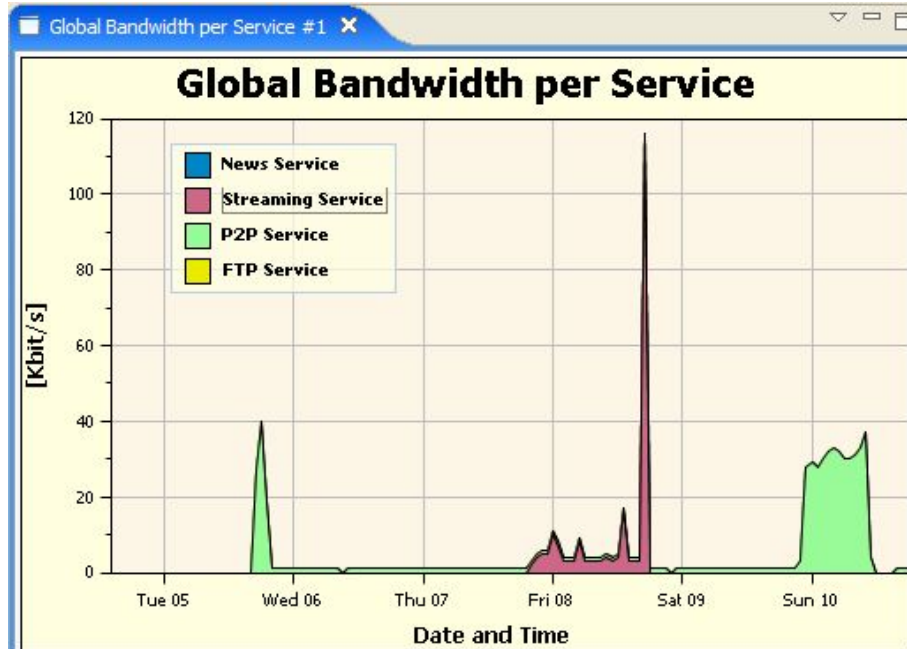
The service re-appears on the chart and in the legend.



## Adjusting Chart Display

To Move Legend:

**Step 1** Right click on the area where the legend is located, while dragging.



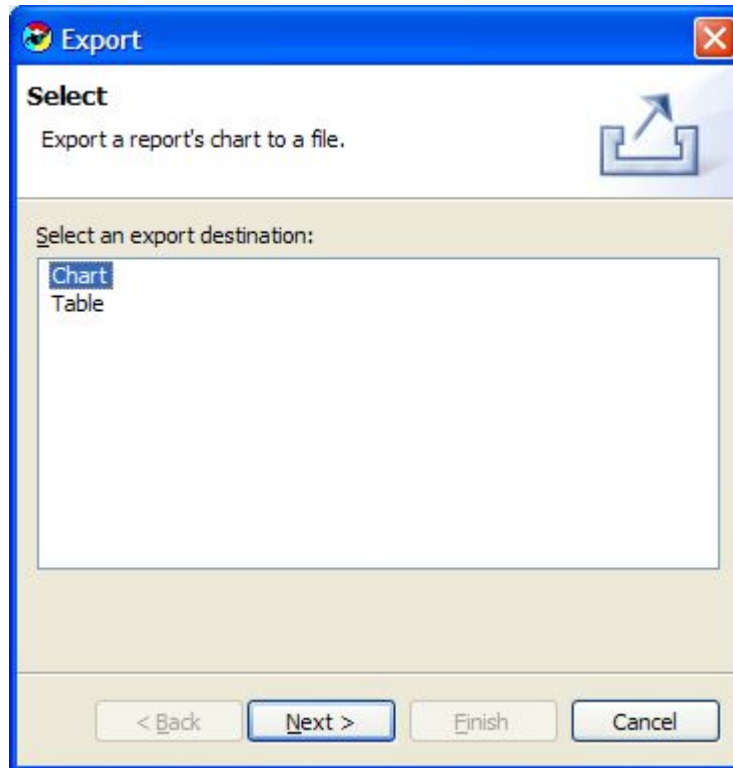
**Note** Particular legend items are displayed in the same color each time the Reporter is run.

## Exporting Single or Multiple Reports

Use this option to export charts to most graphic formats. This option can also be used to export tables to csv or quoted csv format, which can be opened as spreadsheets. Multiple reports are exported by checking the reports in the dialog box of the wizard.

To export a report chart or table:

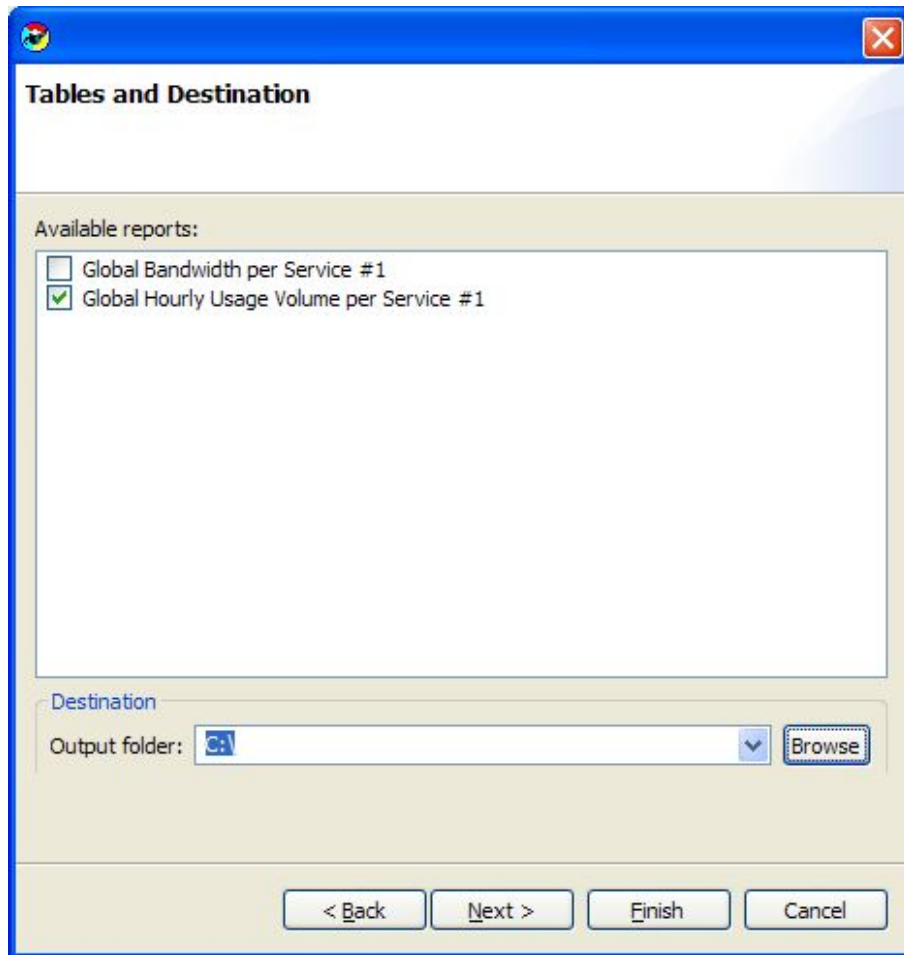
**Step 1** After executing one or more report, click **File > Export**.



**Step 2** Choose Chart or Table.

**Step 3** Click Next.

**Step 4** Check one or more of the Available Reports.



**Step 5** (Optional) Change the default destination directory in the Output folder field.

**Step 6** Click **Next**.

**Step 7** Do one of the following:

- (For Chart) Choose File type: jpeg or png, and configure Image width and height in pixels.
- (For Table) Choose CSV or quoted CSV.

Chart Format:

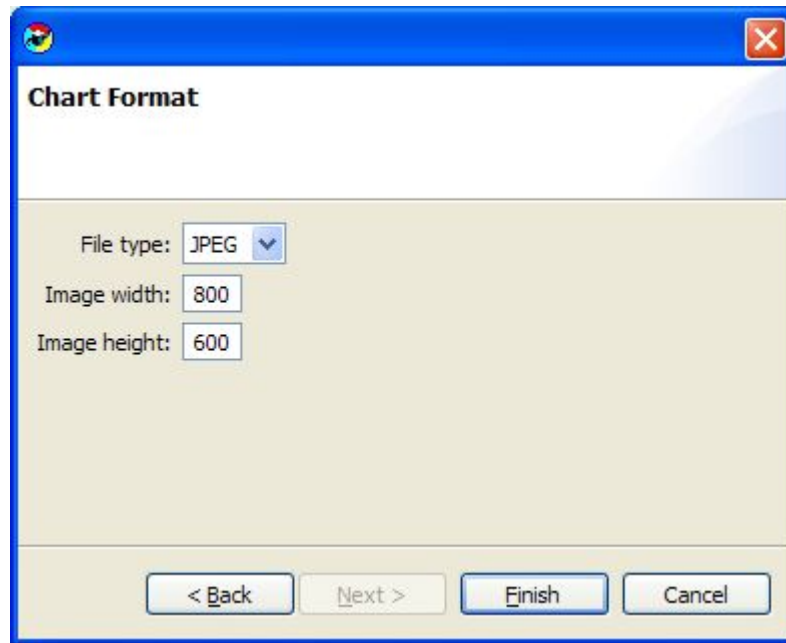
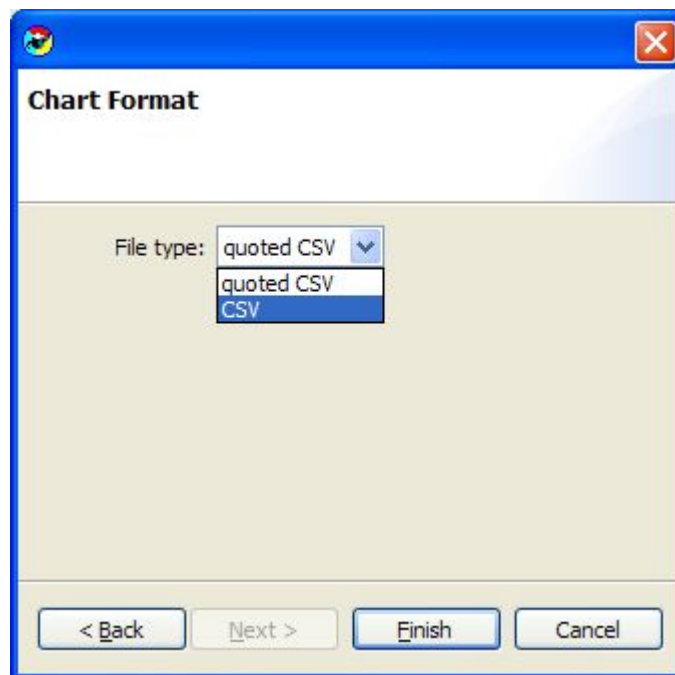


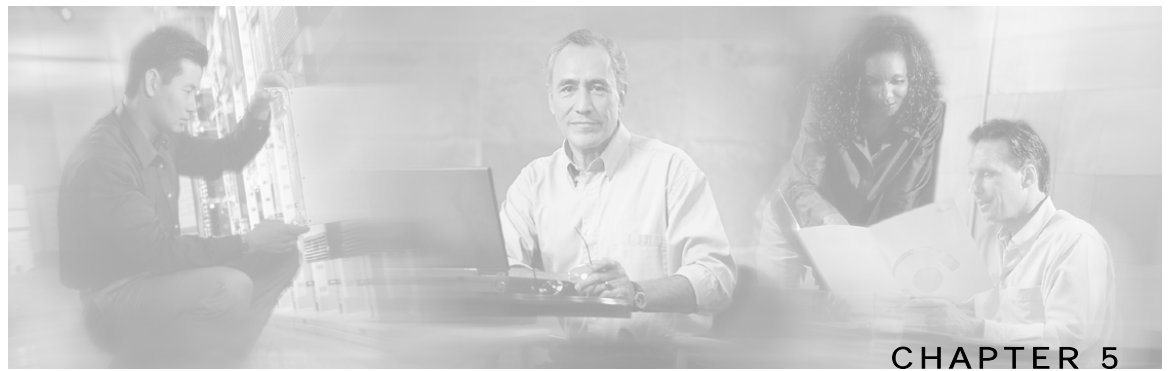
Table Format:



**Step 8** Click **Finish**.

Each file is created and saved in the output folder configured.





