CHAPTER 2

Installing and Logging In to ISC

Use the information described in this chapter in the following order:

Note See Chapter 1, "System Recommendations," before installing ISC.

Packages Included with ISC

The ISC installer includes the following third party software:

- ADCi® World Map Version 3.1
- AdventNet® SNMP Version 4.0
- Apache® Tomcat Version 5.5
- ILOG® CPLEX Version 7.5
- JCraft® JSch Version 0.1.30

- Macrovision® FlexLM Version 7.2e
- SourceForge® Ehcache Version 1.2.4
- Sun Microsystems® Java JRE Version 1.6.0_07
- Sybase® Adaptive Server Anywhere (ASA) Version 11.0.1
- TIBCO® Rendezvous Version 7.1.15

Initial Configuration—Creating the ISC Owner

Note If you are planning to use an Oracle database, understand that ISC 6.0 has been tested with Oracle Database 10g, Enterprise Edition Release 10.2.0.1.0 - 64 bit Production. If you would like to use another version of Oracle 10g, see Oracle's compatibility information. If you are upgrading ISC and were using a version of Oracle other than 10g, you must transfer your Repository to Oracle 10g. This can be done using Oracle import/export utilities or other methods. Proceed to Appendix A, "Setting Up Oracle for ISC" before continuing with the ISC installation. After you complete the Oracle set up, return here.

The first time you install ISC, create a UNIX user to own the software. This user is the default username when you log in to ISC. Create the user and group using Solaris commands or the Solaris Admintool. This user must have a valid group ID and read and write permissions to the install directory.

To add a user to your server using the standard Solaris commands, follow these steps:

Step 1 At the Solaris prompt, log in as **root**.

Step 2 To create the user, enter:

```
useradd -d /users/<username> -m -s /bin/<shell_type> <username>
passwd <username>
```

where:

-m creates the directory specified in **-d**

<shell_type> is **sh** for the Bourne shell. The Bourne shell is the only supported shell.

iscadm is recommended as the *<username>*.

Step 3 At the prompt, enter a password.

Installing ISC

Before installing ISC, configure the server to be able to perform hostname to IP address translations. Ensure that Domain Naming System (DNS) or an alternative is configured.

ISC accesses its database using a connection based on the hostname of the server. Ensure that you can reach the host via its hostname. For example, if the hostname is 'pollux', set up hostname resolution such that you do not get an error response when entering 'ping pollux'.

To add ISC to your system, either as a new ISC customer or a customer upgrading from an existing ISC release, you can choose one of the following two ways to install:

- Installing ISC Using the Graphical User Interface, page 2-3
- Installing ISC Using the Command Line Installer, page 2-19

Note After installing ISC, the installation log can be found in <*ISC_ROOT*>**/tmp**, where <*ISC_ROOT*> is the directory specified for ISC to be installed to (see **Step 10**). Then, for example, if you installed in **/opt/isc-6.0**, look for the installation log in **/opt/isc-6.0/tmp/install.**<*HOSTNAME*>**.log**, where <*HOSTNAME*> is the UNIX workstation name (or IP address) of the server to which you installed ISC.

Note It is not possible to install ISC for use with an Oracle database using the Command Line Installer. Therefore, if you will be using Oracle, be sure to use the GUI installation method, explained in the "Installing ISC Using the Graphical User Interface" section on page 2-3.

Cisco recommends you install ISC using the Graphical User Interface (GUI) installer. This option provides more configuration options.

The installer checks for two kinds of disk space:

- In the intended install location, you need 1.2 GB free for the binaries plus an extra 250 MB for log file growth and the installation of the Cisco Configuration Engine software.
- In the database directory, you need 1 GB free. For large systems, you should have 4 to 5 GB of space. If the directory has less than 1.2 GB free, you can still install ISC, but you might run out of space.

See Chapter 1, "System Recommendations" for more information about disk space and planning.

The complete installation for the ISC software requires 1.2 GB of free disk.

Installing ISC Using the Graphical User Interface

This section describes both a general installation procedure that applies to all upgrade path and specific details regarding individual upgrade paths.

After reviewing the information in the "Installing ISC" section on page 2-2, you can follow these steps to install the ISC software using the Graphical User Interface (GUI):

Note If an existing ISC installation is running, enter the **stopall** command. See the *Cisco IP Solution Center Infrastructure Reference, 6.0* for information about all WatchDog commands.

