

Blue Coat® Systems

IntelligenceCenter Getting Started Guide

For IntelligenceCenter 3.3.1

BLUE COAT

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1 About IntelligenceCenter

This chapter provides information to help you understand IntelligenceCenter (IC) and its components. It includes the following sections:

- [IntelligenceCenter Overview](#)—on page 2
- [IntelligenceCenter Components](#)—on page 3

IntelligenceCenter Overview

IC is a data collection and reporting solution for Blue Coat products. IC provides a secure dashboard that allows access to Blue Coat products from a central screen. With a single click, you can go into PolicyCenter, PacketShaper, or iShaper—without having to enter a user name and password each time a product is accessed. Just log in to IC and the Blue Coat products are instantly accessible without additional sign on.

You can configure one or more DataCollectors (DCs) to collect Measurement Engine (ME) and/or Flow Detail Record (FDR) data from PacketShaper appliances on your network. You can also collect NetFlow-5 data from other network devices such as routers. You can then use the data to generate aggregated reports that provide snapshots of your network as a whole or of individual sites. Or, you can define your own applications and network views, which allow you to generate reports using specific cross-sections of data.

For larger networks or networks where you want your data segregated, you can create multiple network groups, each with its own DC, to create separate reporting domains. Each group contains its own data sources, sites, and views on which the DC reports. A DC cannot report on devices, views, or sites contained in a different group and a device can only belong to one group within the IC network.

IC provides two types of reporting mechanisms:

- **Static Reports**—Allow you to choose from a selection of predefined reports, which you can run ad hoc or on a schedule.
- **Portlets**—Allow you to monitor and troubleshoot the flows and applications that are the most important to you. Portlet configurations are unique to each IC user profile.

IntelligenceCenter Components

IC comprises two separate installation components:

- **IntelligenceCenter**—Includes a web-based application that provides the central management, reporting, and administration functions as well as a database that is used to store historical reports, IC configuration information, end-user device single sign-on credentials, and portlet configuration information. All of your interaction with the product — including DC — is via IC.
- **DataCollector**—Collects the raw ME and/or FDR data from the configured data sources on your network and stores it in a database. It grooms the data and adds it to database tables in a “ready to report” format. As DC collects data over a period of time, it rolls the data up into time-based tables to enable reporting over a variety of time frames. In addition, DC pushes to IC the traffic class and partition information for the appliances from which it collects data. DC can collect data from any PacketShaper or PacketShaper ISP appliance running PacketWise version 7.3.1 or higher or any iShaper appliance running 8.2.1 or higher. DC can also collect and report on data from generic network devices such as routers and switches. For scalability or segregation of data, you can also deploy multiple DCs. When you deploy multiple DCs, the reports you run are contained to data collected on a single DC; that is, data is not aggregated across DCs.

Both IC and DC use the PostgreSQL Database Server to store their data. Therefore, if you install DC and IC on separate machines, each machine will need its own instance of Postgres; if you install DC and IC on the same machine, the components will share a single Postgres instance. The Postgres installation is integrated into both the DC and IC installers and the installer will detect whether it needs to install Postgres or if it is already installed. Figure 1-1 illustrates a typical IC configuration.

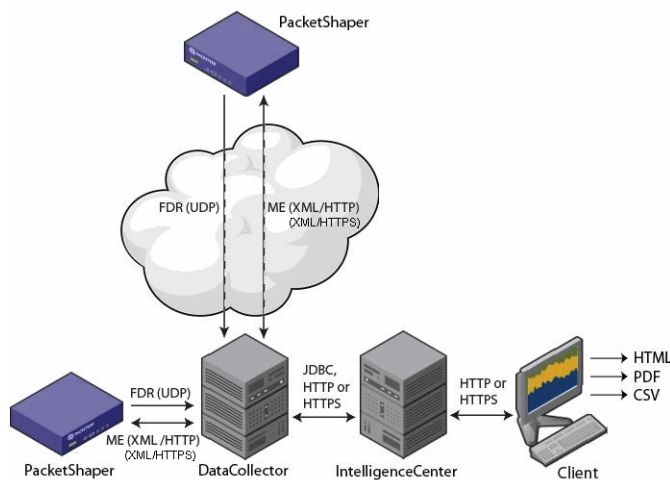


Figure 1-1 Typical IntelligenceCenter Deployment

2 Installing IntelligenceCenter

This chapter provides procedures for installing IntelligenceCenter (IC) and DataCollector (DC). It includes the following sections:

- ❑ System Requirements—on page 6
- ❑ Installation Checklist—on page 11
- ❑ Installing IntelligenceCenter—on page 12
- ❑ Installing DataCollector—on page 17
- ❑ Connect to PostgreSQL 8.4—on page 22
- ❑ Installing an SSL Certificate—on page 23

System Requirements

Before you can determine the hardware and software requirements for the server(s) on which you will be installing IC and one or more DCs, you must have an understanding of the data you will be collecting and reporting on. The quantity and rate of data to be collected as well as the characteristics of the data all have an impact on the amount of processing power required to collect, aggregate, and retrieve the data and on the number of DCs you must install to support the collection and reporting of the data. You must consider the following factors when determining the system requirements for your IntelligenceCenter deployment:

- Number of devices that you plan to collect data from (these are your data sources). This includes PacketShaper appliances as well as any NetFlow-capable devices you plan to collect from, such as routers or switches.
- Number of flow records per minute that will be collected from your data sources
- Total number of traffic classes
- Number of unique traffic classes
- Number of unique hosts
- Number of unique VLANs
- Number of unique DSCP values

You can install the IC and a single instance of DC on the same server or on separate servers depending on the number of data sources you have and the characteristics of your data. Because data collection and reporting are disk-, memory- and CPU-intensive, you must install the IC components on dedicated server(s). In addition, the amount of disk space you will need to store your data depends on the quantity and type of data you plan to collect (ME and/or FDR). For information on determining how much disk space you will need, see ["DataCollector Disk Space Usage Example" on page 9](#).

System Requirements Per Deployment

The following table provides the minimum system requirements for several different deployments based on your collection environment. Because data collection and reporting are resource-intensive, the more robust the hardware you use the better the performance of the application will be. In order for IC and DC to run successfully on the specified hardware, your deployment must meet ALL of the data thresholds detailed in the table.

There are a couple of things to note about this table:

- In order for IC and DC to run successfully on the specified hardware, your deployment must meet **ALL** of the data thresholds detailed in the table.
- The Small and Medium deployments show N/A for DC requirements because these deployments do not require a separate server for DC whereas the Large deployment does require a separate server for DC.
- All deployments are also supported on VMware ESXi 5.1.0 and vSphere client 5.1.0 platforms as long as all system requirements are met.
- Although there is no way to measure it before you start collecting data, each DC can only support up to 2 to 3 million host pairs. If you notice that your DC is exceeding this level, you will need to deploy additional DCs.

Requirements	Small IC & DC on same server	Medium IC & DC on same server	Large IC & DC on separate servers
Total			
PacketShaper appliances	50	100	250
Flows Per Minute	25,000	200,000	2,500,000
Traffic Classes	10,000	25,000	200,000
Per DC			
PacketShaper appliances	N/A	N/A	100
Flows Per Minute	N/A	N/A	500,000
Unique Traffic Classes	N/A	N/A	4,000
Total Traffic Classes	N/A	N/A	40,000
IC Server			
CPUs	1	2	2
Cores per CPU	4	4	4
Speed	2.66 Ghz	2.66 Ghz	2.66 Ghz
RAM	8 GB	16 GB	16 GB
Hard Disk Space	300 GB SAS	450 GB SAS	300 GB SAS
Number of Hard Disks	3+	5+	3+
RPM	10K	10K	15K
Partitions	2	2	2
RAID	0, 1, 5	0, 1, 5	0, 1, 5
Windows Server Edition	2008 Standard or Enterprise -or- 2008 R2 Standard, Enterprise, or Foundation 2012 Standard	2008 Standard or Enterprise -or- 2008 R2 Standard, Enterprise, or Foundation 2012 Standard	2008 Standard or Enterprise -or- 2008 R2 Standard, Enterprise, or Foundation 2012 Standard
Windows OS	32- or 64-bit	64-bit	64-bit
Language	English	English	English
Virtual Environment Support	VMware ESXi 5.1.0 vSphere client 5.1.0	VMware ESXi 5.1.0 vSphere client 5.1.0	VMware ESXi 5.1.0 vSphere client 5.1.0

Requirements	Small IC & DC on same server	Medium IC & DC on same server	Large IC & DC on separate servers
DC Server			
Supported PacketWise Version	PacketShaper: 7.3.1 or higher PS-S500: 11.1.1.14 or higher	PacketShaper: 7.3.1 or higher PS-S500: 11.1.1.14 or higher	PacketShaper: 7.3.1 or higher PS-S500: 11.1.1.14 or higher
CPUs	N/A	N/A	2
Cores per CPU	N/A	N/A	4
Speed	N/A	N/A	2.66 Ghz
RAM	N/A	N/A	16 GB
Hard Disk Space	N/A	N/A	500 GB SAS
Number of Hard Disks	N/A	N/A	6+
RPM	N/A	N/A	15K
Partitions	2	2	2
RAID	0, 1, 5	0, 1, 5	0, 1, 5
Windows Edition	2008 Standard or Enterprise -or- 2008 R2 Standard, Enterprise, or Foundation 2012 Standard	2008 Standard or Enterprise -or- 2008 R2 Standard, Enterprise, or Foundation 2012 Standard	2008 Standard or Enterprise -or- 2008 R2 Standard, Enterprise, or Foundation 2012 Standard
Windows OS	32- or 64-bit	64-bit	64-bit
Language	English	English	English
Virtual Environment Support	VMware ESXi 5.1.0 vSphere client 5.1.0	VMware ESXi 5.1.0 vSphere client 5.1.0	VMware ESXi 5.1.0; vSphere client 5.1.0



Note Static IP addresses (not DHCP) are required on the server(s) where you install IC and/or DC. This is because communication between IC and DC is established when you add DC to the IC network based on the IP addresses on each system at that time. If the IP address on either system changes after you deploy DC, you will have to remove DC from the IC network and re-add it in order to reestablish communication. Keep in mind that if you remove DC from the IC network, you will lose all configuration settings.

DataCollector Disk Space Usage Example

After DC collects ME and/or FDR data, it grooms the data and adds it to its database tables in a “ready to report” format. As DC collects data over a period of time, it rolls the data up into time-based tables to enable reporting over a variety of time frames. DC maintains tables for raw, hourly, daily, monthly, and yearly data. As these database tables are populated over time, the DC database can grow quite large. It is difficult to predict the size the database will grow to because of the large number of variables involved, such as the type of data you are collecting (ME or FDR), the number of flows-per-minute that you are collecting (for FDR), the number of devices from which you are collecting data, the number of traffic classes, and the data granularity and retention policies you configure.

The following examples show the amount of disk space used to store FDR and ME data on a system that is using the default data retention configuration. These examples assume that data is reduced by 50% when rolling from the raw table to the hourly table and a 4:1 reduction from the hourly to the daily table, the daily table to the monthly table, and the monthly table to the yearly table.

FDR Disk Space Usage Example

The following table shows the amount of disk space used to store the FDR data at a rate of 10,000 records per minute. Each FDR record (Packeteer-2) is approximately 214 bytes.

Table	Number of Records	Disk Space Usage
Raw	$2880 * 10,000 = 28.8 \text{ M}$	$28.8 \text{ M} * 214 = 6163 \text{ MB} \sim 6 \text{ GB}$
Hourly	$10,000 * 60 / 2 = 300,000$	$300,000 * 214 * 48 = 3,081,600,000 \sim 3 \text{ GB}$
Daily	$10,000 * 24 * 60 / (2 * 4) = 1,800,000$	$1,800,000 * 214 * 32 = 12,326,400,000 \sim 12 \text{ GB}$
Monthly	$10,000 * 60 * 24 * 30 / (2 * 4 * 4) = 13,500,000$	$13,500,000 * 214 * 7 = 20,223,000,000 \sim 20 \text{ GB}$
Yearly	$10,000 * 60 * 24 * 365 / (2 * 4 * 4 * 4) = 41,062,500$	$41,062,500 * 214 * 2 = 17,574,750,000 \sim 18 \text{ GB}$
Total: 6 GB + 3 GB + 12 GB + 20 GB + 18 GB = 59 GB		

ME Disk Space Usage Example

The following table shows the amount of disk space used to store ME class data collected from 10 PacketShaper appliances comprising 100 traffic classes. The DC is configured with a query interval of 15 minutes and 5 minutes granularity. Each ME class single record is approximately 306 bytes.

Table	Number of Records	Disk Space Usage
Raw	$100 * 2 * 3 * 4 * 48 * 10 = 1152000$	$1152000 * 306 = 352,512,000 \sim 350 \text{ MB}$
Hourly	$100 * 2 * 10 * 3 * 4 / 2 = 12000$	$12000 * 306 * 48 = 176,256,000 \sim 176 \text{ MB}$
Daily	$100 * 2 * 10 * 3 * 4 * 24 (2 * 4) = 72000$	$72,000 * 306 * 32 = 705,024,000 \sim 700 \text{ MB}$
Monthly	$100 * 2 * 10 * 3 * 4 * 24 * 30 / (2 * 4 * 4) = 172800$	$172800 * 306 * 7 = 370,137,600 \sim 370 \text{ MB}$
Yearly	$100 * 2 * 10 * 3 * 4 * 24 * 365 / (2 * 4 * 4 * 4) = 1624500$	$1624500 * 306 * 2 = 994,194,000 \sim 990 \text{ MB}$
Total: $350 \text{ MB} + 176 \text{ MB} + 700 \text{ MB} + 370 \text{ MB} + 990 \text{ MB} = 2.6 \text{ GB}$		



Note This example does not show disk space usage calculations for link and partition data.

Installation Checklist

Before you begin the installation process, make sure you have set up your server environments as follows:

- ❑ Make sure the system on which you are installing IC and/or DC meets the system requirements that are appropriate for your deployment. See "[System Requirements](#)" on page 6.
- ❑ You must log in to the server where you plan to install IC and/or DC using a user account with administrative rights that include the following:
 - Read/Write permissions on the file system
 - Permissions to access and modify the Windows Registry
 - Permissions to restart the server
 - Permissions to deploy/install software
- ❑ If you are logging into the server through a remote connection, you must use the console mode to log in to the network.
- ❑ You must install IC and DC on a dedicated system. In addition, you must make sure the following services are disabled before installing the software:
 - Anti-virus programs
 - Windows update services
 - Backup agents
- ❑ If you are installing IC and DC on separate systems, you must make sure that there is no firewall blocking communication between the two. For a list of ports that must be open for IC and DC to communicate, refer to the release notes.

**Note**

Before the IC and DC installation begins, the setup program runs a series of tests to ensure that the environment is configured for a successful installation. For example, it checks to see that it has the administrative privileges that are required to create the necessary folders, users, and registry settings and to start and stop services. In addition, it checks to make sure there are no software conflicts, such as existing installations of PostgreSQL or Python that will interfere with a successful installation. If the checks fail, the installation will stop and a detailed installation log file will be saved to the Windows Desktop so that you can troubleshoot the problem and then re-run the setup.

Installing IntelligenceCenter

This section provides instructions for installing IC. It includes the following topics:

- ❑ Before You Begin—on page 12
- ❑ Install IC—on page 12



Note If you install IC on the same server as DC, the two components can share an instance of PostgreSQL. However, there should not be any other existing instances of PostgreSQL on the system where you plan to install IC. If PostgreSQL was installed on the system by an application other than DC, you must uninstall it before proceeding with the setup. In addition, if there is an existing version of Python on the system, you must remove that before proceeding with the setup.

Before You Begin

The IC setup will prompt you for the following information:

- **Postgres Data Location** — Although the PostgreSQL software must be installed on the C:\ drive of the local system, you can choose where to create the Postgres data directory. Because this is the directory where your IC database will be created, make sure that the location you choose has adequate disk space.
- **Port Numbers** — The setup prompts for port numbers to use for HTTP and HTTPS access to IC. By default, it supplies the well-known port numbers 80 (HTTP) and 443 (HTTPS). However, if these port numbers are in use by other services that are installed on the system or if you do not want to use the default port numbers, you will need to provide available port numbers for these protocols to use.



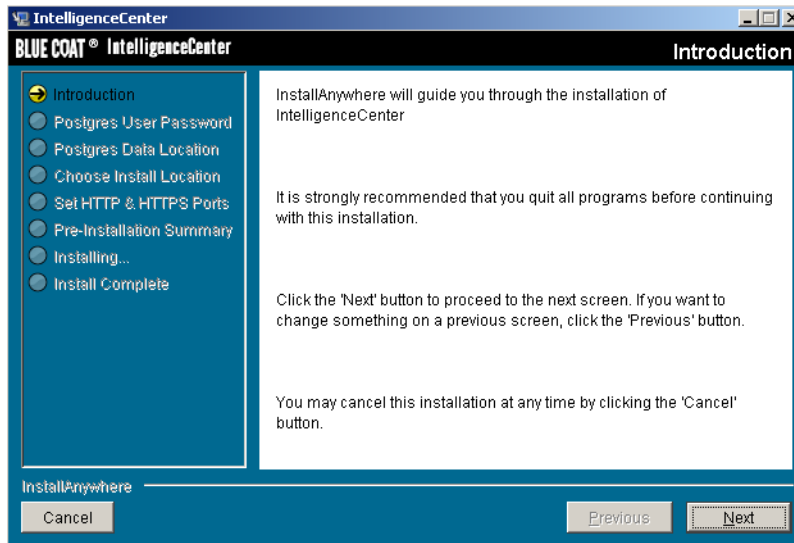
Note Before you install IC, make sure Java is not installed on the server. If you find that the Java Runtime Environment (JRE) and/or Java Developer Kit (JDK) are installed, you must uninstall them before proceeding with the IC installation.