# Command-Line Interface

---

This chapter describes the various ways of using the Service Control Reporter Command-Line Interface (CLI) for executing the **SCAS Reporter** features, including the syntax, switches, and options of the application.

This chapter contains the following sections:

- [Overview of Reporter Command-Line Interface 6-1](#)
- [Syntax and Usage 6-1](#)

## Overview of Reporter Command-Line Interface

The Reporter Command-Line Interface (CLI) is based on a command-line application that complements the functionality of the **SCA Reporter** GUI. The CLI provides capabilities and flexibility beyond that of its **SCA Reporter** GUI counterpart and can be integrated into third-party applications to generate usage and statistical based output. A report must first be executed to verify that the report is satisfactory. Since the CLI utilizes the name of the report instance that is generated by the GUI. Once the initial report is generated, you can change the parameters without using the GUI.

## Syntax and Usage

The **SCA Reporter** is an application that can be executed as a command-line version which accepts input passed as parameters. Once a report is generated, click **Menu > Show Cmd** in the *Templates View* to create the initial CLI Command with the name of the report. The database information and the SCE IP parameters are included along with the configured parameters for the report instance.

The command is automatically copied to the clipboard so you can paste in a command file shell or in a command window to be executed with some minor changes. For automated reporting other switches are added. For example, the filename to save the data and the format that it is to be saved are not included in the CLI for this report. The format would indicate if the report is to be in graphic (jpeg) or tabular (csv) form.

Also not all parameters that exist in the original report are included in the "params" switch. When a parameter is not specifically listed in the CLI invocation, the value is taken from the report from which the command is based.

## Command-Line Usage

The following is an example of a command line for invoking the **SCAS Reporter** application:

```
reportercmd -report "Global Bandwidth per Service #1" -dbdriver
"com.mysql.jdbc.Driver" -dburl
"jdbc:mysql://127.0.0.1:3306/apricot" -dbuser "pqb_admin" -
dbpassword "pqb_admin" -policysce "10.1.12.85" -params
"numhours=240000000;seip=10.1.12.85;avgdata=true;link=Link 0,Link
1;trafficdir=Both Directions;services=Messaging Service,Generic UDP
Service,Generic TCP Service,News Service,FTP Service,Browsing
Service,Default Service" -o "myfile" -format "jpeg"
```

The following are the switches for the non-parameter arguments that must be added:

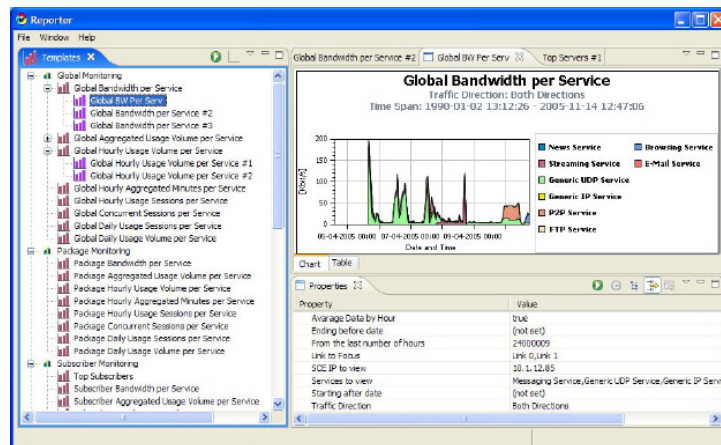
**-o "filename" -format "jpeg or csv"**

To Generate Reporter Commands:

**Step 1** Select a *Report Instance* and execute the report from the *Templates View*.

The report is generated.

**Step 2** (Optional) Reconfigure report instance and chart display parameters so you have a satisfactory report instance on which to base your CLI.



**Step 3** Select **Menu > Show Cmd.**



**Step 4** Click **OK**.

The command with all the switches and parameters, is placed on the clipboard.



**Step 5** Do one of the following:

- Open a file from which to execute the Command from Shell and save the file in the Reporter directory.
- Open a Command Window from which to execute the CLI command and change the directory to the Reporter directory.

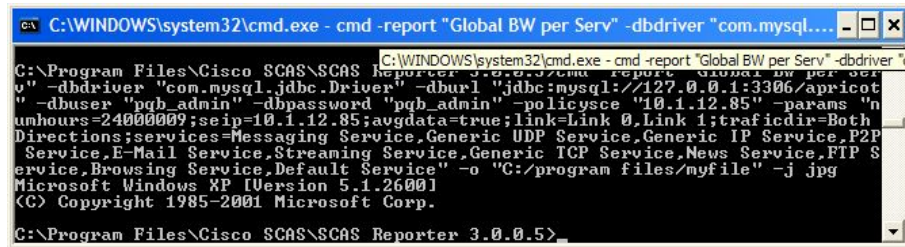
**Step 6** Paste the clipboard contents.

The command is pasted in the file or in the Command line.

**Step 7** Add the following mandatory flags:

- `-o "filename"`
- `-format "jpeg or csv"`

**Step 8** Change parameters as required. For example you may want to change the "numhours" parameter.



```
C:\WINDOWS\system32\cmd.exe - cmd -report "Global BW per Serv" -dbdriver "com.mysql.jdbc.Driver" -dburl "jdbc:mysql://127.0.0.1:3306/apricot" -dbuser "pqb_admin" -dbpassword "pqb_admin" -policysce "10.1.12.85" -params "numhours=24000009;seip=10.1.12.85;avgdata=true;link=Link 0.Link 1;trafficdir=Both Directions;services=Messaging Service,Generic UDP Service,Generic IP Service,P2P Service,E-Mail Service,Streaming Service,Generic TCP Service,News Service,FTP Service,Browsing Service,Default Service" -o "C:/program files/myfile" -j jpg
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Program Files\Cisco SCAS\SCAS Reporter 3.0.0.5>
```

**Step 9** Execute the command for automated reporting.

The exported file is saved in the defined directory with a time stamp appended to the name of the report.

## Command-Line Switches

The following are switches in the command line for invoking the SCAS Reporter application:

- `-report`
- `-dbdriver`
- `-dburl`
- `-dbuser`
- `-dbpassword`
- `-policysce`
- `-params`
- `-o`
- `-format`

## Command-Line Options

The following table describes the options of the command line for invoking the **SCA Reporter** application:

**Table 6-1** Command-Line Options for SCA Reporter Application

Option	Action by SCA Reporter	Comments
<code>-report "report-name"</code>	Generates report using report-name.	Use this parameter when generating a report from one of the Report Instances.
<code>-dbdriver "db-driver"</code>	Driver for the database.	Same database that is configured in the SCA Reporter.
<code>-dburl "db-url"</code>	URL for the database.	
<code>-dbuser "db-user"</code>	User for the database.	
<code>-dbpassword "db-password"</code>	Password for the database.	
<code>-policysce "IP of SCE for policy data"</code>	(Required) Configuration of IP of SCE for policy data of Templates.	Same IP of SCE for policy data that is configured in the SCA Reporter.
<code>-params "numhours=,..."</code>	Parameter from Properties View.	When a particular parameter is not listed, the default value is used.
<code>-o "filename"</code>	(Required) Name of file to which to direct output.	If the filename already exists, the original file is overwritten.
<code>-format "jpeg"</code>	(Required) Generates report as a chart or table in the specified report-format.	-format "csv" used in spreadsheets for table data.



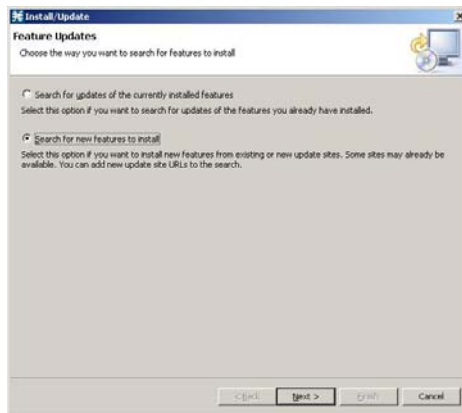
# Installing and Upgrading SCA Reporter Templates

This chapter describes the how to install and upgrade **SCA Reporter** Templates.

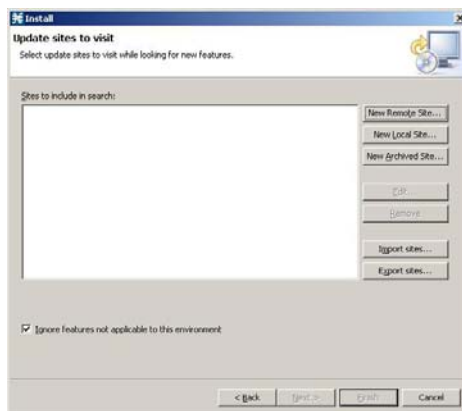
## Installing the Reporter Templates

To install the Reporter Templates:

### Step 1 Select **Help > Find and Install**.



### Step 2 Check "Search for new feature to install" and select **Next**.

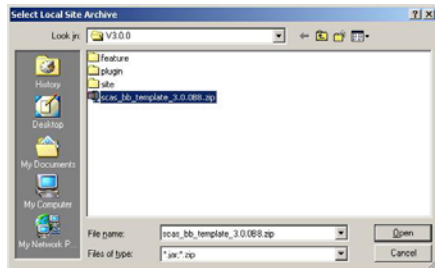


## Installing the Reporter Templates

**Step 3** Press **Next**.

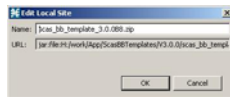
**Step 4** Press "New archived site..." and browse for the site distributed with the release.

The file is highlighted in the browser. The file is according to the naming convention; SCAS\_bb\_template\_B<build>.zip. For example, the file may be named SCAS\_bb\_template\_3.0.0B8.zip.