Step 1 Insert the ISC installation CD-ROM.

Caution When you insert the CD-ROM, the File Manager is invoked automatically. Do *not* use the File Manager to install the ISC product. Run the installation script from a terminal window.

Note If you choose to remotely install over a wide area network, you must add two spaces at the end of each field for which you modify the entry. This is to work around a potential problem that occurs when you have two or more SSH tunnels between your location and your installation machine's location.

Note You can install as **root** or as the user you will designate as the ISC owner. If you want ISC to automatically restart when you reboot a server, it is recommended to install as **root**. If you choose not to do this, then you must restart ISC manually when rebooting a server.

Step 2 Open a terminal window and log in as the identified UNIX user.

Step 3 Change to the CD ROM directory:

```
$ cd /cdrom/cdrom0
```

Step 4 If you have an existing ISC installation with a database, you *must* back up your current database. See the instructions to back up and restore an ISC repository or create a standby system, as explained in Appendix D, "Backup and Restore of ISC Repository and Standby System".

Step 5 Execute the ISC product installation script:

```
cdrom> ./install.sh
```

The ISC software is installed by default in the **/opt/isc-6.0** directory or a directory set up as follows.

If you are upgrading ISC from an existing version, make sure the existing ISC is shut down completely. Then do *one* of the following:

a. Install ISC 6.0 in the same directory with the same directory name as the existing ISC product, as follows:

- Save the ISC installation for possible uninstall purposes, as follows:

  tar cvf <*directory_name*>**.tar /opt/**<*directory_name*>

- Select this directory name in Step 8, Figure 2-3, "Specify Directory Location."

-or-

b. Install ISC 6.0 in the same directory with a new name.

For example, if you are upgrading from ISC 5.2 to ISC 6.0 and the ISC installation is under the directory **/opt/isc-5.2**, then install ISC 6.0 in the same directory and rename it to **/opt/isc-6.0**, with steps like the following:

- Save the ISC 5.2 installation for possible uninstall purposes, as follows:

  tar cvf isc-5.2.tar /opt/isc-5.2

- Rename the directory, as follows:

  mv /opt/isc-5.2 /opt/isc-6.0

- Select the directory **/opt/isc-6.0** in Step 8, Figure 2-3, "Specify Directory Location."

-or-

c. Install ISC 6.0 in a separate directory.

For example, if you are upgrading from ISC 5.2 to ISC 6.0 and the ISC 5.2 installation is under the directory **/opt/isc-5.2**, then install ISC 6.0 in a new directory **/opt/isc-6.0**, with steps like the following.

- Create the new ISC 6.0 directory, as follows:

  mkdir /opt/isc-6.0

- Copy the Repository from the ISC 5.2 directory to the new ISC 6.0 directory, as follows:

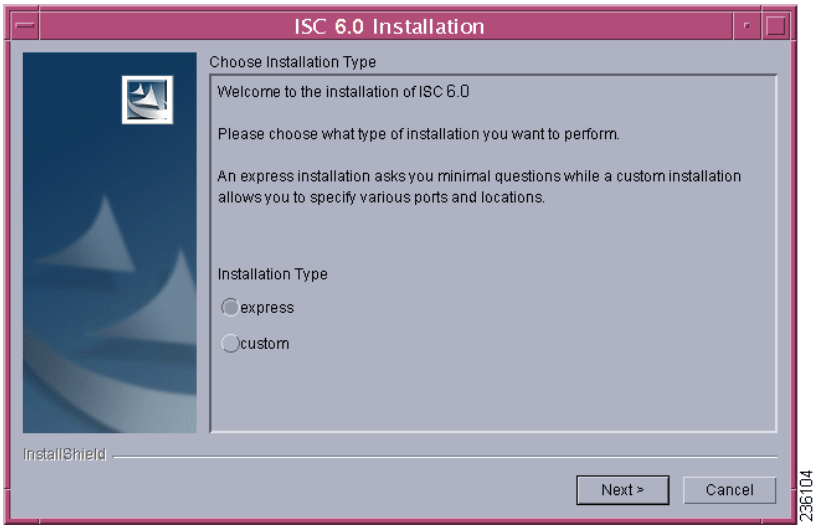
  cp -r /opt/isc-5.2/Repository /opt/isc-6.0

- Select the directory **/opt/isc-6.0** in Step 8, Figure 2-3, "Specify Directory Location."