Install IC

To install IC, quit all open programs (including anti-virus software) and then do the following:

1. Log in to the system where you plan to install IC using an account with administrative privileges. You will not be able to successfully install IC if you do not have administrative rights.
2. Go to <https://support.bluecoat.com/download> and follow the links to the IntelligenceCenter release that you want to install. To access the software download, you must log in to Blue Touch Online (BTO). If you do not have a BTO login, send an email to customer@bluecoat.com. You will receive a response within one business day. Contact Customer Care for forgotten username and passwords or submit a request at <https://support.bluecoat.com/help/forgotpassword>.
3. Download the IntelligenceCenter.zip file from BTO and unzip it to the hard drive on the system where you plan to install IC.

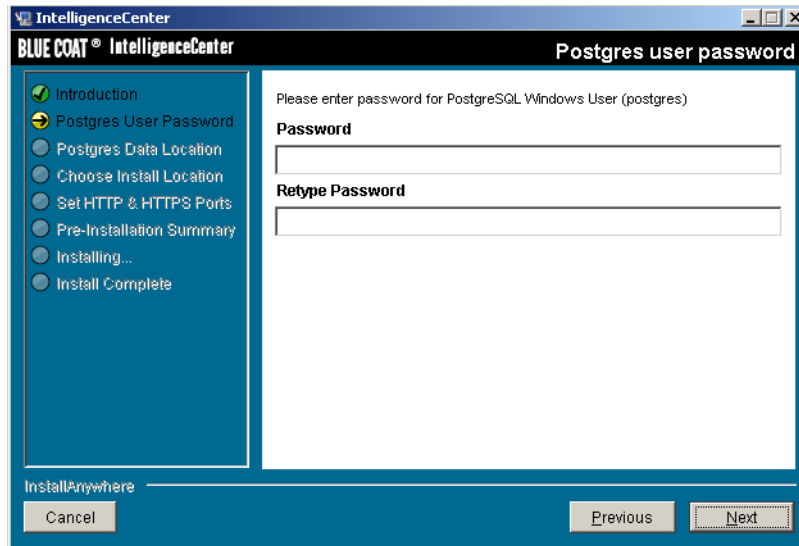
4. For Windows 2012, you need to run the installer in Windows 7 compatibility mode.
 - Right-click *IC_IntelligenceCenter_3.x.x.x.installer.exe*, click **Properties**.
 - In the Compatibility tab, select the check box **Run this program in compatibility mode**. From the drop-down, select **Windows 7**.
 - Click OK.
 - Double-click *IC_IntelligenceCenter_3.x.x.x.installer.exe* to install Intelligence Center.
 - Proceed to Step 6.
5. For all other Windows versions, double-click the *IC_IntelligenceCenter_3.x.x.x.installer.exe* file to launch the installer. The *Introduction* screen appears.



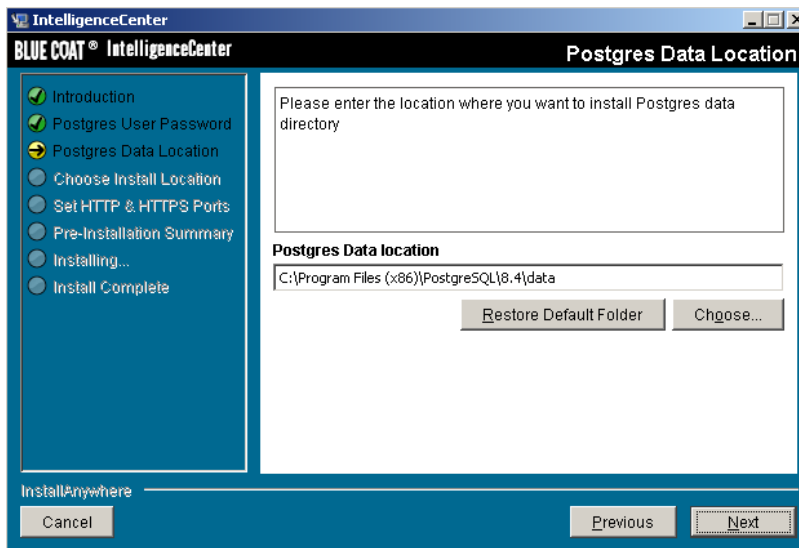
Note If you have already installed DC on this system, PostgreSQL will be installed and the Postgres user account will already be configured. In this case, the *Choose an Install Location* screen will be displayed. Skip to **step 8**. However, if you have not installed DC on this system, PostgreSQL will now be installed. In this case, the *Postgres user password* screen will be displayed. Continue with **step 5**.

6. At the *Introduction* screen (shown above), click **Next**.

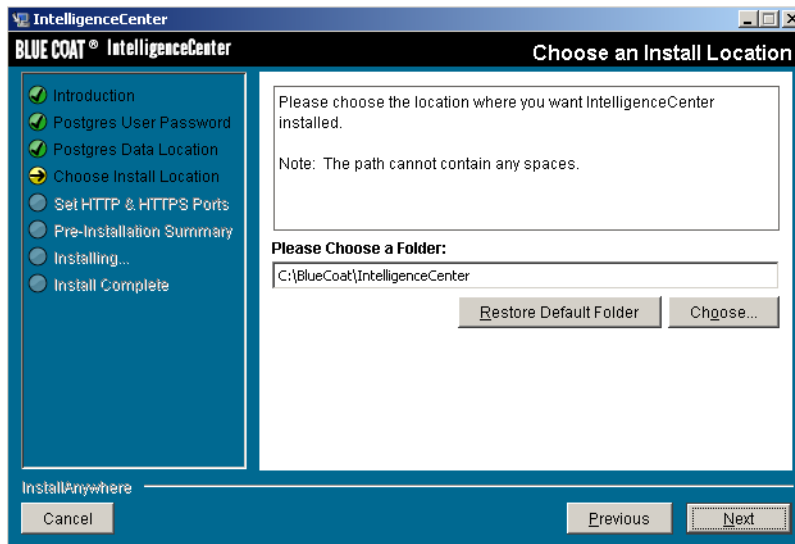
7. At the *Postgres user password* screen, create a password. For verification purposes, reenter the password in the **Retype Password** field. Click **Next**.



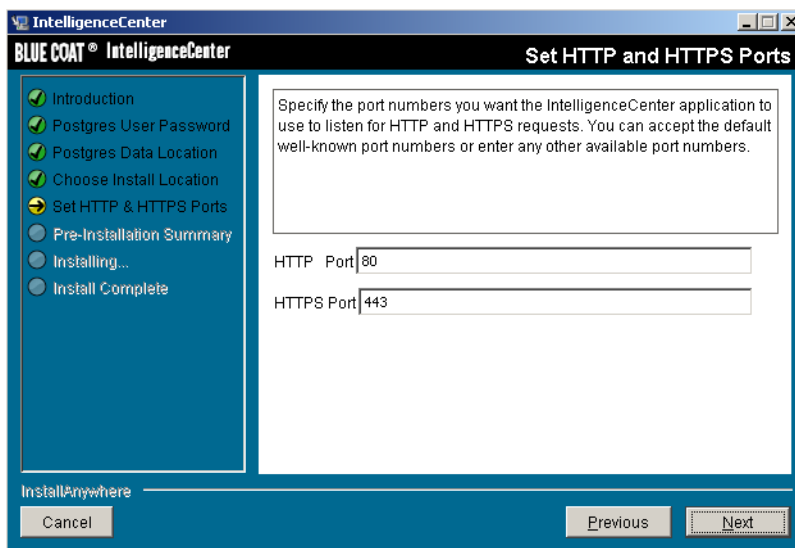
8. On the *Postgres Data Location* screen, enter the path to the folder where you want to create your database or use the default location (*C:\ProgramFiles\PostgreSQL\8.4\data*). Or, you can click **Choose** and browse to the location. Click **Next**.



9. On the *Choose an Install Location* screen, enter the path to the folder where you want to install IC. You have the option of searching through the **Please Choose a Folder** field or using the default location (C:\BlueCoat\IntelligenceCenter). You can also click **Choose** and browse to the folder. After you specify a location, click **Next**.

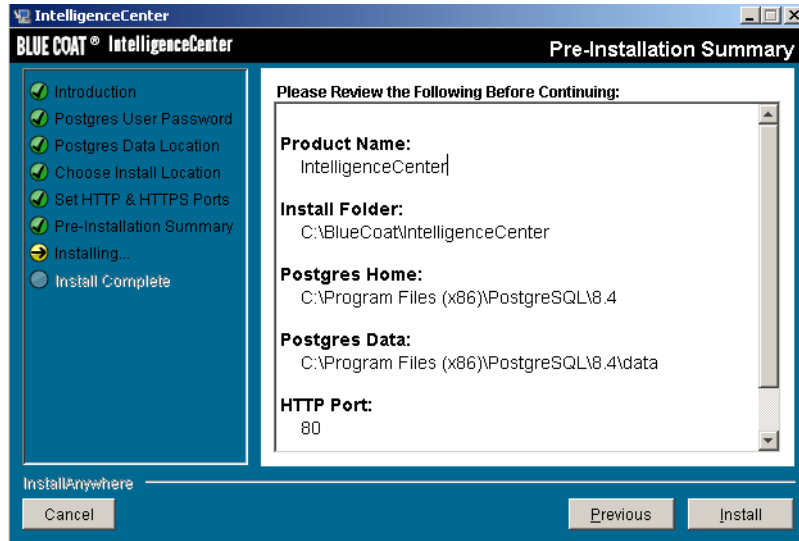


10. On the *Set HTTP and HTTPS Ports* screen, specify the **HTTP Port** and **HTTPS Port** that IC will use to listen for HTTP and HTTPS requests, or accept the default port numbers. Click **Next**.

**Note**

After you choose the installation location, the setup checks the server to make sure that you have enough physical memory to meet the minimum requirements. If you are installing IC and DC on the same machine, you must have at least 8 GB of RAM. If the physical memory is insufficient, you may see an error message stating that **Server Memory is insufficient**. To stop the installation, click **Quit, use a Different Computer**. To continue with the installation on the same machine, click **Ignore Recommended RAM**.

11. Review the *Pre-Installation Summary* screen, and then click **Install**. During installation the *Installing IntelligenceCenter* screen shows the progress of the installation.



Note During the IC installation, the setup program runs a series of database tests to ensure that the database environment is configured for a successful installation. If the checks fail, an error message is displayed stating that the database tests failed. Click **Exit** to stop the installation. If the installation is cancelled or has failed, a detailed database creation log file will be saved to the folder where IC is installed.

12. On the *Install Complete* screen, select whether to reboot the system now or later and then click **Done** to complete the setup. You must reboot the system before you can use IntelligenceCenter. If you plan to install DC on the same system, go ahead and install it before rebooting.

Installing DataCollector

The following sections describe how to install DC:

- ❑ [Before You Begin—on page 17](#)
- ❑ [Install DC—on page 18](#)



Note If you install DC on the same system as IC, the two components can share an instance of PostgreSQL. However, there should not be any other previously existing instances of PostgreSQL on the system where you plan to install DC. If PostgreSQL was installed on the system by an application other than IC, you must uninstall it before you can proceed with the DC setup.

In addition to PostgreSQL, DC automatically installs three additional applications: Python, Python PyGreSQL, and Microsoft Visual C++ Redistributable. Do not uninstall these components from your system or DC will not function.

Before You Begin

The following procedure describes how to restrict service group redirection to a specific protocol and set of ports.

- **NTP Server URL** — To ensure the integrity of the data collected by DC, you must configure it to use a Network Time Protocol (NTP) server. You will be required to provide the URL for an NTP server during the installation. For best results, DC and the PacketShaper appliances that it will use as data sources should all be configured to use the same NTP server. As a best practice, consider using the DC as the NTP server for your data sources.
- **Postgres Data Location** — Although the PostgreSQL software must be installed on the C:\ drive of the local system, you can choose where to create the Postgres data directory. Because this is the directory where your DC database will be created, make sure that the location you choose has adequate disk space.

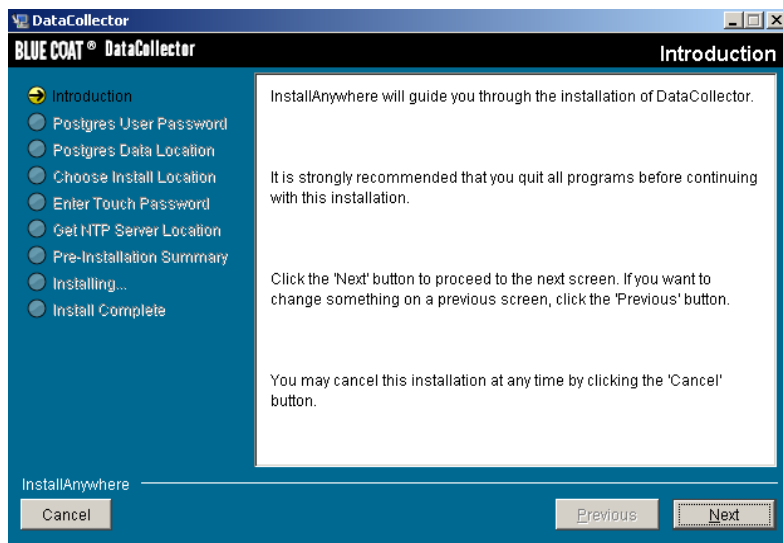


Note Before you install DC, make sure Java is not installed on the server. If you find that the Java Runtime Environment (JRE) and/or Java Developer Kit (JDK) are installed, you must uninstall them before proceeding with the DC installation.

Install DC

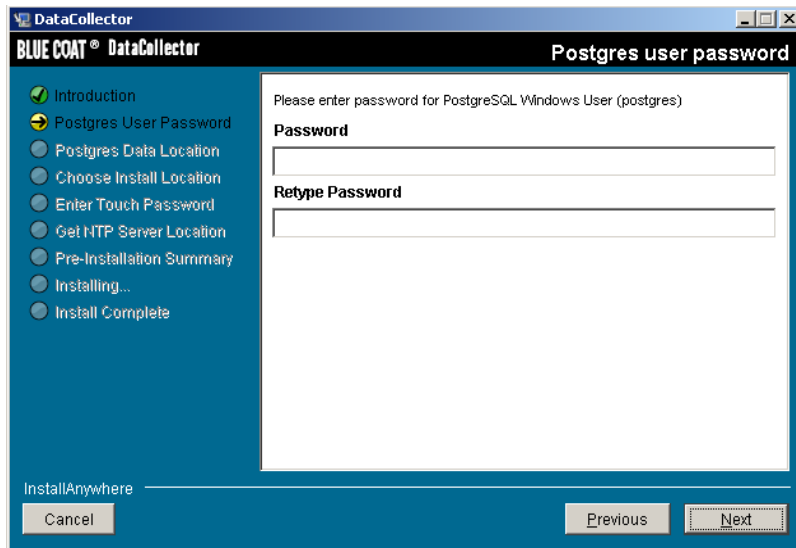
To install a DC, quit all open programs (including anti-virus software) and then do the following:

1. Log in to the system where you plan to install DC using an account with administrative privileges. You will not be able to successfully install DC if you do not have administrative rights.
2. Go to <https://support.bluecoat.com/download> and follow the links to the IntelligenceCenter release that you want to install. To access the software download, you must log in to Blue Touch Online (formerly WebPower). If you do not have a Blue Touch Online login, send an email to customercare@bluecoat.com. You will receive a response within one business day. Contact Customer Care for forgotten username and passwords or submit a request at <https://support.bluecoat.com/help/forgotpassword>.
3. Download the *DataCollector.zip* file from Blue Touch Online and unzip it to the hard drive on the system where you plan to install DC.
4. For Windows 2012, you need to run the installer in Windows 7 compatibility mode.
 - Right-click *IC_DataCollector_3.x.x.x.installer.exe*, click **Properties**.
 - In the Compatibility tab, select the check box **Run this program in compatibility mode**. From the drop-down, select **Windows 7**.
 - Click OK.
 - Double-click *IC_DataCollector_3.x.x.x.installer.exe* to install Intelligence Center.
 - Proceed to Step 6.
5. For all other Windows versions, double-click the *IC_DataCollector_3.x.x.x.installer.exe* file to launch the installer. The *Introduction* screen appears. Click **Next**.