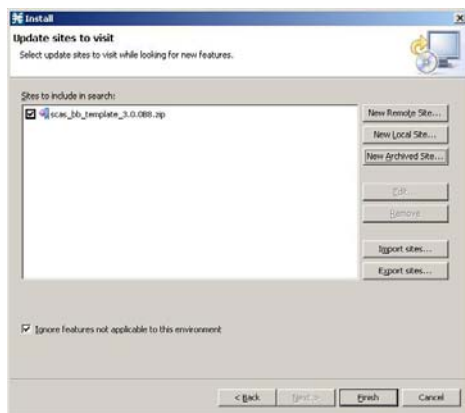


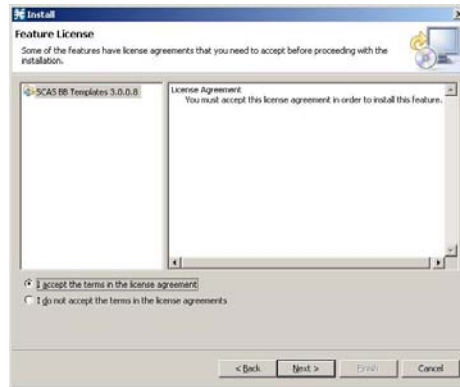
**Step 5** Select the zipped file and press **Open**.

"Edit Local Site" dialog appears with the zip name and the URL with the content.

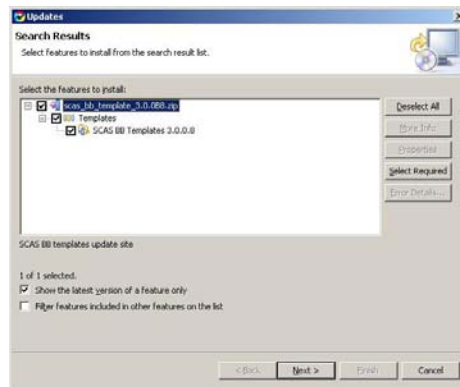
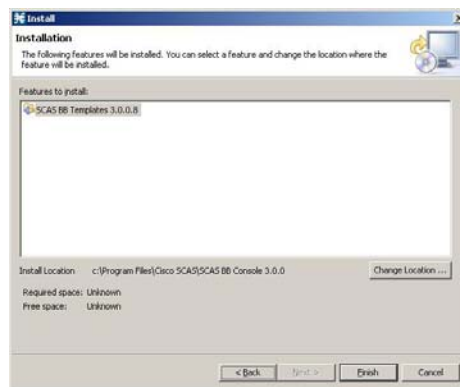


**Step 6** Press on **OK**.

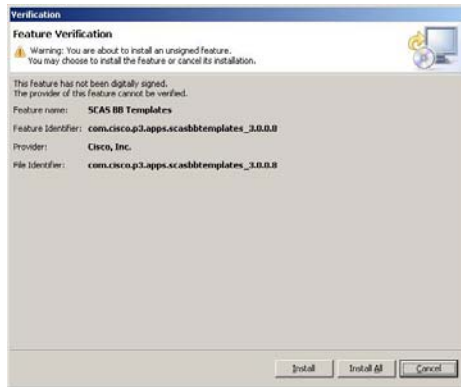
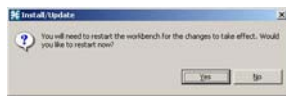


**Step 7** Press **Finish**.**Step 8** Accept the agreement and Click **Next**.

Updates dialog appears with the available installed features for that site. Select the required feature which should be named like "SCAS BB Templates .<build>". For example the file may be named "SCAS BB Template 3.0.0.8".

**Step 9** (Optional) Click **Change Location** and browse to install features in another location.

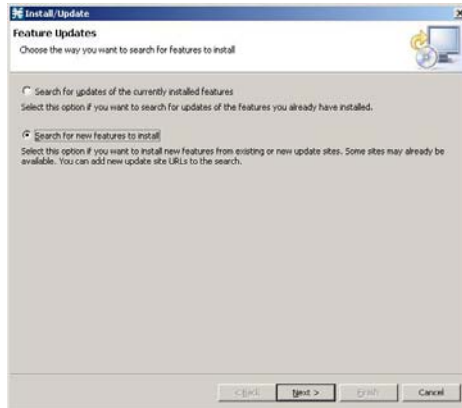
## Installing the Reporter Templates

**Step 10** Click **Finish**.**Step 11** Press **Install** or **Install All**.**Step 12** Press **Yes** and wait for the application to come up.  
Computer restarts.**Step 13** Click **Help > About SCAS Reporter > Plug-in details**.**Step 14** Verify that the new installed version appears on the Reporter plug-in list and click **OK**.  
The Plug-in Window closes.

# Upgrading the Reporter Templates

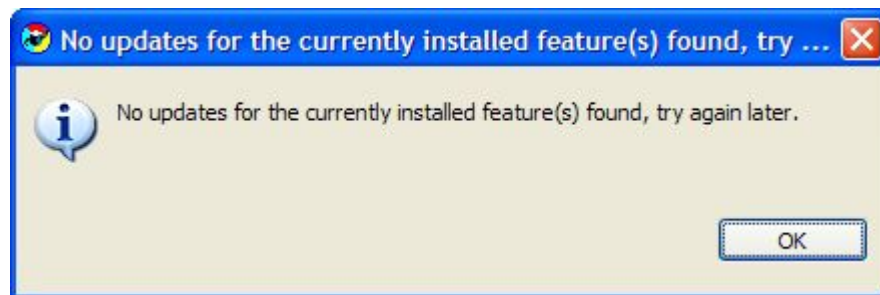
To upgrade the Reporter Templates:

---

**Step 1** Select **Help > Find and Install**.**Step 2** Click **Finish**.

One of the following occurs:

- There are no updates.



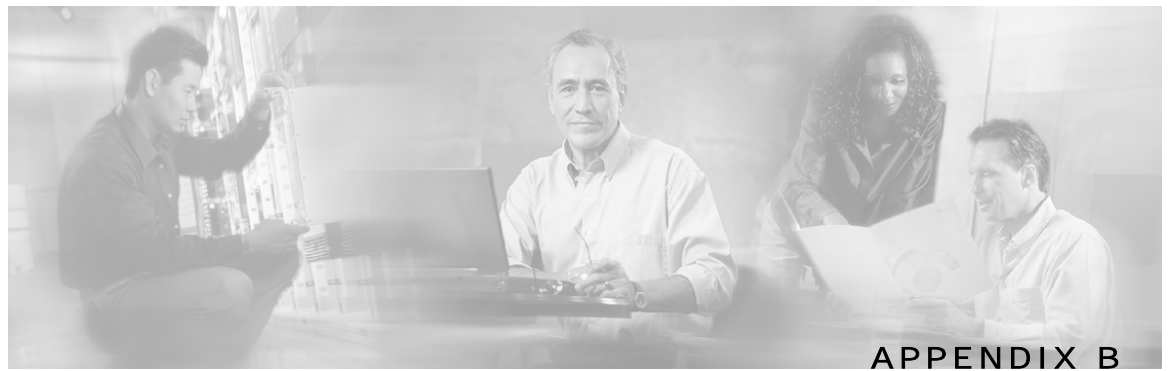
- There are updates.

The wizard appears (See [Installing the Reporter Templates](#) (on page A-1)).

---







APPENDIX B

## SCA Reporter as a Tool in SCA BB Console

---

This chapter describes the **SCA Reporter** as a tool in the **SCA BB Console**. For more information on the **SCA BB Console**, see *Cisco Service Control Application for Broadband User Guide*.

### Accessing the SCA Reporter

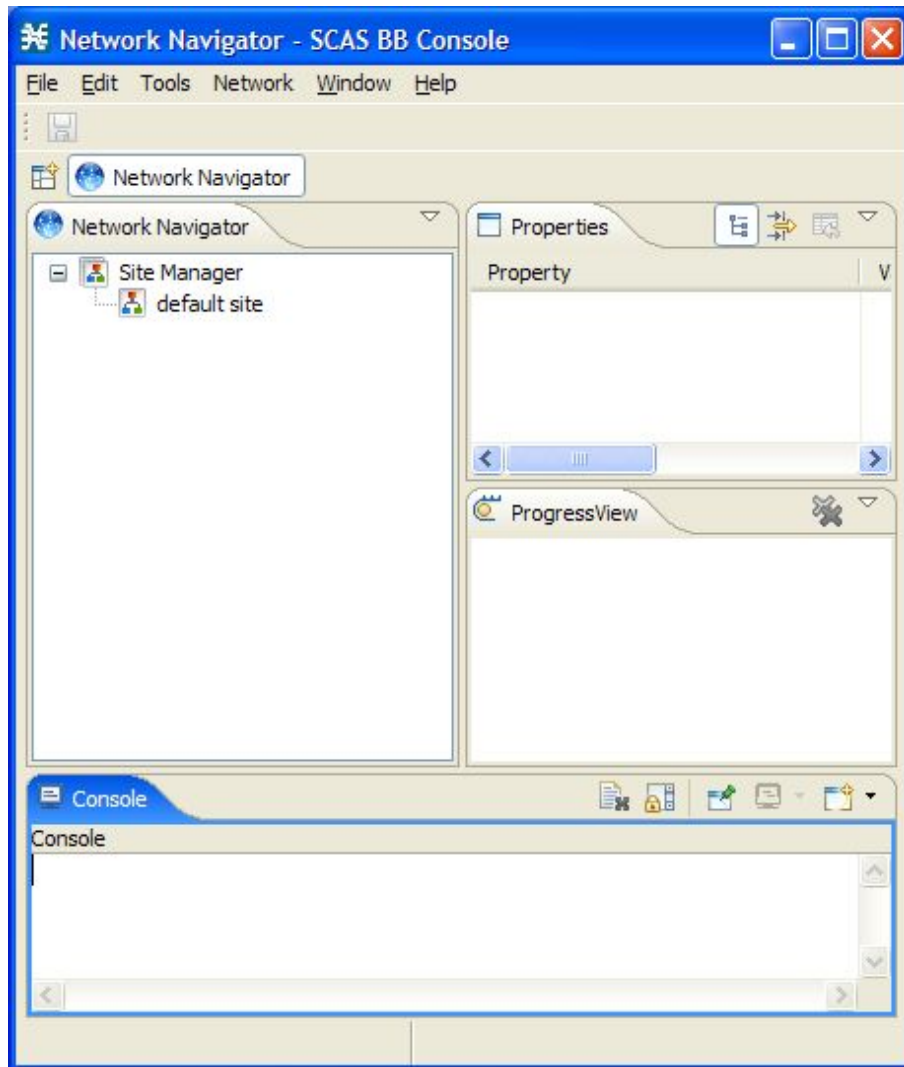
You can access the **SCA Reporter** as a tool in the **SCA BB Console**.

To access the SCA Reporter from within the SCA BB Console:

- 
- Step 1** Select **Start > All Programs > Cisco SCAS > SCAS BB Console 3.0.0 > SCAS BB Console 3.0.0**.

