

Configuration Guide

ArcSight™ Express Version 5.0 Patch 1

October 20, 2010



Configuration Guide ArcSight™ Express Version 5.0 Patch 1

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The network information used in the examples in this document (including IP addresses and hostnames) is for illustration purposes only.

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Revision History

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What is ArcSight Express?

ArcSight Express is a Security Information and Event Management (SIEM) solution that provides the essentials for security monitoring by leveraging ArcSight ESM's superior correlation capabilities in combination with a ArcSight Storage Appliance. ArcSight Express delivers an easy-to-deploy enterprise-level security monitoring and response system through a series of coordinated resources, such as dashboards, rules and reports included as part of ArcSight Express Content.

This chapter covers the following topics:

["Pre-installed Components on ArcSight Express Appliance" on page 1](#)

["Pre-installed Components on ArcSight Storage Appliance" on page 2](#)

["ArcSight Console" on page 3](#)

["Deployment Overview" on page 3](#)

["ArcSight Express Communication Overview" on page 4](#)

["Related Documents" on page 5](#)

The ArcSight Express solution can be comprised of the following appliances:

- ArcSight Express Appliance

The ArcSight Express Appliance comes with ArcSight Database, ArcSight Manager, ArcSight Web and ArcSight Forwarding Connector pre-installed on it.

- ArcSight Storage Appliance

The ArcSight Storage Appliance serves as a long term data storage hardware solution that receives and stores events, and supports search and retrieval of the stored events. It has the ArcSight Logger software pre-installed on it. The ArcSight Storage Appliance comes as a standard component with certain models of ArcSight Express only. However, you can purchase the ArcSight Storage Appliance separately for models of ArcSight Express with which it is not included.

Pre-installed Components on ArcSight Express Appliance

The ArcSight Express Appliance has the following software components pre-installed on it:

- ArcSight Manager
- ArcSight Database
- ArcSight Web
- ArcSight Forwarding Connector

ArcSight Manager

ArcSight Manager is at the center of the ArcSight Express Appliance. The Manager is a software component that functions as a server that receives event data from Connectors and correlates and stores them in the database. The Manager also provides advanced correlation and reporting capabilities. The ArcSight Web interface is used to retrieve this information from the Manager and display it.

ArcSight Database

ArcSight Database is the central repository for all information collected by the ArcSight Manager and is based on Oracle DBMS. It also stores the configuration information for users, groups, rules, dashboards, assets, and reports.

ArcSight Web

ArcSight Web is the primary user interface for ArcSight Express. ArcSight Web is a web server component that enables you to access ArcSight Manager securely using a browser. ArcSight Web supports the following browsers on the Windows Vista or Windows XP platforms:

- Internet Explorer 7 and 8
- Safari on Macintosh 4
- Firefox on Windows and Linux 3.0 - 3.6
- Firefox on Macintosh 3.6



Check the Product Lifecycle document available on the ArcSight Customer Support website for information on the exact browser versions supported.

ArcSight Web is an easy-to-use interface designed for operators in a Security Operations Center (SOC) and customers of a Managed Security Service Provider (MSSP) who need to view information on the Manager.

ArcSight Forwarding Connector

The ArcSight Forwarding Connector is a component that transports events from the ArcSight Express Appliance to the ArcSight Storage Appliance.

Pre-installed Components on ArcSight Storage Appliance

The ArcSight Storage Appliance comes installed with the following software:

ArcSight Logger

ArcSight Logger is a log management solution that is optimized for extremely high event throughput. Logger stores time-stamped text messages, called events, at high sustained input rates and can optionally forward selected events. Logger compresses raw data, but can always retrieve unmodified data on demand, for forensics-quality litigation data.

ArcSight Connector Management

ArcSight Connector Management software incorporates a number of onboard ArcSight SmartConnectors and a web-based user interface that provides centralized management for SmartConnectors.

SmartConnectors are ArcSight software components that forward security events from a wide variety of devices and security event sources to ArcSight Logger.

You have the option to use up to four SmartConnector(s) locally depending on available resources on the ArcSight Storage Appliance.

ArcSight Console

The ArcSight Console provides a user interface for you to perform administrative tasks on ArcSight Express, such as fine tuning the pre-installed ArcSight Express content and managing users. ArcSight Console is not bundled with ArcSight Express and should be separately installed on a system other than the ArcSight Express Appliance.

Deployment Overview

The following is an example of how various ArcSight components are normally deployed in a network.

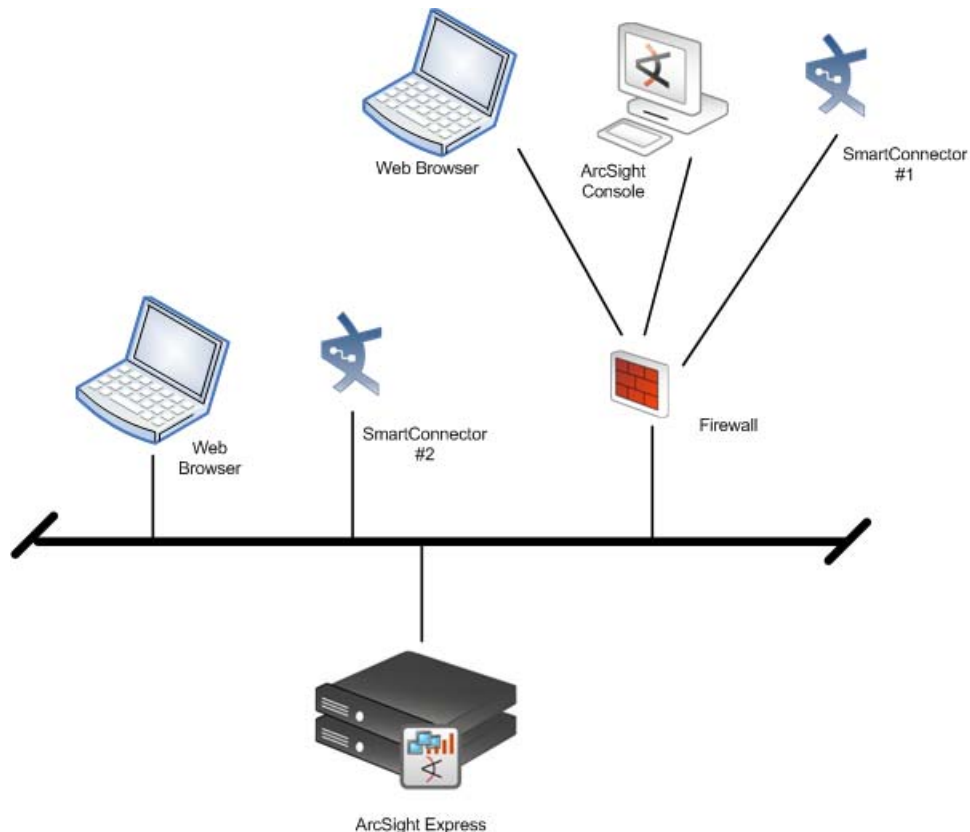


Figure 1-1 ArcSight Express Deployment Overview

ArcSight Express Communication Overview

ArcSight Console, ArcSight Manager, and ArcSight SmartConnector communicate using HTTP (HyperText Transfer Protocol) over SSL (Secure Sockets Layer), often referred to as HTTPS (HyperText Transfer Protocol Secure). The HTTPS protocol provides for data encryption, data integrity verification, and authentication for both server and client.

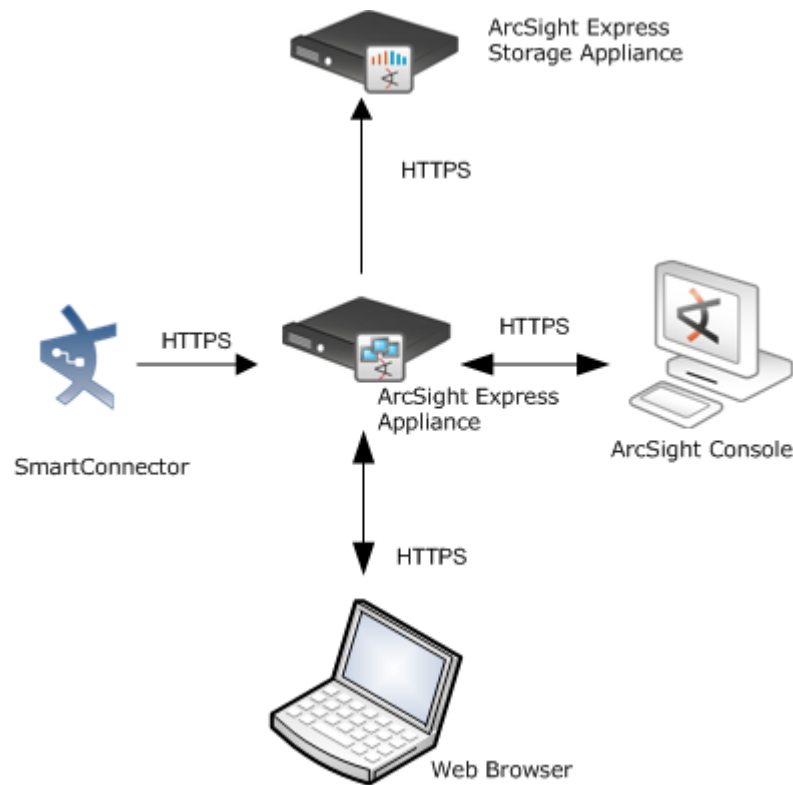


Figure 1-2 ArcSight Express Solution - Communication Overview

SSL works over TCP (Transport Control Protocol) connections. The default incoming TCP port on ArcSight Manager is 8443, for ArcSight Web it is 9443 and for ArcSight Storage Appliance it is 443.

The Manager never makes outgoing connections to the Console, ArcSight Web, or SmartConnectors. The Manager connects to the Database on the appliance locally using JDBC.

Effect on Communication when Components Fail

If any one of the software components in ArcSight Express Appliance is unavailable, it can affect communication between other components.

If the database is unavailable for any reason, such as when database is filled to capacity, the Manager stops accepting events and caches any events that were not committed to the database. The SmartConnectors also start caching new events they receive, so there is no event data loss. The Console gets disconnected. All existing ArcSight Web connections are

disconnected and no new login requests to the Web server are accepted until the database is up and running again.

If the Manager is unavailable, the SmartConnectors start caching events to prevent event data loss. The database server is idle. The Console is disconnected. All existing ArcSight Web connections are disconnected and no new login requests to the Web server are accepted.

If a SmartConnector fails, whether event data loss will occur or not depends on the SmartConnector type. SmartConnectors that listen for events from devices such as the SNMP SmartConnectors will stop accepting events. However, a SmartConnector that polls a device, such as the NT Collector SmartConnector, may be able to collect events that were generated while the SmartConnector was down, once the SmartConnector comes back up.

If the Forwarding Connector fails, the Manager will continue to store the events in its file store which is 10 GB in size. If the file store gets filled up, the Manager will start dropping the oldest events and the newer events will continue to get stored on the file store.

If the ArcSight Storage Appliance fails, the Forwarding Connector will cache the events that were supposed to be forwarded to the ArcSight Storage Appliance.

Related Documents

To get you started, *Getting Started with ArcSight Express* document is available in hard copy and is packaged with ArcSight Express.

The ArcSight Express Online Help is available from the ArcSight Console. Also, in addition to this guide, you can refer to and download the following documents from the ArcSight Customer Support download site:

- *Getting Started with ArcSight Express*
- *Getting Started with ArcSight Logger*
- *ArcSight Logger Administrator's Guide*
- *ArcSight ESM Installation and Configuration Guide*
- *ArcSight ESM Administrator's Guide*
- *SmartConnector Configuration Guide for ArcSight Forwarding Connector*
- *SmartConnector User's Guide*
- *ArcSight Express Release Notes*

Chapter 2

Configuring ArcSight Storage Appliance

This chapter covers the following topics:

- ["Define Storage Volume" on page 8](#)
- ["Create Storage Groups" on page 8](#)
- ["Configure NTP" on page 8](#)
- ["Indexing" on page 9](#)
- ["Reboot Appliance" on page 9](#)
- ["Create SmartMessage Receivers" on page 9](#)
- ["Adding an ArcSight Storage Appliance" on page 9](#)

After you have set up the hardware for ArcSight Express, the next step is to initialize the the ArcSight Storage Appliance if applicable. ArcSight Storage Appliance (Storage Appliance) is included with certain models of ArcSight Express.

The ArcSight Express Storage Appliance is also known as ArcSight Logger when purchased separately. Refer to the *ArcSight Logger Administrator's Guide* for details on how to configure ArcSight Storage Appliance. You can download this guide from the ArcSight Customer Support download site.

It is very important that you initialize the appliance in the sequence shown here. The ArcSight Storage Appliance can be reset to its initial condition, but other than that, several of the settings described here cannot be changed once set.



Make sure that you have obtained the license file from ArcSight Customer Support and installed it on your appliance.



One-time initialization can only be changed by performing a factory reset (see [Appendix C, Restoring Factory Settings, on page 65](#)). Be sure you know how you want the ArcSight Storage Appliance storage set up before performing the first steps of the initialization sequence (up to rebooting).

This sequence ensures that resources are created and parameters are set in the proper order:

- 1 [Define Storage Volume](#) - establish where ArcSight Storage Appliance stores event data

- 2 [Create Storage Groups](#) - apply retention policies to the Storage Volume
- 3 [Configure NTP](#) (optional, but strongly recommended)
- 4 [Indexing](#)
- 5 [Reboot Appliance](#) - commit the changes made in previous steps
- 6 [Create SmartMessage Receivers](#)

Define Storage Volume

Establish the ArcSight Storage Appliance's Storage Volume. See the section on Storage Volume in the *ArcSight Logger Administrator's Guide* for details. Choose **Local** to use Logger's built-in storage.

You can choose to pre-allocate your Storage Volume to save time later. Performance is degraded if you don't pre-allocate at least a portion of the storage volume. ArcSight recommends 100% pre-allocation for your Storage Volume.



Note

Storage Volume cannot be extended after initialization.

Create Storage Groups

Once the Storage Volume has been created, you must define the Default Storage Group. ArcSight recommends that you increase the maximum size of the Storage Group and increase the maximum age of the event retention policy to meet your internal data retention policy. For example:

- Increase the maximum size to 500 GB (this can be increased in the future if needed)
- Set the maximum age to 120 days.

Create a second Storage Group with storage size of 5 GB and retention period set to 30 days.



Caution

Do not reboot the Appliance in the next step unless you are certain of your Storage Volume and Storage Group choices. Additional Storage Groups cannot be created once the Appliance is initialized.

See the section on Storage Groups in the *ArcSight Logger Administrator's Guide* for the details of adding Storage Groups.

Configure NTP

Optional, but a strongly recommended initialization step.

Precise time stamping of events is a key log management function. Therefore, ArcSight strongly recommends that you use Network Time Protocol (NTP) for system time instead of manually configuring it. See the section on Time Settings in the *ArcSight Logger Administrator's Guide*.

Indexing

The default option on the ArcSight Storage Appliance is No Indexing. However, ArcSight recommends using default indexing options for the Storage Appliance for better performance.

Reboot Appliance

Reboot the system to commit changes before other resources can be created. See the section on System Reboot in the *ArcSight Logger Administrator's Guide*.



When the ArcSight Storage Appliance is rebooted, the Storage Volume and Storage Group settings become permanent. Only certain settings of non-default Storage Groups can be changed. See the *ArcSight Logger Administrator's Guide* for details on this.

Create SmartMessage Receivers

After initializing the storage, you can create a SmartMessage Receiver to listen for events. Make sure to use the settings mentioned below when creating the SmartMessage Receiver:

- Receiver Name: `esm-manager-receiver` (or any name of your choice)
Make sure to create a receiver on the ArcSight Storage Appliance. Also, make a note of the receiver name. You will be required to enter the receiver name when configuring the ArcSight Express Appliance. The receiver name you enter has to match the receiver name you configured on the ArcSight Storage Appliance exactly.
- Receiver Type: `SmartMessage`
- Receiver Encoding: `UTF-8`

After SmartMessage receiver is configured, enable the Receiver.

For more information about setting up the Receiver, see the *ArcSight Logger Administrator's Guide*.

The next step is to configure the ArcSight Express Appliance. Refer to the chapter, "[Configuring ArcSight Express Appliance](#)" on page 11.

Adding an ArcSight Storage Appliance

ArcSight Storage Appliance (Storage Appliance) is included with certain models of ArcSight Express. For those ArcSight Express models that do not include ArcSight Storage Appliance, you can purchase and install the Storage Appliance separately at a later time.

The ArcSight Express Storage Appliance is also known as ArcSight Logger when purchased separately.

See the *Getting Started with ArcSight Logger* document to install your newly purchased ArcSight Storage Appliance.

Once you have installed the ArcSight Storage Appliance, you will need to configure the ArcSight Forwarding Connector to send the events to the Storage Appliance. Refer to the sections, "Sending Events to ArcSight Logger" and "Forwarding Events to ArcSight Logger" in the *SmartConnector Configuration Guide for ArcSight Forwarding Connector* document available on the ArcSight Customer Support website.

Chapter 3

Configuring ArcSight Express Appliance

This chapter covers the following topics:

- [“Configuring ArcSight Express Appliance” on page 11](#)
- [“Configuring the Operating System” on page 11](#)
- [“Configuring Software Components on ArcSight Express Appliance” on page 22](#)
- [“The Next Steps” on page 30](#)

The steps in this chapter presume that you have followed the instructions in the *Getting Started with ArcSight Express* document to set up the ArcSight Storage Appliance if applicable and the ArcSight Express Appliance.

Make sure that you have done the following:

- (If applicable) Installed the ArcSight Storage Appliance according to the instructions in the *Getting Started with ArcSight Logger* document available on ArcSight Customer Support download site.
- Installed the ArcSight Express Appliance according to the instructions in the *Getting Started with ArcSight Express* document that is included with ArcSight Express.

We recommend that you read the *ArcSight Express Release Notes* before proceeding further.

Configuring ArcSight Express Appliance

Configuring ArcSight Express Appliance is a two step process:

- 1 Configuring the Oracle Enterprise Linux operating system installed on the appliance.
- 2 Configuring the ArcSight Express software components that have been pre-installed on the appliance.

Both these are performed through the First Boot Wizard which starts automatically when you boot up the appliance for the first time.