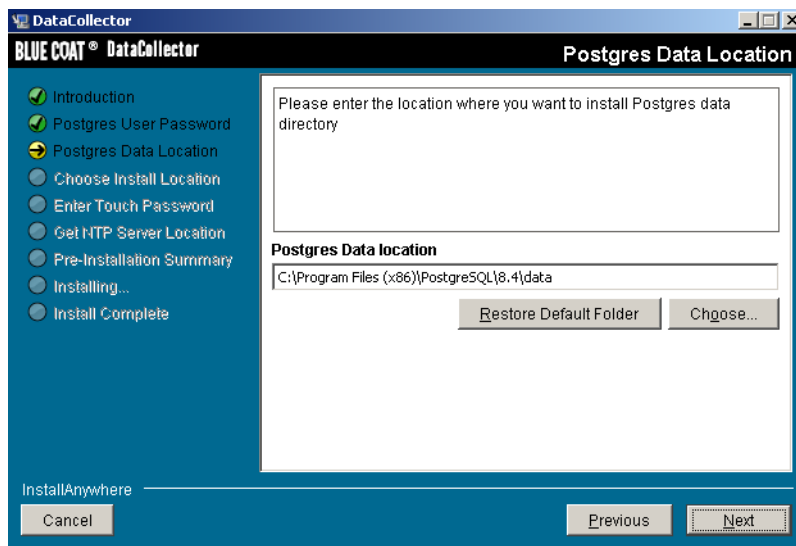


Note If you have already installed IC on this system, PostgreSQL will be installed and the Postgres user account will already be configured. In this case, the *Choose an Install Location* screen will be displayed. Skip to **step 8**. However, if you have not installed IC on this system, PostgreSQL will now be installed. In this case, the *Postgres user password* screen is displayed. Continue with **step 5**.

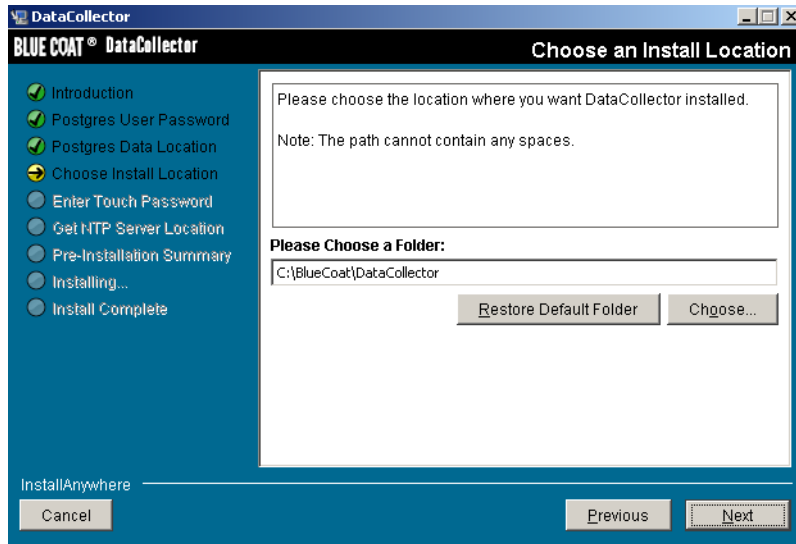
6. At the *Postgres user password* (shown above), create a password. For verification purposes, reenter the password in the **Retype Password** field. Click **Next**.



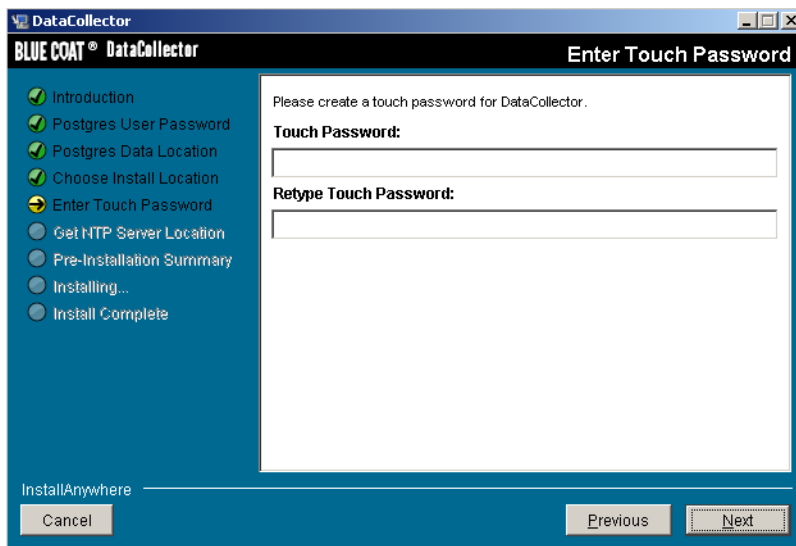
7. On the *Postgres Data Location* screen, enter the path to the folder where you want to create your database or use the default location (*C:\Program Files\PostgreSQL\8.4\data*). Or, you can click **Choose** and browse to the location. Click **Next**.



8. On the *Choose an Install Location* screen, enter the path to the folder where you want to install IC. You have the option of searching through the **Please Choose a Folder** field or using the default location (C:\BlueCoat\IntelligenceCenter). You can also click **Choose** and browse to the folder. After you specify a location, click **Next**. (Keep in mind that there cannot be any spaces in any of the folder names in the install location path). Click **Next**.



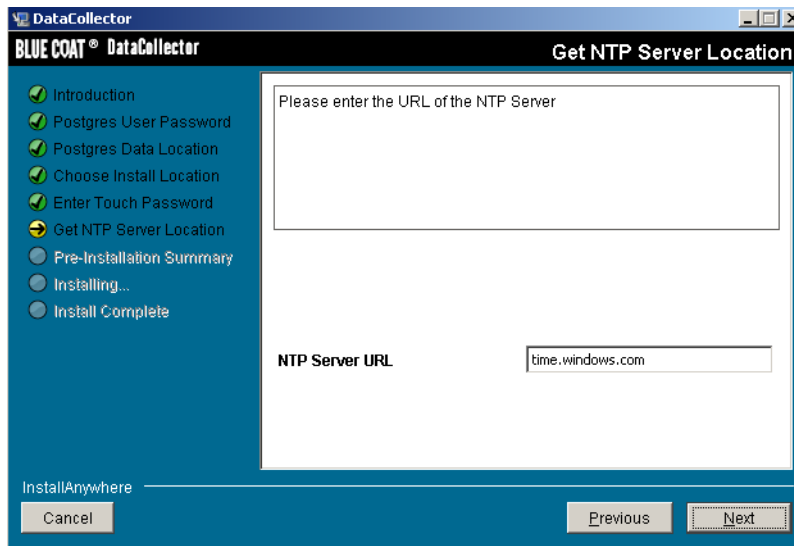
9. At the *Enter Touch Password* screen, enter a password for DC in the **Touch Password** field. For verification purposes, reenter the password in the **Retype Touch Password** field and then click **Next**.



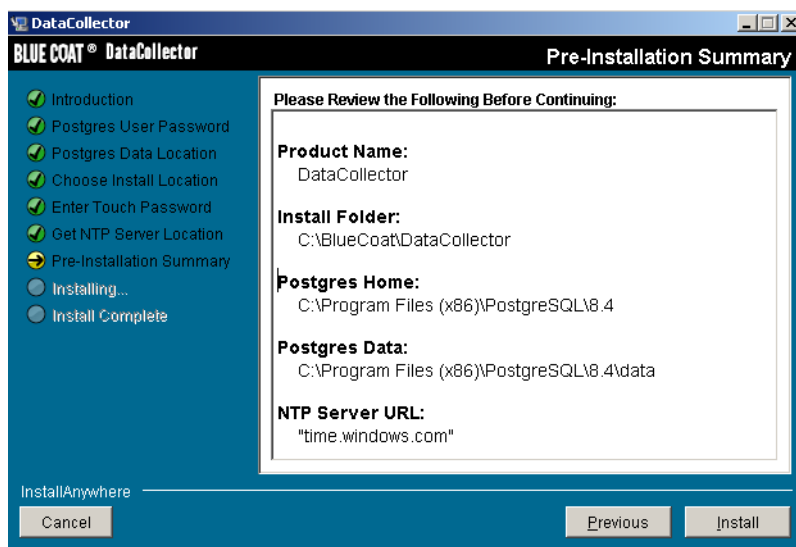
10. At the *Get NTP Server Location* screen, enter the URL for the network time protocol (NTP) server that you are using to synchronize the time on DC in the **NTP Server URL** field or accept the default value (time.windows.com). For best results, DC and the PacketShaper appliances from which it will be collecting data should all be configured to use the same NTP server. Note that if you want to change the NTP server after installation, you will have to modify the Windows Registry Settings. Click **Next**.



Note Make note of the touch password because you will be required to enter it when you deploy DC from within IntelligenceCenter.



11. Review the *Pre-Installation Summary* screen, and then click **Install**. During installation the *Installing DataCollector* screen shows the progress of the installation. When the installation completes, the *Install Complete* screen is displayed.



12. Before you complete the installation, use a text editor to open the `\jboss-4.2.2\conf\wrapper.conf` file, which is located in the DC installation folder (C:\BlueCoat\DataCollector by default) and change the value of the `host` parameter from `0.0.0.0` to the actual IP address of the system where you are now installing DataCollector.
13. Go back to the *Install Complete* screen in the setup program and select whether to reboot the system now or later and then click **Done** to complete the setup. You must reboot the system to complete the installation.

Connect to PostgreSQL 8.4

Follow these steps to connect to PostgreSQL 8.4 for the first time:

1. After installing IC and DC, you need to get the PostgreSQL password. Go to the following registry location:
`HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\PostgreSQL\BlueCoatIntelligenceCenter`
2. Get the dbPassword value.
3. To decode the hex value, use this website: <http://www.base64decode.org/>
4. Open pgAdmin3.
5. Right-click **PostgreSQL8.4 (localhost:xxxx) database**
6. Click **connect**.
7. When prompted for the password, enter the decoded password.

You are now connected to PostgreSQL 8.4.

Installing an SSL Certificate

IC ships with a default keystore that contains a self-signed certificate. This keystore — named *server.keystore* — is located in the `\apache-tomcat-6.0.18\webapps\ROOT\conf` directory in the IC installation location (C:\BlueCoat\IntelligenceCenter by default). However, in order to fully support the SSL protocol, you must purchase a certificate from a trusted third-party Certificate Authority (CA) and install it on the IC server. You can either replace the keys contained in the existing keystore or you can replace the existing keystore with a new one. Note that if you replace the keystore, the new keystore you create must also be named *server.keystore* in order for it to work with IC.

There are many different ways to generate and install keys and certificates. The following procedure describes one way to do it. The examples in this procedure assume that you installed IC in the default location. If you installed IC in a different location, adjust the commands accordingly. Additionally, the default *server.keystore* uses the password *management_application*. If you do not want to use this password, you can replace it with a different one in the commands.

To replace the default keystore:

1. Go to the website of the CA from which you are purchasing your certificate. Locate the CA root certificate and copy and paste it into a file.
2. To create a new keystore and store the root certificate file you just saved, go to the Windows command prompt and enter the following command (replacing *root_certificate_filename* with the actual name of the certificate file):

```
C:\BlueCoat\IntelligenceCenter\jre\bin\keytool -import -alias rootcert
-storepass management_application -keystore server.keystore -keypass
management_application -file <root_certificate_filename>
```

3. Generate your public/private key pair. When generating your key pair, you must provide parameters that create the distinguished name (DN) of the IC server. These parameters include the URL of the IC server, the department name where it is located and the name and location of the organization to which it belongs. To create the key pair, enter the following command (replacing the variables with your own values):

```
C:\BlueCoat\IntelligenceCenter\jre\bin\keytool -genkey -alias serverkeys -keyalg RSA
-keystore server.keystore -storepass management_application -keypass
management_application -dname"CN=<IC_web_URL>, OU=<organizational_unit_name>,
O=<organization_name>, L=<city_name>, ST=<state_name_abbreviation>,
C=<country_name_abbreviation>"
```

For example, to create a key pair for an IC server with IP address 123.45.6.78 in the IT department of Acme corporation located in Cupertino, California, you would enter the following command:

```
C:\BlueCoat\IntelligenceCenter\jre\bin\keytool -genkey -alias serverkeys -keyalg RSA
-keystore server.keystore -storepass management_application -keypass
management_application -dname"CN=123.45.6.78, OU=IT_Department, O=Acme Corporation,
L=Cupertino, ST=CA, C=US"
```

4. Create the certificate signing request (CSR). This is the file that you will submit to the CA in order to purchase your certificate. To create a CSR named *request.csr*, enter the following command:
- ```
C:\BlueCoat\IntelligenceCenter\jre\bin\keytool -certreq -alias serverkeys -file
request.csr -keystore server.keystore -storepass management_application
```
5. Submit the .csr file you just created to the CA. The procedure for submitting the CSR depends on which CA you are using. After the CA processes the CSR, the organization will usually email your certificate to you. The certificate will look something like this:

```

-----BEGIN CERTIFICATE-----
MIICWzCCAiygAwIBAgICAZmwdYJKoZIhvcNAQEEBQAwgbcx CzAJBgNVBAYTA1VT
MRiWAwYDQVQIEwIeXANjb25aZW4xEDA0BgNVBAcTF0h1ZG1zb24xkdAmBgNVBAoT
H1VuaXZlcnNpdHkgb2YwV2l1ZyZ29uc2U1LlU1hZG1zb24xkzApBgNVBASATkRpdmlz
aW9uIG9mIEIuLm9yYWF0aW9uIFRlY2hub2xvZ3kxkzApBgNVBAMTl1VXMS0yMDAz
MTIxOCBNAWRkbG93YXJ1IFRlcn13Rpbmcgc20wEWhcnmNDMxMjY1eJ5MDQwOTQ1
WncmNDcwNDZMQDQ0TWF1CjBxazELMkAGIUEBHMCMVFEeJAQBgNVBAcTCVdpd2Nvbnpb
jE5MA4GALUEBxMHTWFlkGaXNvbjE0MCGYGA1UECmFV5dpdVyc2l0eSBvZjE1bXAN
jb25aW4tTWFlkAXNvbjE0MCKGALUECxmIRGL2aXNpb24gb2YgSW5mb3JtYXRpb24
vGVGVjAg5vbG9neTEUMBIUeALUEAXMLR3jYyB0aW9uZDk1YXJ1eGkgbG91ZG90
BCQEFmFwQm9yYWF0aW9uQGRvXQud2l1Zy51ZHUwXDNANBgkqhkiG9w0AQAQFAANL
DIAEIAEK/27x8st0GRPUulw5AIOOausOvWw9/B3W4XRvrXsk3Yfn2jW4K+YarQKv4r
jXJb4BR1IPGBz4KhVaUumcvlgr1TDAQAb0uafJAMBgNVHRMAA8EajAAMA0GCSGMS13
DQEBAAUAA4GBAA/3rFnngPFRBl2Mv7UxOfOrXgGxK9QkZALUEBwbbpboYVCopHRm
/v/cySA91GLjL18g1PWW723Jk1E1Cv+G3ycM83YgtlulYhB26/JbVc0jg4hl+c1
g1v32RR+e+pESbfsIY0KoKJBX2WElm0IB1LpDrRL+mUhJmcmWzx1
-----END CERTIFICATE-----

```

6. Copy the certificate text into a file and save it with the extension `.pem`.
7. Convert the PEM file — named `ICcert.pem` in this example — to the DER format required for Java implementations using an SSL conversion tool. For example, using the openSSL utility you would enter the following command:

```
C:\openssl\bin\openssl x509 -in C:\ICcert.pem -out C:\ICcert.der -outform DER
```

8. Import the certificate into your keystore using the following command:

```
C:\BlueCoat\IntelligenceCenter\jre\bin\keytool -import -alias serverkeys -file
ICcert.der -keypass management_application -keystore server.keystore -storepass
management_application
```

9. Replace the default `server.keystore` with your new `server.keystore` by copying the file to the following location:

*C:\BlueCoat\IntelligenceCenter\apache-tomcat-6.0.18\webapps\ROOT\conf\server.keystore*



**Note** IC requires that the keystore be named `server.keystore`.

## 3 Getting Started With IntelligenceCenter

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Now that you have installed IntelligenceCenter (IC) and DataCollector (DC), you are ready to start configuring the system. This chapter describes how to log in and out of IC and how to navigate the user interface. It also details the steps you must take to set up the administrative accounts and license the software. It includes the following sections:

- ❑ [Logging in and out of Intelligence Center—on page 24](#)
- ❑ [Exploring the IntelligenceCenter User Interface—on page 29](#)
- ❑ [Setting Administrative Account Settings—on page 30](#)
- ❑ [Installing the License Key—on page 32](#)

## Logging in and out of Intelligence Center

The following sections describe how to log in to the IC Web-based user interface and the browser requirements for doing so:

- ❑ "Browser Requirements" on page 24
- ❑ "Adobe Flash Player Requirements" on page 24
- ❑ "Logging In" on page 25
- ❑ "Logging Out" on page 28

### Browser Requirements

IC has been tested with the following browser versions. You can log in to IC from any client machine that is equipped with one of the supported browsers.

- Google Chrome 35
- Firefox 30
- Internet Explorer 7.x, 8.x, or 9.x

### Adobe Flash Player Requirements

Because the IC user interface is displayed using Adobe Flash Player, you must have the current version of Adobe Flash Player installed on the client system from which you will access IC. For the IC user interface to function properly, you must set the browser's Internet security settings to the default values. If you haven't already installed the latest version, make sure to do so before using IC. If you aren't sure which version of Adobe Flash Player is installed on your client system, go to:

<http://www.adobe.com/software/flash/about/>

To download the latest version, go to:

<http://www.adobe.com/products/flashplayer/>

If you do not have Flash installed and you attempt to log in to IntelligenceCenter, you will be redirected to the Flash download page.