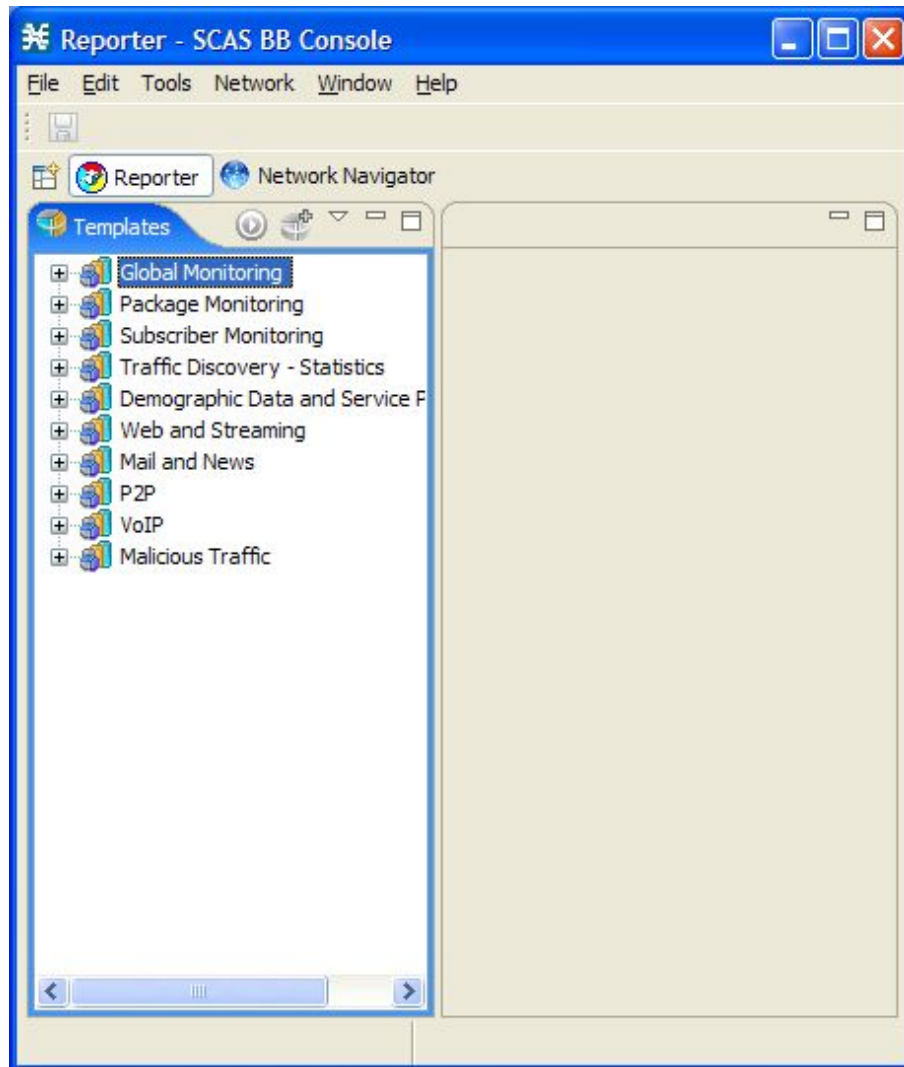
## Accessing the SCA Reporter

The Initial Perspective appears.



**Step 2** Select **Tools> Reporter**.

The **Reporter** perspective appears.



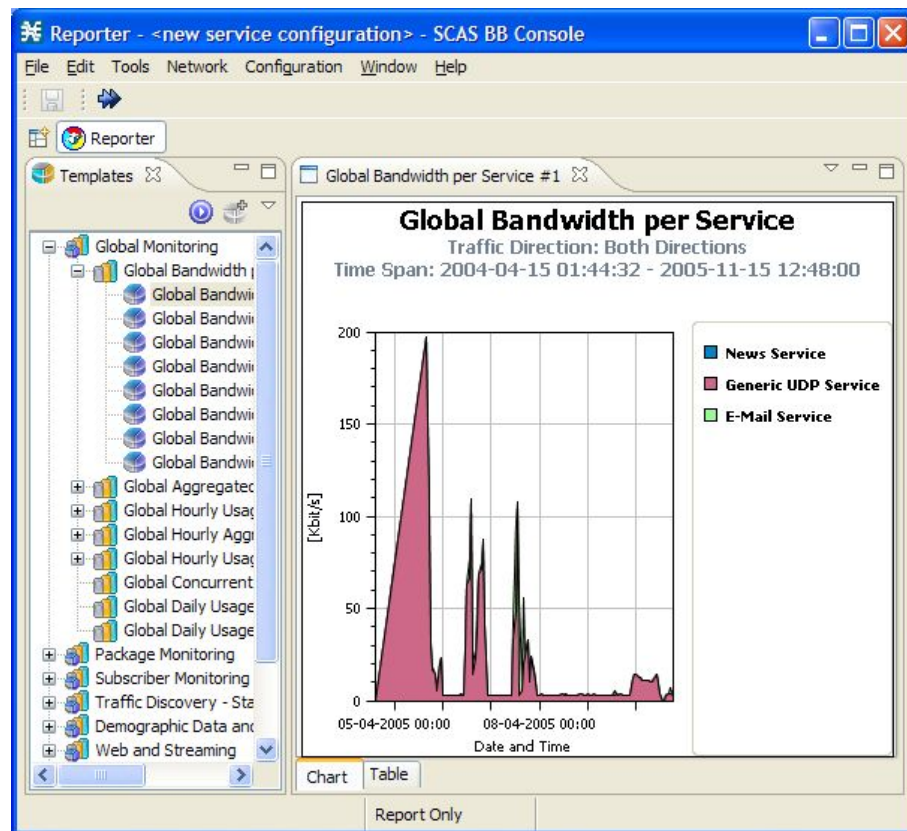
## Navigating in the SCA BB Console: Perspectives

The **SCA Reporter** is a tool in the **SCA BB Console** and is accessed by opening a *Perspective*.

The Reporter GUI has a standard toolbar and menu bar. Underneath the menu bar is the *perspective bar*. When you open a perspective, a button is added to the perspective bar. To switch between open tools, simply click on the appropriate button on the perspective bar. The *Templates View* is the default view for the Reporter Perspective. When a report is executed, the *Report* and *Properties Views* are also displayed.

The configuration and operation of the **SCA Reporter** as a tool in the **SCA BB Console** is identical to its configuration and operation as a standalone. This includes navigation (See [Navigating in the Reporter: Views](#) (on page 3-8)).

Figure B-1: SCA BB Console Perspective



**Note** The title of the Console Perspective shows the active perspective and the active service configuration.



# SCA Reporter Templates

---

This chapter describes the **SCA Reporter** Templates.

## Overview of Report Templates

The **SCA Reporter** provides groups of templates from which to generate reports. Each template allows you to create new report instances. Default filter values are assigned to the parameters, some of which are common to all the instances in a given group. You can impose additional constraints by configuring the parameters.



---

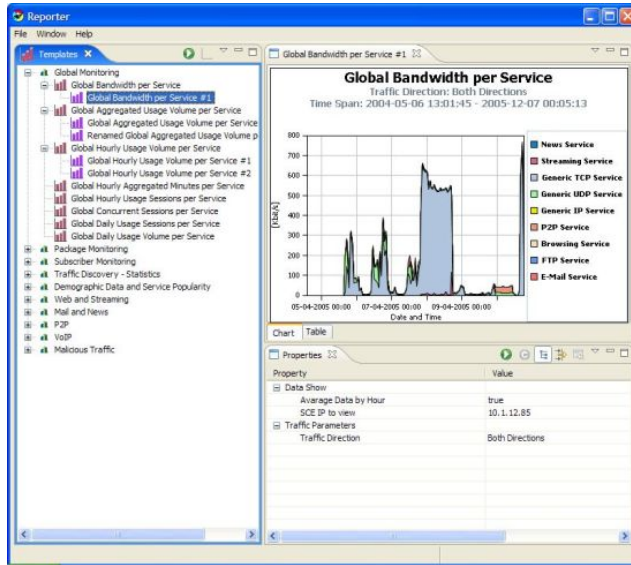
### Note

The default filters are the default values initially applied to the parameters. When generating reports, you re-configure parameters. In order to reset the parameters to their default values, select parameter and click **Restore Default Value**. Mandatory parameters are the ones that are viewed the initial time a report is executed and they must be set. Non-mandatory parameters may be assigned a value of "not set". To view all the parameters, click **Show Advanced Properties**.

---

You generate a report instance by selecting a report template from the list of available groups in the *Templates View*. The figure below shows a selected report instance "Global Bandwidth per Service #1" which was generated from the "Global Bandwidth per Service" template in the "Global Monitoring" group. The *Properties View* displays the mandatory parameters of the report instance "Global Bandwidth per Service #1".

Figure C-1: Templates View



At a high level, the system provides two categories of reports:

- Monitoring reports—Provide insight as to how network resources are utilized according to the configured services in the system at various granularities (global, package, subscriber).
- Traffic Discovery reports—Provide statistical information on network activity and help identify the characteristics of the traffic traversing the network.

The **SCA Reporter** provides the following parameters that are common for all reports:

Table C-1 Common Parameters for All Reports

Parameter	Field Type	Default	Mandatory	Remembered	Comments
SCE IP	Single Choice	not set	√	√	IP of specific SCE platform
Starting After Date	Time/Date	not set			
Ending Before Date	Time/Date	not set			When not set, the report is bound to the current time.
From the Last Number of Hours/Days	Free Text-Number	24	√		Ignored when all three time boundaries parameters are set.

- SCE IP—All reports include a parameter which enables filtering to a specific SCE platform. This parameter is mandatory and set to be remembered. Remembered means that once this parameter is set, it is set for all the additional reports which are created after.
- Time Boundaries Parameters—The following time boundaries parameters are included for all reports except for Top Subscribers, Top Talkers and Relative Consumption of Top Subscribers.
  - Starting After Date
  - Ending Before Date
  - From the Last Number of Hours/Days

The parameter, "From the last number of hours/days" is set to a default value in all the reports. When all three time boundaries parameters are set, the "last number of hours" is ignored. When the parameter "Ending before date" is not set, the report is bound to the current time.

The following subsections describe the mainstream reports in each category.

## Monitoring Reports

Monitoring reports provide information on the distribution and consumption of network resources. Reports in this category are useful for the understanding of how the network is used at different granularities (such as for the entire link, or for traffic generated by all subscribers in a particular package counter, or for traffic generated by a particular subscriber). These reports are critical for the tuning of the Service Control solution's configuration according to the changing network patterns.

Monitoring RDRs are created from the Link, Subscriber, and Package RDRs (that are generated by the SCE platform). These RDRs provide periodic usage information (at the various granularities) that is processed according to the selected report template to provide the final report.

Reports of this type typically show a specific *metric* for a set of *service counters* at a selected *granularity*. For example, *bandwidth* for *P2P* and *Browsing* service counters at a *link* granularity, or *volume* for the *Streaming* service counter for subscribers in the *Gold* package counter.

Selecting the service counters on which to report is done via the **SCA Reporter**. The available service counters are those defined in the service configuration of the SCE platform from which the reports are generated.

## Granularity

A report's granularity controls what part of the traffic the selected report addresses. The following granularities are supported:

- Global—Provides visibility into all traffic processed by the SCE platforms being reported on. Use this global granularity to view the global distribution of network resources (for example, total P2P bandwidth for the last 24 hours)

- **Package**—Reports on traffic mapped to subscribers in a particular package counter. Use package granularity to monitor how network resources are used by subscribers assigned to a particular package counter (for example, the total volume of streaming traffic for all subscribers assigned to the Gold package counter in the last 10 days). Note that to generate package counter reports, subscribers must be defined (in any of the subscriber modes) and assigned to a particular package. In the *Cisco Service Control Application for Broadband User Guide*, see *Managing Subscribers* for a description of how to manage subscribers and *Using the Service Configuration Editor: Traffic Control* for a description of how to define different packages in the system.
- **Subscriber**—Provides insight into the activity of a single subscriber as defined in the Service Control solution. Use subscriber granularity to view how a particular subscriber is utilizing network resources (for example, the number of P2P sessions generated by subscriber *xyz* for each hour during the last 12 hours). Subscriber reports are available for those subscribers flagged for real-time reporting. (See *Cisco Service Control Application for Broadband User Guide*, *Using the Service Configuration Editor: Traffic Accounting and Reporting* for a description of managing real-time subscriber reporting.)