Configuring the Operating System

The ArcSight Express Appliance has the Oracle Enterprise Linux operating system installed. You have to set up the preferences for Oracle Enterprise Linux when you boot the system for the first time only or when you boot the system after a factory restore.

The following wizard will help you set the preferences for Oracle Enterprise Linux:

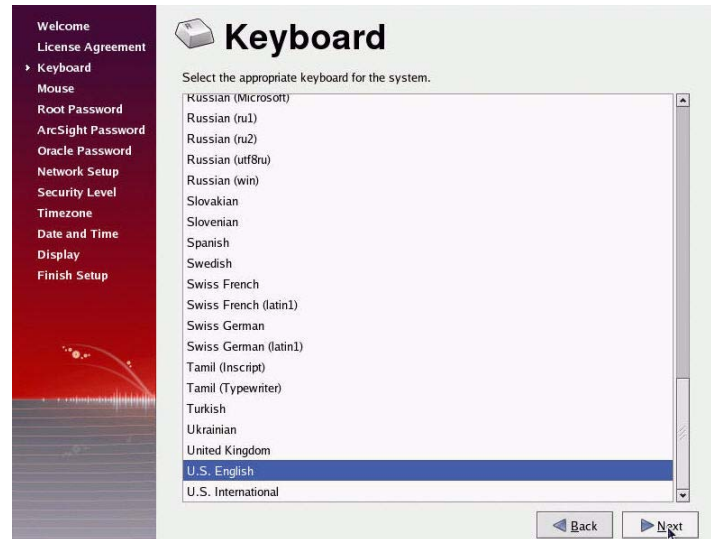
- 1 Click **Next** on the Welcome screen:



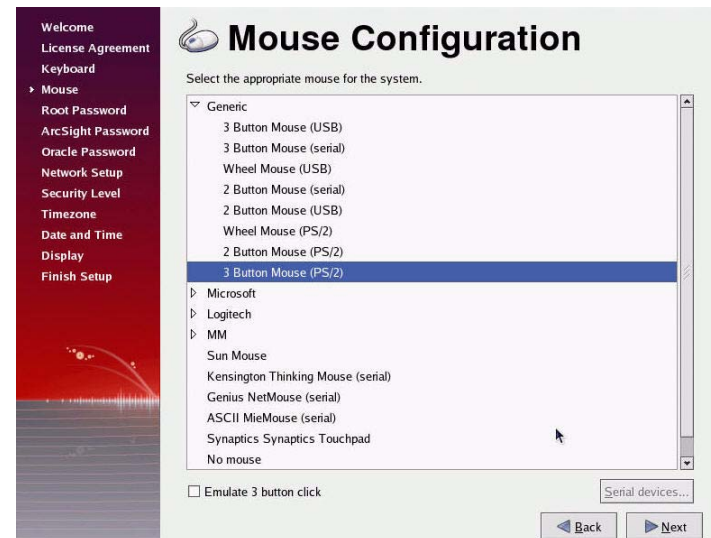
- 2 Read the license agreement. This license agreement is for Oracle Linux. Select **Yes, I agree to the License Agreement** if you agree with it, and click **Next**:



- 3 Select the Keyboard you will be using and click **Next**:



- 4 Select your mouse configuration and click **Next**:

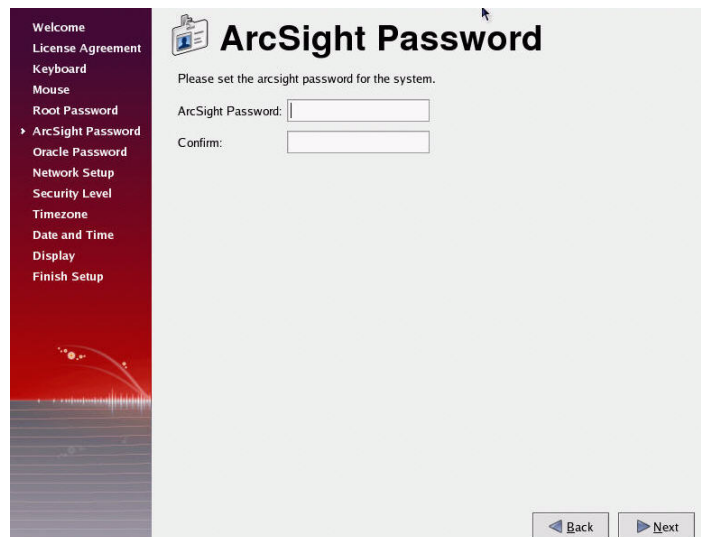


- 5 Enter a password for the root account which is used for system administration. Re-enter to confirm it. Click **Next**:



The screenshot shows the 'Root Password' configuration screen. On the left is a vertical navigation menu with the following items: Welcome, License Agreement, Keyboard, Mouse, > Root Password (highlighted), ArcSight Password, Oracle Password, Network Setup, Security Level, Timezone, Date and Time, Display, and Finish Setup. The main area has a title 'Root Password' with a shield icon. Below the title is the instruction 'Please set the root password for the system.' There are two input fields: 'Root Password:' and 'Confirm:'. At the bottom right are 'Back' and 'Next' buttons.

- 6 Most components, including the Manager and ArcSight Web, run using an "arcsight" user account for security reasons. The "arcsight" user account has already been created for you. Set up a password for the user "arcsight" in the following screen and click **Next**:



The screenshot shows the 'ArcSight Password' configuration screen. On the left is a vertical navigation menu with the following items: Welcome, License Agreement, Keyboard, Mouse, Root Password, > ArcSight Password (highlighted), Oracle Password, Network Setup, Security Level, Timezone, Date and Time, Display, and Finish Setup. The main area has a title 'ArcSight Password' with a user icon. Below the title is the instruction 'Please set the arcsight password for the system.' There are two input fields: 'ArcSight Password:' and 'Confirm:'. At the bottom right are 'Back' and 'Next' buttons.

- 7 Oracle runs as the user “oracle”. Set up a password for the Oracle user “oracle” in the following screen and click **Next**:

Welcome
License Agreement
Keyboard
Mouse
Root Password
ArcSight Password
► Oracle Password
Network Setup
Security Level
Timezone
Date and Time
Display
Finish Setup

Oracle Password

Please set the oracle password for the system.

Oracle Password:

Confirm:

◀ Back ▶ Next

- 8 The next step is to configure the IP addresses for the appliance. The appliance is set up with the following pre-defined IP addresses:

- ◆ 192.168.35.35 for eth0
- ◆ 192.168.36.35 for eth1
- ◆ 192.168.37.35 for eth2
- ◆ 192.168.38.35 for eth3

Click **Change Network Configuration...** in the following screen and configure the **eth0** interface:

Welcome
License Agreement
Keyboard
Mouse
Root Password
ArcSight Password
Oracle Password
► Network Setup
Security Level
Timezone
Date and Time
Display
Finish Setup

Network Setup

The following network devices have been detected on the system:

Network Device	Boot protocol
eth3	static
eth2	static
eth1	static
eth0	static

Change Network Configuration...

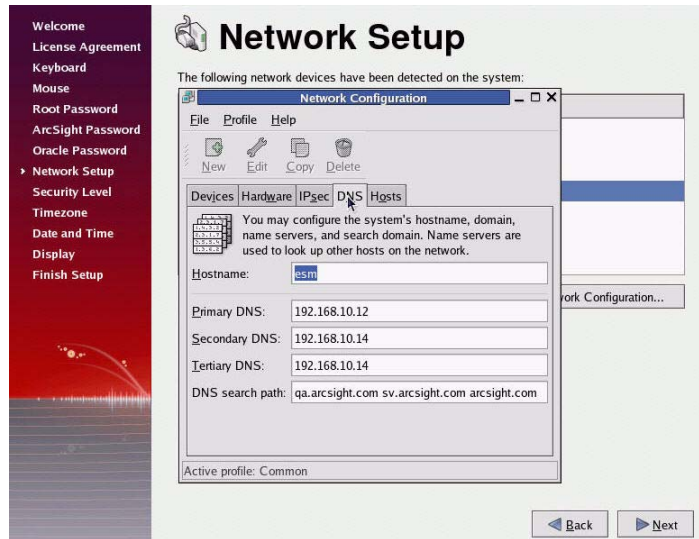
◀ Back ▶ Next



Note

For the Network Setup screens, please note that if you click on the wizard screen when the network setup dialog is in the foreground, the network dialog disappears and the wizard buttons remain inoperable. Use **Alt-Tab** to switch back to the network setup dialog

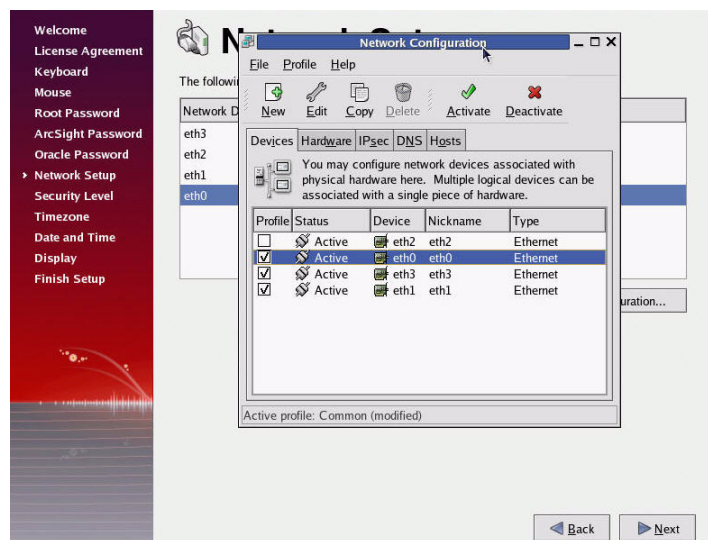
- a Click the **DNS** tab in the Network Configuration dialog and enter a host name, DNS servers, and DNS search path (domain name) for the ArcSight Express Appliance, then click **File->Save** to save the changes.



Make sure that you do not change the default values in the Hosts tab of the panel shown above. If you change the default values, it could lead to loss of network connectivity and you will receive this error:

Could not look up internet addresses for <hostname>.This will prevent GNOME from operating correctly.

- b Click the **Devices** tab. To configure a network interface, select it and click the **Edit** button:

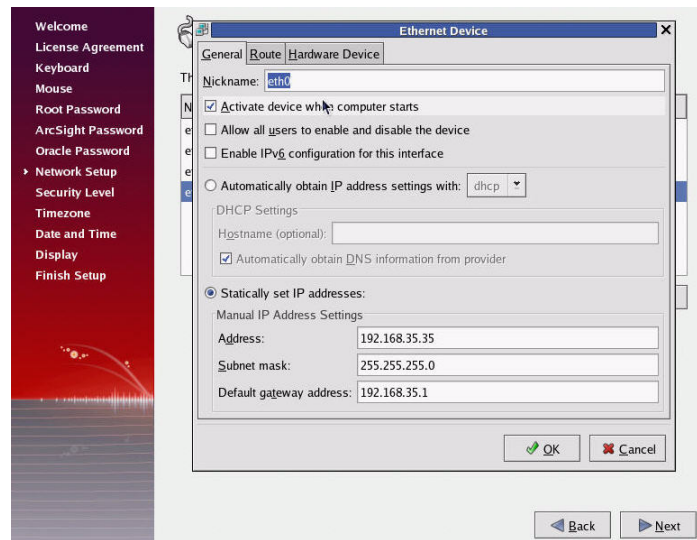


If you plan to configure a single network interface, make sure to configure the **eth0** interface. Configuring eth1 will cause the Manager to not communicate with the database.

- c Set the IP address, subnet mask, and default gateway in the Ethernet Device dialog and click **OK**:

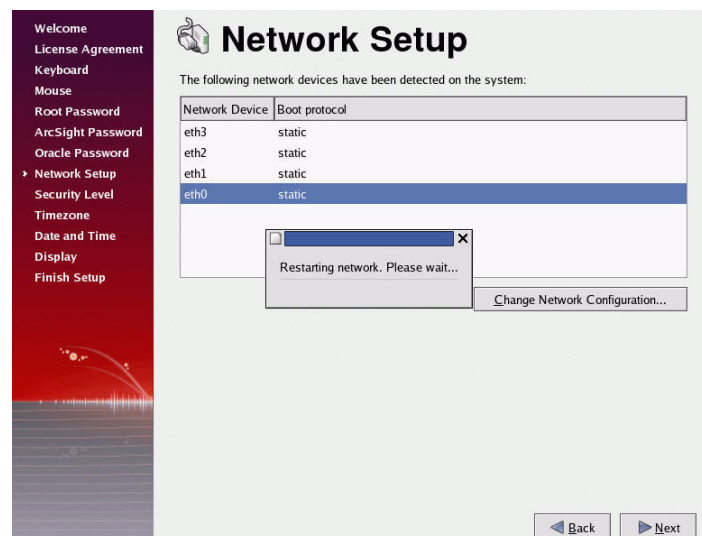


Make sure that the IP addresses you set up is not already in use. The First Boot Wizard will report errors if IP address has not been configured correctly.



If you want to change the host name or IP address after you have finished running this wizard, you will have to do a system restore. The system restore will run this First Boot Wizard and you can make the changes you want in the First Boot Wizard.

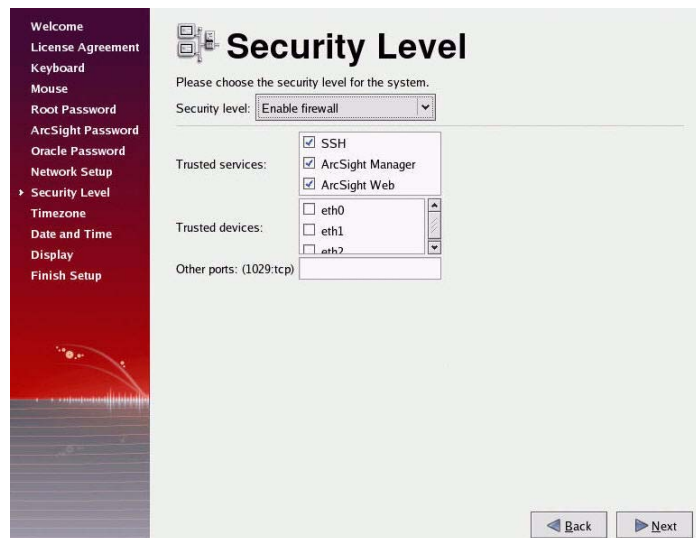
- d Click **File->Save** to save the settings. If you exit the dialog without explicitly saving, you will get a prompt asking you if you want to save the changes. Click **Yes** in the Information box:
- e The Network will automatically be restarted and you will see a message, "Restarting network. Please wait...".



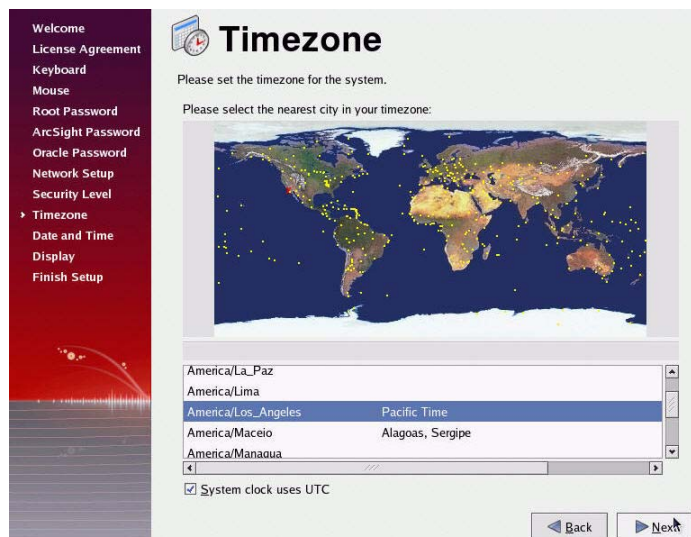
- f** Click **File->Quit** to exit the Network Configuration dialog.
- g** Click **Next** in the Network Setup dialog.
- 9** Choose **Enable firewall** in the Security Level dropdown menu and then make sure the ports listed in the note below are open. and click **Next**:



Make sure that the ports 8443 and 9443 are open for outgoing communications. The ArcSight Manager uses port 8443 and the ArcSight Web uses port 9443 for communication. You will also need to leave port 22 open for remote `ssh` access.



- 10** Select the Timezone in which your ArcSight Express ESM appliance is located and click **Next**.



By default, Network Time Protocol (NTP) is active. The system will attempt to contact the NTP servers. It could take a few minutes to contact a server. If the system cannot contact a server, the request will time out in a few minutes and will take you to the next screen in the wizard.

NTP requires 3 or more servers in order to work correctly. The list of servers configured by default points ArcSight Express to a virtual cluster of time servers operated by the NTP project. Assuming that UDP port 123 is open to the outside internet in your firewall, you can keep the default values, unless you would prefer to use your own cluster of NTP servers.

- 11** By default, the Enable Network Time Protocol checkbox is checked (recommended). This will configure the operating system to use the NTP servers specified in the list from which to obtain the time. If you choose to de-activate the Network Time Protocol, make sure to set the local date and time in the **Date & Time** tab.



Note

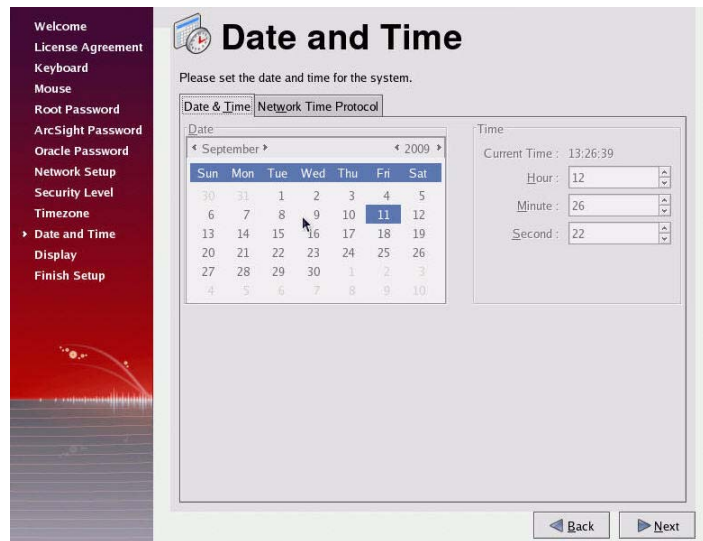
ArcSight strongly recommends using NTP, since accurate time keeping is essential for event correlation and log management.