## Logging In

IC provides a default administrator user account with user name `admin`; you must use this account the first time you log in to configure IC.

If you are logging in from the system on which you installed IC, you can launch IC from the Windows Start menu. If you are logging in from a remote system or if you are logging in from the local system using non-default port numbers (ports other than 80 for HTTP and 443 for SSL), you must manually enter the IP address of the IC server in your browser window in order to launch IC. Both login procedures are described in the following sections:

- ❑ "Launching IC from the Start Menu" on page 25
- ❑ "Launching IC from a Browser" on page 26

### Launching IC from the Start Menu

If you're logging in from the local system and you configured IC to use the default ports when you installed it (80 and 443 respectively), you can log in using the Windows Start menu as follows:

1. Click **Start** and select **Programs > Blue Coat > IntelligenceCenter**.
2. Select one of the following options, depending on whether you want to access IC over a secure (SSL) or non-secure (HTTP) port:
  - Select **Launch IntelligenceCenter (non-secure port)** to access IC over HTTP.
  - Select **Launch IntelligenceCenter (secure port)** to access IC over SSL.

IC launches in your default browser. The login screen appears.



3. For **User Name**, type `admin`.
4. For **Password**, type `admin`.

Click **Login**. The **Monitor** tab in IC initially displays.



## Launching IC from a Browser

To launch IC from a browser:

1. Open a browser window or tab.

For the address, type one of the following:

**https://<ip\_address>:<port>** (for a secure connection)

- or -

**http://<ip\_address>:<port>** (for a non-secure connection)



**Note** The port number is required only if you specified HTTP and/or HTTPS ports other than the defaults — 80 and 443 respectively — when you installed IC.

The following table describes each variable in the URL:

| Variable     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ip_address> | <ul style="list-style-type: none"> <li>• If you're logging in from a remote client, type the IP address or domain name of the computer on which you installed IC. For example, <i>http://10.10.1.2</i>.</li> <li>• If you're logging in from the local system, enter <i>localhost</i>. For example, <i>http://localhost</i> or <i>https://localhost</i>.</li> </ul>                                                                                                   |
| <port>       | <ul style="list-style-type: none"> <li>• If you accepted the default port numbers for HTTP (80) and HTTPS (443) when you installed IC, you do not need to include the port number in the URL. For example, <i>http://10.10.1.2</i>.</li> <li>• If you specified port numbers other than the defaults when you installed IC, you must include them in the URL as in the following examples: <i>https://10.10.10.1:8443</i> or <i>http://localhost:8080</i>.</li> </ul> |

The login screen appears.

2. For **User Name**, type **admin**.
3. For **Password**, type **admin**.

4. Click **Login**. The **Monitor** tab in IC initially displays.



## Logging Out

IC does not log you out automatically. If you do not intend to use IC for an extended period of time, you should log out to prevent unauthorized access to the application.

To log out of IC:

1. Click the **Logout** link in the banner.



The login screen appears.



2. Close the browser window.

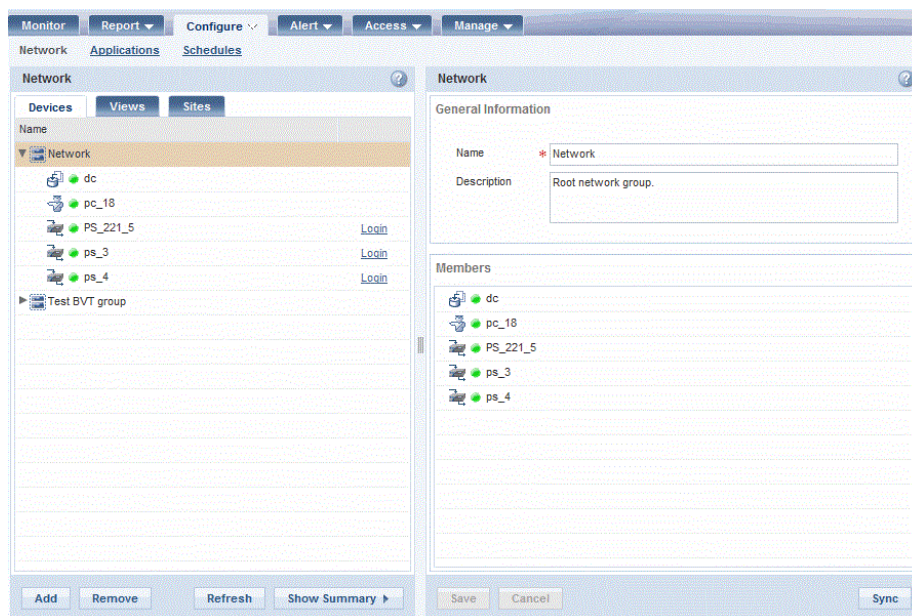


**Note** Your IC session will automatically time out after 30 minutes of server inactivity. If your session times out, you will have to enter your password to restore your session.



## Exploring the IntelligenceCenter User Interface

When you log in to IC for the first time, the **Monitor** tab is displayed. To perform the initial IC configuration tasks you must select the **Configure > Network > Devices** tab. By default, this tab contains a single group called **Network**.



The tabs at the top of the interface allow you to move from task to task within IC. The following table describes the tasks you can perform from each tab.

| Tab              | Tasks                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Monitor</b>   | Configure and view the IC portlets. The portlet configurations are unique to each IC user profile. For information on configuring and viewing portlets, refer to the online help.                                                                                                                                                                                                                                                                                              |
| <b>Report</b>    | Run, view, or schedule the IC static reports. For information on running, viewing, and scheduling reports, refer to the online help.                                                                                                                                                                                                                                                                                                                                           |
| <b>Configure</b> | Define the IC network, including creating network groups, sub-groups, and views, adding devices, and configuring data collection. For information on how to set up your network, see .                                                                                                                                                                                                                                                                                         |
| <b>Alert</b>     | View active alerts or configure the alerting system. For information on configuring alerting, refer to the online help.                                                                                                                                                                                                                                                                                                                                                        |
| <b>Access</b>    | Manage users and user groups and define and assign access roles for the users and user groups. For information on setting up user and group access to IC, see <a href="#">Chapter 5, Setting Up User Access</a> .                                                                                                                                                                                                                                                              |
| <b>Manage</b>    | Install and view your license, customize the IC login message, manage your scheduled reports, monitor the audit log and configure IC system settings. For information on installing your license key, see <a href="#">"Installing the License Key" on page 32</a> . For information on setting up the system email account, see <a href="#">"Setting Up the IC Email Account" on page 31</a> . For information on configuring other system settings, refer to the online help. |

## Setting Administrative Account Settings

Before you begin using IC, you must configure the required administrative account settings as described in the following sections:

- ❑ [Setting the Administrative Password—on page 30](#)
- ❑ [Setting Up the IC Email Account—on page 31](#)

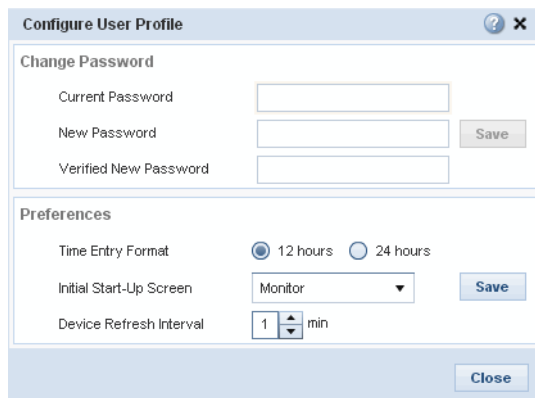
### Setting the Administrative Password

Because the default user name and password for the admin user are well known and listed in documentation available to the public, you should consider security implications. If IC is not on a trusted network, you should immediately change the password to prevent unauthorized access.

1. Click the **admin** link in the banner.



The *Configure User Profile* dialog box appears.



2. Type the **Current Password**.
3. Type the **New Password**. The password must be 6 to 32 characters in length; can contain any combination of letters, numbers, and symbols; and contain no spaces. As you type the password, an asterisk (\*) displays for each character you type. Passwords are case sensitive.
4. Retype the password in the **Verified New Password** field.
5. Click **Save**.
6. Click **Close**.

## Setting Up the IC Email Account

To enable IC to send email notification of events — such as report generation notification — to selected users, you must configure an email server. You will need the DNS name or IP address of the Simple Mail Transfer Protocol (SMTP) server through which IC will send the email as well as the email address and an account for IC to use to send email from.

To set up the IC email account:

1. Select **Manage > System Settings > System Email Address**. The IC system email account settings are displayed in the right pane. You must replace the default values with actual email server and addressing information before IC will be able to send email notifications.

The screenshot shows the 'System Email Address' configuration window. On the left is a sidebar with a tree view containing the following items: 'Device Communication', 'External Syslog Servers', 'Login Message', 'SNMP Trap Managers', 'System Email Address' (which is highlighted with an orange background), and 'External Authentication'. The main area of the window is titled 'System Email Address' and contains a descriptive text: 'System email settings define the settings IntelligenceCenter uses to email reports and alerts.' Below this text are three input fields, each with a red asterisk indicating a required field: 'Email Server' with the value 'mail.acme.com', 'Sender Email' with the value 'admin@acme.com', and 'Sender Name' with the value 'IntelligenceCenter'. At the bottom of the window are two buttons: 'Save' and 'Cancel'.

2. In the **Email Server** field, enter the fully qualified DNS name or IP address of your SMTP server.
3. In the **Sender Email** field, enter the email address of the user from which you want IC to send email notifications. This must be a valid email account on the specified email server.
4. In the **Sender Name** field, enter the name of the user from which you want IC to send email notifications.
5. Click **Save**.

## Installing the License Key

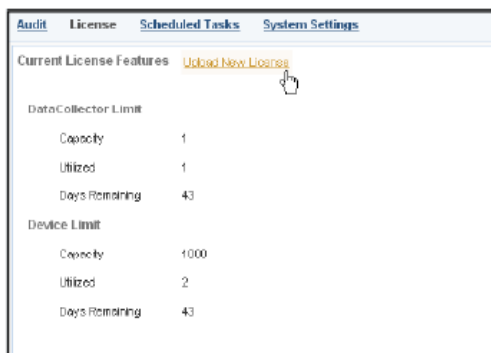
Your IC license controls which product features you are allowed to use. When you first install IC a 60-day trial license gets installed, which allows you to deploy a single DC and 1000 devices (the trial license does not support multiple DCs). To continue using IC after the 60-day trial period has ended, you must purchase the license components you require and then upload the corresponding license keys to IC. At a minimum you will need a base license, which allows you to deploy IC with a single DataCollector, as well as license keys to support the number of devices you plan to deploy. You must also purchase a license for each additional DC you plan to deploy.

After your purchase is complete, you will receive an email containing the activation codes for the licensing features you purchased. You must then go to Blue Touch Online (BTO) and download your license keys. When you download your license key file from Blue Coat, make sure you copy it to a location that is accessible by the system on which you installed IC. You can then use IC to install the license key file as follows:



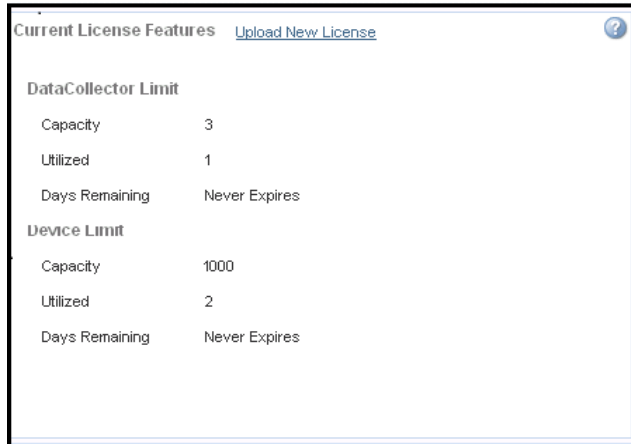
**Note** Do **NOT** open the license key in a text editor or rename it as this will corrupt the file. The license key must have a *.bluecoat* extension.

1. Go to <https://support.bluecoat.com/licensing> and select **License Others**. The Blue Coat Licensing Portal (BCLP) login screen is displayed.
2. Enter your Blue Touch Online (BTO) **User ID** and **Password**. If you do not have a BTO login, send and email to [customer@bluecoat.com](mailto:customer@bluecoat.com). You will receive a response within one business day. Contact Customer Care for forgotten username and passwords or submit a request at <https://support.bluecoat.com/help/forgotpassword>. After you successfully log in, the BCLP Home page is displayed.
3. Enter the **Activation Code** contained in the email you received and then click **Next**. The download link for the corresponding license key is displayed. Download the file to a location that is accessible by the system on which you installed IC. Repeat this step for each activation code you received.
4. Log in to IC and select **Manage > License**. The *Current License Features* window displays information about your current license, such as whether data collection is enabled, the number of devices and DCs you can support, and the expiration date on each feature.



5. To install a new license, click **Upload New License**. A file selector dialog box is displayed.
6. Browse to the location where you saved the license file and click **Open**. The new license is applied and the **Current License Features** are updated on the screen.

For example, in the screen below, the **Current License Features** now shows the device capacity as 1000, which indicates that you purchased a license to add 1000 data sources to IC; this license never expires.



| Current License Features           |               |
|------------------------------------|---------------|
| <a href="#">Upload New License</a> |               |
| <b>DataCollector Limit</b>         |               |
| Capacity                           | 3             |
| Utilized                           | 1             |
| Days Remaining                     | Never Expires |
| <b>Device Limit</b>                |               |
| Capacity                           | 1000          |
| Utilized                           | 2             |
| Days Remaining                     | Never Expires |



## 4 Setting Up Data Collection and Reporting

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Before you can start generating IntelligenceCenter (IC) reports, you must configure your IC network. At a minimum, an IC network contains a group of devices and a DataCollector (DC) that collects and reports on the data generated by these devices. Depending on the amount of data you need to collect and the way you want to partition your reporting, you may need to create multiple groups, each with its own DC and unique set of devices. Each DC collects data from and reports on the devices that reside in its own group.

To set up your IC network, you must complete the following tasks:

- ❑ Define the groups and sub-groups that will contain the DCs and devices in your IC network. Each group you create represents a standalone reporting domain with a unique DC and set of devices. See [“Defining Network Groups and Subgroups” on page 35](#).
- ❑ Add a DC to each group. See [“Adding a DataCollector” on page 38](#).
- ❑ Add each device that you want to be able to report on to the IC network. See [“Adding Devices” on page 40](#).
- ❑ Configure DC to collect data from the devices. See [“Configuring Data Sources” on page 42](#).
- ❑ Define a set of hours that correspond to the hours when your network usage is most active (that is, the hours when people are working). See [“Setting Up Business Hours Reporting” on page 46](#).
- ❑ Define the applications that you are interested in reporting on and designate critical applications. See [“Select the time zone that corresponds to the region where you are setting your business hours \(this does not have to be the same as the time zone where the DataCollector resides\) by selecting a value from the Select Time Zone drop-down list.” on page 46](#).
- ❑ Enable site reporting by associating IC site names with PacketShaper location-based traffic classes. See [“Setting Up Site Reporting” on page 51](#).

## Defining Network Groups and Subgroups

In IC, you organize your devices into groups and sub-groups. A group is a top-level organizational unit that defines a reporting domain in IC. Each group must contain a single DC as well as the devices from which this DC will collect and generate reports. A DC in one group cannot collect data from or report on data from devices in a different group.

Within each group that you define, you can further organize your devices into sub-groups. By organizing small groups of devices into sub-groups, you can optimize the speed at which the network tabs load. You can then report on these sub-groups rather than on the entire network to improve report generation times.

The following sections describe how to set up your IC network:

- ❑ [Planning Groups and Sub-groups—on page 35](#)
- ❑ [Creating a Group—on page 36](#)
- ❑ [Creating a Sub-group—on page 37](#)

### Planning Groups and Sub-groups

Before you install IC and your DC(s), you should take time to plan your deployment. The number of groups (and, DCs) you need will depend on the size of your organization and the amount and type of data you are collecting, and the way you want to partition your data. When planning your deployment, consider the following:

- **The amount and type of data you will be collecting**—If you are collecting more data than a single DC can support, you will need to deploy multiple DCs. Keep in mind that for each DC you deploy, you must create a separate group and that you cannot report across groups. Therefore, you must plan how you want to partition your data collection and reporting. For guidelines on the amount of data a single DC can collect on a given hardware platform, see ["System Requirements" on page 6](#).
- **How you want to partition your data**—You may also want to create groups to partition data from specific regions or customers. For example, if you are a service provider, you may want to create a separate group for each customer to ensure that the data for each customer is segregated. Or, if you have a global organization that generates a large amount of data, you may want to create separate groups based on geographic region or organization type.

Beneath each group, you can create sub-groups to help you further organize your devices. For example, you could organize sub-groups based on the physical structure and location of the devices on your network. In this type of organization, you might create a separate sub-group for each geographical region or city in your network. Or, you could create sub-groups that organize devices logically, such as by department.