Each report template generates a report in a specific granularity (global, package, or subscriber). Each type of report is accessible through the corresponding report template group:

- Global reports are accessible through the [Global Monitoring](#) (on page C-9) group.
- Package reports are accessible through the [Package Monitoring](#) (on page C-11) group.
- Subscriber reports are accessible through the [Subscriber Monitoring](#) (on page C-15) group.

## Metrics

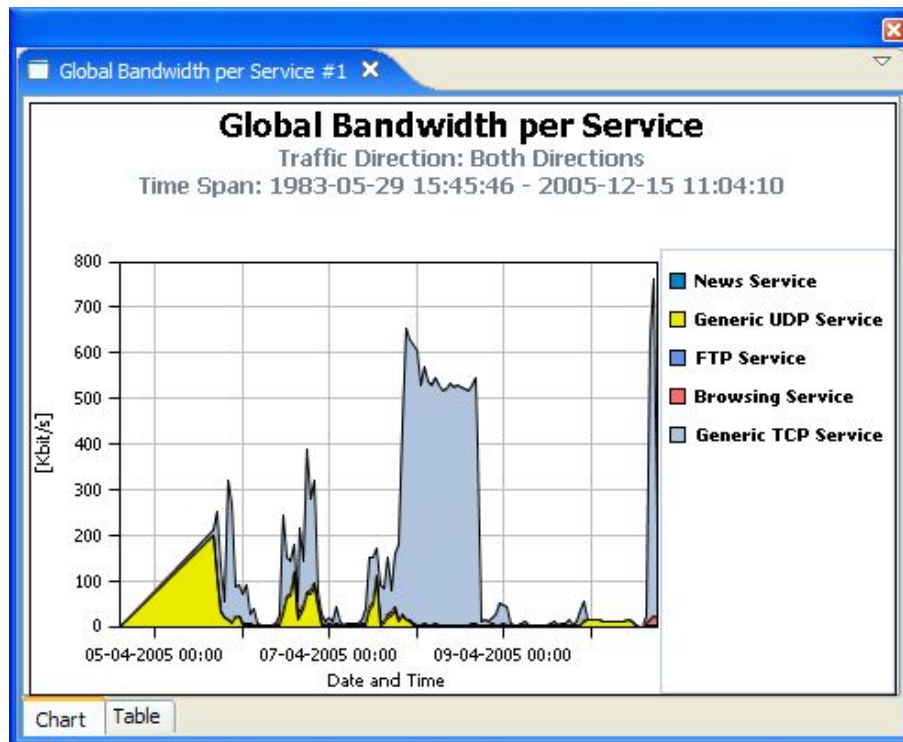
A metric is the statistic that is being reported on. The following metrics are available:

- **Bandwidth**—Represents the total Kilobits-per-second (Kbps) consumed by the selected services. Bandwidth graphs are presented by default as **stacked-area** (where each area/series indicates the bandwidth of a particular service).



When generating a bandwidth report it is possible to select the **direction**: upstream or downstream (to focus on a particular direction), or both (*default*). An additional option is to perform an **hourly average** of samples so as to create a single sample for each hour. This is recommended when generating a report for more than several hours, in which case a single sample per hour is usually sufficient and reduces the number of samples displayed (it also increases performance and improves the visualization of the data).

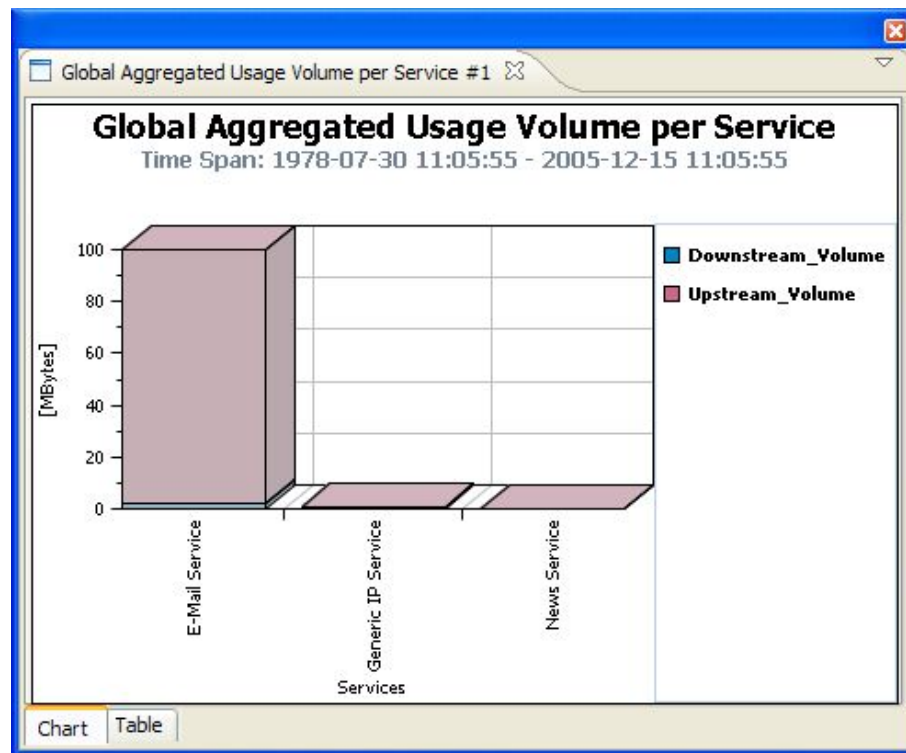
Figure C-2: Global Bandwidth Per Service



- **Volume**—Represents the total volume (in kilobytes or megabytes) for a specific period of time, for the selected service counters. As opposed to the bandwidth metric (which provides normalized volume over time), volume reports provide the total volume consumed, grouped by specific time durations. Volume graphs are presented by default as **stacked bar-charts** (where each bar/series indicates the volume of a particular service counter).

Volume reports accumulated usage either for specific durations of time (hours or days), or for the entire duration of the report. An example of a report that groups volume by duration is Global Hourly Usage Volume, which generates a bar that accounts for the total volume consumed (by each service counter) during each hour of the selected time frame. As a different example, the Global Aggregated Usage Volume per Service report accounts for all volume of each service counter for the entire time frame of the report.

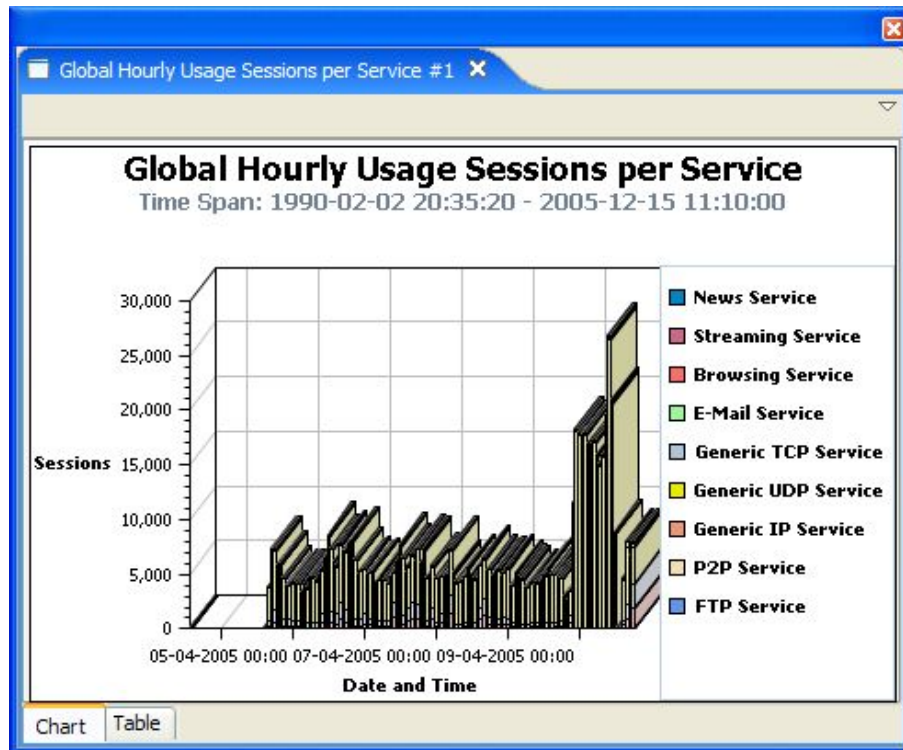
Figure C-3: Global Aggregated Usage Volume Per Service



- Sessions—Counts the number of sessions. A session is a single network transaction (for example, RTSP stream or P2P file download). Sessions graphs are generated by default as **stacked-bar charts** (where each bar/series indicates the total number of sessions of a particular service counter).

Similar to volume reports, sessions reports can be grouped into specific durations (hours or days), so as to account for the total number of sessions in a particular hour/day consumed by a particular service counter.

Figure C-4: Global Hourly Usage Sessions Per Service



## Traffic Discovery Reports

Traffic discovery reports provide raw statistics for analyzing network activities. They are useful for obtaining statistics on the general activity in the IP network, and are the key for the definition of the service configuration of the system.

The generation of traffic discovery reports is based on Transaction RDRs (generated by the SCE platform). These sampled RDRs provide the statistical information from which the various Traffic Discovery histograms and charts are created.

Traffic Discovery reports generate histograms and distribution charts that are grouped by the selected *criteria* and ordered by the selected *order-parameter*. For example: Top *Protocols* sorted by *Total Volume*, or Top *Web-hosts* sorted by *Hit-Count*.

### Criteria

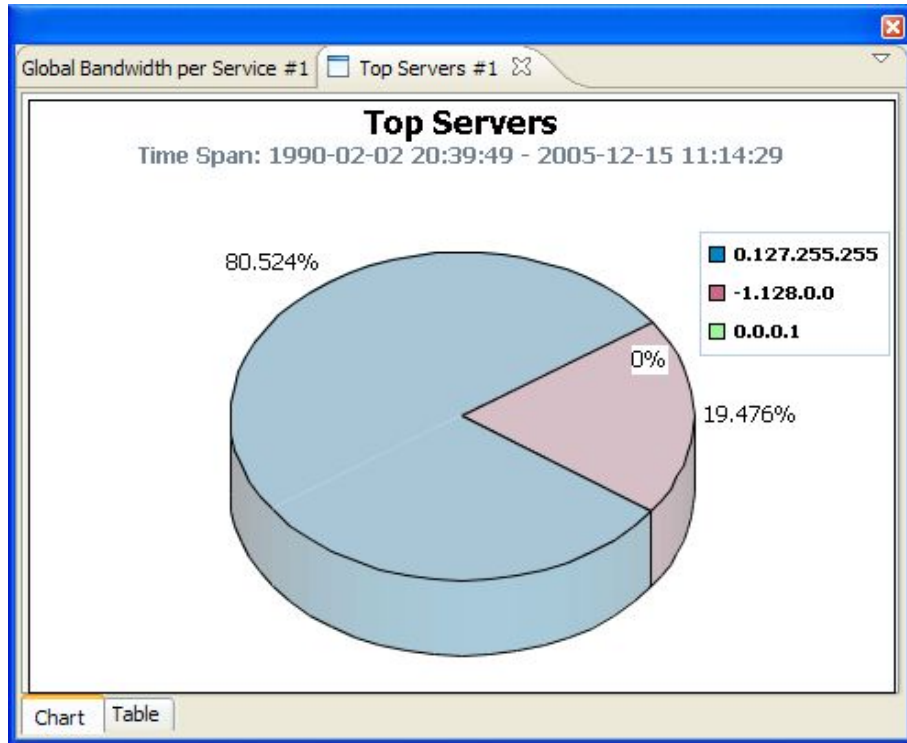
Each report template focuses on a particular criterion based on layers 3–7, such as:

- Top Servers/Client IP addresses
- Top Server/Client Port numbers
- Top HTTP web-hosts
- Top NNTP news-groups

Report templates focusing on statistics from layers 3 and 4 (for example, IP addresses and port numbers) are found in *Traffic Discovery - Statistics* (on page C-18). Report templates focusing on application- and protocol-specific information are in *Mail and News Reports* (on page C-26).