Enter the NTP server name in the Server text box and click **Add**. The NTP server should show up in the box below.

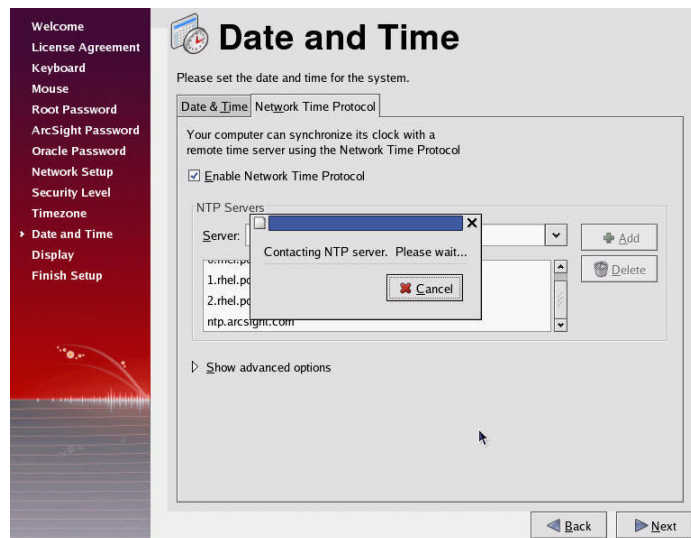


Caution

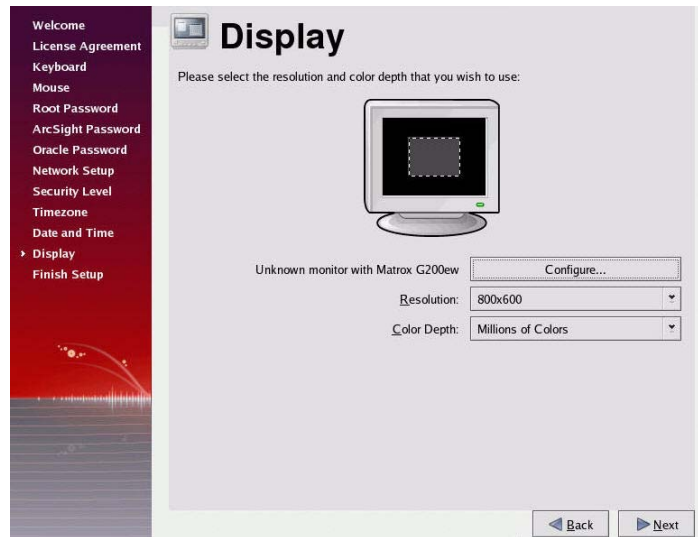
If you enter a wrong server address and re-enter the right address, it could take a few minutes for ArcSight Express to find the NTP server.



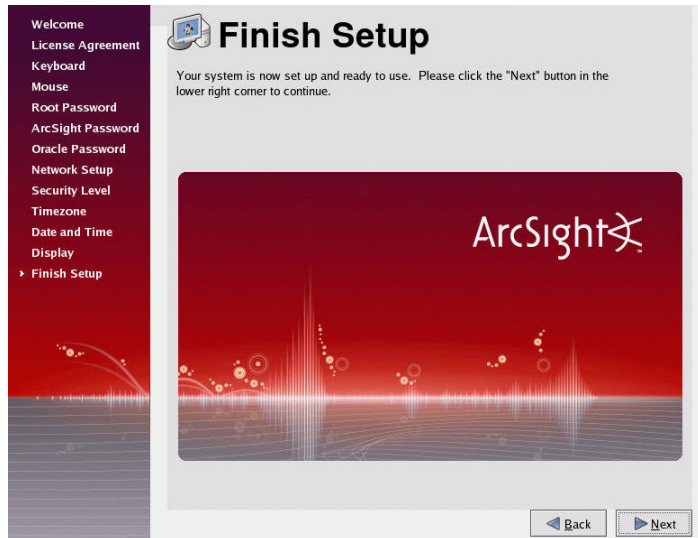
Click **Next**. You will see a message saying that the NTP server is being contacted.



- 12 Select the resolution and color depth for your screen and click **Next**.

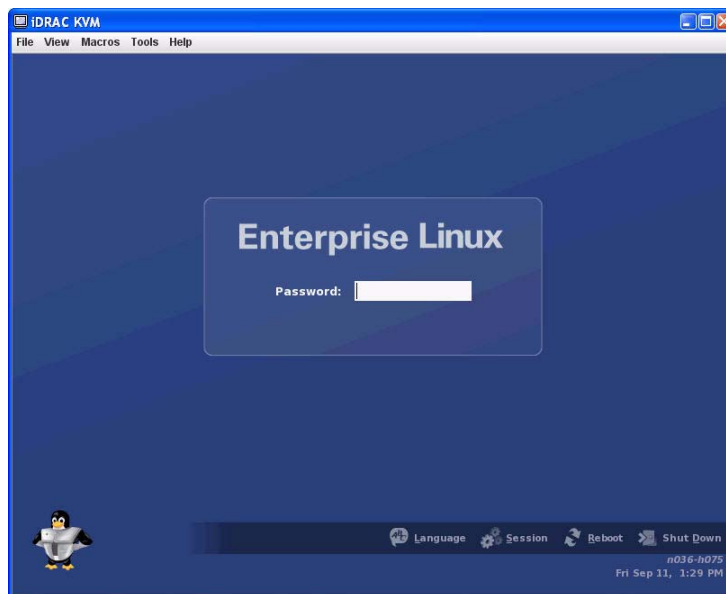
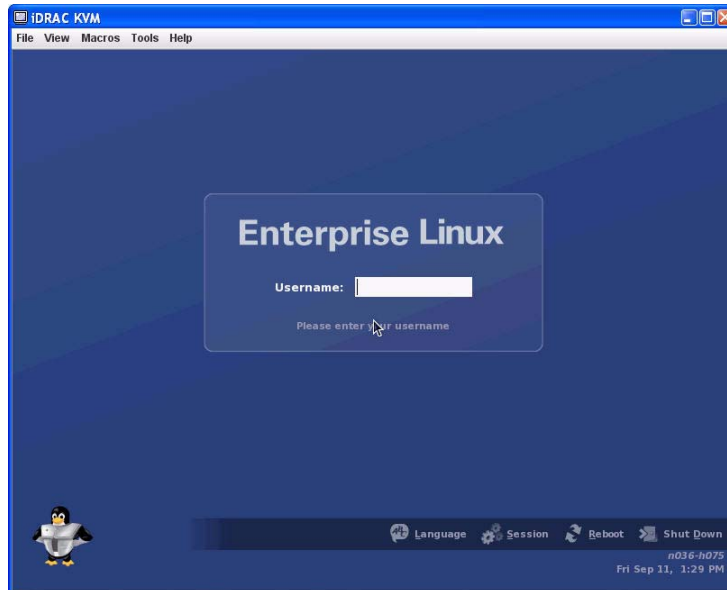


- 13 Click **Next** in the following screen:



You will be prompted to enter your username in a login screen. This begins the second phase of the First Boot Wizard which will help you configure the software components that have already been installed on your ArcSight Express appliance.

- 14 Important!** Log in as user “root” when you are prompted with the screen below, and enter the password for this account which you had set in [Step 5 on page 14](#). The next step is to set up the software components on the ArcSight Express Appliance:



After you have logged in successfully, the software components configuration wizard will open. Follow the directions in the [Configuring Software Components on ArcSight Express Appliance](#) section to configure ESM on ArcSight Express.

Configuring Software Components on ArcSight Express Appliance

This wizard prompts you for information required to configure the ArcSight Express software components - ArcSight Database, ArcSight Manager, ArcSight Web, and ArcSight Forwarding Connector.

See the *ArcSight ESM Installation and Configuration Guide* if you need further help with these screens. For more information on ArcSight Storage Appliance software, refer to *ArcSight Logger Administrator's Guide*. You can download both these documents from the ArcSight Customer Support download site.



Note

Restarting this wizard if you exit it...

If you exit out of any of the following screens, the wizard will exit with the following warning:

The wizard is not finished yet. Are you sure you want to exit?

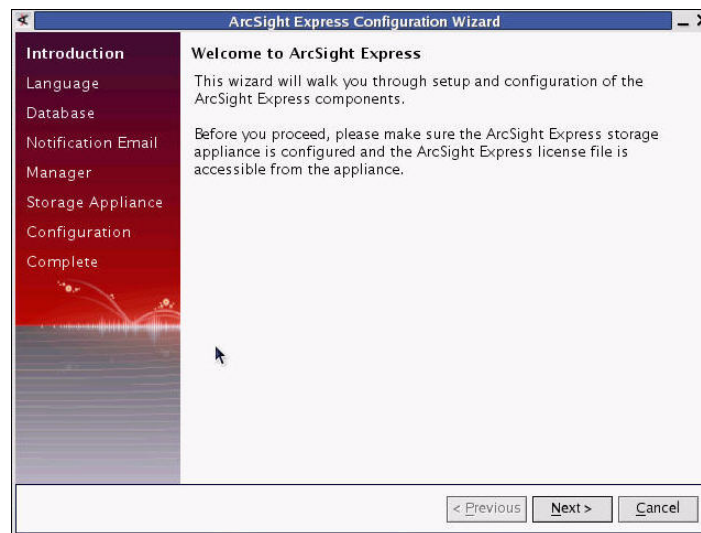
You can re-start the wizard at any point until you get to the screen which tells you that the Manager configuration has been complete. To re-start the wizard, run the following command from `/opt/arcsight/manager/bin` directory when logged in as user "root":

```
./arcsight appliancefirstbootsetup
```

The wizard will open the screen you see in [Step 3](#) below.

The ArcSight Express Appliance is functional only after the successful completion of the wizard.

- 1 The wizard reminds you to configure the Storage Appliance before configuring the ArcSight Express appliance in the following screen. Click **Next**:

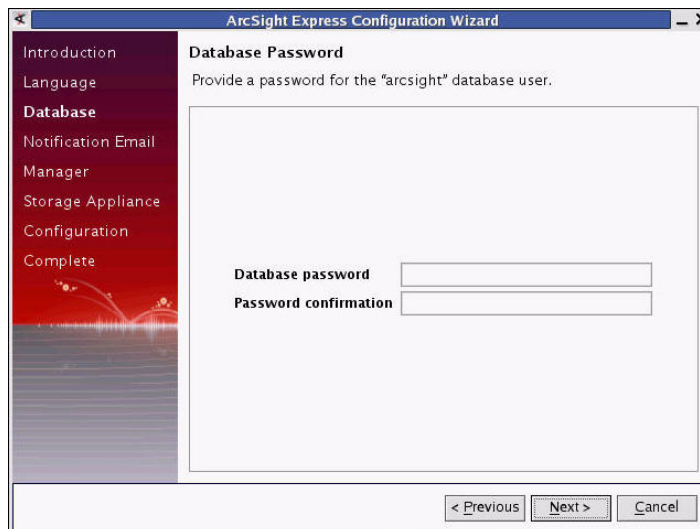


- 2 Select the language for the user interface display and click **Next**:



The screenshot shows the 'ArcSight Express Configuration Wizard' window. On the left is a vertical navigation pane with a red background and white text, listing steps: Introduction, Language, Database, Notification Email Manager, Storage Appliance Configuration, and Complete. The 'Language' step is highlighted. The main area is titled 'Language Options' and contains the instruction: 'Select the language ArcSight Express will use for user interface displays and interaction.' Below this are three radio button options: 'English' (selected), 'Chinese (Traditional)', and 'Japanese'. At the bottom right are three buttons: '< Previous', 'Next >', and 'Cancel'.

- 3 The database user account has already been created for you with username "arcsight". Enter a password for this account and click **Next**:



The screenshot shows the 'ArcSight Express Configuration Wizard' window. The left navigation pane is the same as in the previous step, but the 'Database' step is now highlighted. The main area is titled 'Database Password' and contains the instruction: 'Provide a password for the "arcsight" database user.' Below this are two text input fields: 'Database password' and 'Password confirmation'. At the bottom right are three buttons: '< Previous', 'Next >', and 'Cancel'.

- 4 Enter passwords for the SYS and SYSTEM accounts and click **Next**.

Oracle SYS Password—Password for the Oracle superuser, SYS.

Oracle SYSTEM Password—Password for the Oracle admin account.

The screenshot shows the 'ArcSight Express Configuration Wizard' window. On the left is a vertical navigation pane with the following steps: Introduction, Language, Database, Notification Email Manager, Storage Appliance, Configuration, and Complete. The 'Database' step is currently selected and highlighted in red. The main content area is titled 'Oracle Passwords' and contains the instruction: 'Provide passwords for Oracle super user (SYS) and administrator (SYSTEM)'. Below this instruction are four text input fields arranged in two pairs. The first pair is labeled 'Oracle SYS password' and 'Password confirmation'. The second pair is labeled 'Oracle SYSTEM password' and 'Password confirmation'. At the bottom right of the window are three buttons: '< Previous', 'Next >', and 'Cancel'.

- 5 Configure the following e-mail addresses:

Notification e-mail address: An e-mail address of the person who should receive e-mail notifications in the event that the ArcSight Manager goes down or encounters some other problem.

Escalation e-mail address: An e-mail address of the person who should receive an escalation e-mail in case no action has been taken for a period of time after the notification e-mail was sent.

From Address: E-mail address that will be used to represent the sender of the e-mail notifications.

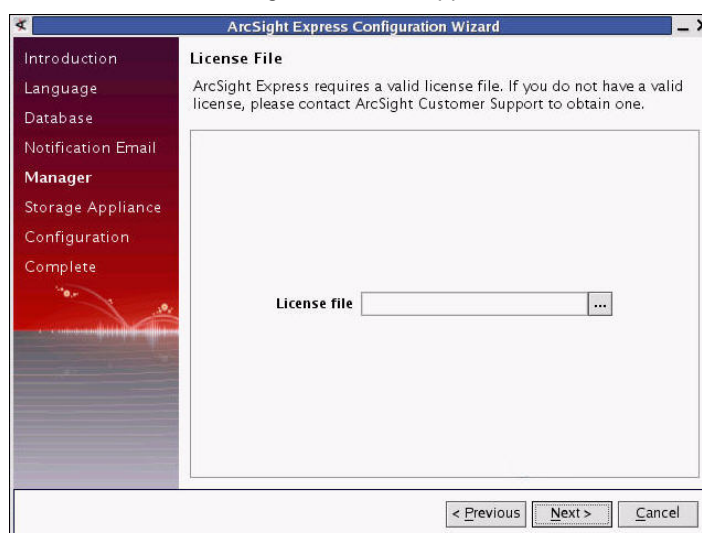
Click **Next**.

The screenshot shows the 'ArcSight Express Configuration Wizard' window. The left navigation pane now has 'Notification Ema...' selected and highlighted in red. The main content area is titled 'Notification E-mails' and contains the instruction: 'Provide e-mail addresses for notifications and escalations about system administration issues for all ArcSight Express components.' Below this instruction are three text input fields. The first is labeled 'Notification e-mail address', the second is labeled 'Escalation e-mail address', and the third is labeled 'From e-mail address'. At the bottom right of the window are three buttons: '< Previous', 'Next >', and 'Cancel'.

- 6 Enter or navigate to the location where you have stored the ArcSight Express license file and click **Next**.

If you do not have a license file, contact ArcSight Customer Support to obtain one. You can use the Web browser on the appliance to download the file once you obtain it from

ArcSight Customer Support. Alternatively, you can download the license file elsewhere and use `scp` or `sftp` to get it onto the appliance:



- 7 Enter the Manager's host name, and configure information which will be used to create an ArcSight Manager user with administrative privileges. Click **Next**.

Important: Make sure to change the **Manager Host Name** to either the host name or IP address of the ArcSight Express Appliance. The Manager host name will be used to generate a self-signed certificate and also when connecting the Console to the Manager. The Common Name (CN) in the certificate will be the Manager host name that you specify in this screen:

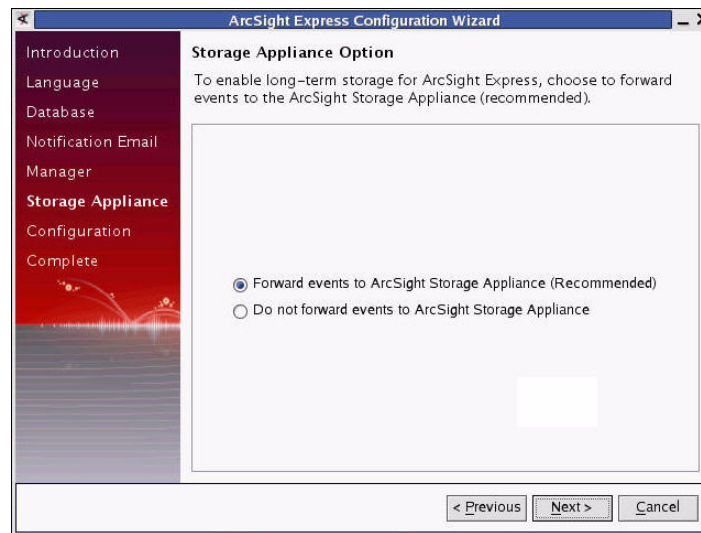


- 8 Select whether you would like to forward events to the ArcSight Storage Appliance for long term storage and click **Next**.



Note

If you select the **Do not forward events to ArcSight Storage Appliance** option, you will not have any long term storage for your events. So, we recommend that you select the **Forward Events to ArcSight Storage Appliance (Recommended)** option.

**Caution**

Make sure that you have installed and configured ArcSight Storage Appliance and created a SmartMessage receiver on it before proceeding to the next step. Receivers are used to receive events from files and over the network. See the *ArcSight Logger Administrator's Guide* for details on how to create a SmartMessage receiver.

If you selected the **Do not forward events to ArcSight Storage Appliance** option, you can skip the next step and go to [Step 10 on page 28](#). You have the option to install and configure the ArcSight Storage Appliance at a later time too. See [“Adding an ArcSight Storage Appliance” on page 9](#) for details on how to do this.

- 9 If you chose to forward events to the ArcSight Storage Appliance, please enter the following information and click **Next**:

ArcSight Storage Appliance host name—The host name or IP address of the ArcSight Storage Appliance.

ArcSight Storage Appliance receiver name—The name of the SmartMessage Receiver created on the ArcSight Storage Appliance.