## Creating a Group

By default, IC contains a single group called *Network*. You must create a separate group for each DC you plan to deploy.

To create a group:

1. Select **Configure > Network > Devices**.



**Note** You can rename the default *Network* group. If you have a naming scheme for the groups you plan to create, you may want to rename this top-level group to match your scheme. To rename the default group, simply select it in the **Devices** tab, enter a new **Name** and click **Save**.

2. Click **Add** and select **Group** from the pop-up menu. The *Create Group* dialog box is displayed.


3. Enter a **Name** and optionally a **Description** for the group.
4. Specify whether you want to associate a DC with this group now or later:
  - If you want to associate a DC with this group later, select **Do not assign a DataCollector at this time**. You must add a DC to the group before you can collect data and report on devices in the group.
  - If you have a DC in a different group that you would like to reassign to this new group, select **Reassign a DataCollector**. Note that if you have used this DC to collect data for a different group, you will no longer be able to report on the data you have collected (unless you move the devices as well).
  - If you want to add a new DC to this group, select **Add a new DataCollector** and then complete the fields required to add the DC (see ["Adding a DataCollector" on page 38](#) for detailed information about the required fields).
5. Click **Save**. The new group is displayed on the **Devices** tab and is identified with the icon. Additionally, if you chose to add a DC at the same time that you created the group, the DC is also displayed under the new group object on the **Devices** tab as indicated by the icon. You must add a DC to each group in order to collect and report on data for the devices in the group. If you have not yet added a DC to this group, see ["Adding a DataCollector" on page 38](#).


## Creating a Sub-group

If you have many devices, you can optimize the speed at which the network tabs load by organizing small groups of devices into sub-groups. You can then report on these sub-groups rather than on the entire network to improve report generation times.

To create a sub-group:

1. Select **Configure > Network > Devices**.
2. Select the group or sub-group under which you want to create the new sub-group. The network groups can be collapsed and expanded; just click the arrow icons next to each group or sub-group. The down arrow ▼ icon indicates that the group is expanded; the right arrow ► icon indicates that the group is collapsed.
3. Click **Add** and select **Sub-group** from the pop-up menu. The *Create Sub-group* dialog box is displayed.

A dialog box titled "Create Sub-group" with a question mark icon in the top right corner. It contains two input fields: "Name" with a red asterisk indicating it is required, and "Description". At the bottom are "Save" and "Cancel" buttons.

4. Enter a **Name** and optionally a **Description** for the sub-group and click **Save**. The new sub-group is displayed on the **Devices** tab and is identified with the  icon.



## Adding a DataCollector

A DC is required to collect and report on data for the devices in a given group. You must deploy a DC in each group before you can begin reporting on that group. Note that you can also create a DC at the same time that you create a new Group; see ["Creating a Group" on page 36](#) for details.




**Note** The default licence that is included with IC allows you to deploy a single DC for 60 days. If you want to continue using DC after the 60-day trial period ends, you must purchase a license to do so. To deploy additional DCs you must obtain a license. See ["Installing the License Key" on page 32](#) for instructions on adding a license.

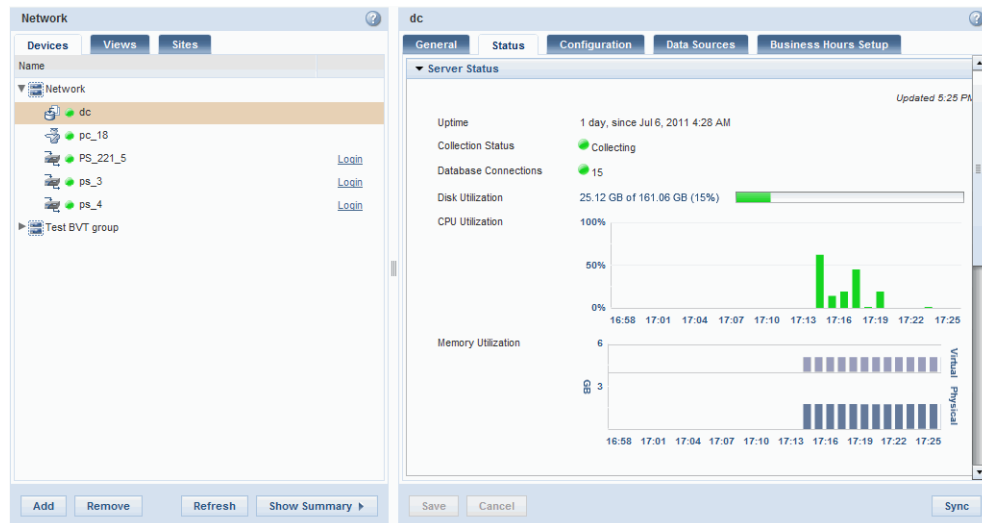
To add a DC to a group:

1. Select **Configure > Network > Devices**.
2. Click **Add** and then select **DataCollector** from the pop-up menu.

The *Import DataCollector* dialog box appears.

3. Enter a name for the DC in the **Device Name** field.
4. Enter an optional **Description**.
5. Enter the IP address or DNS hostname of the server on which DC is installed in the **Host** field. If IC and DC are installed on the same system, you can enter `localhost` in this field. Note however that you can only run one DC on a given server; if you have multiple DCs, you must install them on separate servers, each of which meets the ["System Requirements" on page 6](#).
6. Enter the **DC Touch Password**. This is the password that you created when you installed this DC.
7. In the **Location** field, you can optionally enter a description of the server's location.
8. Specify which group this DC will service. A DC can only collect and report on the devices contained in its associated group:
  - If the group that this DC will service already exists, select the **Select from current Group(s)** radio button and then select the group from the **Groups without DataCollectors** drop-down list.
  - If the group does not yet exist and you want to create it now, select the **Create new Group** radio button and then enter a **Name** and optionally a **Description** for the new group.

9. Click **Save** to save the DC configuration and the group, if applicable. A DC object appears on the **Devices** tab in the **Network** pane, as indicated by the  icon. The DC tabs appear in the right pane.



## Adding Devices

In order to interact with a device from within IC or collect data from a device, the device must have an entry on the **Devices** tab. There are two ways to add a device to IC:


- ❑ [Adding Devices Manually—on page 40](#)
- ❑ [Importing Devices from PolicyCenter—on page 41](#)

### Adding Devices Manually

To add a device to IC manually:

1. Select **Configure > Network > Devices**.
2. Select the group or sub-group where you want to create the device and then click **Add**.
3. Select the device type from the pop-up menu. A configuration window appears.
4. Configure the device. The configuration information you must supply depends on the type of device you are adding. The following table describes the possible fields:

| Menu                   | Tasks                                                                                                                                                                               |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Device Name            | A descriptive name for the appliance or application you are adding                                                                                                                  |
| Description            | An optional description of the device or appliance you are adding                                                                                                                   |
| Device Type            | The type of NetFlow-capable device: router, gateway, bridge, switch, hub, or other (Network Devices only)                                                                           |
| Serial Number          | The Blue Coat serial number of the appliance (PacketShaper and iShaper only)                                                                                                        |
| Host                   | The IP address or DNS hostname used to access the appliance or application (to add an iShaper you must supply the IP addresses of the Inline Plane and the Advanced Services Plane) |
| Port                   | Port number to be used for web access                                                                                                                                               |
| Secure Login           | Select this checkbox if the specified port is secure (if the default port is secure, this checkbox will already be selected)                                                        |
| Touch Password         | The password required for read/write access to the device (PacketShaper, iShaper, DataCollector only)                                                                               |
| Location               | An optional description of the device's location                                                                                                                                    |
| Administrator ID       | The user name for the administrative user (iShaper and PolicyCenter only)                                                                                                           |
| Administrator Password | The password associated with the administrator ID (iShaper and PolicyCenter only)                                                                                                   |
| Domain Name            | Name of the Windows Active Directory (domain) or workgroup to which the iShaper belongs                                                                                             |
| Host                   | IP address of the iShaper appliance's Advanced Services Plane                                                                                                                       |

For more details, click the help  icon in the configuration window.

5. When you are done configuring the device, click **Save**. The new device is displayed in the selected group or sub-group.

## Importing Devices from PolicyCenter

As an alternative to adding PacketShaper and iShaper appliances to your IC network manually, you can import device entries from a PolicyCenter server. Note that you must add PolicyCenter as an IC device before you can import appliances from it.



**Note** All devices that are imported from PolicyCenter are added to the top-level of the group that contains the PolicyCenter device; you cannot import devices into a sub-group or into a different group than that containing the PolicyCenter server. However, you can move the devices after they are imported by dragging them to the desired location.

To import devices from PolicyCenter:

1. Select **Configure > Network > Devices**.
2. Select the PolicyCenter server from which you want to import devices:
  - If you have already added the PolicyCenter server to IC, select its entry in the **Devices** tab. The PolicyCenter server details are displayed in the right pane.
  - If you have not yet added the PolicyCenter server to IC, select the group where you want to create it, click **Add** and select **PolicyCenter** from the pop-up menu. Enter the required PolicyCenter configuration information and then click **Save**. Details about the PolicyCenter server you just imported are displayed in the right pane.
3. In the **Import Shaper Inventory** section of the right pane, click **Import Shapers**. IC begins importing the devices from PolicyCenter; this process may take several minutes depending on the number of devices being imported. When the import completes, a message displays telling you that you must refresh the screen in order to see the imported devices. After you refresh the screen (which requires you to log out and log back in), the new devices are displayed just below the group object; each appliance is uniquely identified by its serial number.
4. If you want to move the newly imported devices to a different group or sub-group, drag the device entry to the desired location.
5. To change the name that is displayed for an imported device from a serial number to a more descriptive name, click on the corresponding object on the **Devices** tab, enter a new **Device Name** on the device's **General** tab and then click **Save**.

## Configuring Data Sources


Before DC can begin collecting data, you must define the data sources from which you want it to collect. Additionally, if you plan to collect Flow Detail Record (FDR) data from the device, you must configure the device to emit FDR to DC after you add it as a data source. A data source can be any PacketShaper or PacketShaper ISP appliance running PacketWise version 7.3.1 or higher or any iShaper appliance running 8.2.1 or higher. In addition, you can also add NetFlow-capable network devices such as routers and switches as data sources. You must add a device to IC before you can add it as a data source. In addition, you can only add devices that are contained in the same group as the DC as data sources.

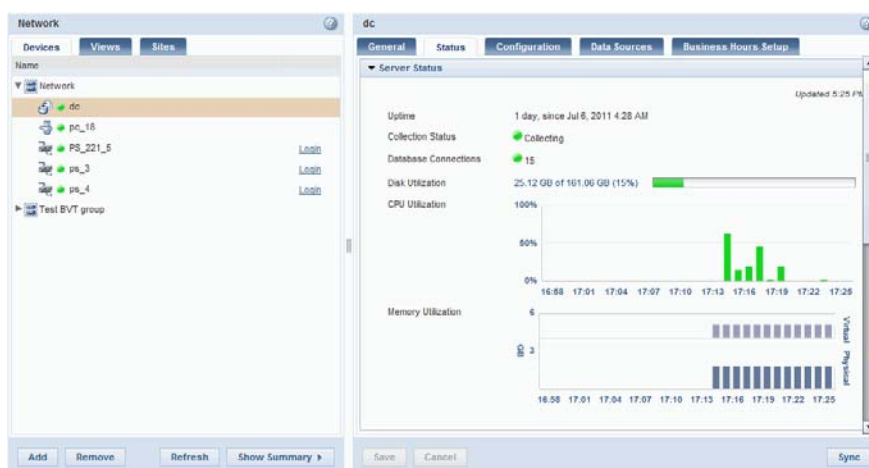
The following sections describe how to configure data sources:

- ❑ Adding Data Sources to DC—on page 42
- ❑ Configuring Devices to Emit FDR to DC—on page 44
- ❑ Synchronizing Time Between DC and its Data Sources—on page 45



## Adding Data Sources to DC

To add a data source to the DC configuration:

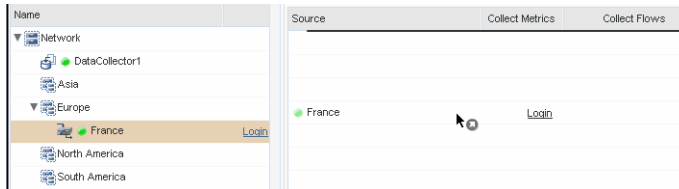
1. Select **Configure > Network > Devices**.
2. Select the DC object for which you want to add data sources. A DC is identified by the  icon. After you select a DC, its **Status** is displayed in the right hand pane.



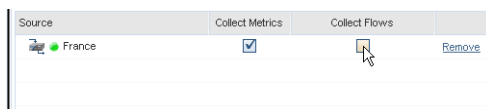
3. Select the **Data Sources** tab. Initially, there are no data sources configured.

| General                                                                                          | Status                              | Configuration                       | Data Sources           | Business Hours Setup |
|--------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|------------------------|----------------------|
| Source                                                                                           | Collect Metrics                     | Collect Flows                       |                        |                      |
|  014-10006757 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <a href="#">Remove</a> |                      |
|  Sim          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <a href="#">Remove</a> |                      |

- In the **Devices** tab in the *Network* pane, select the appliance, network device, or group/sub-group that you want to add as a data source. Note that if you add a group or sub-group, all PacketShaper and iShaper appliances and network devices in the group become data sources. This makes it easier when you add new devices because they will automatically become data sources.
- Select the device or group object from the **Devices** tab or the view object from the **Views** tab and drag it to the **Source** column on the **Data Sources** tab.



As soon as the appliance, network device, group/sub-group, or view is successfully added as a data source, checkboxes appear in the **Collect Metrics** and **Collect Flows** columns of the corresponding row.



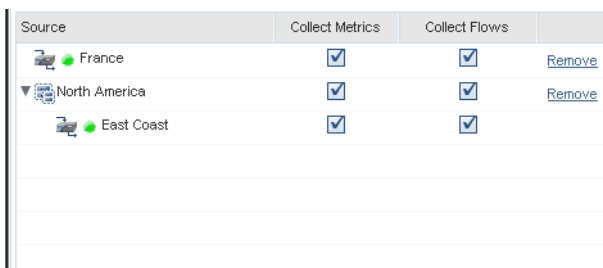
- Specify the types of data you want DC to collect from the new data source as follows:
  - If you want to collect ME data from the data source (PacketShaper and iShaper only), check the **Collect Metrics** checkbox. The specific ME variables that are collected depend on the appliance type. For a list of collected ME variables, refer to the online help or the *IntelligenceCenter User Guide*.
  - If you want to collect FDR data from the data source (Packeteer-2 and/or NetFlow-5), check the **Collect Flows** checkbox. Note that you must also configure the appliance to emit FDR to the DC. See [“Configuring Devices to Emit FDR to DC”](#) on page 44.

For the best possible correlation of data across FDR and ME reports, make sure that you are collecting ME and FDR from the same set of devices.



**Note** Because you can add views or groups/sub-groups at any level of the device hierarchy, an individual device may be added as a data source multiple times, each with different data collection settings (for example, if you add a group and a sub-group as separate data source entries; if you add a sub-group and an individual device within the sub-group; or if you add a sub-group and a view that contain overlapping devices). The settings you define at the child level will always take precedence over the settings defined at higher levels of the hierarchy.

- If you want to add additional data sources, repeat step 5 and step 6.



- When you are done adding data sources, click **Save**.



## Configuring Devices to Emit FDR to DC

If you configure a data source to for flow data collection, you must also configure the device to emit FDR data to DC. For instructions on configuring a network device such as a router or switch to emit FDR, refer to the product documentation for that device.

To configure a PacketShaper to emit FDR to DC:

1. Log in to the PacketShaper (or the iShaper's inline plane).
2. Click the **Setup** tab.
3. From the **Choose setup page** list, choose **flow detail records**. The *flow detail record settings* page appears.
4. For each collector, specify the following:
  - **Collector IP** — The IP address of the DC to which you want to emit FDR. Keep in mind that a device can only belong to one IC group and you should therefore only configure it to emit FDR to the DC that belongs to the same group. In addition, you must add the device as a data source for the corresponding DC before the DC will accept FDR records from it.
  - **Port** — UDP port number on which DC listens for FDR. By default, this is set to 9800. However, you can change the port on which DC listens for FDR by modifying the **Data port** field on the DCs **Configuration** tab. However, all devices that emit FDR to the same DC must use the same port number.
  - **Record Type** — Select **Packeteer-2**. Note that if you are collecting FDR data from this appliance and not ME data, you should also configure the appliance to emit Packeteer-0 from the appliance CLI using the `setup variable flowRecordsSendPktr0 1` command.
  - **Enabled** — Select **on**.
5. Click **apply changes** to save the settings.

## Synchronizing Time Between DC and its Data Sources

DC will not be able to collect data from a device if the device's time is not in sync with DC's time. The best way ensure that time stays in sync is to enable the simple network time protocol (SNTP) on your data sources. By default, DC uses time.windows.com as its NTP time server (unless you changed it during installation). To ensure that your data sources stay in sync with DC, enable SNTP on them and have them use DC as their primary time server (or have them use the same time server that DC uses). For instructions on configuring SNTP on a network device such as a router or switch, refer to documentation that came with the product.