The following is an example of a report on Top Servers, which focuses on IP address.

Figure C-5: Top Servers - Focusing on IP Addresses



## Order Parameter

The order parameter indicates the parameter that the report will be sorted by. Available parameters are:

- Total Volume—Extrapolated total volume (both upstream and downstream)
- Upstream Volume—Extrapolated upstream volume
- Downstream Volume—Extrapolated downstream volume
- Hit-Counts—Extrapolated Number of transactions

Each report can be limited to a specific number of results, which allows focusing on the top areas of activity (according to the selected order-parameter), as illustrated in the following two examples.

- Top Newsgroups Ordered by Volume
- Top Protocols Ordered by Volume

## Global Monitoring

Use the Global Monitoring group of reports to view statistics regarding the traffic bandwidth or volume that was consumed. The bandwidth/volume consumption can be presented per service for the entire link.

**Table C-2 Common Parameters for Global Monitoring Group**

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Link to Focus	Multiple Choice	not set			List of available links to focus.
Services to View	Multiple Choice	not set	√		List of service counters available for this subscriber domain. All services, when not set.

## Global Bandwidth per Service

For a given time frame, Global Bandwidth per Service shows the distribution of bandwidth among the different services defined in the system for all traffic, regardless of subscriber or package.

**Table C-3 Global Bandwidth per Service Template**

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.
Average data by hour	Boolean	True	√		Select option or not. If this option is selected, a single value is used for each hour: Average of all samples. This option is recommended when generating the report for 24 or more hours.

## Global Aggregated Usage Volume per Service

For a given time frame, Global Aggregated Usage Volume per Service shows the most popular Service counter. It shows, for the selected time frame, the total amount of traffic volume (upstream and downstream) for each service counter (for all traffic, regardless of subscriber or package).

Table C-4 Global Aggregated Usage Volume per Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.

## Global Hourly Usage Volume per Service

For a given time frame, Global Hourly Usage Volume per Service shows the distribution of volume between the different service counters defined in the system, grouped by hour.

Table C-5 Global Hourly Usage Volume per Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.

## Global Hourly Aggregated Minutes per Service

For a given time frame, Global Hourly Aggregated Minutes per Service shows the total number of minutes spent for service counters defined in the system, grouped by hour.

See [Global Monitoring](#) (on page C-9) for a table of common parameters for the Global Monitoring group.

## Global Hourly Usage Sessions per Service

For a given time frame, Global Hourly Usage Sessions per Service shows the distribution of sessions between the different service counters defined in the system, grouped by hour.

See [Global Monitoring](#) (on page C-9) for a table of parameters for the Global Monitoring group.

## Global Concurrent Session per Service

For a given time frame, Global Concurrent Session per Service shows the distribution of concurrent sessions between the different service counters defined in the system

See *Global Monitoring* (on page C-9) for a table of parameters for the Global Monitoring group.

## Global Daily Usage Sessions per Service

For a given time frame, Global Daily Usage Sessions per Service shows the distribution of sessions between the different service counters defined in the system, grouped by day.

See *Global Monitoring* (on page C-9) for a table of parameters for the Global Monitoring group.

## Global Daily Usage Volume per Service

For a given time frame, Global Daily Usage Volume per Service shows the distribution of volume between the different service counters defined in the system, grouped by day.

Table C-6 Global Daily Usage Volume per Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.

## Package Monitoring

Use Package Monitoring group of reports to view statistics of bandwidth or volume of traffic used by a package. The reports are provided per service counter for the total volume used by the package. The volume consumption can be presented per service for package.

Table C-7 Common Parameters for Package Monitoring Group

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Services to view	Multiple Choice	not set			List of services available for this subscriber domain. All services, when not set.
Package	Single Choice	not set	√		Select one of the package counters: Default Package or Unknown Subscriber Traffic.

## Package Bandwidth per Service

For a given time frame, Package Bandwidth per Service shows the distribution of bandwidth among the different service counters defined in the system for all subscribers belonging to a particular package.

Table C-8 Package Bandwidth per Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.
Average data by hour	Boolean	True	√		Select option or not. If this option is selected, a single value is used for each hour: Average of all samples. This option is recommended when generating the report for 24 or more hours.

## Package Aggregated Usage Volume per Service

For a given time frame, Package Aggregated Usage Volume per Service shows the most popular Service counter for a specific package counter. It shows, for the selected time frame, the total amount of traffic volume (upstream and downstream) for each service counter (for subscribers in a specific package).

Table C-9 Package Aggregated Usage Volume per Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.



## Package Hourly Usage Volume per Service

For a given time frame, Package Hourly Usage Volume per Service shows the distribution of volume between the different service counters defined in the system, for the traffic of subscribers in a specific package counter, grouped by hour.

Table C-10 Package Hourly Usage Volume per Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.

## Package Hourly Aggregated Minutes per Service

For a given time frame, Package Hourly Aggregated Minutes per Service shows the total number of minutes spent for service counters for a specific package counter defined in the system, grouped by hour.

Table C-11 Package Hourly Aggregated Minutes per Service

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.

## Package Hourly Usage Sessions per Service

For a given time frame, Package Hourly Usage Sessions per Service shows the distribution of sessions between the different service counters defined in the system, for the traffic of subscribers in a specific package, grouped by hour.

See [Package Monitoring](#) (on page C-11) for a table of common parameters for the Package Monitoring group.

## Package Concurrent Session per Service

For a given time frame, Package Concurrent Session per Service shows the distribution of concurrent sessions between the different Service Counters for a specific package counter defined in the system

Table C-12 Package Concurrent Session per Service

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.

## Package Daily Usage Sessions per Service

For a given time frame, Package Daily Usage Sessions per Service shows the distribution of sessions between the different service counters defined in the system, for the traffic of subscribers in a specific package counter, grouped by day.

See [Package Monitoring](#) (on page C-11) for a table of common parameters for the Package Monitoring group.

## Package Daily Usage Volume per Service

For a given time frame, Package Daily Usage Volume per Service shows the distribution of volume between the different service counters defined in the system, for the traffic of subscribers in a specific package counter, grouped by day.

Table C-13 Package Daily Usage Volume per Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.

## Subscriber Monitoring

Use the Subscriber Monitoring group of reports to view statistics regarding the bandwidth or volume of traffic used by the subscriber. The reports are provided per service counter for the total volume consumed by the subscriber. The Top Subscribers report identifies the subscribers that consume the largest traffic volume. Subscriber bandwidth and volume reports are available for those subscribers configured for real-time monitoring. In *Cisco Service Control Application for Broadband User Guide*, see *Selecting Subscribers for Real-Time Usage Monitoring*, for a description of how to configure real-time subscribers.

**Table C-14 Common Parameters for Subscriber Monitoring Group**

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Subscriber name	Free Text	not set	√		IP address (decimal format) or subscriber name. This parameter is common to all the report templates, except "Top Subscribers".
Services to View	Multiple Choice	not set			List of service counters available for this subscriber domain. All services, when not set. This parameter is common to all the report templates, except "Top Subscribers".

## Top Subscribers

For a given time frame, Top Subscribers shows a list of the top subscriber volume consumption in a specific hour/day.

**Table C-15 Top Subscribers Template**

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Specific Time	Date/Time	not set	√		Select specific time. Note that the selected time is rounded to the nearest hour/day.
Limit number of results	Free Text	10	√		Type a number.
Filter to Metric	Single Choice	Both Directions Volume	√		Select one of the directions of the volume, aggregate sessions or aggregate duration.
Aggregation Period	Single Choice	Hourly	√		Select one aggregation period: Hourly or Daily.

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Focus on the service	Single Choice	not set			Select service. When this parameter is not set, the default is all services.
Units of Results	Single Choice	MBytes	√		Select results units: Mbytes or KBytes.
Show other Consumption	Boolean	False	√		Select True or False.
Subscriber Id	Free Text	not set			Pattern which represent group of subscribers.

## Subscriber Bandwidth per Service

For a given time frame, Subscriber Bandwidth per Service shows the distribution of bandwidth among the different service counters defined in the system for a particular subscriber.

Table C-16 Subscriber Bandwidth per Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.
Average data by hour	Boolean	False	√		Select option or not.

## Subscriber Aggregated Usage Volume per Service

For a given time frame, Subscriber Aggregated Usage Volume per Service shows the most popular Service counter for a particular subscriber.

Table C-17 Subscriber Aggregated Usage Volume per Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.

## Subscriber Hourly Usage Volume per Service

For a given time frame, Subscriber Hourly Usage Volume per Service shows the hourly distribution of volume between the different service counters defined in the system for a particular subscriber.

Table C-18 Subscriber Hourly Usage Volume per Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.

## Subscriber Hourly Aggregated Minutes per Service

For a given time frame, Subscriber Hourly Aggregated Minutes per Service shows the total number of minutes spent for service counters for a specific package counter defined in the system, grouped by hour.

See [Subscriber Monitoring](#) (on page C-15) for a table of common parameters for the Subscriber Monitoring group.

## Subscriber Hourly Usage Session per Service

For a given time frame, Subscriber Hourly Usage Sessions per Service shows the hourly distribution of sessions between the different service counters defined in the system for a particular subscriber.

See [Subscriber Monitoring](#) (on page C-15) for a table of common parameters for the Subscriber Monitoring group.

## Subscriber Daily Usage Session per Service

For a given time frame, Subscriber Daily Usage Sessions per Service shows the daily distribution of sessions between the different service counters defined in the system for a particular subscriber.

See [Subscriber Monitoring](#) (on page C-15) for a table of common parameters for the Subscriber Monitoring group.

## Subscriber Daily Usage Volume per Service

For a given time frame, Subscriber Daily Usage Volume per Service shows the daily distribution of volume between the different service counters defined in the system for a particular subscriber.

Table C-19 Subscriber Daily Usage Volume per Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth: Upstream, Downstream, or Both Directions.

## Traffic Discovery - Statistics

Use the Traffic Discovery - Statistics group of reports to view statistics compiled from the source and destination IP addresses and ports of the system traffic.



### Note

The reports in this group are not per subscriber; they supply general Port and IP address information.