**Caution**

It is important that the receiver name you enter in this field exactly matches the receiver name configured on the ArcSight Storage Appliance.

Forwarding Connector user name—Enter a user name for creating an ArcSight Express account to be used by the Forwarding connector. This account is created under the admin folder in the Console. The Forwarding connector uses this account to pull events from the Manager, and forwards them to ArcSight Storage Appliance.

Forwarding Connector password—Enter a password for the ArcSight Express account to be used by the Forwarding Connector. Re-enter it to confirm it.

The screenshot shows the 'Storage Appliance Parameters' screen of the ArcSight Express Configuration Wizard. The left sidebar lists the steps: Introduction, Language, Database, Notification Email Manager, Storage Appliance, Configuration, and Complete. The main area contains the following fields:

- ArcSight Storage Appliance host name: [Empty text box]
- ArcSight Storage Appliance receiver name: esm-manager-receiver
- Forwarding Connector user name: [Empty text box]
- Forwarding Connector password: [Empty text box]
- Password confirmation: [Empty text box]

At the bottom, there are three buttons: '< Previous', 'Next >', and 'Cancel'.

- 10** You will see a screen that informs you that ArcSight Express is ready to be configured. Click **Next** to continue with the configuration.



Caution

Keep in mind that once the wizard has started configuring the software components, if you exit the wizard or if an error occurs, you will have to configure that component manually. See [Appendix A, Troubleshooting](#), on page 49 for detailed steps on how to do this.

The screenshot shows the 'Configure ArcSight Express' screen of the ArcSight Express Configuration Wizard. The left sidebar lists the steps: Introduction, Language, Database, Notification Email Manager, Storage Appliance, Configuration, and Complete. The main area contains the following text:

You are about to configure ArcSight Express with the settings specified in previous panels.

The configuration will accomplish the following tasks:

- Initializing schema and content
- Configure Oracle passwords
- Configure the ArcSight Manager
- Create Forwarding Connector user
- Start the ArcSight Manager service
- Configure Forwarding Connector
- Configure the ArcSight Web server
- Start the ArcSight Web server service

At the bottom, there are three buttons: '< Previous', 'Next >', and 'Cancel'.

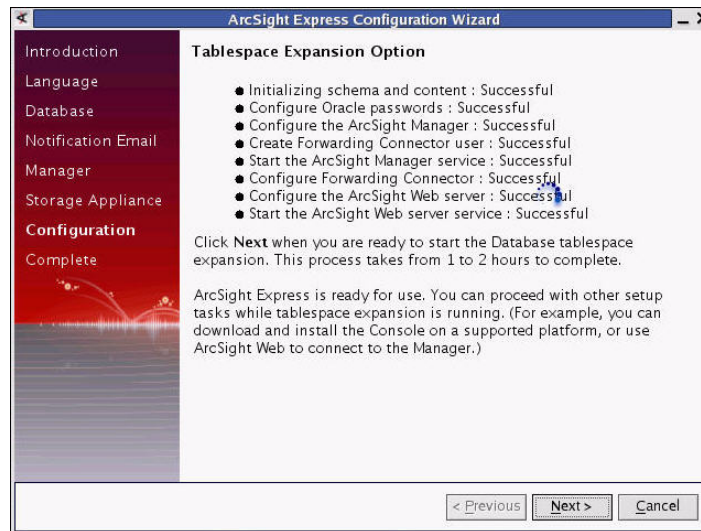
- 11** You can see the progress and errors if any as the configuration process continues. Once the configuration completes successfully, click **Next**.



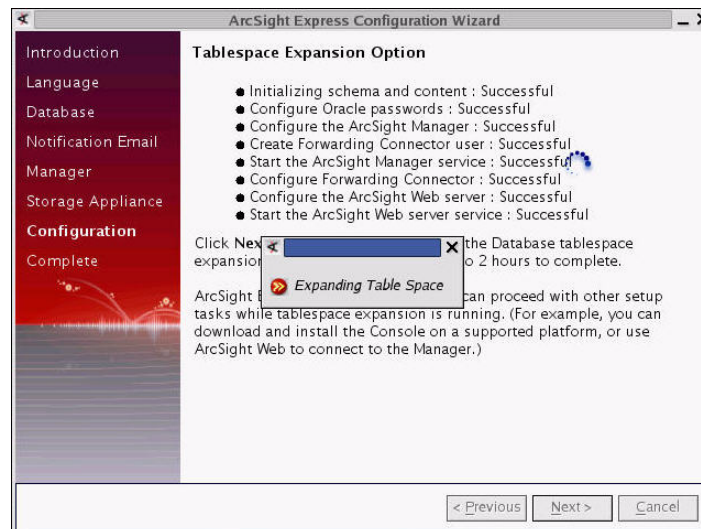
Caution

If you see a "Failed" status or exit this wizard after it has started configuring the components, but before successful completion of the wizard, you are required to manually configure the component that failed and perform the rest of the steps shown in the screen capture under [Step 11](#) manually. See ["Failed" Status while Configuring or Starting a Component](#) section in the [Appendix A, Troubleshooting](#), on page 49 for detailed steps on how to do this. Optionally, you can restore your appliance to its original factory settings. See [Appendix C, Restoring Factory Settings](#), on page 65 for details.

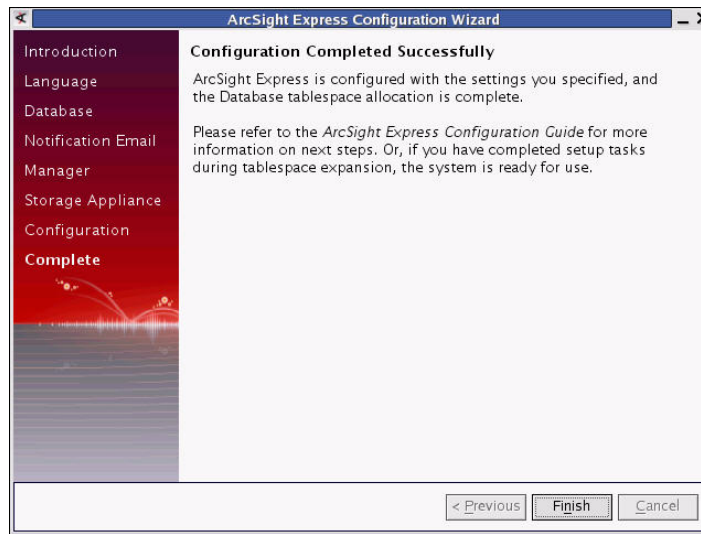
You cannot restart the wizard once the Manager configuration has started.



You will see a message telling you that the tablespace expansion is in progress.



- 12** Once your appliance has been configured successfully, you will see the following screen:



ArcSight Express is ready for use.

The Next Steps

Now you have configured both the appliances. The next steps are:

- If there are any service packs available, be sure to download and install them. Refer to the respective service pack Upgrade Guide for instructions on how to upgrade ArcSight Express with the service pack.
- Download the ArcSight Console and install it on a supported platform. The Console should not be installed on ArcSight Express Appliance. Refer to the next chapter, [Installing ArcSight Console](#), for details on how to do this.

Please also read the ArcSight Express Release Notes, available on the ArcSight Customer Support download site.

Chapter 4

Installing ArcSight Console

The ArcSight Console provides a user interface for you to perform administrative tasks on ArcSight Express, such as fine tuning the pre-installed ArcSight Express content and creating/editing/deleting users. The Console should only be used for administrative purposes. The ArcSight Console provides a host-based interface (as opposed to the browser-based interface of ArcSight Web) to ArcSight Express. This chapter explains how to install and configure the ArcSight Console.



Make sure that you have successfully configured ArcSight Express before proceeding.

The following topics are covered in this chapter:

- [“Console Supported Platforms” on page 31](#)
- [“Using a PKCS#11 Token” on page 32](#)
- [“Installing the Console” on page 32](#)
- [“Starting the ArcSight Console” on page 39](#)
- [“Reconnecting to the ArcSight Manager” on page 40](#)
- [“Reconfiguring the ArcSight Console” on page 40](#)
- [“Uninstalling the ArcSight Console” on page 40](#)

ArcSight Console is deployed on several perimeter machines located outside the firewall which protects the ArcSight Express.

Console Supported Platforms

The following operating system platforms are supported.

Platform	Supported Operating System	Typical System Requirements
Windows	Microsoft Windows Vista SP2 64-bit	x86-compatible single or multi-CPU system with 1-2 GB RAM
	Microsoft Windows Vista SP2 32-bit	
	Microsoft Windows XP Professional SP3 32-bit	

Using a PKCS#11 Token



Note

PKCS #11 token support may not be available for all ESM versions and ArcSight Express models.

Starting ESM v4.0 SP2, ArcSight ESM supports the use of a PKCS#11 token, such as the Common Access Card (CAC), which is used for identity verification and access control. PKCS#11 is a public key cryptography standard which defines an API to cryptographic tokens.

You can use the PKCS#11 token regardless of the mode that the client is running in - with clients running in FIPS 140-2 mode or with clients running in the default mode. See [Appendix I, Using the PKCS#11 Token, on page 219](#) for details on using a PKCS #11 token with the Console.

Installing the Console



Caution

Do not install the ArcSight Console on the ArcSight Express Appliance. See the section [“Console Supported Platforms” on page 31](#) for supported platforms for ArcSight Console.



Note

A Windows system was used for the sample screens. If you are installing on a Unix based system, you will notice a few Unix-specific screens. Path separators are / for Unix and \ for Windows.

Download the ArcSight Console installer file for your platform from the ArcSight Customer Support download site and install the Console on your system **after** configuring ArcSight Express.

- 1 To install ArcSight Console, run the self-extracting archive file . Click **Next** in the Installation Process Check screen.
- 2 Read the introductory text in the Introduction panel and click **Next**.
- 3 Read the text in the Special Notice panel and click **Next**.
- 4 Navigate to an existing folder where you want to install the Console or accept the default and click **Next**. If you specify a folder that does not exist, the folder gets created for you.



Caution

On Windows Vista (64-bit): Make sure that you have administrative privileges to the C:\, C:\Program Files, and C:\Windows directories because these are protected folders and you will not be able to create files (creating a folder is allowed, but you need administrative privileges to create a file) under them without having administrative privileges. When you try to export a package to one of these protected folders, the Console checks the permissions for the parent folder, and when it tries to write the file, an exception is thrown if the parent folder does not have explicit write permission. As a result, the Console will not be able to export a resource package directly under these folders.

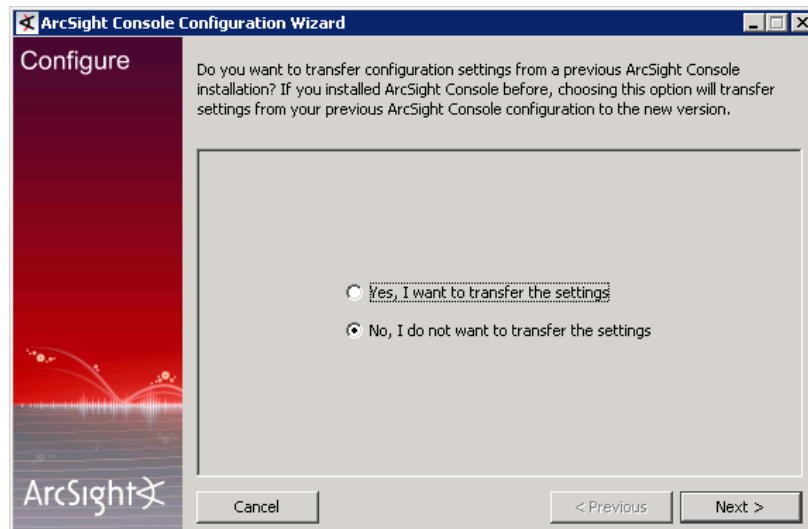
- 5 Select where you would like to create a shortcut for the Console and click **Next**.

- 6 View the summary in the Pre-Installation Summary screen and click **Install** if you are satisfied with the paths listed. If you want to make any changes, use the Previous button to do so.

You can view the installation progress in the progress bar.

Transferring Configuration from an Existing Installation

After the Console has been installed, the wizard asks if you would like to transfer configuration options from an existing installation of ArcSight Console. Choose **No, I do not want to transfer the settings** to create a new, clean installation and click **Next**. If you choose **Yes, I want to transfer the settings**, the wizard will determine the version of the previous installation and may offer additional upgrade options.

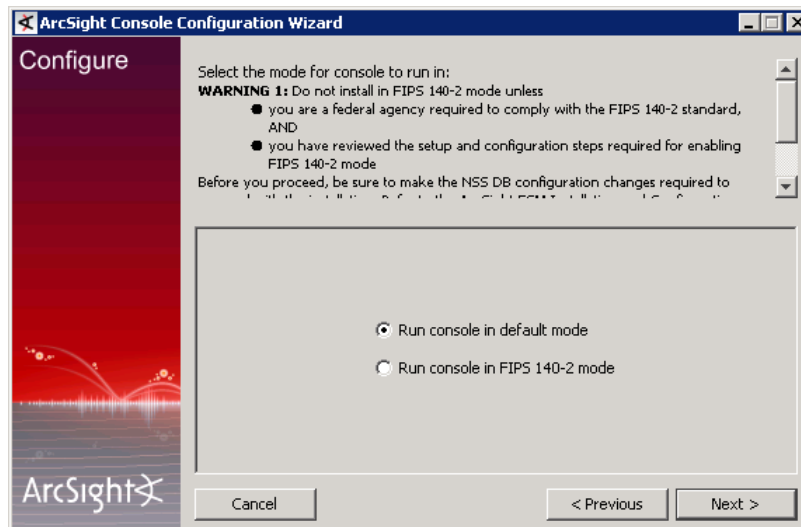


Selecting the Mode in which to Configure ArcSight Console



The FIPS 140-2 mode is not supported for ArcSight Express.

Next, you will see the following screen:



Select the **Run console in default mode** radio button and click **Next**.

Manager Connection

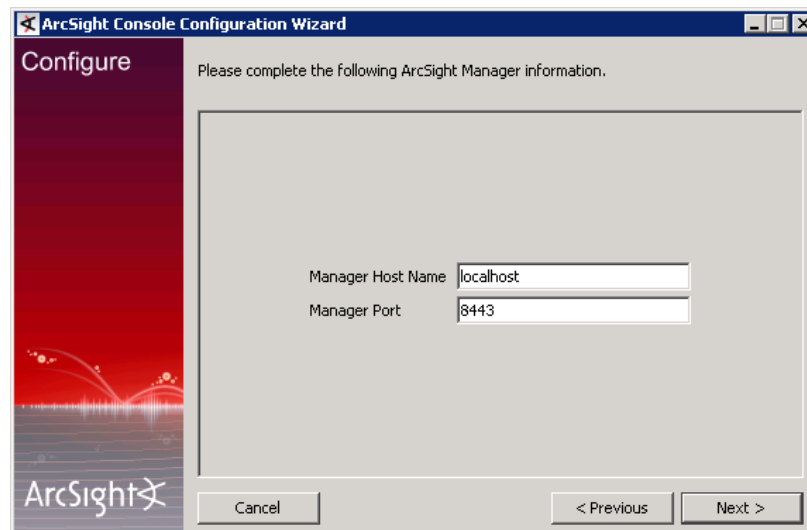
The ArcSight Console configuration wizard prompts you to specify the ArcSight Manager with which to connect.

The hostname is the ArcSight Express Appliance host name or its IP address. The Manager host name that you had entered in the First Boot Wizard while configuring the ArcSight Express Appliance and the value of the Manager Host Name that you will be entering in this screen should be identical. If you had entered the machine name when configuring the First Boot Wizard, then you must enter the machine name here too, likewise, if you had entered the machine's IP address then you must enter the machine's IP address in this screen too.



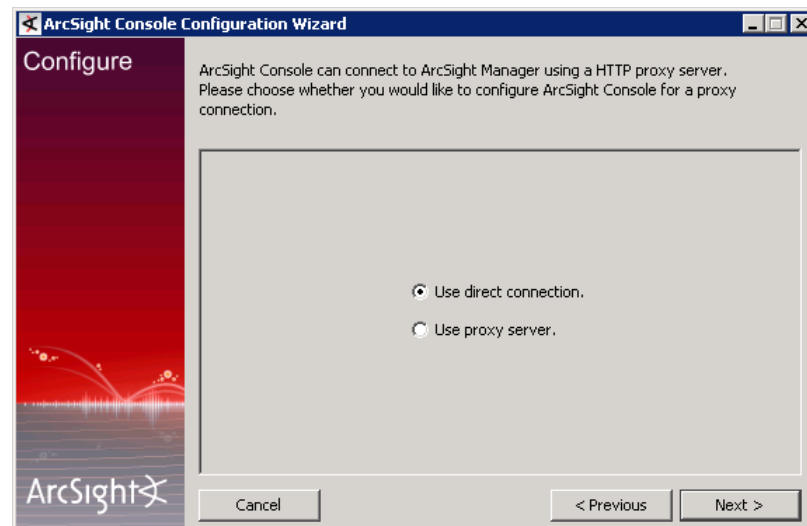
Do not change the Manager's port number.

Click **Next**.



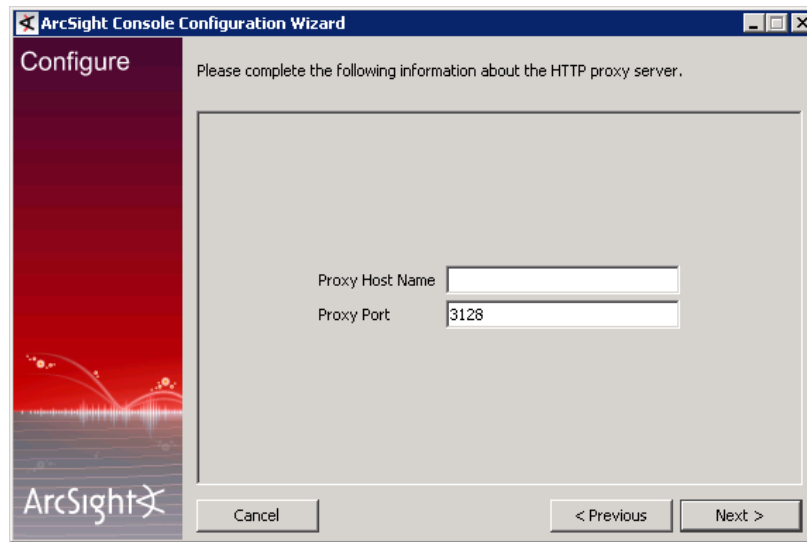
The screenshot shows the 'Configure' step of the ArcSight Console Configuration Wizard. The window title is 'ArcSight Console Configuration Wizard'. On the left is a red sidebar with the ArcSight logo. The main area has a light gray background with the text 'Please complete the following ArcSight Manager information.' Below this is a large rectangular box containing two input fields: 'Manager Host Name' with the value 'localhost' and 'Manager Port' with the value '8443'. At the bottom of the window are three buttons: 'Cancel', '< Previous', and 'Next >'.