To enable SNTP on a PacketShaper:

1. Log in to the Shaper.
2. Click the **Setup** tab.
3. From the **Choose setup page** list, select **date & time**.
4. In the **SNTP Client** field, select **on**.
5. In the **SNTP Primary** field, enter the IP address of the DC for which this device is a data source, or alternatively, enter the same NTP time server that the DC is using (time.windows.com by default).
6. Click **apply changes** to update the settings.

## Setting Up Business Hours Reporting

The business hours reporting feature allows you to define a set of hours that correspond to the hours when your network usage is most active (that is, the hours when people are working). You can define one set of business hours per DataCollector. After you define the business hours, you can then run your reports to show data for only those hours. This way, statistical information displayed in the reports is not skewed by the hours when there is very little traffic, such as weekends and evenings.

To define business hours for a DataCollector:

1. Select **Configure > Network**.
2. On the **Devices** tab, select the DataCollector for which you want to specify business hours.
3. Select the **Business Hours Setup** tab.
4. Select the **Enable Business Hours Setup** checkbox.
5. Select the time zone that corresponds to the region where you are setting your business hours (this does not have to be the same as the time zone where the DataCollector resides) by selecting a value from the **Select Time Zone** drop-down list.

The screenshot shows the 'Business Hours Setup' tab in the configuration interface. At the top, there are tabs for 'General', 'Status', 'Configuration', 'Data Sources', and 'Business Hours Setup'. Below the tabs, a message states: 'Business Hours settings provide flexibility to view reports based on the configured business hours.' The main configuration area includes a checkbox for 'Enable Business Hours Setup' which is checked. Below it is a 'Select Time Zone' dropdown menu showing '(GMT-08:00) Pacific Time (US & Canada)'. The 'Work Time' section contains 'General Work Hours' with a 'Start Time' dropdown set to '09:00', a 'Number of Working Hours' dropdown set to '09:00', and an 'End Time' dropdown set to '18:00'. The 'Work Week' section shows checkboxes for days of the week: Mon, Tue, Wed, Thu, Fri (all checked), Sat, and Sun (unchecked). At the bottom, there is an 'Import And Export Options' section with 'Import' and 'Export' buttons, each with an information icon.

6. Select the work hours as follows:

- Select the **Start Time** from the drop-down list.

**Note:** Business hours can be set on the hour or the half hour only. In the case where the business hours time zone and business hours start time or end time boundary differ by 30 minute fraction, the reports will display data for the whole hour. For example, if you set business hours for GMT-8 from 8:30AM-5:30PM, the reports will show data for the time period from 8AM-6PM.

- Select the **Number for Working Hours** from the drop-down list. When you make a selection, the **End Time** is automatically calculated and displayed.
  - Select the days of the week that network users will be working by selecting the appropriate checkboxes in the **Work Week** field.
7. To save the business hours definition for this DataCollector, click **Save**. You will now be able to run reports that only include data for the specified hours.

## Setting Up Application Reporting

Many reports that you can run in IC detail the performance of applications on your network. Applications map to PacketShaper traffic classes, however they are not the same as traffic classes. A traffic class is logical grouping of traffic flows that share the same characteristics based on matching rules. All traffic in the traffic class must match the same rules in order to be part of the traffic class. However, you can define applications to match multiple traffic classes and/or other applications to group traffic that you are interested in reporting on as a single entity even if its flow characteristics are vastly different.

If you are simply interested in reporting on your traffic classes as they are defined on the appliances from which you're collecting data, you do not need to worry about creating applications; you can simply run traffic class reports. However, if you want to report traffic classes or traffic class groupings as applications, you must make sure that there is an application defined in IC to represent them. By default, IC includes applications that match many standard network traffic classes. The matching rules for each application, as related to the PacketShaper class tree, use the `/Inbound/*/<class_name>` and `/Outbound/*/<class_name>` format. With these matching rules, any standard traffic class (including most site-based traffic classes) will match the application definition as long as it is a leaf class. For example, the class `/Inbound/HTTP` and `/Inbound/Paris/HTTP` would both match the default IC application called HTTP.

Whenever IC discovers a new traffic class that matches one of its applications, the application becomes active. An application can only be reported on if it is (or was at one time) active. IC learns about the traffic classes on the devices it manages through its class discovery operation. By default, IC performs class discovery once a day, but this interval is configurable. You can also force IC to perform a class discovery on demand.

Because the default IC applications only match standard traffic classes, you will need to manually create applications for any custom traffic classes on your network that you want to report on as applications.

Applications can also contain other applications. This is useful when you want to report on a group of applications as a single entity. For example, you could create an ERP application that contains the Oracle and SAP applications. You can also designate applications as critical applications. Many reports allow you to then generate reports that contain data for these critical applications only.

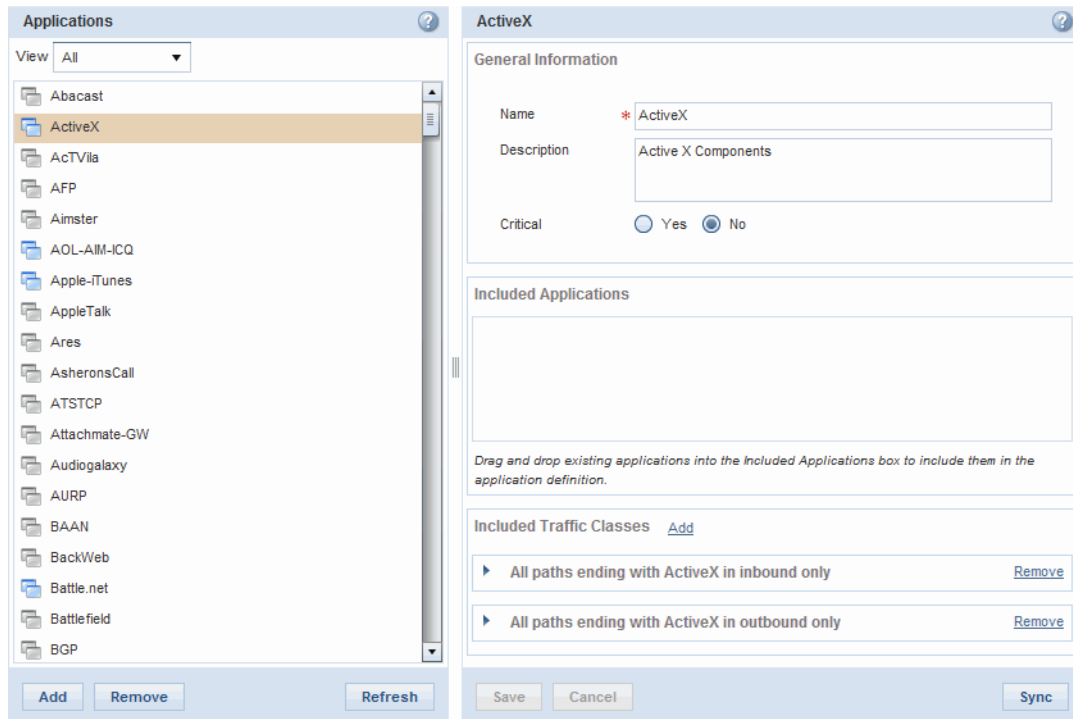
The following sections describe how to manage applications, including:



- [“Defining an Application” on page 48](#)
- [“Defining Critical Applications” on page 50](#)

## Defining an Application

To define an application:

1. Select **Configure > Applications**. The application management panes are displayed. The left pane shows the list of applications that have already been defined; if you add an application, it will be added to this list. The right pane shows the settings for the selected application.



By default, IC shows all applications. However, you can select a value from the **View** menu to filter whether the list shows **Active**, **Inactive**, or **Critical** applications. An active  application is an application for which a corresponding traffic class has been discovered on one of the configured data sources; an inactive  application is an application for which the corresponding traffic classes have not been discovered on the configured data sources. A critical application is one that you have marked as **Critical** in the application definition. If DC has not yet discovered traffic classes all applications will display as inactive; you must force a class discovery in order to see which applications are active or wait for the next discovery interval (once a day by default). If there was a traffic class discovery either by automatic mechanism or by force during the last 15 minutes, it will not trigger new discovery again; you must wait for 15 minutes before forcing class discovery again.

If you want to force a class discovery, continue to step 2; otherwise, skip to step 3.

2. To force DC to push a list of discovered traffic classes to IC:
  - a. Select **Configure > Network > Devices**.
  - b. Select the DC object on the **Devices** tab.
  - c. Select the **General** tab in the DC configuration pane.
  - d. Click **Discover Traffic Classes**. DC will push the traffic classes it knows about to IC. When you click the **Discover Traffic Classes** button, it takes about 5 to 6 minutes to get classes on IC.
  - e. Select **Configure > Applications**.



**Note** By default, DC sends an updated list of traffic classes to IC once a day. You can change the frequency at which DC sends updated traffic class information to IC by modifying the class discovery interval (**Configure > Network > Devices**, select the DC and set the **Class discovery interval** on the **Configuration** tab). For more information, refer to the online help or the *IntelligenceCenter User Guide*.

3. If you want to create an application manually, click **Add** in the *Applications* pane. The *Create New Application* dialog box is displayed. Otherwise, skip to step 9.

4. Enter a **Name** and optionally a **Description** for the new application.
5. If you want to be able to report on the application as a critical application, select the **Yes** radio button in the **Critical** field.
6. Click **Save**. The new application will be listed alphabetically in the *Applications* pane.

7. Select the new application in the *Applications* pane. Its details appear in the right pane.

8. To define the rules that determine which traffic classes match the application, click **Add**. The **Included Traffic Classes** box expands so that you can define the traffic class matching rules for the application as follows:

- a. Type a traffic class path in the text box or click **Select** to select a class from the *Select Traffic Class* dialog box. If you type the path, the path you enter may contain one or more alphanumeric strings—including the underscore ( \_ ), dash ( - ), or period ( . )—separated by a forward slash ( / ). Wildcards ( \* ) are allowed, but not at the beginning or end of the path. Additionally, the path may not end with a slash. For example, Class.1-2, Class1/Class2\_3, and Class.1/\* /Class2 are all valid paths.
  - b. Select the matching pattern from the drop-down list (**Path ends with**, **Path contains**, **Path is**, **Path starts with**).
  - c. Select the matching direction: **Both Directions** will match against all /Inbound and /Outbound traffic classes; **Inbound Only** will match against all /Inbound traffic classes; **Outbound Only** will match against all /Outbound traffic classes).
  - d. To add another rule, repeat step 8.
9. If you want to add an existing application to this application, drag it from the *Applications* pane and drop it in the **Included Applications** box.
10. When you are done defining the application, click **Save**.

## Defining Critical Applications

IC allows you to generate reports that detail the performance of the applications that are the most critical to your business. Before you can generate reports on your critical applications, you must first designate which applications to include as critical.

To designate an application as critical:

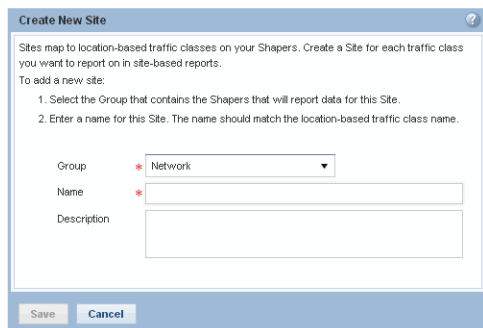
1. Select **Configure > Applications**.
2. Select the application you want to designate as a critical application in the *Applications* pane.
3. Set the **Critical** radio button to **Yes**.
4. Click **Save**.

## Setting Up Site Reporting

Before you can run site-based reports, you must first create IC site names that are associated with the Shapers' location-based subnet classes for which you want to generate site reports.

To add a site to IC:

1. Select **Configure > Network > Sites**.
2. Click **Add** at the bottom of the **Sites** pane. The *Create New Site* dialog box is displayed.

The image shows a 'Create New Site' dialog box. It has a title bar with a question mark icon. The main text says: 'Sites map to location-based traffic classes on your Shapers. Create a Site for each traffic class you want to report on in site-based reports.' Below this, it says 'To add a new site:' followed by two numbered instructions: '1. Select the Group that contains the Shapers that will report data for this Site.' and '2. Enter a name for this Site. The name should match the location-based traffic class name.' There are three input fields: 'Group' with a dropdown menu showing 'Network', 'Name' with a text box, and 'Description' with a larger text box. At the bottom, there are 'Save' and 'Cancel' buttons.

3. Select the **Group** that contains the Shapers that will report data for the site.
4. Enter the **Name** of the site. The site name must exactly match the traffic class name used on the PacketShaper.
5. Enter a **Description** for the site. It's good practice to include in the description the name of the PacketShaper on which the location-based class that maps to the site is located.
6. Click **Save**. The new site name will be listed alphabetically in the *Sites* pane.



## 5 Setting Up User Access

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This chapter describes how to set up user access and controls, including creating user and group accounts, defining third-party authentication services, and defining access roles and privileges.

To set up user access to IC, you must complete the following tasks:

- ❑ [Defining Roles—on page 53](#)
- ❑ [Enabling User Access—on page 57](#)
- ❑ [Assigning Roles—on page 66](#)

# Defining Roles

In IC, an access role defines the tasks a given user can perform. Every user who uses IC must be assigned a role. The access rights that have been defined for the role determine what objects the users can see and what tasks the user can perform in IC; if the user doesn't have access rights to an object or a task, the user will not be able to see the corresponding menu item or object within the IC user interface.

Whenever a new user account is created, you must assign a role to the user or the user will not be able to perform any tasks within IC. IC provides three default roles—*administrator*, *operator*, and *user*—that you can select from (for details about the access rights for each of these default roles, refer to the online help). Or, you can define your own roles and then assign them to users or groups of users.

The following sections describe how to determine what access levels you need to assign to a role and provide procedures for creating new roles:

- ❑ Access Level Dependencies—on page 53
- ❑ Creating a Role—on page 54

## Access Level Dependencies

When defining access levels for a role, keep in mind that some rights are dependent on other rights. For example, suppose you wanted to create an application monitoring role for users who need to use IC to run application reports. To run an application report, the user needs to be able to select the report to run, select the network group, sub-group, or device against which to run the report, and, in some cases, select the actual application to report on. Therefore, when defining access levels for this role you would need to grant the following access levels to the role:

- **Reports**—Grant rights view the application reports and to perform the desired reporting tasks such as running, viewing, scheduling, and emailing reports.

- **Network > Devices**—Grant rights to the specific groups, sub-groups, and devices you want the users in the role to be able to report against and grant rights to view network groups, sub-groups, and devices.

- **Applications**—Grant rights to view application definitions. You must also specify which applications users in the role can see or select All applications. Keep in mind that limiting the applications that the user can see will only limit what applications users can choose to run reports against; it does not limit what applications show up on the reports. For example, if you limit the application access to HTTP, FTP, and CIFS, users will only be able to run an Application Activity report against one of those applications. If, however, they run a Top Applications report the report will display the applications that used the most bandwidth during the reporting period, whether or not the users in the role have specifically been granted rights to view those applications.

## Creating a Role

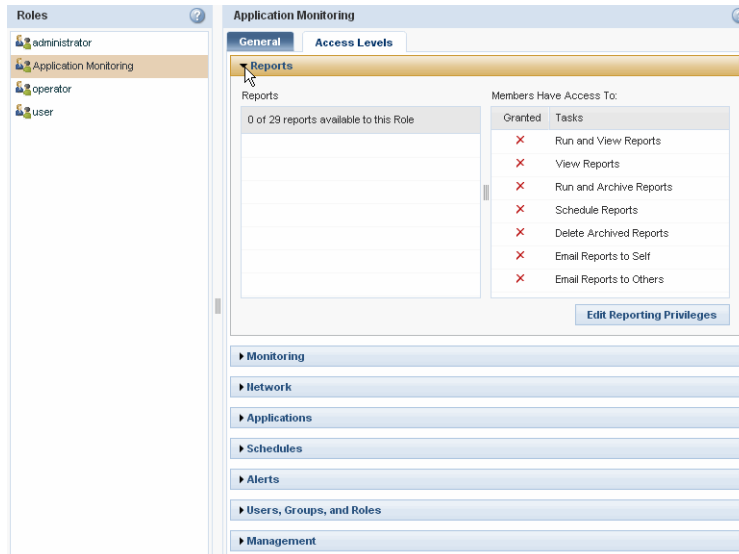
For instructions on assigning a role to a user or a group of users, see ["Assigning Roles" on page 66](#).