Table C-20 Common Parameters for Traffic-Discovery Statistics Group

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Units of Results	Single Choice	MBytes	√		Select results units: Mbytes or KBytes.
Subscriber name	Free Text	not set			IP address (decimal format) or subscriber name.
Limit Number of Results	Free Text	10	√		Type of number.
Time Frames to focus	Multiple Choice	not set			Select one or more of four time frame options.
Traffic Direction	Single Choice	Downstream Volume	√		Select one traffic direction.
Packages to View	Multiple Choice	not set			List packages available for this subscriber domain.
Services to View	Multiple Choice	not set			List of services available for this subscriber domain. All services, when not set.

## Top Servers

For a given time frame, Top Servers shows the most popular servers for certain services.


**Note**

The "Server" refers to the IP address of the other side of the flow initiator and may be located on the Subscriber side or on the Network side.

See [Traffic Discovery - Statistics](#) (on page C-18) for a table of common parameters for the Traffic Discovery - Statistics group.

## Top Clients

For a given time frame, Top Client shows the most popular client IP for certain services.


**Note**

The "Client" refers to the IP address of the flow initiator and may be located on the Subscriber side or on the Network side.

See [Traffic Discovery - Statistics](#) (on page C-18) for a table of common parameters for the Traffic Discovery - Statistics group.

## Top Server Ports

For a given time frame, Top Server Ports shows the most popular server ports for certain services.

See [Traffic Discovery - Statistics](#) (on page C-18) for a table of common parameters for the Traffic Discovery - Statistics group.

## Top Service Ports

For a given time frame, Top Service Ports shows the most popular server ports of a certain service or services.

Table C-21 Top Service Ports Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Transport Protocol	Single Choice	TCP	√		Choose a transport protocol: TCP or UDP.

## Top Protocols

For a given time frame, Top Protocols show the most popular protocol for certain services.

See [Traffic Discovery - Statistics](#) (on page C-18) for a table of common parameters for the Traffic Discovery - Statistics group.

## Top IP Protocols

For a given time frame, Top IP Protocols show the most popular IP protocol for certain services.

See [Traffic Discovery - Statistics](#) (on page C-18) for a table of common parameters for the Traffic Discovery - Statistics group.

## Top Server IP to Server Port

For a given time frame, Top Server IP to Server Port shows the most popular server IP to server port for certain services.

Table C-22 Top Server IP to Server TCP Port Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Transport Protocol	Single Choice	TCP	√		Choose a transport protocol: TCP or UDP.

## Top Client IP To Server Port

For a given time frame, Top Client IP To Server Port shows the most popular client IP to server port for certain services.

Table C-23 Top Client IP to Server Port Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Transport Protocol	Single Choice	TCP	√		Choose a transport protocol: TCP or UDP.

## Top Client IP to Server IP

For a given time frame, Top Client IP to Server IP shows the most popular client IP to server IP for certain services.

See [Traffic Discovery - Statistics](#) (on page C-18) for a table of common parameters for the Traffic Discovery - Statistics group.



## Top Client IP to Server IP and Server Port

For a given time frame, Top Client IP to Server IP and Server Port shows the most popular server IP and server port for certain services.

Table C-24 Top Client IP To Server IP and Server TCP Port Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Transport Protocol	Single Choice	TCP	√		Choose a transport protocol: TCP or UDP.

## Demographic Data and Service Popularity Reports

Use Demographic group of reports to view statistics of the demographic data.

Table C-25 Common Parameters for Demographic Data and Service Popularity Group

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Link to Focus	Multiple Choice	not set			List of available links to focus.
Select Service to View	Single Choice	not set	√		List of service counters available for this subscriber domain.

## Global Active Subscriber per Service

For a given time frame, Global active subscriber per Service shows the distribution of subscribers among the different services defined in the system for all traffic, regardless of subscriber or package.

See [Demographic Data and Service Popularity Reports](#) (on page C-21) for a table of common parameters for the Demographic Data and Service Popularity group.

## Package Active Subscriber per Service

For a given time frame, Package Active subscriber per Service shows the distribution of bandwidth between the different services defined in the system for specific subscriber package.

Table C-26 Package Active Subscriber per Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Package	Single Choice	not set	√		Default Package or Unknown Package

## Service Popularity among Subscribers

For a given time frame, Service Popularity among subscribers shows the percentage of subscribers using a specific service defined in the system.

See [Demographic Data and Service Popularity Reports](#) (on page C-21) for a table of common parameters for the Demographic Data and Service Popularity group.

## Service Popularity among Subscribers of Specific Package

For a given time frame, Service popularity among subscribers of a specific package shows the percentage of subscribers using a specific service in a specific package defined in the system.

Table C-27 Service Popularity among Subscribers of Specific Package Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Package	Single Choice	not set	√		Select one of the package counters.

## Relative Consumption of Top Subscribers

For a given time frame, Relative consumption of top subscribers shows the relative consumption of a specific number of subscribers compared to "other".

Table C-28 Relative Consumption of Top Subscribers Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Specific Time	Date/Time	not set	√		Select specific time. Note that the selected time is rounded to the nearest hour/day.
Limit number of results	Free Text	10	√		Type a number.
Filter to Metric	Single Choice	Both Directions Volume	√		Select one of the directions of the volume, aggregate sessions or aggregate duration.
Aggregation Period	Single Choice	Hourly	√		Select one aggregation period: Hourly or Daily.
Focus on the service	Single Choice	not set			Select service.
Units of Results	Single Choice	MBytes	√		Select results units: Mbytes or KBytes.

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Show other Consumption	Boolean	False	√		Select True or False.
Subscriber Id	Free Text	not set			Pattern which represent group of subscribers.

## Service Popularity among Subscribers (Average)

For a given time frame, Service popularity among Subscribers (Average) shows the total number of subscribers using a specific service compared to subscribers using all other services.

See [Demographic Data and Service Popularity Reports](#) (on page C-21) for a table of common parameters for the Demographic Data and Service Popularity group.

## Service Popularity among Subscribers of Specific Package (Average)

For a given time frame, Service popularity among Subscribers of a specific package (Average) shows the total number of subscribers using a specific service compared to subscribers using all other services in a specific package.

Table C-29 Service Popularity among Subscribers of Specific Package (Average) Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Package	Single Choice	not set	√		Select one of the package counters.

## Web and Streaming Reports

Use the Web and Streaming group of reports to compile statistics presenting the most popular servers or hosts for the various pre-defined system services (such as Browsing, Streaming, and Downloading) and for user-defined services.

Table C-30 Common Parameters for Web and Streaming Group

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Units of Results	Single Choice	Hits	√		Select results units: Mbytes, KBytes, or Hits.
Subscriber name	Free Text	not set			IP address (decimal format) or subscriber name.

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Limit Number of Results	Free Text	10	√		Type of number.
Time Frames to focus	Multiple Choice	not set			Select one or more of four time frame options.
Metric to order/ Traffic Direction	Single Choice	Both Directions Volume	√		Select one of the directions of the volume or Hit Count.
Packages to View	Multiple Choice	not set			List packages available for this subscriber domain.
Services to View	Multiple Choice	not set			List of services available for this subscriber domain. All services, when not set.

## Top Web Hosts

For a given time frame, Top Web Hosts shows the most popular web servers.

Table C-31 Top Web Hosts Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Show other consumption	Boolean	False	√		Select when to include the other consumption in the report.
Where host contains	Free Text	not set			Filter to hosts containing the given pattern.

## Top Rtsp Hosts

For a given time frame, Top Rtsp Hosts shows the most popular real-time streaming protocol (Rtsp) servers.

Table C-32 Top Rtsp Hosts Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Show other consumption	Boolean	False	√		Select when to include the other consumption in the report.

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Where host contains	Free Text	not set			Filter to hosts containing the given pattern.

## Top FTP Servers

For a given time frame, Top FTP Servers shows the most popular FTP file hosts.

See [Web and Streaming Reports](#) (on page C-23) for a table of common parameters for the Web and Streaming group.

## Top MMS Servers

For a given time frame, Top MMS Servers shows the most popular MMS hosts.

See [Web and Streaming Reports](#) (on page C-23) for a table of common parameters for the Web and Streaming group.

## Top Service Servers

For a given time frame, Top Service Servers shows the most popular servers of a certain service or services.

See [Web and Streaming Reports](#) (on page C-23) for a table of common parameters for the Web and Streaming group.

## Web Hosts Distribution by Subscriber Packages

For a given time frame, Service Distribution by Subscriber Packages shows the most popular web servers, grouped by the package of the requesting subscriber.

See [Web and Streaming Reports](#) (on page C-23) for a table of common parameters for the Web and Streaming group.

## Rtsp Host Distribution by Subscriber Packages

For a given time frame, Rtsp Host Distribution by Subscriber Packages shows the most popular real-time streaming protocol servers, grouped by the package of the requesting subscriber.

See [Web and Streaming Reports](#) (on page C-23) for a table of common parameters for the Web and Streaming group.

## FTP Server Distribution by Subscriber Packages

For a given time frame, FTP Server Distribution by Subscriber Packages shows the most popular FTP file servers, grouped by the package of the requesting subscriber.

See [Web and Streaming Reports](#) (on page C-23) for a table of common parameters for the Web and Streaming group.

## MMS Server Distribution by Subscriber Packages

For a given time frame, MMS Server Distribution by Subscriber Packages shows the most popular Microsoft Manager Server servers, grouped by the package of the requesting subscriber.

See [Web and Streaming Reports](#) (on page C-23) for a table of common parameters for the Web and Streaming group.

## Service Distribution by Subscriber Packages

For a given time frame, Service Distribution by Subscriber Packages shows the distribution of service usage according to the subscriber packages.

See [Web and Streaming Reports](#) (on page C-23) for a table of common parameters for the Web and Streaming group.

## Mail and News Reports

Use the Mail and News group of reports to view statistics of the mail and news traffic.

Table C-33 Common Parameters for Mail and News Group

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Units of Results	Single Choice	MBytes	√		Select results units: Mbytes or KBytes.
Subscriber name	Free Text	not set			IP address (decimal format) or subscriber name.
Limit Number of Results	Free Text	10	√		Type of number.
Time Frames to focus	Multiple Choice	not set			Select one or more of four time frame options.
Metric to order/Traffic Direction	Single Choice	Upstream Volume	√		Select one traffic direction/metrics.
Packages to View	Multiple Choice	not set			List packages available for this subscriber domain.
Services to View	Multiple Choice	not set			List of services available for this subscriber domain. All services, when not set.

## Top SMTP Servers

For a given time frame, Top SMTP Servers shows the most popular SMTP hosts.

See [Mail and News Reports](#) (on page C-26) for a table of common parameters for the Mail and News group.

## Top POP3 Servers

For a given time frame, Top POP3 Servers shows the most popular POP3 hosts.

See [Mail and News Reports](#) (on page C-26) for a table of common parameters for the Mail and News group.

## Top NNTP Servers

For a given time frame, Top NNTP Servers shows the most popular NNTP hosts.

See [Mail and News Reports](#) (on page C-26) for a table of common parameters for the Mail and News group.

## Top E-mail Sender

For a given time frame, Top E-mail Sender shows the top e-mail sender.

See [Mail and News Reports](#) (on page C-26) for a table of common parameters for the Mail and News group.