Select **Use direct connection** option and click **Next**. You can set up a proxy server and connect to the Manager using that server if you cannot connect to the Manager directly.



The screenshot shows the 'Configure' step of the ArcSight Console Configuration Wizard, specifically the connection selection screen. The window title is 'ArcSight Console Configuration Wizard'. On the left is a red sidebar with the ArcSight logo. The main area has a light gray background with the text 'ArcSight Console can connect to ArcSight Manager using a HTTP proxy server. Please choose whether you would like to configure ArcSight Console for a proxy connection.' Below this is a large rectangular box containing two radio button options: 'Use direct connection.' (which is selected) and 'Use proxy server.'. At the bottom of the window are three buttons: 'Cancel', '< Previous', and 'Next >'.

If you select the Use proxy server option, you will be prompted to enter the proxy server information.

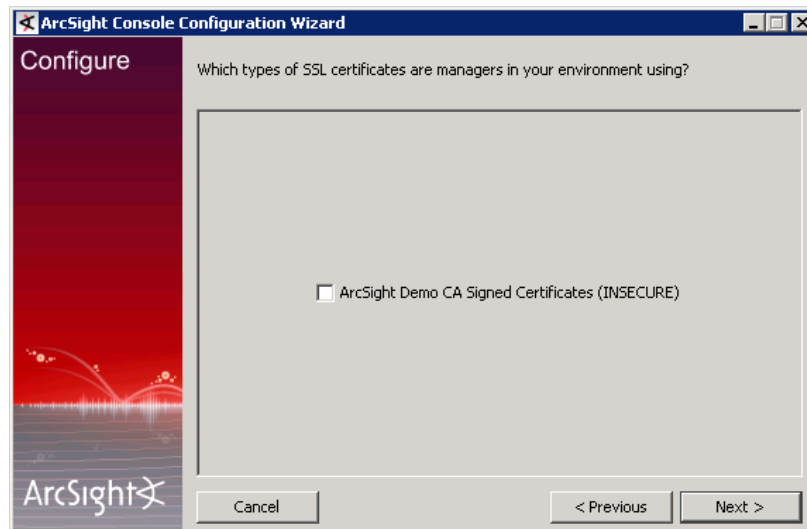


The screenshot shows the 'ArcSight Console Configuration Wizard' window, specifically the 'Configure' step. The window has a blue title bar and a red sidebar with the ArcSight logo. The main area is light gray and contains the text 'Please complete the following information about the HTTP proxy server.' Below this text are two input fields: 'Proxy Host Name' and 'Proxy Port'. The 'Proxy Port' field contains the value '3128'. At the bottom of the window are three buttons: 'Cancel', '< Previous', and 'Next >'.

Enter the Proxy Host name and click **Next**.

SSL Certificate used by Manager

You will see the following screen:



The screenshot shows the 'ArcSight Console Configuration Wizard' window, specifically the 'Configure' step. The window has a blue title bar and a red sidebar with the ArcSight logo. The main area is light gray and contains the text 'Which types of SSL certificates are managers in your environment using?'. Below this text is a single checkbox labeled 'ArcSight Demo CA Signed Certificates (INSECURE)'. At the bottom of the window are three buttons: 'Cancel', '< Previous', and 'Next >'.

ArcSight Express is pre-configured with a self-signed certificate, so leave this checkbox unchecked. Click **Next**.

Authentication

The ArcSight Console configuration wizard prompts you to choose the type of client authentication you want to use, as shown in the following screen:



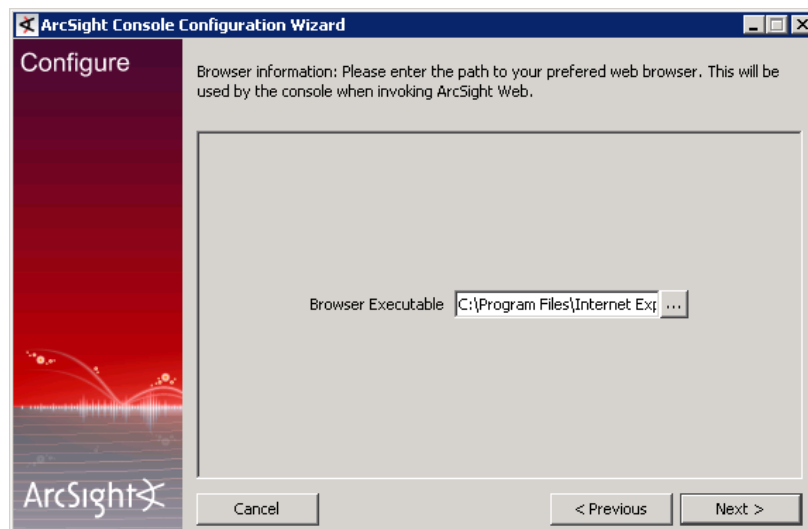
This release of ArcSight Express supports **Password Based Authentication** only.

Select **Password Based Authentication** and click **Next**.

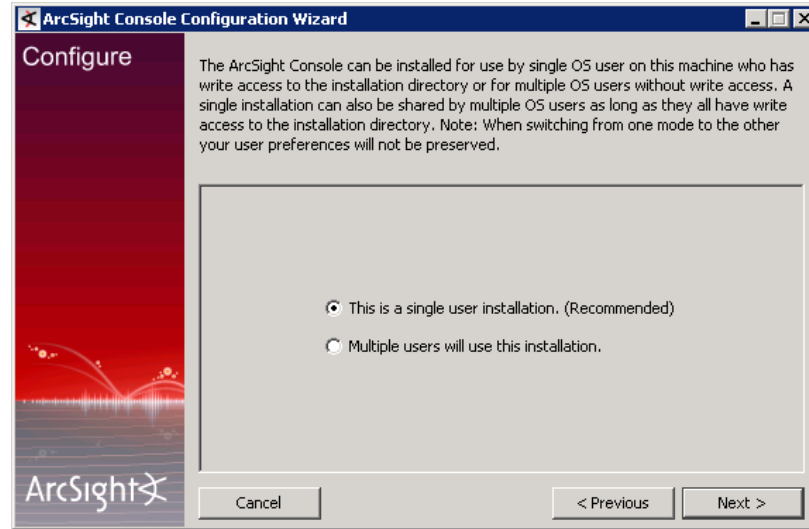
Web Browser

The ArcSight Console configuration wizard prompts you to specify the default web browser you want to use to display reports, Knowledge Base articles, and other web page content.

Specify the location of the executable for the web browser that you want to use to display the Knowledge Base articles and other web pages launched from the ArcSight Console. Click **Next**.

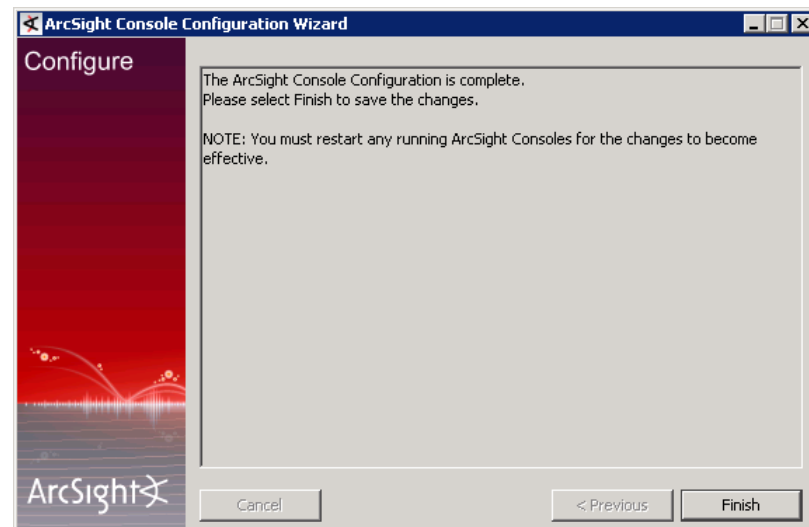


User Logs and Preferences



Select **This is a single user installation (Recommended)** and click **Next**.

You have completed configuring your ArcSight Console. Click **Finish** in the following screen.



Click **Done** in the next screen.



Note

On Mac OS X 10.5 update 8 and later:

The Mac OS update changed the password for the cacerts file in the system's JRE. Before you start the Console, you need to change the default password for the cacerts file by setting it to the following in the `client.properties` file (create the file if it does not exist) in the Console's `\current\config` folder by adding:

```
ssl.truststore.password=changeme
```

You have installed the ArcSight Console successfully. Please be sure to install any available patches for the Console. Refer to the *ArcSight ESM Patch Release Notes* for instructions on how to install a patch for the Console.

Starting the ArcSight Console



The Manager on ArcSight Express Appliance should be up and running before you start the Console.

After installation and setup is complete, you can start ArcSight Console.

To start the ArcSight Console, use the shortcuts installed or open a command window on the Console's `\bin` directory and run:

```
arcsight console
```

Logging into the Console

To start the Console, click **Login**.

When you start the Console for the first time, after you click Login, you will get a dialog asking you whether you want to trust the Manager's certificate. The prompt will show details specific to your settings (following is just an example). Click **OK** to trust the Manager's certificate. The certificate will be permanently stored in the Console's truststore and you will not see the prompt again the next time you log in.



Creating ArcSight Express Users

The next step is to create users. ArcSight Express comes configured with a custom user group called ArcSight Express. Add users to this group with ArcSight Web privileges.

In the Navigator panel, go to **Users > Shared > Custom User Groups**. ArcSight Express comes configured with a custom user group called ArcSight Express. Add users to this group with ArcSight Web privileges.

1 In the Navigator panel, go to **Users > Shared > Custom User Groups**.

2 Right click on ArcSight Express and select **New User**.

For each user you add, provide a User ID and Password, and set the User Type to **Web User** and click **OK**. If the Navigator panel is not visible, you can open it by clicking Window->Navigator Panel. Then right click on **ArcSight Express** and select **New User**.

3 For each user you add, provide a User ID and Password, and set the User Type to **Web User** and click **OK**.

Reconnecting to the ArcSight Manager

If the ArcSight Console loses the connection to the ArcSight Manager (for example, because the Manager was restarted), a dialog box appears in the ArcSight Console stating that your connection to the ArcSight Manager has been lost. Click **Retry** to re-establish a connection to the ArcSight Manager or click **Start Over**.

Connections to the ArcSight Manager cannot be re-established while the ArcSight Manager is restarting or if the Manager refuses the connection. In addition, you may see connection exceptions during the Retry process while the connection is lost or ArcSight Manager is restarting.

Reconfiguring the ArcSight Console

You can reconfigure ArcSight Console at any time by running the following command within a command window from the Console's `\bin` directory:

```
arcsight consolesetup
```

and follow the prompts.

Uninstalling the ArcSight Console

Before uninstalling the ArcSight Console, exit the current session.

To uninstall on Windows, run the **Start->All Programs (Programs in the case of Windows XP)->ArcSight Console ->Uninstall ArcSight Console 5.0** program. If a shortcut to the Console was not installed on the Start menu, locate the Console's `\UninstallerData` folder and run:

```
Uninstall_ArcSight_Console.exe
```

Chapter 5

Using SmartConnectors with ArcSight Express

This chapter covers the following topics:

[“Installing the SmartConnector” on page 41](#)

[“Importing the Manager’s Certificate” on page 42](#)

SmartConnectors process raw data generated by various vendor devices throughout an enterprise. Devices are hardware and software products such as routers, anti-virus products, firewalls, intrusion detection systems (IDS), VPN systems, anti-DoS appliances, operating system logs, and other sources that detect and report security or audit information.

ArcSight SmartConnectors collect a vast amount of varying, heterogeneous information. Due to this variety of information, SmartConnectors format each event into a consistent, normalized *ArcSight events*, letting you find, sort, compare, and analyze all events using the same event fields. The “normalized” events are then sent to the ArcSight Manager and are stored in the ArcSight Database or forwarded to ArcSight Storage Appliance if you choose to enable forwarding events.

You have the option to use up to four SmartConnector(s) locally depending on available resources on the ArcSight Storage Appliance.

Installing the SmartConnector

Installing and configuring the SmartConnector is a three step process:

- 1 Install the SmartConnector.

For an overview of the SmartConnector installation and configuration process, see the *SmartConnector User’s Guide*.

- 2 Import the Manager’s certificate to the Connector’s truststore. See the section [Importing the Manager’s Certificate](#) for details on how to do this.

- 3 Configure the SmartConnector.

For complete configuration instructions for a particular SmartConnector, see the configuration guide for that connector. The product-specific configuration guide provides specific device configuration information, installation parameters, and device event mappings to ArcSight ESM fields.

Importing the Manager's Certificate

You will be required to import the Manager's certificate manually. You can use either of the two methods to import the certificate:

- Use the [keytoolgui](#) tool. See the *ArcSight ESM Administrator's Guide* for details on importing the Manager's certificate using the [keytoolgui](#).
- Import the Manager's certificate using the Connector Manager software.

Using keytoolgui to Import Manager's Certificate

You will need to export the Manager's certificate from ArcSight Express Appliance before you can import it on the Smart Connector in the Smart Connector server.

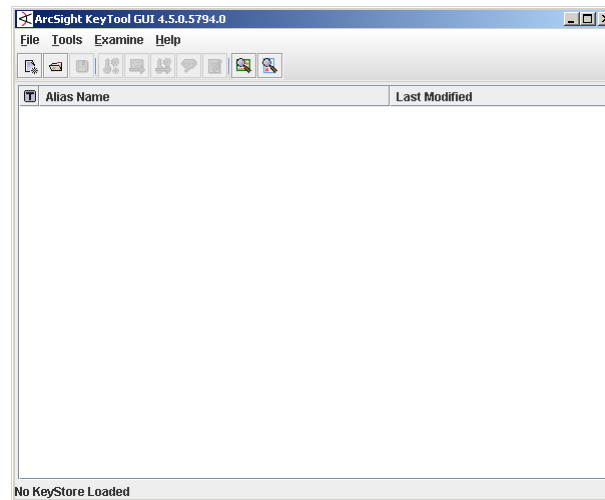
Exporting the Manager's Certificate

To export the Manager's certificate:

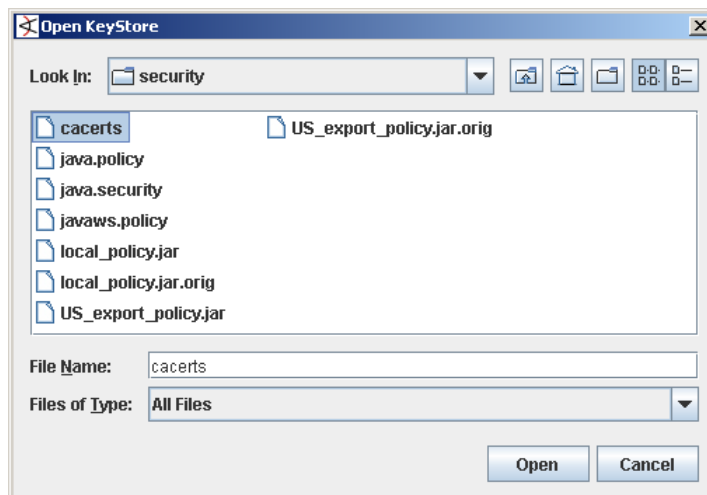
- Open a shell/command prompt window on the ArcSight Express Appliance.
- Run the following command from the ArcSight Express Manager's `/opt/arcsight/manager/bin` directory while logged in as user "arcsight":

```
./arcsight keytoolgui
```

The keytoolgui interface will open.



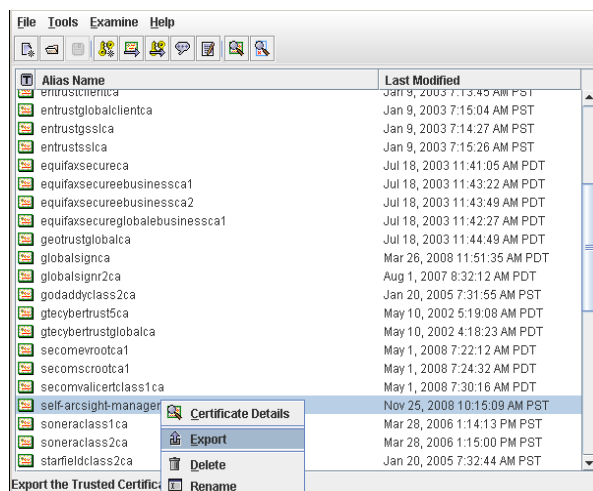
- c Select **File->Open KeyStore** from the menu and navigate to the Manager's truststore (**cacerts**) located in `/opt/arcsight/manager/jre/lib/security/` directory.



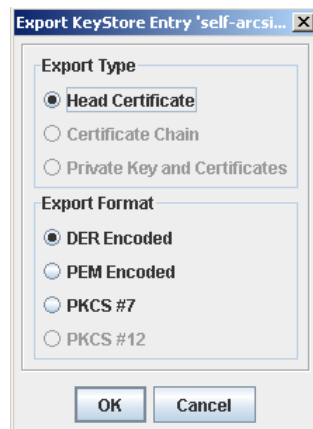
- d Enter the keystore password. The default password is "changeit" (without the quotes).