To define a new role:

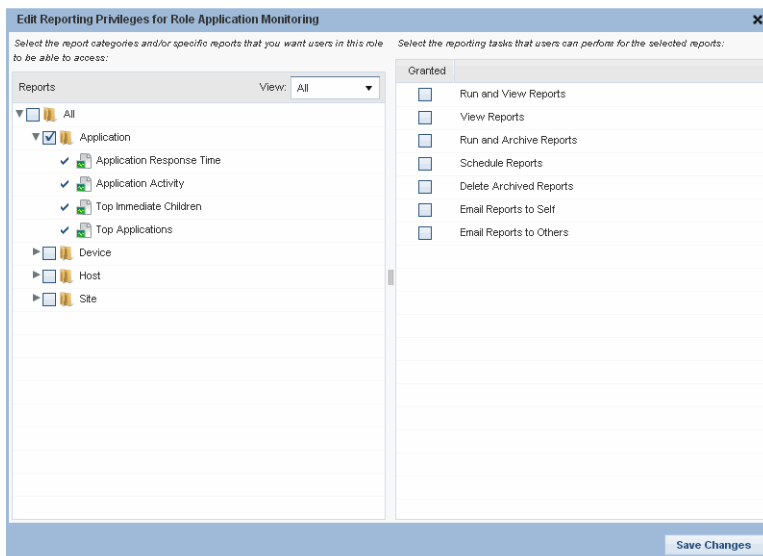
1. Select **Access > Roles**.
2. Click **Add/Copy**. The *Add a New Role* dialog box is displayed.

3. Specify how you want to create the role:
  - If you want to create a role and manually define the access privileges for the role, make sure the **Create a New Role** radio button is selected. When you create a role manually, all access privileges for all IC tasks are disabled by default.
  - If you want to create a new role that inherits the access privileges defined for an existing role, select the **Copy an Existing Role** radio button and then choose a role from the **Select a Role to Copy** drop-down list. You can modify the access privileges after you create the role.
4. Enter a name for the new role in the **Name this New Role** or **Name this Copied Role** field.
5. (Optional) Enter a **Description** for the new role.
6. Click **Add New Role**. The new role is added to the *Roles* pane.

7. To define the access levels for the role, make sure the role is selected in the *Roles* pane and then select the **Access Levels** tab. This tab details the access levels for the various categories of tasks that users can perform from within IC.
8. Expand the category for which you want to define access levels by clicking the right arrow ► icon. Once expanded, the current access levels for the category are displayed.



9. To set the access privileges for the category, click the corresponding Edit button. For example, to edit the access levels for reporting, click the **Edit Reporting Privileges** button. The privileges editor for the category is displayed. You use the privileges editor to define the access levels for the category, including which tasks the user can perform within the category and which objects within the category the user can perform these tasks on. The specific objects and/or tasks that are available depend on which category you selected.



For example, in the reporting privileges editor (shown above), you can grant users in the role the privilege to perform a reporting task—such as viewing reports, emailing reports, or scheduling reports—by checking the corresponding checkbox in the *Granted* column. You can specify which reports

the users in the role can perform these tasks on by selecting the specific reports in the *Reports* column. Many of the privileges editors have hierarchical lists of objects that you can expand and collapse by clicking arrow icons next to each group of objects. The down arrow ▼ icon indicates that the group is expanded; the right arrow ► icon indicates that the group is collapsed. Selecting an object at a higher level of the hierarchy automatically selects all objects below it. For example, selecting the **Application** object in the list of reports automatically selects all application reports.

10. When you are done defining the access privileges for the category, click **Save Changes**.
11. Repeat [Step 8](#) through [Step 10](#) for each category of the IC application for which you want to define access privileges for this role.

## Enabling User Access

To access IC, a user must provide a valid user name and password. IC can authenticate users locally or it can contact an external authentication server to authenticate users. The following sections describe how to set up user access to IC:

- ❑ You can manually create a user account for each IC user. This is a good method to use if you have few IC users and you do not have an existing authentication system in place. See [“Creating a Local User Account” on page 57](#).
- ❑ You can configure IC to authenticate users via an external LDAP, RADIUS, or TACACS+ authentication service. This is a good method to use if you already have authentication services in place and you do not want to have to manually maintain additional user accounts. Keep in mind that for each user that is authenticated to IC via an external authentication service, you must manually enable the account and assign a role before the user can use IC (see [“Activating a User Account” on page 64](#) for details).

## Creating a Local User Account

Use the following procedure to manually create a user account in IC:

1. Select **Access > Users & Groups** and select the **Users** tab. The existing user accounts are displayed. By default, there is a single user account called *Administrator*. When you select an account in the left pane, account details are displayed in the right pane.

The screenshot displays the 'Users & Groups' management interface. On the left, a pane titled 'Users & Groups' has two tabs: 'Users' and 'User Groups'. Under the 'Users' tab, a list shows 'Administrator Administrator'. The main area on the right is titled 'admin' and contains a form for user details. The 'User Name' is 'admin' and the 'Account Status' is 'Enabled'. The form includes fields for 'New Password', 'Verified Password', 'First Name' (marked with a red asterisk and containing 'Administrator'), 'Middle Name', 'Last Name' (marked with a red asterisk and containing 'Administrator'), 'Email' (marked with a red asterisk and containing a red box), 'Phone', 'Address' (with sub-fields for 'Street 1', 'Street 2', 'City', 'State', and 'Zip'), and 'Country' (a dropdown menu showing 'Select country'). At the bottom left are 'Add' and 'Remove' buttons, and at the bottom right are 'Save' and 'Cancel' buttons.



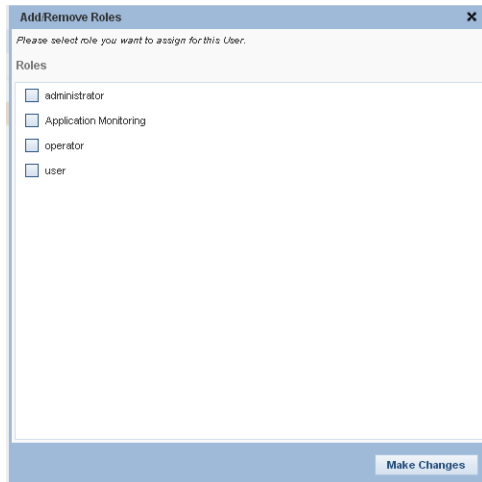
**Note** The *Users & Groups* pane displays the first and last name of the person associated with the user profile. Because the default Administrator profile is not associated with an actual person, it is displayed as *Administrator Administrator*.

- Click **Add**. The *Create User* dialog box appears.

- Enter the **First Name**, **Last Name**, and, optionally, the **Email** address of the user.
- Fill in the following user account information:

| Menu                     | Tasks                                                                                                                                                                                                                                                                                                                        |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>User Name</b>         | Unique name for the user — this is the name the user must enter in order to log in to IC. The user name must be 32 characters or less; can contain any combination of letters, numbers, and symbols; and contain no spaces. User names are case sensitive. Note that the user name cannot be modified after adding the user. |
| <b>New Password</b>      | The IC password. The password must be 6 to 32 characters in length; can contain any combination of letters, numbers, and symbols; and contain no spaces. As you type the password, an asterisk (*) displays for each character you type. Passwords are case sensitive.                                                       |
| <b>Verified Password</b> | For verification purposes, this password must match the password you entered in the <b>New Password</b> field.                                                                                                                                                                                                               |

- Click **Save**. The new user — identified by first and last name — appears on the **Users** tab in the left pane. Configuration details for the user are displayed in the right-hand pane. By default, the **Account Status** for manually created user accounts is **Enabled**.
- Assign one or more roles to the user. There are two ways to associate a user with a role: you can manually assign roles to each user or you can add the users to a user group, which is associated with one or more roles. Every user must have at least one role assigned to be able to use IC. To add a role, click **Add/Remove** in the **Roles** field or in the **User Groups** field. The *Add/Remove Roles* or the *Add/Remove User Groups* dialog box is displayed.



7. Select the role(s) or group(s) you want to assign to the user and then click **Make Changes**. There are no default user groups; before you can assign users to user groups, you must first create the groups. See ["Creating a User Group" on page 66](#) for instructions.

You can select one or more of the following default roles or select any custom roles you have defined:

- **user** — Can view anything within IC, but can not change anything.
- **operator** — Can run and view reports and portlets and manage the IC network topology.
- **administrator** — Can perform all IC tasks.

For instructions on defining roles, see ["Creating a Role" on page 54](#).



**Note** Roles and user groups are not mutually exclusive; you can assign a role to a user and assign the user to a user group.

8. When you are done configuring the user account, click **Save**.



## Enabling External Authentication

As an alternative to configuring a local user account for each IC user, you can configure IC to authenticate users by accessing your existing RADIUS, TACACS+, and/or LDAP authentication services. If external authentication is enabled, IC will contact the configured authentication server(s) to authenticate a user based on the user name and password supplied during login. The first time IC successfully authenticates a user using an external authentication service, it creates an IC user account for the user. However, IC will not log the user in upon this first successful authentication. Instead, it displays a message on the login screen indicating that the administrator must activate the account; in addition, IC sends an email to the IC system email account indicating that the account requires activation. For instructions on setting up the system email account, see ["Setting Up the IC Email Account" on page 31](#).

The following sections describe how to configure external authentication services:

- ❑ [Enabling RADIUS Authentication—on page 60](#)
- ❑ [Enabling TACACS+ Authentication—on page 61](#)
- ❑ [Enabling LDAP Authentication—on page 63](#)
- ❑ [Activating a User Account—on page 64](#)

## Enabling RADIUS Authentication



To configure IC to work with the RADIUS authentication server:

1. Select **Manage > System Settings > External Authentication**.
2. In the *External Authentication* pane, click **Add**. The *Add an External Authentication Service* dialog box is displayed.
3. Select **RADIUS** from the **Please select the service you want to add** drop-down list. The RADIUS configuration fields are displayed on the dialog box.

The screenshot shows the 'Add an External Authentication Service' dialog box with 'RADIUS' selected in the top dropdown. The dialog is divided into two main sections: 'Primary Host Information' and 'Secondary Host Information'. The 'Primary Host Information' section includes fields for 'Primary Host' (with a red asterisk), 'Port' (set to 1812), 'Shared Secret' (with a red asterisk), 'Retype Shared Secret' (with a red asterisk), 'Authentication Scheme' (set to CHAP), and 'Retry Settings' (with 'Retry limit' set to 3 and 'Retry interval (seconds)' set to 5). The 'Secondary Host Information' section includes fields for 'Secondary Host', 'Port' (set to 1812), 'Shared Secret', 'Retype Shared Secret', 'Authentication Scheme' (set to CHAP), and a checkbox for 'Same as Primary Host'. At the bottom of the dialog are 'Save' and 'Cancel' buttons.

4. Enter the following configuration settings for the primary and optionally for the secondary RADIUS authentication server:

| Field                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Host (Primary or Secondary)</b> | The IP address or DNS name of the RADIUS server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Port</b>                        | The port number IC will use to connect to the RADIUS server. The default port number is 1812.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Shared Secret</b>               | The password required for the RADIUS server to authenticate the IC server <???. For verification purposes, you must retype this password in the <b>Retype Shared Secret</b> field.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Authentication Scheme</b>       | <p>The method to be used to authenticate the user credentials. You can select one of the following methods:</p> <ul style="list-style-type: none"> <li>• <b>PAP</b>—With PAP (Password Authentication Protocol), the user name and password are transmitted in clear, unencrypted text. If you select PAP, Blue Coat recommends you increase security by logging in to IC via HTTPS. PAP is required for RADIUS configurations that require access to clear text passwords (for example, when passwords are stored and maintained in a database external to the RADIUS server).</li> <li>• <b>CHAP</b>—With CHAP (Challenge Handshake Authentication Protocol) the RADIUS server sends a challenge that consists of a session ID and an arbitrary challenge string, and the user name and password are encrypted before they are sent back to the server.</li> </ul> |

5. You can optionally modify the **Retry Settings** as follows:
- **Retry limit**—By default, if the RADIUS server fails to respond, IC will try to log in to the server three times before reporting a server failure. The valid range for this field is 0-10.
  - **Retry interval**—By default, the IC server waits 5 seconds before retrying a login when the RADIUS server fails to respond. The valid range for this field is 0-30 seconds.
6. Make sure the **Enable RADIUS** checkbox is checked.
7. Click **Save**. The **RADIUS** service is added to the **Services** table in the *External Authentication* pane. If you had already added a different external authentication service, RADIUS is added to the bottom of the list. When a user attempts to authenticate, IC will connect to the configured authentication services in the order listed.
8. If you want to change the order of the authentication services, select the service you want to move in the **Services** list and click the up arrow  or the down arrow  to move the service to the desired position and then click **Save**.

## Enabling TACACS+ Authentication



To configure IC to work with the TACACS+ authentication server:

1. Select **Manage > System Settings > External Authentication**.
2. In the *External Authentication* pane, click **Add**. The *Add an External Authentication Service* dialog box is displayed.
3. Select **TACACS+** from the **Please select the service you want to add** drop-down list. The TACACS+ configuration fields are displayed on the dialog box.

4. Enter the following configuration settings for the primary and optionally for the secondary TACACS+ authentication server:

| Field                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Host (Primary or Secondary)</b> | The IP address or DNS name of the TACACS+ server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Port</b>                        | The port number IC will use to connect to the TACACS+ server. The default port number is 49.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Shared Secret</b>               | The password required for the TACACS+ server to authenticate the IC server. For verification purposes, you must retype this password in the <b>Retype Shared Secret</b> field.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Authentication Scheme</b>       | <p>The method to be used to authenticate the user credentials. You can select one of the following methods:</p> <ul style="list-style-type: none"> <li>• <b>PAP</b>—With PAP (Password Authentication Protocol), the user name and password are transmitted in clear, unencrypted text. If you select PAP, Blue Coat recommends you increase security by logging in to IC via HTTPS. PAP is required for TACACS+ configurations that require access to clear text passwords (for example, when passwords are stored and maintained in a database external to the RADIUS server).</li> <li>• <b>CHAP</b>—With CHAP (Challenge Handshake Authentication Protocol) the TACACS+ server sends a challenge that consists of a session ID and an arbitrary challenge string, and the user name and password are encrypted before they are sent back to the server. This is the default.</li> <li>• <b>ASCII</b>—With ASCII (American Standard Code for Information Interchange), the user name and password are transmitted in clear, unencrypted text.</li> </ul> |

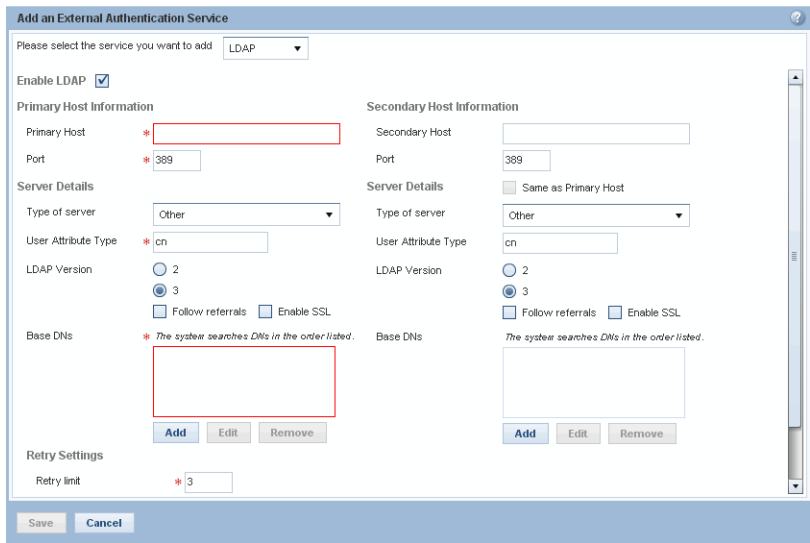
5. You can optionally modify the **Retry Settings** as follows:
- **Retry limit**—By default, if the TACACS+ server fails to respond, IC will try to log in to the server three times before reporting a server failure. The valid range for this field is 0-10.
  - **Retry interval**—By default, the IC server waits 5 seconds before retrying a login when the TACACS+ server fails to respond. The valid range for this field is 0-30 seconds.
6. Make sure the **Enable TACACS+** checkbox is checked.

- 7. Click **Save**. The **TACACS+** service is added to the **Services** table in the *External Authentication* pane. If you had already added a different external authentication service, TACACS+ is added to the bottom of the list. When a user attempts to authenticate, IC will connect to the configured authentication services in the order listed.
- 8. If you want to change the order of the authentication services, select the service you want to move in the **Services** list and click the up arrow  or the down arrow  to move the service to the desired position and then click **Save**.

Enabling LDAP Authentication

To configure IC to work with the LDAP authentication server:



- 1. Select **Manage > System Settings > External Authentication**.
- 2. In the *External Authentication* pane, click **Add**. The *Add an External Authentication Service* dialog box is displayed.
- 3. Select **LDAP** from the **Please select the service you want to add** drop-down list. The LDAP configuration fields are displayed on the dialog box.