## Top E-mail Recipients

For a given time frame, Top E-mail Recipients shows the top e-mail recipients.

See [Mail and News Reports](#) (on page C-26) for a table of common parameters for the Mail and News group.

## Top NNTP Consumers

For a given time frame, Top NNTP Consumers shows the top NNTP Consumers.

See [Mail and News Reports](#) (on page C-26) for a table of common parameters for the Mail and News group.

## Top Newsgroups

For a given time frame, Top Newsgroups shows the most popular newsgroups.

See [Mail and News Reports](#) (on page C-26) for a table of common parameters for the Mail and News group.

## SMTP Server Distribution by Subscriber Packages

For a given time frame, SMTP Server Distribution by Subscriber Packages shows the most popular SMTP servers, grouped by the package of the requesting subscriber.

See *Mail and News Reports* (on page C-26) for a table of common parameters for the Mail and News group.

## POP3 Server Distribution by Subscriber Packages

For a given time frame, POP3 Server Distribution by Subscriber Packages shows the most popular POP3 servers, grouped by the package of the requesting subscriber.

See *Mail and News Reports* (on page C-26) for a table of common parameters for the Mail and News group.

## NNTP Server Distribution by Subscriber Packages

For a given time frame, NNTP Server Distribution by Subscriber Packages shows the most popular NNTP servers, grouped by the package of the requesting subscriber.

See *Mail and News Reports* (on page C-26) for a table of common parameters for the Mail and News group.

## Top Subscriber to Newsgroup

For a given time frame, Top Subscriber to Newsgroup shows the top subscriber to newsgroup for certain services.

See *Mail and News Reports* (on page C-26) for a table of common parameters for the Mail and News group.

## Top E-mail Account Owners

For a given time frame, Top E-mail Account Owners shows the top e-mail account owners.

See *Mail and News Reports* (on page C-26) for a table of common parameters for the Mail and News group.

## P2P Reports

Use the P2P Reports group of reports to view statistics of the P2P traffic.

Table C-34 Common Parameters for P2P Group

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Units of Results	Single Choice	MBytes	√		Select results units: Mbytes or KBytes.
Subscriber name	Free Text	not set			IP address (decimal format) or subscriber name.



Parameter	Field Type	Default	Mandatory	Remembered	Comments
Limit Number of Results	Free Text	10	√		Type of number.
Time Frames to focus	Multiple Choice	not set			Select one or more of four time frame options.
Traffic Direction	Single Choice	Both Directions Volume	√		Select one traffic direction/metrics.
Packages to View	Multiple Choice	not set			List packages available for this subscriber domain.
Services to View	Multiple Choice	not set			List of services available for this subscriber domain. All services, when not set.

## Top P2P Protocols

For a given time frame, Top P2P Protocols shows the most popular P2P protocol for certain services.

See [P2P Reports](#) (on page [C-28](#)) for a table of common parameters for the P2P group.

## Top P2P Consumers

For a given time frame, Top P2P Consumers shows a list of the top P2P subscriber volume consumption.

See [P2P Reports](#) (on page [C-28](#)) for a table of common parameters for the P2P group.

## Top P2P Downloaders

For a given time frame, Top P2P Downloaders shows the top P2P downloader consumers.

See [P2P Reports](#) (on page [C-28](#)) for a table of common parameters for the P2P group.

## Top P2P Uploaders

For a given time frame, Top P2P Uploaders shows the most popular P2P uploader consumers.

See [P2P Reports](#) (on page [C-28](#)) for a table of common parameters for the P2P group.

## Top P2P Protocols

For a given time frame, Top P2P File Extensions shows the most popular P2P file-extensions

See [P2P Reports](#) (on page [C-28](#)) for a table of common parameters for the P2P group.

## VoIP Reports

Use the VoIP group of reports to view statistics of the VoIP traffic.

Table C-35 Common Parameters for VoIP Group

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Link to Focus	Single Choice	not set			List of available links to focus.
Services to View	Multiple Choice	not set			List of VoIP services available for this subscriber domain. When this condition is not set, the default is all the services are chosen.

## Global Bandwidth per VoIP Service

For a given time frame, Global Bandwidth per VoIP Service shows the distribution of bandwidth among the different VoIP services defined in the system for all traffic, regardless of subscriber or package.

Table C-36 Global Bandwidth per VoIP Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Average Data by Hour	Boolean	True	√		
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth.

## Global Concurrent Calls per VoIP Service

For a given time frame, Global Concurrent Calls per VoIP Service shows the distribution of concurrent sessions between the different VoIP service counters defined in the system, grouped by day.

See [VoIP Reports](#) (on page C-30) for a table of common parameters for the VoIP group.

## Global Hourly Call Minutes per VoIP Service

For a given time frame, Global Hourly Call Minutes per VoIP Service shows the distribution of Call Minutes between the different VoIP service counters defined in the system, grouped by day.

See [VoIP Reports](#) (on page C-30) for a table of common parameters for the VoIP group.

## Package Bandwidth per VoIP Service

For a given time frame, Package Bandwidth per VoIP Service shows the distribution of bandwidth between the different VoIP services defined in the system for the traffic of subscribers in a specific package.

Table C-37 Package Bandwidth per VoIP Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Package	Single Choice	not set	√		Select one of the package counters.
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth.

## Package Concurrent Calls per VoIP Service

For a given time frame, Packet Concurrent Calls per VoIP Service shows the distribution of concurrent sessions between the different VoIP service counters defined in the system, grouped by day.

See [VoIP Reports](#) (on page [C-30](#)) for a table of common parameters for the VoIP group.

## Package Hourly Call Minutes per VoIP Service

For a given time frame, Global Hourly Call Minutes per VoIP Service shows the distribution of Call Minutes between the different VoIP service counters defined in the system, grouped by day.

Table C-38 Package Hourly Call Minutes per VoIP Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Package	Single Choice	not set	√		Select one of the package counters: Default Package or Unknown Subscriber Traffic

## Subscriber Bandwidth per VoIP Service

For a given time frame, Subscriber Bandwidth per VoIP Service shows the distribution of bandwidth between the different VoIP services defined in the system for the traffic of subscriber in a specific package.

Table C-39 Subscriber Bandwidth per VoIP Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Subscriber Name	Free Text	not set	√		IP address (decimal format) or subscriber name.
Traffic Direction	Single Choice	Both Directions	√		Select one of the directions of the bandwidth.

## Subscriber Hourly Call Minutes per VoIP Service

For a given time frame, Subscriber Hourly Call Minutes per VoIP Service shows the distribution of Call Minutes between the different VoIP service counters defined in the system, grouped by day.

Table C-40 Subscriber Hourly Call Minutes per VoIP Service Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Subscriber Name	Free Text	not set	√		IP address (decimal format) or subscriber name.

## Top SIP Domains

For a given time frame, Top SIP Domains shows the most popular SIP Domains.

Table C-41 Top SIP Domains Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Units of Results	Single Choice	Hits	√		Select results units: Mbytes, KBytes, or Hits.
Subscriber Name	Free Text	not set			IP address (decimal format) or subscriber name.
Limit Number of Results	Number	10	√		Type of Number.
Time Frames to focus	Multiple Choice	not set			Select one or more of four time frame options.

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Metric To Order/Traffic Direction	Single Choice	Hit_Count	√		Select one traffic direction/Metrics.
Packages to View	Multiple Choice	not set			List of packages available for this subscriber domain.

## Top Talkers

For a given time frame, Top Talkers shows a list of the top talker volume/session/minutes consumption in a specific hour/day for a specific/all VoIP services.

Table C-42 Top Talkers Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Specific Time	Date/Time	not set	√		Select specific time. Note that the selected time is rounded to the nearest hour/day.
Limit number of results	Free Text	10	√		Type a number.
Filter to Metric	Single Choice	Hit_count	√		Select one of the directions of the volume, aggregate sessions or aggregate duration.
Aggregation Period	Single Choice	Hourly	√		Select one aggregation period: Hourly or Daily.
Focus on the VoIP service	Single Choice	not set			Select service.
Units of Results	Single Choice	MBytes	√		Select results units: Mbytes or KBytes.
Show other Consumption	Boolean	False	√		Select True or False.
Subscriber Id	Free Text	not set			Pattern which represent group of subscribers.

## Malicious Traffic

Use the Malicious Traffic group of reports to view statistics of the malicious events accrued in the system.

Table C-43 Common Parameters for Malicious Traffic Group

Parameter	Field Type	Default	Mandatory	Remembered	Comments
IP protocol	Single Choice	not set			List of available IP protocol to focus.
Filter to port	Free Text	not set			Filter to attack port. (available in all report groups except top scanning attacking subscribers and top scanned or attacked subscribers)

## Global Scan or Attack Rate

For a given time frame, Global Scan or Attack Rate shows the rate (session/sec) of scan/attacks originating from the hosts (typically due to worm or zombie).

Table C-44 Global Scan or Attack Rate Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Detected IP side	Single Choice	not set			Select between Subscriber and Network side.

## Global DoS Rate

For a given time frame, Global DoS Rate shows the rate (sessions/sec) of DoS attacks on the targeted host.

Table C-45 Global DoS Rate Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Detected IP side	Single Choice	not set			Select between Subscriber and Network side.

## Top Scanning or Attacking Hosts

For a given time frame, Top Scanning or Attacking hosts shows the top hosts identified as DoS attacking.

Table C-46 Top Scanning or Attacking Hosts Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Attack Metric	Single Choice	Attacks	√		Select one of the available metrics (attacks, malicious sessions, or duration(min)).
Detected IP side	Single Choice	not set			Select between Subscriber or Network side.

## Top DoS Attacked Hosts

For a given time frame, Top DoS Attacked Hosts shows the top DoS attacked hosts.

Table C-47 Top DoS Attacked Hosts Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Attack Metric	Single Choice	Attacks	√		Select one of the available metrics (attacks, malicious sessions, or duration(min)).
Detected IP side	Single Choice	not set			Select between Subscriber or Network side.

## Infected Subscribers

For a given time frame, Infected Subscribers shows the distribution infected Subscribers over time among the different IP protocol in the system.

See [Malicious Traffic](#) (on page C-34) for a table of common parameters for the Malicious Traffic group.

## DoS Attacked Subscribers

For a given time frame, DoS Attacked Subscribers shows the distribution of DoS Attacked Subscribers over time among the different IP protocol defined in the system.

See [Malicious Traffic](#) (on page C-34) for a table of common parameters for the Malicious Traffic group.

## Top DoS Attacked Subscribers

For a given time frame, Top DoS Attacked Subscribers shows the top DoS attacked subscribers.. See *Malicious Traffic* (on page C-34) for a table of common parameters for the Malicious Traffic group.

## Top Scanning or Attacking Subscribers

For a given time frame, Top Scanning or Attacking subscribers shows the top subscribers identified as DoS attacking.

Table C-48 Top Scanning or Attacking Subscribers Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Attack Metric	Single Choice	Attacks	√		Select one of the available metrics (attacks, malicious sessions, or duration(min)).

## Top Scanned or Attacked Ports

For a given time frame, Top Scanned or Attacked Ports shows the top scanned attacked ports.

Table C-49 Top Scanned or Attacked Ports Template

Parameter	Field Type	Default	Mandatory	Remembered	Comments
Attack Metric	Single Choice	Attacks	√		Select one of the available metrics (attacks, malicious sessions, or duration(min)).





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