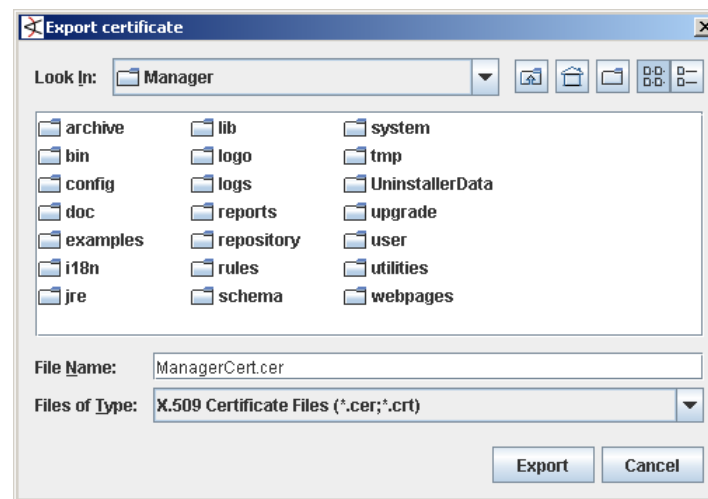
- e Right-click the Manager's certificate as shown below and select **Export**.



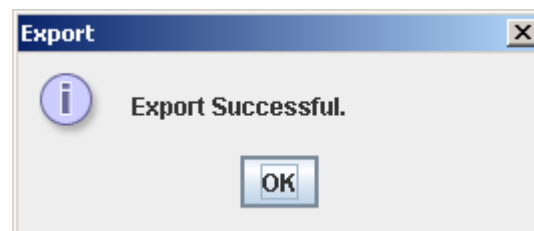
- f Accept the default settings in the following dialog and click **OK**.



- g Navigate to the location where you want to export the certificate and make sure to enter `cacerts` in the File Name text box when naming the certificate and click **Export**.



- h You will see the following prompt when the certificate is exported successfully.



- i Click **OK** and exit the `keytoolgui`.
- j Transfer (or scp) this exported certificate file from the ArcSight Express Appliance to the Smart Connector server where you will be importing it into the SmartConnector.

Importing the Manager's Certificate into the SmartConnector's Truststore

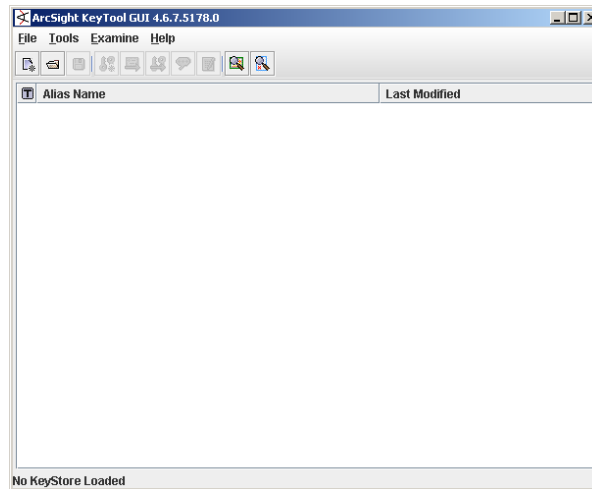
Import the certificate you exported above into the Connector's truststore.

To do so:

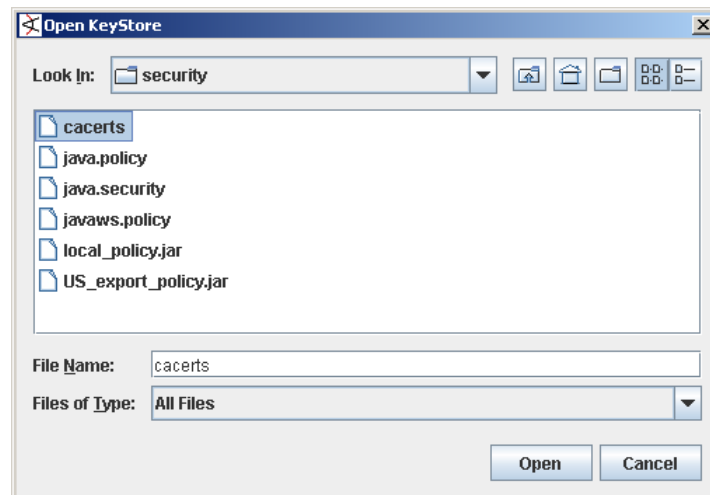
- a Open a shell/command prompt window on the SmartConnector server.
- b Run the following command from the Connector's `/opt/arcsight/connector/current/bin` directory while logged in as user "arcsight":

```
./arcsight agent keytoolgui
```

The keytoolgui interface will open.



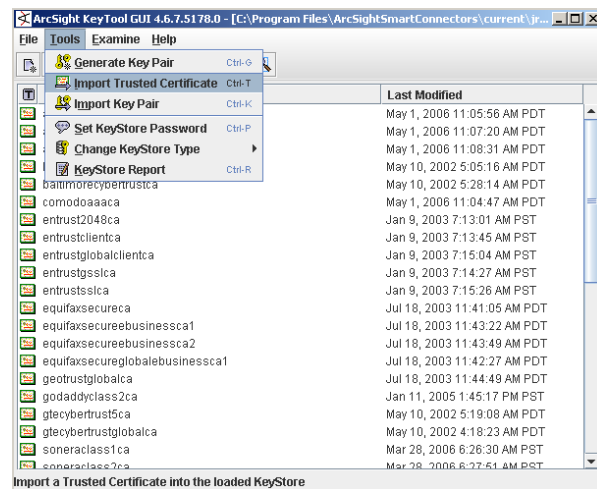
- c Select **File->Open KeyStore** from the menu and navigate to the Connector's truststore (`cacerts`) located in `/opt/arcsight/connector/current/jre/lib/security/` directory.



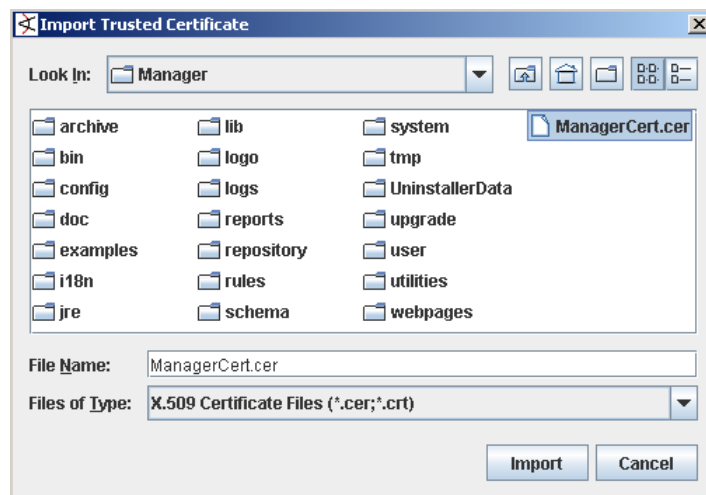
- d Enter the password. The default password is "changeit" (without the quotes).



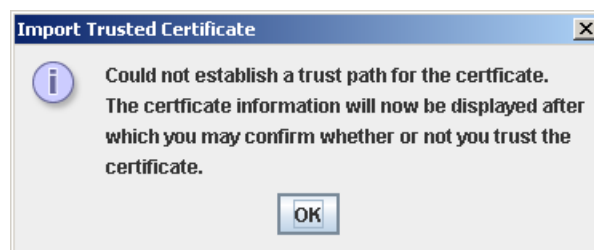
- e Click **Tools->Import Trusted Certificate**.



- f Navigate to the Manager's certificate, select it and click **Import**.



- g You will see the following prompt. Click **OK** to see the certificate details.



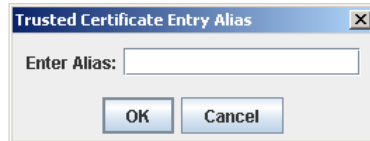
The **Certificate Details** dialog will be displayed.

- h Click **OK** on the **Certificate Details** dialog to accept the certificate.

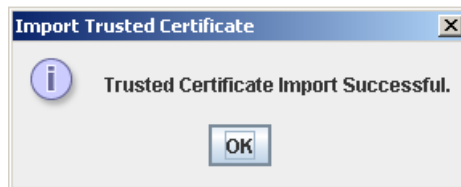
- i Click **Yes** in the following dialog.



- j Enter an alias for the certificate and click **OK**.



- k You will see the following message when the import is successful.



Click **OK**.

- l Click **File->Save KeyStore** to save the certificate in the Connector's truststore and exit the [keytoolgui](#) interface.

Import the Manager's certificate using the Connector Manager

- 1 Copy the [cacerts](#) file manually from the ArcSight Express Manager's `/opt/arcsight/manager/jre/lib/security/` directory on to your local desktop.
- 2 Open a web browser on your desktop and connect to the ArcSight Storage Appliance by typing in the URL `https://<the_IP_address_of_your_ArcSight_Storage_Appliance>`
- 3 To upload the `cacerts` file to the ArcSight Storage Appliance, go to **Configuration->Advanced Operations->CA Certs->CA Certs Repositories** tab, and click **Upload**.
- 4 Navigate to the file, select the file, and click **Submit** to start the upload process.
- 5 Click **Apply CA Certs** tab and select the container by checking the checkbox to the right of it.
- 6 Click **Update** to apply this `cacerts` to the container.
- 7 Continue to configure the connectors and register them with the Manager whose certificate you just imported.

Appendix A

Troubleshooting

The following information may help solve problems that might occur when installing or using ArcSight Express. In some cases, the solution can be found here or in other ArcSight Express documentation, but ArcSight Customer Support is available if you need it. Refer to the documents listed in section [“Related Documents” on page 5](#).

This chapter covers the following topics:

- [“Location of Log files for Components” on page 49](#)
- [“Customizing ESM Components Further” on page 50](#)
- [“Fatal Error when Running the First Boot Wizard” on page 51](#)
- [“Manager Service Failed when Starting” on page 52](#)
- [““Failed” Status while Configuring or Starting a Component” on page 52](#)

If you intend to have ArcSight Customer Support guide you through a diagnostic process, please prepare to provide specific symptoms and configuration information.

Location of Log files for Components

The log file for each component can be found in the following location:

On ArcSight Express Appliance:

First Boot Wizard:

`/opt/arcsight/manager/logs/firstboot.log`

`/opt/arcsight/manager/logs/default/managerwizard.log`

`/opt/arcsight/manager/logs/default/serverwizard.log`

ArcSight Database:

`/opt/arcsight/db/logs`

ArcSight Manager:

`/opt/arcsight/manager/logs/default`

ArcSight Web:

`/opt/arcsight/web/logs/default`

ArcSight Forwarding Connector:

```
/opt/arcsight/connector/current/logs
```

On ArcSight Storage Appliance:

ArcSight Logger:

```
/opt/arcsight/logger/logs
```

On the machine where you install the Console:

ArcSight Console:

```
<ARCSIGHT_HOME>\current\logs
```

Customizing ESM Components Further

The First Boot Wizard configures the software components on ArcSight Express Appliance (ArcSight Database, ArcSight Manager, ArcSight Web, and ArcSight Forwarding Connector) for you. But, in the event that you would like to customize a component further, you can follow these instructions to start the setup program for the component:

ArcSight Database

While logged in as the “root” user, run the following command from `/opt/arcsight/db/bin` directory:

```
./arcsight database pc
```

ArcSight Manager

While logged in as user “arcsight”, run the following command from `/opt/arcsight/manager/bin` directory:

```
./arcsight managersetup
```

ArcSight Web

While logged in as user “arcsight”, run the following command from `/opt/arcsight/web/bin` directory:

```
./arcsight websetup
```

Follow the prompts on the wizard screens. To get more information on an individual screen for any of the components listed above, see the *ArcSight ESM Installation and Configuration Guide* available on the ArcSight Customer Support download site.

ArcSight Forwarding Connector

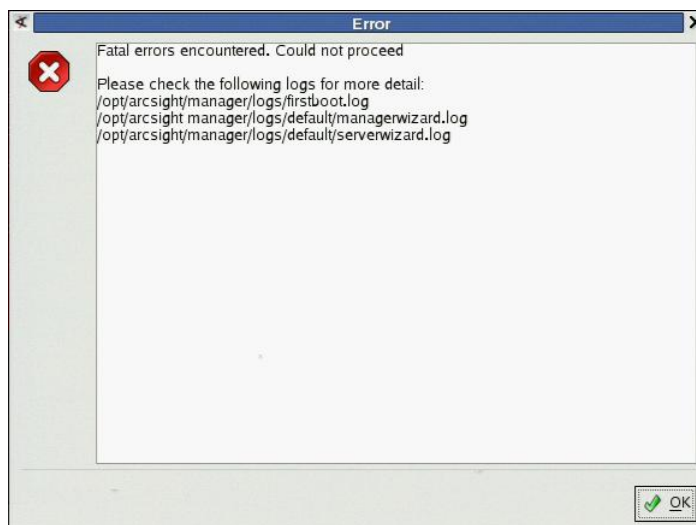
While logged in as user “root”, run the setup program from the `/opt/arcsight/connector/current/bin` directory:

```
./arcsight connectorsetup
```

and follow the prompts on the screen. Refer to the *SmartConnector Configuration Guide for ArcSight Forwarding Connector* document available on the ArcSight Customer Support download site.

Fatal Error when Running the First Boot Wizard

If you encounter a fatal error such as the one shown below while running the First Boot Wizard, the wizard will display an error message and then exit.



To resolve this issue, try the following steps:

- 1 Check the `/opt/arcsight/manager/logs/firstboot.log` file to figure out where the error occurred.
- 2 Check to make sure that the IP address for the appliance has been configured correctly (eth0 has been configured correctly) and is available (not already in use for some other system on your network).
- 3 Make sure that the listener and Oracle services are started.

To check the status of the TNS listener, run this command from the `/opt/arcsight/db/bin` directory:



Note

To run the commands in this step, you must be logged in as the Oracle user. Run the following command to switch to the Oracle user if not logged in as one already:

```
su - oracle
```

```
% ./arcdbutil lsnrctl status
```

To check whether Oracle services have been started, run the following:

```
% ./arcdbutil sql
```

```
Enter user-name: / as sysdba
```

```
Enter password:
```

Enter "arcsight" without the quotes when prompted for the password. You will get the sqlplus prompt only if the Oracle services are running.

- 4 Restart the First Boot Wizard by running the following command from the `/opt/arcsight/manager/bin` directory when logged in as user "root":

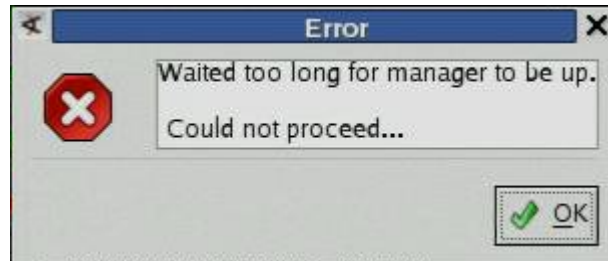
```
./arcsight appliancefirstbootsetup
```

The First Boot Wizard can only be rerun until the point that the Manager has not been configured.

If the steps above do not solve the issue, you will be required to revert your ArcSight Express Appliance to its factory settings. For instructions on how to do this, see [Appendix C, Restoring Factory Settings, on page 65](#).

Manager Service Failed when Starting

If the Manager service fails to start giving you the following error:

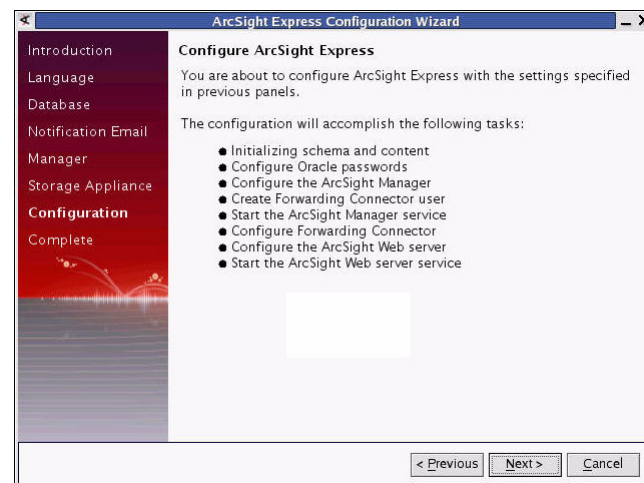


- You will need to start the Manager service manually. See [Step 3 on page 53](#) for information on how to start the Manager service manually.
- You will also be required to configure the Forwarding Connector and ArcSight Web manually. See [“Failed” Status while Configuring or Starting a Component](#) section for details on how to run Forwarding Connector and ArcSight Web setups manually.
- You will be required to run the tablespace expansion manually. See [Step 2](#) for details on how to do this.

In the event that any of the above steps do not work, we recommend that you revert your ArcSight Express Appliance to its factory settings. For instructions on how to do this, see [Appendix C, Restoring Factory Settings, on page 65](#).

“Failed” Status while Configuring or Starting a Component

If you cancel out of the First Boot Wizard before you reach the screen below, you can re-run the wizard:



However, once you click Next in the screen above and the configuration begins, if any step fails or you cancel out of the wizard, you will be required to run the corresponding component setup program and configure the component manually.

If you see a “Failed” status for any component, such as the follows, you will be required to configure the component manually. To find out the reason for the failure, look at the log for the component. See [“Location of Log files for Components” on page 49](#) for the location of the logs.



Here are the steps to configure a component manually:

- 1 To configure the partition management notification e-mails for the ArcSight Database software component, run the following command from `/opt/arcsight/db/bin` directory on ArcSight Express Appliance while logged in as user “root”:

```
./arcsight database pc
```

and follow the prompts on the screen. Refer to the *ArcSight ESM Installation and Configuration Guide* for information on each screen. You can download this guide from the ArcSight Customer Support download site.

- 2 To expand the tablespaces manually, run the following command from `/opt/arcsight/db/bin` directory on ArcSight Express Appliance while logged in as user “root”:

```
./arcsight database xts
```

- 3 To start the Manager service manually, run the following command from `/etc/init.d` directory as user “root” on ArcSight Express Appliance:

```
./arcsight_manager start
```

and follow the prompts on the screen. Refer to the *ArcSight ESM Installation and Configuration Guide* for information on each screen.

- 4 To configure the Forwarding Connector manually, run the setup program from the `/opt/arcsight/connector/current/bin` directory on ArcSight Express Appliance as user “root”:

```
./arcsight connectorsetup
```

and follow the prompts on the screen. Refer to the *SmartConnector Configuration Guide for ArcSight Forwarding Connector* document available on the ArcSight Customer Support download site.

- 5 To configure ArcSight Web manually, run the following command from the `/opt/arcsight/web/bin` directory on ArcSight Express Appliance as user "arcsight":

```
./arcsight websetup
```

and follow the prompts on the screen. Refer to the *ArcSight ESM Installation and Configuration Guide* for information on each screen.