- 4. Enter the following configuration settings for the primary and optionally for the secondary LDAP authentication server:

| Field                       | Description                                                                                                                                                                                        |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host (Primary or Secondary) | The IP address or DNS name of the LDAP server.                                                                                                                                                     |
| Port                        | The port number IC will use to connect to the LDAP server. The default port number is 389. If you enable SSL, change the port to an SSL listening port, such as port 636 (the default LDAPS port). |
| Type of server              | Select the type of LDAP authentication server you are using: <b>Microsoft Active Directory</b> , <b>Netscape/Sun iPlanet</b> , <b>Novell NDS/eDirectory</b> , or <b>Other</b> (the default).       |

| Field                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>User Attribute Type</b> | Specifies which LDAP attribute contains the user name. IC uses the following default settings, however you can change these values if your LDAP authentication server uses a different user attribute: <ul style="list-style-type: none"> <li>• <b>Microsoft Active Directory:</b> <code>sAMAccountName</code></li> <li>• <b>Netscape/Sun iPlanet:</b> <code>uid</code></li> <li>• <b>Novell NDS/eDirectory/Other:</b> <code>cn</code></li> </ul>                                                                                                                                                                                                                                  |
| <b>LDAP Version</b>        | Select 2 for LDAP v2 or 3 for LDAP v3 (the default). If you use LDAP v3, you can also enable the following options: <ul style="list-style-type: none"> <li>• <b>Follow Referrals</b>—Select this option if your LDAP authentication service comprises multiple servers (or domains) and you want IC to automatically be redirected to the server containing the information for the user it is trying to authenticate.</li> <li>• <b>Enable SSL</b>—Select this option if you want IC and the LDAP server to communicate over a secure connection. Note that you will also need to change the Port to an SSL listening port, such as port 636 (the default LDAPS port).</li> </ul> |
| <b>Base DN</b>             | A Base DN identifies the LDAP entry that IC should use as the starting point of its search for users. You can specify multiple base DNs. You must enter a complete DN, for example <code>cn=administrators, dc=acme, dc=com</code> or <code>ou=operations, o=acme</code> .                                                                                                                                                                                                                                                                                                                                                                                                         |

5. You can optionally modify **Retry limit**. By default, if the LDAP server fails to respond, IC will try to log in to the server three times before reporting a server failure. The valid range for this field is 0-10.
6. Make sure the **Enable LDAP** checkbox is checked.
7. Click **Save**. The **LDAP** service is added to the **Services** table in the *External Authentication* pane. If you had already added a different external authentication service, LDAP is added to the bottom of the list. When a user attempts to authenticate, IC will connect to the configured authentication services in the order listed.
8. If you want to change the order of the authentication services, select the service you want to move in the **Services** list and click the up arrow  or the down arrow  to move the service to the desired position and then click **Save**.

## Activating a User Account

The first time IC successfully authenticates a user using an external authentication service, it creates an IC user account for the user. However, IC will not log the user in upon this first successful authentication. Instead, it displays a message on the login screen indicating that the administrator must activate the account; in addition, IC sends an email to the IC system email account indicating that the account requires activation. For instructions on setting up the system email account, see ["Setting Up the IC Email Account" on page 31](#).

Before the externally authenticated users can access IC, you must activate their accounts and assign them to at least one role (or add them to a user group that is associated with a role) as follows:

1. Select **Access > Users & Groups** and select the **Users** tab. The *Users* pane displays the existing user accounts.
2. Select the user account that you want to activate. Details about the selected user account are displayed in the right pane.
3. In the **Account Status** field, select **Enabled**.

4. Assign at least one role to the user by selecting **User Groups** and/or **Roles**:
  - If you want to associate the user with a user group that has roles assigned, click **Add/Remove** in the **User Groups** section of the screen, select the user groups you want to add the user to from the dialog box and then click **Make Changes**.
  - If you want to manually assign the user to a role, click **Add/Remove** in the **Roles** section of the screen, select the roles you want to assign the user to from the dialog box and then click **Make Changes**.
5. Click **Save**.

## Assigning Roles

To use IC, each user must be assigned a role. There are two ways to assign roles to users. You can manually assign roles to each user. Or, you can create user groups that have a defined set of roles and then add users to the user group; the user is then a member of all roles that are defined for the user group. Using user groups to assign roles simplifies administration of user access control.

The following sections describe how to create user groups and assign roles:

- ❑ [Creating a User Group—on page 66](#)
- ❑ [Assigning Roles to Users Manually—on page 67](#)

### Creating a User Group

To create a user group:

1. Select **Access > Users & Groups** and select the **User Groups** tab. The *Users & Groups* pane displays the existing user groups. There are no default user groups.
2. Click **Add** to create a new user group. The *Create User Group* dialog box is displayed.
3. Enter a **User Group Name** and optionally a **Description** of the group and then click **Save**. The new user group is added to the **User Groups** tab and details about the group are displayed in the right pane.

4. To add roles that you want to assign to the members of this group assigned to, click the **Add/Remove** button in the **Roles** section of the screen. The *Add/Remove Roles* dialog box is displayed.
5. Select the role(s) you want to associate with this user group and then click **Make Changes**. The selected roles are displayed in the **Roles** box.
6. To add users to this user group, click the **Add/Remove** button in the **Members** section of the screen. The *Add/Remove Members* dialog box is displayed.
7. Select the users and user groups you want to associate with this user group and then click **Make Changes**. The selected users and user groups are displayed in the **Members** box.
8. To save the user group configuration, click **Save**.

## Assigning Roles to Users Manually

You can manually assign roles to any user with an existing user account (even if the user has already been assigned to one or more user groups).

If the user account does not yet exist and you want to create one locally, see ["Creating a Local User Account" on page 57](#). If you are maintaining your user account information in an external authentication system, a user account will automatically be created for users when they first attempt to log in to IC. For information on enabling external authentication, see ["Enabling External Authentication" on page 60](#).

To assign a role to a user:

1. Select **Access > Users & Groups** and select the **Users** tab. The *Users* pane displays the existing user accounts.
2. Select the user that you want to assign a role to. Details about the selected user account are displayed in the right frame.

The screenshot shows the 'Users & Groups' management interface. On the left, a sidebar lists users: 'Administrator Administrator' and 'Timothy Andrew'. The main area displays the details for the selected user, 'tandrew'. The 'Account Status' is 'Enabled'. Fields for 'New Password' and 'Verified Password' are empty. Personal information includes 'First Name: Timothy', 'Middle Name:', 'Last Name: Andrew', 'Email: tandrew@acme.com', 'Phone:', and 'Address' (Street 1, Street 2, City, State, Zip, Country). The 'Roles' section at the bottom has an 'Add/Remove' button. At the bottom of the interface are 'Add', 'Remove', 'Save', and 'Cancel' buttons.

3. Click **Add/Remove** in the **Roles** section of the user details pane. The *Add/Remove Roles* dialog box is displayed.
4. Select the role(s) you want to assign to this user and then click **Make Changes**. The selected roles are displayed in the **Roles** box.
5. Click **Save**.



## 6 Uninstalling IntelligenceCenter

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This chapter provides uninstalling IntelligenceCenter (IC) and DataCollector (DC) and their components. It includes the following sections:

- ❑ [Uninstalling IntelligenceCenter—on page 69](#)
- ❑ [Uninstalling DataCollector—on page 71](#)



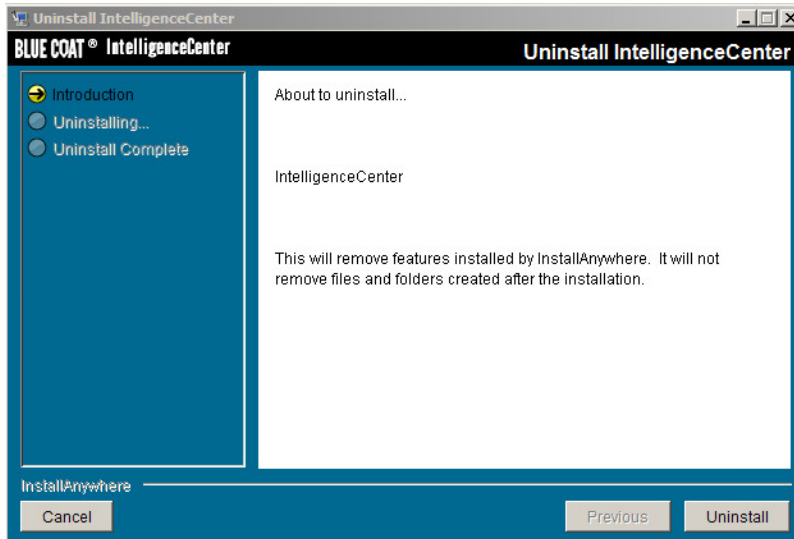
**Note** If you inadvertently uninstall one of the components used by IC (PostgreSQL) or DataCollector (PostgreSQL, Python, PyGreSQL, or Microsoft Visual C++ Redistributable), you will have to completely uninstall the product and then reinstall it. You will not be able to use the IC or DC setup to repair a partial uninstall.

## Uninstalling IntelligenceCenter

The IC setup installs the IC software and, if it's not already installed on the system, the PostgreSQL software. Because the PostgreSQL software may be used by other applications, the IC uninstall program does not remove it.

To uninstall the IC and, optionally, the PostgreSQL software:

1. Click **Start** and select **Programs > Blue Coat > IntelligenceCenter > Uninstall IntelligenceCenter**. The Uninstall program launches and the *Uninstall IntelligenceCenter* screen is displayed.



2. Click **Uninstall**. The *Uninstall IntelligenceCenter* screen displays as the program is uninstalled.
3. When the *Uninstall Complete* screen appears, click **Done**.
4. Uninstall PostgreSQL using the Windows Add or Remove Programs utility as follows:



**Note** You should only uninstall PostgreSQL if you are sure it is not being used by another application (such as DC).

- Click **Start** and select **Settings > Control Panel > Add or Remove Programs**. The *Add or Remove Programs* window appears.
- Locate **PostgreSQL 8.4** on the list of *Currently installed programs* and click **Remove**.
- When prompted to confirm the uninstall operation, click **Yes**.
- When the uninstall completes, close the *Add or Remove Programs* window.

5. Remove the Windows **postgres** user as follows:
  - On the Windows desktop, right-click **My Computer** and select **Manage**. The *Computer Management* dialog box is displayed.
  - Click **Local Users and Groups** to expand it.
  - Click **Users**. You should see the **postgres** user displayed on the right side of the window.
  - Right-click the **postgres** user and select **Delete**.
  - When prompted, click **Yes** to confirm the deletion.
6. Manually remove any remaining files — such as log files and data directories— by deleting the following directories:
  - Remove any remaining IntelligenceCenter files by deleting the folder where you installed the IC software. By default, IC is installed to *C:\BlueCoat\IntelligenceCenter*.
  - Remove any remaining Postgres files by deleting the *C:\Program Files\PostgreSQL* directory.
  - If you installed the Postgres data directory to a location other than the default (*C:\Program Files\PostgreSQL\8.4\data*), you must delete it also.
  - Remove any remaining Postgres folders from the *C:\Documents and Settings* directory.
7. Reboot your system.

## Uninstalling DataCollector

The DC setup installs the DC software, including the following third-party components:

- Python
- Microsoft Visual C++ Redistributable
- PyGreSQL
- PostgreSQL (if it wasn't already installed on the system)

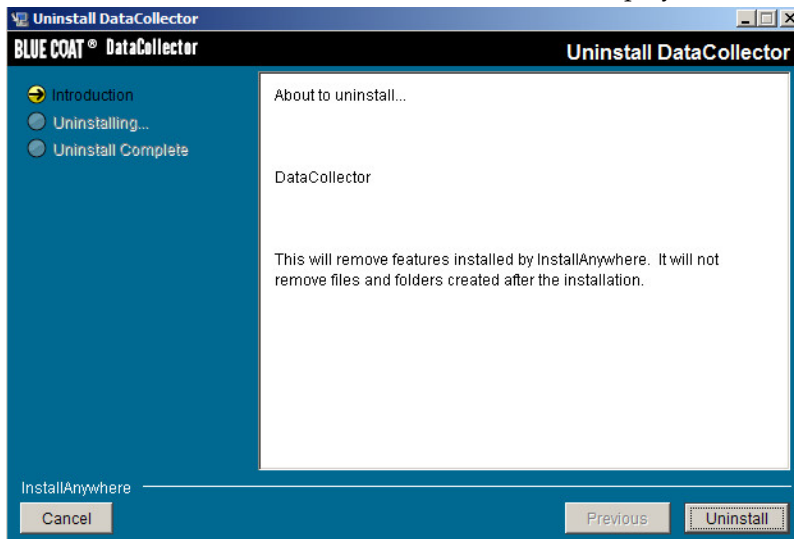
Because these third-party components may be used by other applications, the DC uninstall program does not remove them.



**Note** Do not uninstall any of the third-party components required by DC unless you intend to uninstall DC. If you inadvertently uninstall one of the required components, you will have to uninstall DC and reinstall it in order for it to function properly.

To uninstall DC and its components:

1. Click **Start** and select **Blue Coat > DataCollector > Uninstall DataCollector**. The Uninstall program launches and the *Uninstall DataCollector* screen is displayed.



2. Click **Uninstall**. The *Uninstall DataCollector* screen displays as the program is uninstalled.
3. When the *Uninstall Complete* screen appears, click **Done**.
4. Uninstall Microsoft Visual C++ using the Windows Add or Remove Programs utility as follows:
  - If the *Add or Remove Programs* window isn't already open, click **Start** and select **Settings > Control Panel > Add or Remove Programs**.
  - Locate **Microsoft Visual C++ 2005 Redistributable** on the list of *Currently installed programs* and click **Remove**.
  - When prompted to confirm the uninstall operation, click **Yes**.
5. Uninstall PostgreSQL using the Windows Add or Remove Programs utility as follows:



**Note** You should only uninstall PostgreSQL if you are sure it is not being used by another application, such as IC. If you already uninstalled IC from this system you may have already uninstalled Postgres.

- If the *Add or Remove Programs* window isn't already open, click **Start** and select **Settings > Control Panel > Add or Remove Programs**.
  - Locate **PostgreSQL 8.4** on the list of *Currently installed programs* and click **Remove**.
  - When prompted to confirm the uninstall operation, click **Yes**.
  - When the uninstall completes, close the *Add or Remove Programs* window.
6. Remove the Windows **postgres** user as follows:
    - On the Windows desktop, right-click **My Computer** and select **Manage**. The *Computer Management* dialog box is displayed.
    - Click **Local Users and Groups** to expand it.
    - Click **Users**. You should see the **postgres** user displayed on the right side of the window.
    - Right-click the **postgres** user and select **Delete**.
    - When prompted, click **Yes** to confirm the deletion.
  7. Manually remove any remaining files — such as log files and data directories— by deleting the following directories:
    - Remove any remaining DataCollector files by deleting the folder where you installed the DC software. By default, DC is installed to *C:\BlueCoat\DataCollector*.
    - Remove any remaining Postgres files by deleting the *C:\Program Files\PostgreSQL* directory.
    - If you installed the Postgres data directory to a location other than the default (*C:\Program Files\PostgreSQL\8.4\data*), you must delete it also.
    - Remove any remaining Postgres folders from the *C:\Documents and Settings* directory.
  8. Reboot your system.



## 7 IntelligenceCenter Best Practices

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For best performance, use the following best practices when deploying IC:

- ❑ Make sure that the time on IC, DC and your data sources is in sync. Consider using DC as the SNTP Primary time server for your data sources. Refer to “Modify Date and Time Settings” in PacketGuide (<https://bto.bluecoat.com/packetguide/current/nav/tasks/configure/setup-date.htm>) for instructions on setting the time server for your PacketShapers.
- ❑ Make sure that the servers on which you install IC and DC meet the data thresholds for all data you are collecting as described in “System Requirements Per Deployment” on page 6. In addition, make sure that the data being collected by a single DC does not include more than 2 to 3 million host pairs.
- ❑ If you have many devices, you can optimize the speed at which the network tabs load by organizing small groups of devices into sub-groups or by creating your own network views. You can then report on these sub-groups or views rather than on the entire network to improve report generation times. This is especially beneficial for Top N reports.
- ❑ When running reports, consider that the amount of data, the number of devices in the selected network group, and the length of the report time range you select all affect the amount of time it takes to generate the report. If you have a large amount of data and you need to run reports across your entire network and/or reports with large time ranges, consider scheduling the reports rather than waiting for them to run on demand.
- ❑ When defining your data sources, drag sub-groups into the DataCollector **Data Sources** tab rather than dragging individual devices in. This saves time and allows any new devices you add to the branch to automatically get defined as data sources.
- ❑ For the best possible correlation of data across FDR and ME reports, make sure that you are collecting ME and FDR from the same set of devices.
- ❑ If you have a busy system, minimize the amount of automatic updates that you enable because this will slow down other operations, such as reporting. For example, do not enable the automatic update feature on the portlets. Instead, use the **Refresh Data** option to refresh the data when you are ready to view it.
- ❑ If you modify the DataCollector data retention values, use care not to set an aggregated value lower than a more granular value. For example, do not set the retention value for Hour to a value that is lower than the retention value for Raw. Similarly, do not set the retention value for Day to a value that is lower than the value for Hour.
- ❑ To improve login performance, change the **Initial Start-Up Screen** for your user profile from **Monitor** unless you need to view your portlets immediately upon login. Each time you load the **Monitor** page, the queries on each active portlet are executed, which slows the loading of the application.
- ❑ To optimize report generation times for your users, create separate user profiles for each person who will be running reports and portlets.

- ❑ Each time you run a report, one or more database queries are run on DataCollector, using system resources. The more difficult the query (that is, the more data there is to look through and the more database tables that DC must fetch data from), the more resources are consumed. Therefore, make sure that the reports you are running make sense for the data you have. For example, if you only have one VLAN (you can check by going to the DataCollector **Status** tab), it does not make sense to waste resources running the Top VLAN report.
- ❑ If you run a report and then decide to cancel it by closing the browser window, the report continues to run in the background. If you continue to run subsequent reports while previous reports are still running in the background, system resources will be depleted.