- 6 To start the Web server service manually, run the following command from `/etc/init.d` directory as user "root" on ArcSight Express Appliance:

```
./arcsight_web start
```

- 7 To manually start a Forwarding Connector service, run the following command from `/etc/init.d` directory on ArcSight Express Appliance as user "root":

```
./arc_logger_connector start
```

In the event that any of the above steps do not work, we recommend that you revert your ArcSight Express Appliance to its factory settings. For instructions on how to do this, see [Appendix C, Restoring Factory Settings, on page 65](#).

Changing IP Address of ArcSight Express Appliance After Configuring it in the First Boot Wizard

You set the IP address for the ArcSight Express Appliance when you boot the appliance for the very first time and configure it using the First Boot Wizard. Once the First Boot Wizard has run successfully, you will not be allowed to run it again. In case you want to change the IP address of the ArcSight Express Appliance after running the First Boot Wizard successfully, follow these steps:



Please note:

- Manager and Web setup commands must be run when logged in as user "arcsight."
 - All other commands must be run as user "root".
 - All services are to be stopped and started when logged in as user "root".
-

- 1 Stop all ESM related services:

- a To stop the Manager service, run the following command from `/etc/init.d` directory as user "root":

```
./arcsight_manager stop
```

- b To stop the Web service, run the following command from `/etc/init.d` directory as user "root":

```
./arcsight_web stop
```

- c To stop the Forwarding Connector service, run the following command from `/etc/init.d` directory as user "root":

```
./arc_logger_connector stop
```

- 2 Stop the TNS Listener by running the following command from `/opt/arcsight/db/bin` directory:
`./arcdbutil listener stop`
- 3 Change the IP address of the appliance in the `/etc/sysconfig/network-scripts/ifcfg-eth0` file.
- 4 Change the IP address in the `/home/oracle/OraHome10g/network/admin/sqlnet.ora` file.
- 5 Reboot the ArcSight Express ESM appliance.

Only If you had entered an IP address (instead of a host name) do the following additional steps:

When prompted for a Manager Host Name in the First Boot Wizard, then you will be required to do the following in addition to the steps mentioned above:

- 6 Stop the Manager and Web services again. These services would have started upon reboot.
- 7 Run the following to start the setup program for the Manager from `/opt/arcsight/manager/bin` directory:
`./arcsight managersetup`
This will open the Manager's setup wizard.
 - a Enter the new IP address that you set for your appliance in [Step 4](#) above in the Manager Host Name field when prompted by the wizard.
 - b Make sure to select the self-signed keypair option when prompted by the wizard and enter the required information to generate the self-signed certificate containing the new IP address.
- 8 Start the Manager service by running the following command from the `/etc/init.d` directory as user "root":
`./arcsight_manager start`
- 9 Import the Manager's newly generated self-signed certificate on the webserver using the `keytoolgui` tool. See ["Using keytoolgui to Import Manager's Certificate" on page 42](#).
- 10 While logged in as user "arcsight", run the following to start the setup program for the Web from the `/opt/arcsight/web/bin` directory:
`./arcsight websetup`
 - a Enter the new IP address in Webserver Host Name field when prompted.
 - b Make sure to select the self-signed keypair option when prompted by the wizard and enter the required information to generate the self-signed certificate containing the new IP address.
- 11 If you chose to set up Logger and Forwarding Connector when configuring your appliance using the First Boot Wizard, stop the Forwarding Connector service by running the following command from the `/etc/init.d` directory as user "root":
`./arc_logger_connector stop`

- 12 Import the Manager's certificate on the connector using `keytoolgui`. See *ArcSight ESM Administrator's Guide* available on the ArcSight Customer Support download site for details on how to do this.
- 13 Run the setup program for the connector from the `/opt/arcsight/connector/current/bin` directory:

```
./arcsight_connectorsetup
```

and enter the new IP address for the appliance in the Host Name field when prompted.
- 14 Restart the Connector service by running the following from the `/etc/init.d` directory as user "root":

```
./arc_logger_connector start
```
- 15 Import the Manager's certificate on all clients (Console and connectors) that will be accessing the Manager. You can do so using the `keytoolgui`. See *ArcSight ESM Administrator's Guide* available on the ArcSight Customer Support download site for details on how to do this.
- 16 Test to make sure that the clients can connect to the Manager.

Changing Host Name of ArcSight Express Appliance After Configuring it in the First Boot Wizard



Please note:

- Manager and Web setup commands must be run when logged in as user "arcsight."
- All other commands must be run as user "root".
- All services are to be stopped and started when logged in as user "root".

You set the host name for the ArcSight Express Appliance when you boot the appliance for the very first time and configure it using the First Boot Wizard. Once the First Boot Wizard has run successfully, you will not be allowed to run it again. In case you want to change the host name of the ArcSight Express Appliance after running the First Boot Wizard successfully, follow these steps:

- 1 Stop all ESM related services:
 - a To stop the Manager service, run the following command from `/etc/init.d` directory as user "root":

```
./arcsight_manager stop
```
 - b To stop the Web service, run the following command from the `/etc/init.d` directory as user "root":

```
./arcsight_web stop
```
 - c To stop the Forwarding Connector service, run the following command from the `/etc/init.d` directory as user "root":

```
./arc_logger_connector stop
```
- 2 Stop the TNS Listener by running the following command from the `/opt/arcsight/db/bin` directory:

```
./arcdbutil listener stop
```

- 3** Change the host name of the appliance by editing it in the `/etc/sysconfig/network` file.
- 4** Edit the `/etc/hosts` file to reflect the new host name of the ArcSight Express Appliance.
- 5** Run the following from the shell prompt to change the hostname on the appliance:

```
hostname <new_hostname>
```

- 6** Run the following from a shell prompt for your changes to take effect:

```
service network restart
```

- 7** Change the host name in the `/home/oracle/OraHome10g/network/admin/listener.ora` file.
- 8** Change the host name in the `/home/oracle/OraHome10g/network/admin/tnsnames.ora` file.
- 9** Change the host name in the `/home/oracle/OraHome10g/network/admin/sqlnet.ora` file.

- 10** Start the TNS Listener by running the following command from `/opt/arcsight/db/bin` directory:

```
arcdbutil listener start
```

- 11** Start the Partition Configuration wizard by running the following command from `/opt/arcsight/db/bin` directory:

```
./arcsight database pc
```

and enter the new host name in the Database Host Name field when prompted.

If you had entered an IP address in the Manager Host Name field when configuring the ArcSight Express Appliance you will also need to do the following steps:

- 12** Start the Manager by running the following command from the `/etc/init.d` directory as user "root":

```
./arcsight_manager start
```

- 13** Start the Web by running the following command from the `/etc/init.d` directory as user "root":

```
./arcsight_web start
```

If you had entered a host name when prompted for a Manager Host Name in the First Boot Wizard, then you will be required to do the following in addition to the steps mentioned above:

- 14** Stop the Manager.
- 15** Run the Manager's setup program from the `/opt/arcsight/manager/bin` directory as user "arcsight":

```
./arcsight managersetup
```

- a** Enter the new host name that you set for your appliance in the Manager Host Name field when prompted by the wizard.

- b** Make sure to select the self-signed keypair option when prompted by the wizard and enter the required information to generate the self-signed certificate containing the new host name.
- 16** Start the Manager service by running the following command from the `/etc/init.d` directory as user “root”:


```
./arcsight_manager start
```
- 17** Import the Manager’s newly generated self-signed certificate on the Webserver using the `keytoolgui` tool. See *ArcSight ESM Administrator’s Guide* available on the ArcSight Customer Support download site for details on how to do this.
- 18** While logged in as user “arcsight”, run the following to start the setup program for the Web from the `/opt/arcsight/web/bin` directory:


```
./arcsight websetup
```

 - a** Enter the new host name in the Manager Host Name and the Webserver Host Name fields when prompted.
- 19** If you had chosen to set up Logger and Forwarding Connector when configuring your appliance using the First Boot Wizard, stop the Forwarding Connector service by running the following command from the `/etc/init.d` directory as user “root”:


```
./arc_logger_connector stop
```
- 20** Import the Manager’s certificate on the connector using `keytoolgui`. See *ArcSight ESM Administrator’s Guide* available on the ArcSight Customer Support download site for details on how to do this.
- 21** While logged in as user “root”, run the setup program for the connector from the `/opt/arcsight/connector/bin` directory:


```
./arcsight connectorsetup
```

and enter the new host name for the appliance in the Host Name field when prompted.
- 22** Restart the Connector service by running the following from the `/etc/init.d` directory as user “root”:


```
./arc_logger_connector start
```
- 23** Import the Manager’s certificate on all clients (Console and connectors) that will be accessing the Manager. You can do so using the `keytoolgui`. See *ArcSight ESM Administrator’s Guide* available on the ArcSight Customer Support download site for details on how to do this.
- 24** Test to make sure that the clients can connect to the Manager.

Default Settings for Components

This appendix gives you the default settings for each software component in ArcSight Express. It covers the default settings for the following:

[“General” on page 59](#)
[“ArcSight Database” on page 59](#)
[“ArcSight Manager” on page 61](#)
[“About ArcSight Web” on page 62](#)
[“ArcSight Forwarding Connector” on page 62](#)
[“ArcSight Logger” on page 63](#)

You can always customize any component by running its setup program. Refer to [Appendix A, Troubleshooting, on page 49](#) for information on running the setup program for a component.

The following tables list the default settings for each component.

General

Setting	Default Value
default password for Java keystore	changeit

ArcSight Database

ArcSight Express Appliance comes pre-installed with Oracle 10.2.0.4. An Oracle instance has already been created for you. The following are some of the default values that have been pre-configured in ArcSight Database for you:

Setting	Default Value
ArcSight Database Home	/opt/arcsight/db
Oracle Home	/home/oracle/OraHome10g
Location of Oracle data files	/opt/data
CPU Information	Oracle has the July 2010 CPU applied

Setting	Default Value
Tablespace name	Data file Size
ARC_SYSTEM_DATA	5 GB (1 file x 5 GB)
ARC_SYSTEM_INDEX	5 GB (1 file x 5 GB)
ARC_EVENT_DATA	400 GB (25 files * 16 GB)
ARC_EVENT_INDEX	800 GB (50 files * 16 GB)
ARC_UNDO	96 GB (12 files * 8GB)
ARC_TEMP	48 GB (6 files * 8GB)
Partition Retention Method	Space Based Retention
Target free space %	15%
Partition Management runtimes	Runs 4 times in a 24 hour period. The default timings are 02:00, 07:00, 13:00, 20:00.
E-mail notification level	Warning
Location of Control Files	/home/oracle/OraHome10g/oradata/arc sight
Database Host name	Host name or IP address of your ArcSight Express ESM machine
Database port number	1521
Database instance name	arcsight
Database OS user name	oracle
Database user name (This account will be used by ArcSight Manager to connect to ArcSight Database)	arcsight
Database Template Size	Extra Large
Database Character set	UTF-8
Allowed TNS Clients	localhost
Auto Archive Redo logs	No
Database OS username	oracle
System User name	systemuser
Minimum Partition Retention Period	2 days, by default. To increase this period, add the following property in the /opt/arcsight/manager/config/server.properties file: sbr.extend.min.retention.period=

About Data Retention on ArcSight Express

ArcSight Express uses the Space Based Retention method to maintain online data. Your data is retained based on the target free space which is the amount (percentage) of free

space available in your database. The target free space is set to 15% by default. You can change this percentage by running the `./arcsight database pc` command from the `/opt/arcsight/db/bin` directory and entering the desired percentage when prompted.

The Partition Manager (a component of the ArcSight Manager that manages the life-cycle of event data partitions from creation to elimination) is scheduled to run once every 6 hours. When the Partition Manager runs, it calculates the free space in the database. If you get sudden spikes of events that fill up the database before the next 6-hourly scheduled run of the Partition Manager, you will get alerts in the Console and via e-mail. You can either manually launch Partition Manager to free up space immediately or just wait for the next scheduled Partition Manager run to do so. (In the latter case, events would continue to be cached on the connectors.) As soon as it detects that the free space available is less than the target free space, it drops the oldest retained partition and continues to drop the next oldest partition until the available free space reaches the target free space percent. At a minimum the current partition plus the two most recent partitions are retained even if the amount of free space in the database falls below the target free space. For example, if today is Wednesday, the Partition Manager makes sure to at least retain partitions from Monday and Tuesday even though that might mean leaving less than the target free space in the database. Audit events are generated every time a partition is dropped.

For long term data storage beyond what the disk space on ArcSight Express Appliance allows, forward the events to ArcSight Storage Appliance.

ArcSight Manager



Note

ArcSight Manager uses a self-signed certificate, which gets generated for you when you configure the appliance using the First Boot Wizard. When you log into the Console for the very first time you will be prompted to accept the Manager's certificate. You can either click Yes in that dialog or optionally import the Manager's certificate manually at a later time.

The following are some of the default values that have been pre-configured in ArcSight Manager for you:

Setting	Default Value
Location of Manager	<code>/opt/arcsight/manager</code>
Manager host name	Host name or IP address of ArcSight Express
Manager Port	<code>8443</code>
Manager license file	Please obtain from ArcSight Customer Support
Packages installed	ArcSight Express, ArcSight Administration
Java Heap Memory	2048 MB
Authentication Type	Password Based
Type of certificate used	self-signed
Default password for keystore	<code>password</code>
Default password for truststore	<code>changeit</code>

Setting	Default Value
E-mail Notification	Internal SMTP server. If you want to use an External SMTP server, run the following command from the <code>/opt/arcsight/manager/bin</code> directory and set up the external SMTP server when prompted: <code>./arcsight managersetup</code>
Sensor Asset Auto Creation	Enabled
Packages/default content installed	Appliance-related content
Manager installed as service	Yes (name of service is <code>arcsight_manager</code>)

About ArcSight Web

The following are some of the default values that have been pre-configured in ArcSight Web for you:

Setting	Default Value
Location of ArcSight Web	<code>/opt/arcsight/web</code>
ArcSight Web host name	Host name or IP address of ArcSight Express
ArcSight Web port	9443
Java Heap Size	512 MB
Authentication Type	Password Based
Default password for keystore	<code>password</code>
Default password for truststore	<code>changeit</code>
ArcSight Web installed as service	Yes (name of service is <code>arcsight_web</code>)

ArcSight Forwarding Connector

The Forwarding Connector receives the events from the Manager and forwards the events to the ArcSight Storage Appliance using the SmartReceiver. The following are some of the default values that have been pre-configured in ArcSight Web for you:

Setting	Default Value
Location of ArcSight Forwarding Connector	<code>/opt/arcsight/connector</code>
ArcSight Forwarding Connector installed as service	Yes
Name of the Forwarding Connector Service	<code>arc_logger_connector</code>

ArcSight Logger

The ArcSight Storage Appliance includes the ArcSight Logger software, software for connector management and 4 connectors that run on the appliance itself.

Setting	Default Value
ArcSight Logger host name	IP address of ArcSight Logger
ArcSight Logger Port	443

Appendix C

Restoring Factory Settings

ArcSight Express can be restored to its original factory settings using the built-in Acronis True Image software.



Restoring ArcSight Express to factory settings will irrevocably delete all event data and configuration settings.

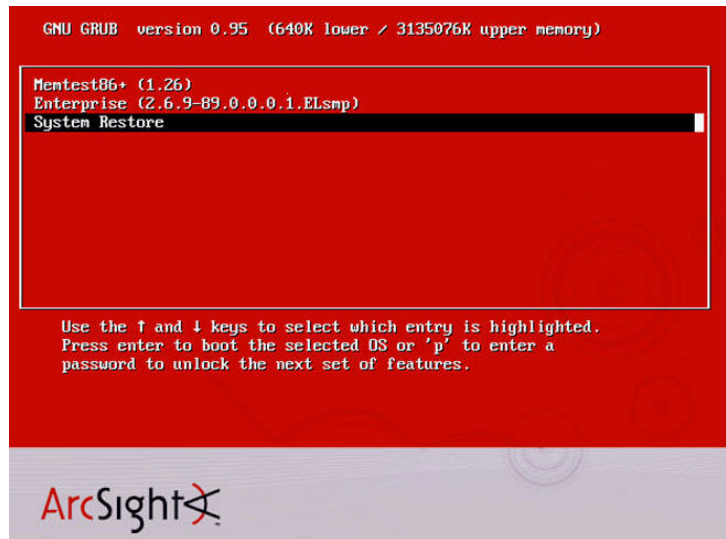
To restore ArcSight Express to its original factory settings, perform these steps:

- 1 Attach a keyboard, monitor, and mouse directly to the ArcSight Express system.
- 2 Reboot ArcSight Express using the command line interface.

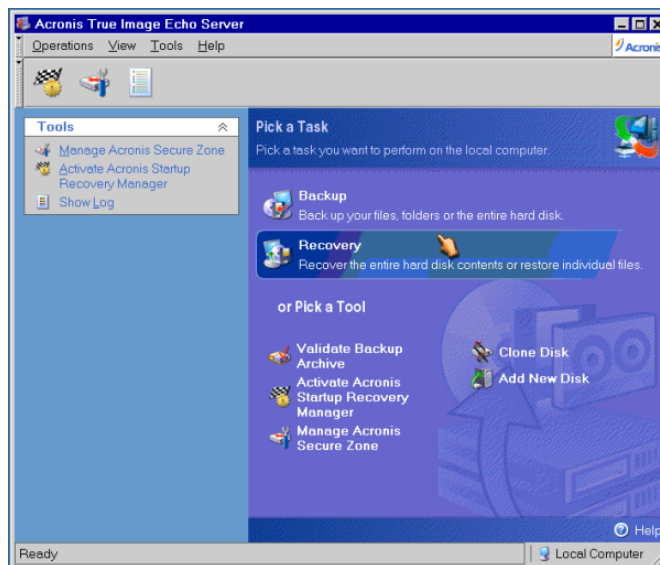


- 3 Press any key.

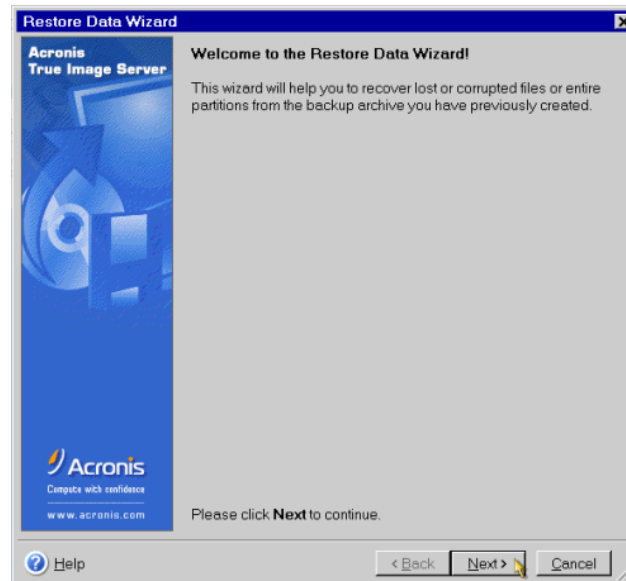
- 4 A screen similar to that shown in the figure below will appear on the attached monitor. Use the mouse or arrow keys to select **System Restore** and press **Enter**.



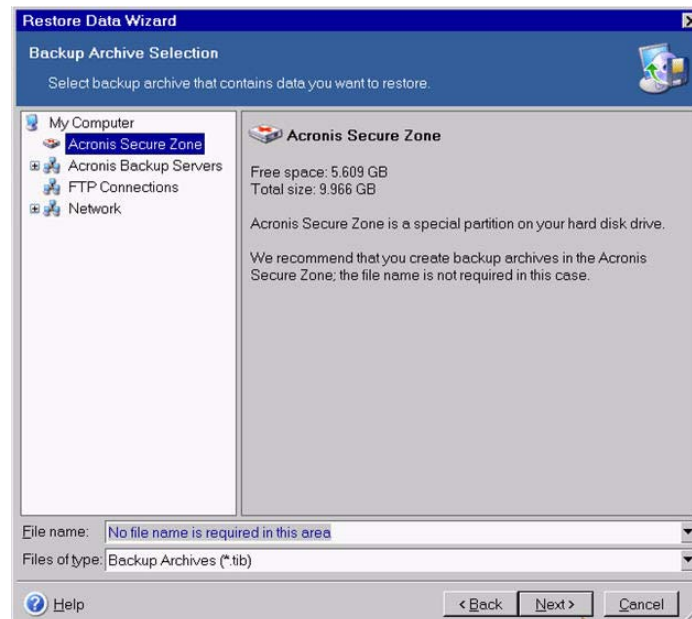
- 5 On the Pick a Task list, shown in the figure below, choose **Recovery**.



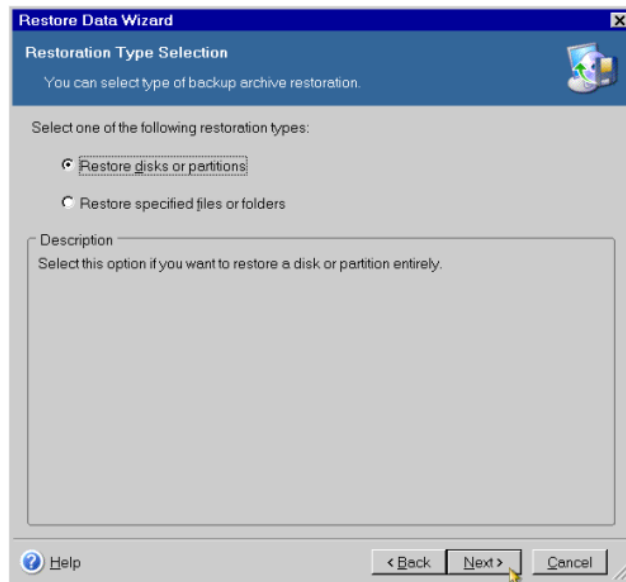
- 6 The Restore Data Wizard opens. Click **Next** to continue.



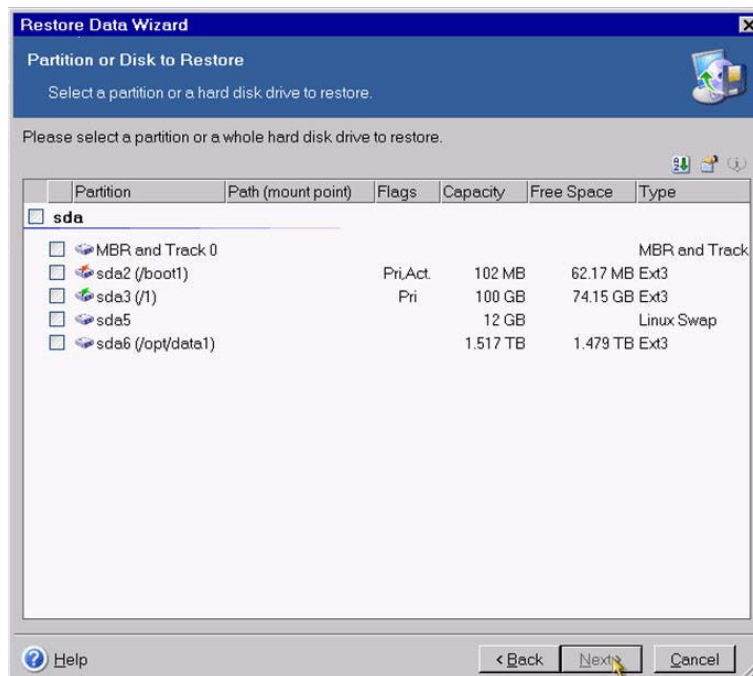
- 7 Select the **Acronis Secure Zone**, as shown in figure below, and click **Next**. You will have a chance to review the choices you make on this page and the wizard pages that follow before initiating the restore process.



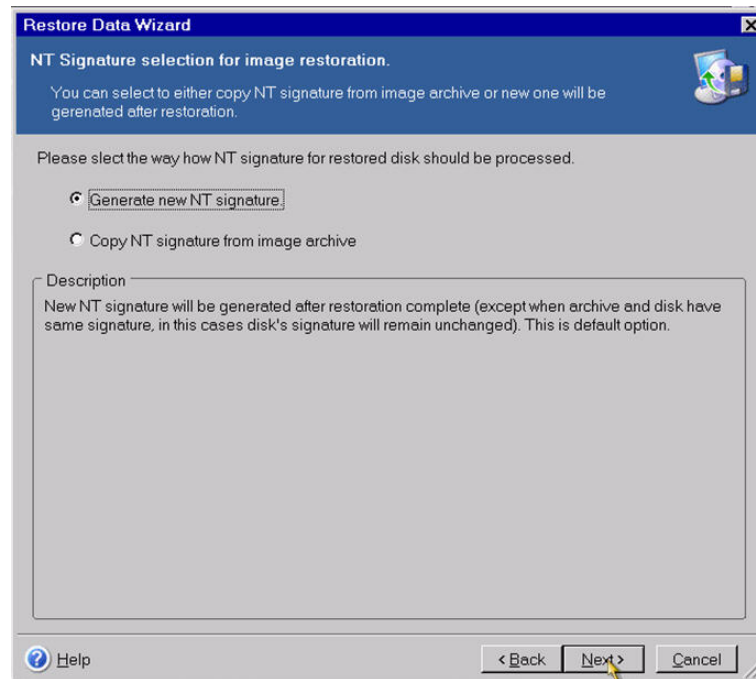
- 8 Select **Restore disks or partitions** and click **Next**. Choose other options only if specifically directed to do so by ArcSight Customer Support.



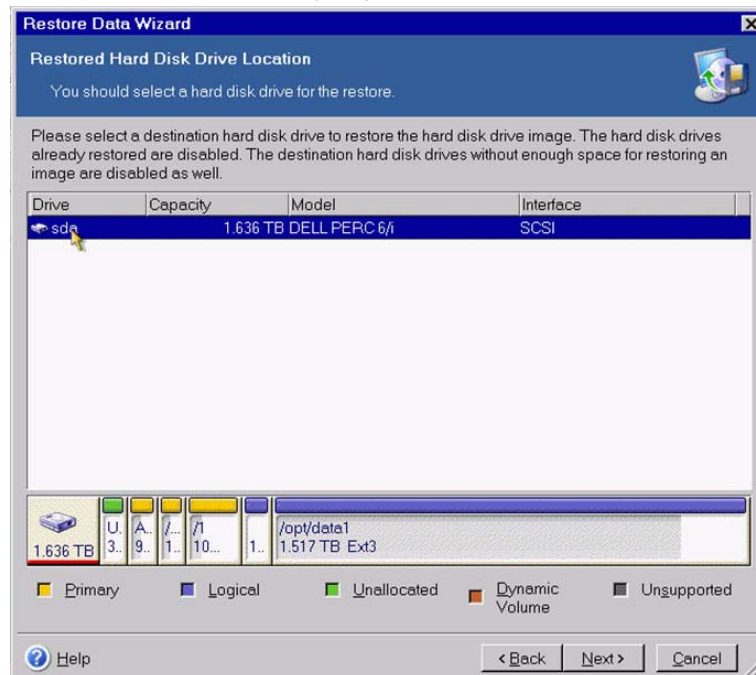
- 9 Select the entire drive, labeled '**sda**' in the figure below. Click **Next** to continue.



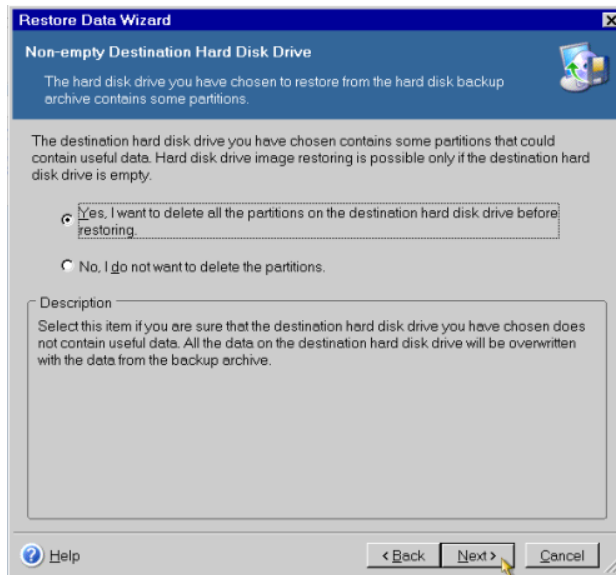
- 10 Select Generate new NT signature in the following screen and click **Next**.



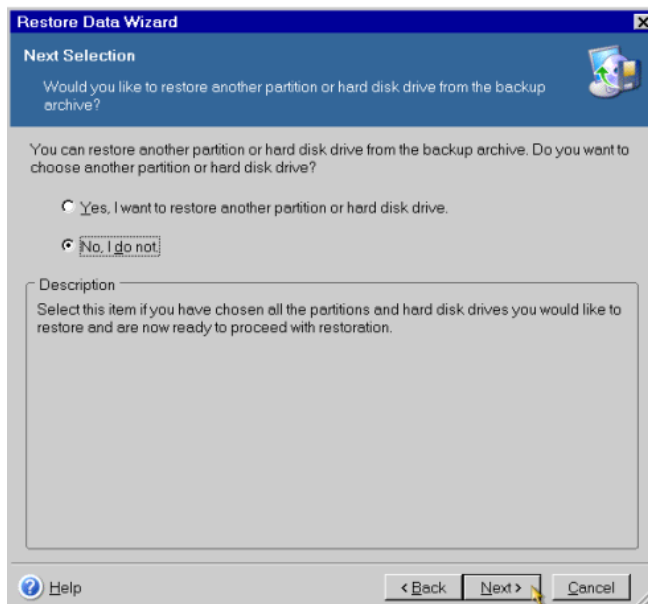
- 11 Choose the drive to restore ('sda') and click **Next**.



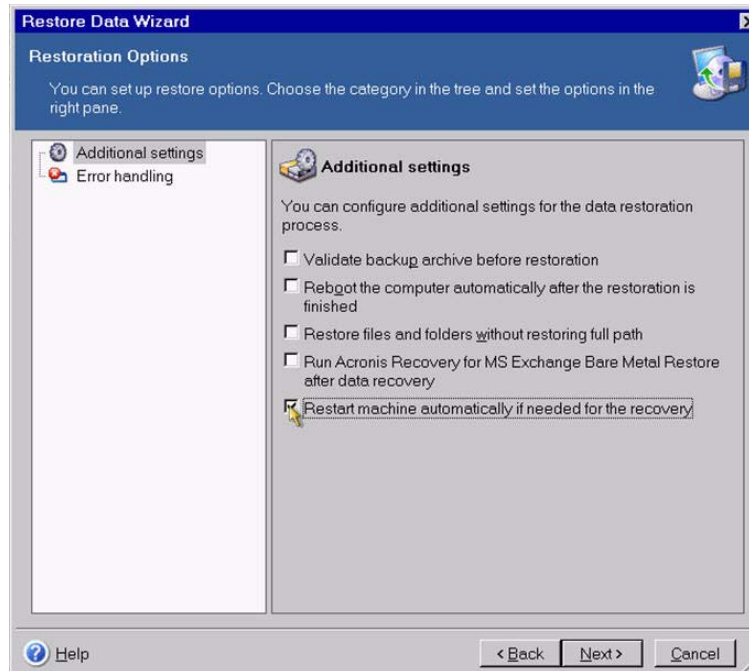
- 12** Select **Yes, I want to delete all the partitions on the destination hard drive before restoring** and click **Next**.



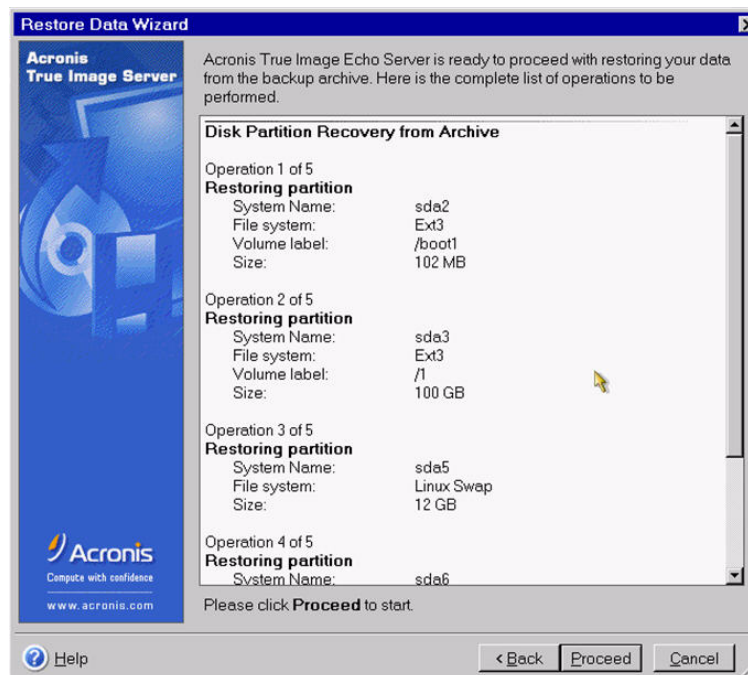
- 13** Because there are no other partitions or disks to restore, choose **No, I do not**, on the Next Selection page of the wizard. Click **Next**.



- 14** Validating the archive before restoring is optional. Check the box to validate the archive or leave it unchecked to skip this step. Check the box to **Restart machine automatically if needed for the recovery**. Click **Next**.



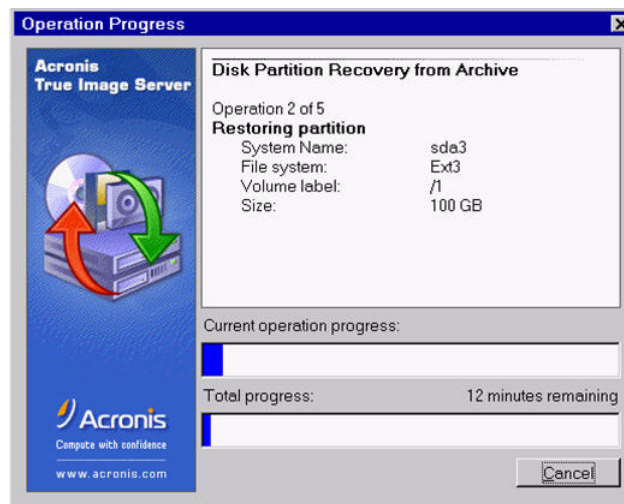
- 15** Review the checklist of operations to be performed and click **Proceed** to begin the restore process, or click **Back** to revisit previous wizard pages.



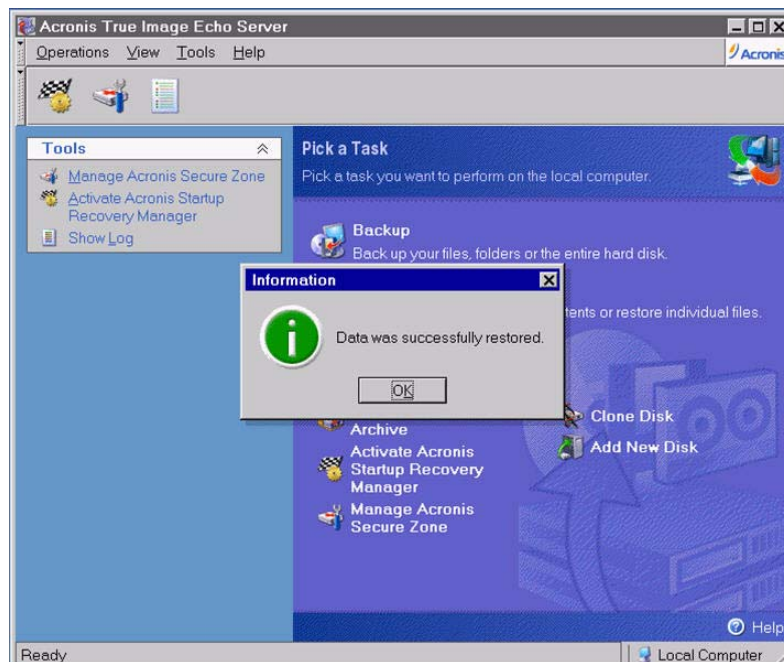
Note

Do not interrupt or power-down ArcSight Express during the restore process. Interrupting the restore process may force the system into a state from which it cannot be recovered.

- 16 The progress bars shown in the figure below display the status of the current and total operations.



- 17 When the restoration is complete, an alert is displayed that says "Data was successfully restored." Click **OK** in the message box and close the Acronis True Image Server window to reboot ArcSight Express..



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