Step 6 In the next window, as shown in Figure 2-1, "Choose Installation Type," choose either the default **express** option or the **custom** option, then click **Next**.

When you click **express**, you have a minimal number of choices to make. When you click **custom**, you can specify various ports and locations and you can change the watermark level for available disk space.

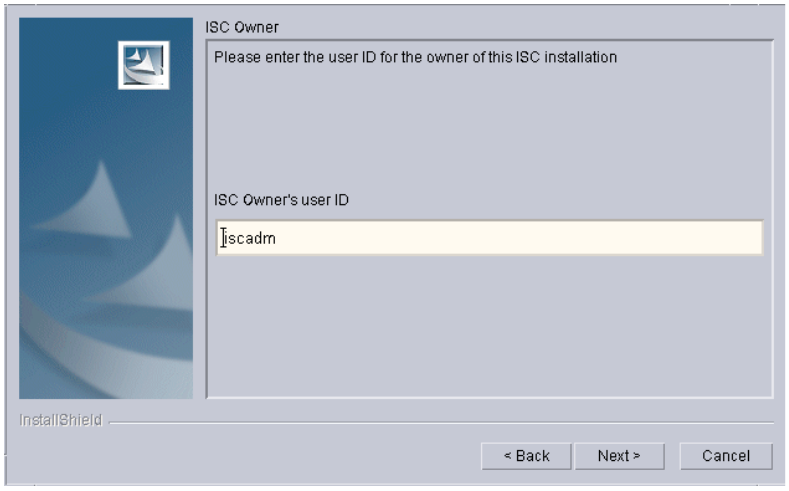
Figure 2-1 Choose Installation Type



Step 7 In the next window, shown in Figure 2-2, "Choose ISC Owner," enter the username you created in Step 2 of the "Initial Configuration—Creating the ISC Owner" section on page 2-2.

Note This field is only used when you are installing as a UNIX user who is not the ISC owner.

Figure 2-2 Choose ISC Owner



Note If you enter an invalid name, you will receive a message indicating the name is invalid.

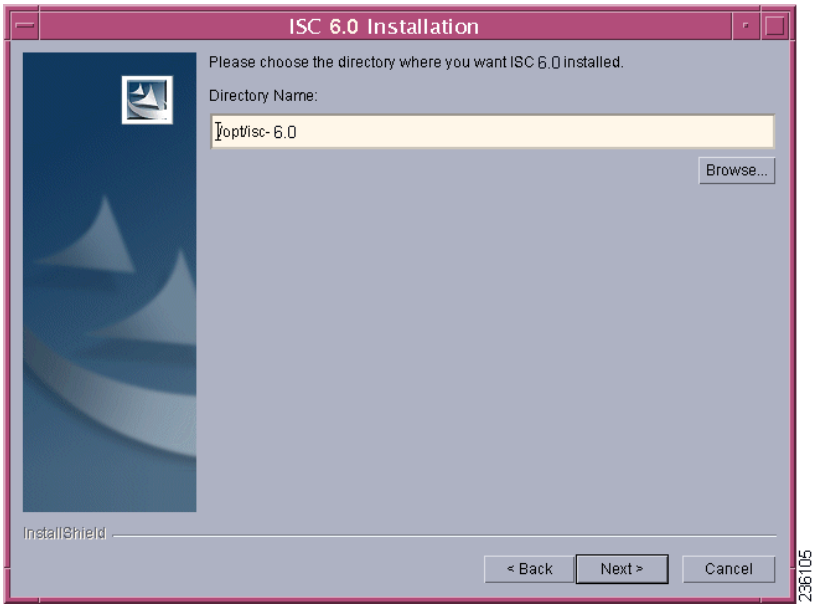
Step 8 Specify the location of the directory where you want to install, as shown in Figure 2-3, "Specify Directory Location," and then click **Next**. You can click **Browse** as an aid to finding an appropriate directory.

Note If you are not installing as **root**, you must have write permission for this directory.

Note In the intended install location, you need 1.2 GB free for the binaries plus an extra 250 MB for log file growth and the installation of the Cisco Configuration Engine software.

In the database directory, you need 1 GB free. For large systems, you should have 4 to 5 GB of space. If the directory has less than 1.2 GB free, you can still install ISC, but you might run out of space.

Figure 2-3 Specify Directory Location

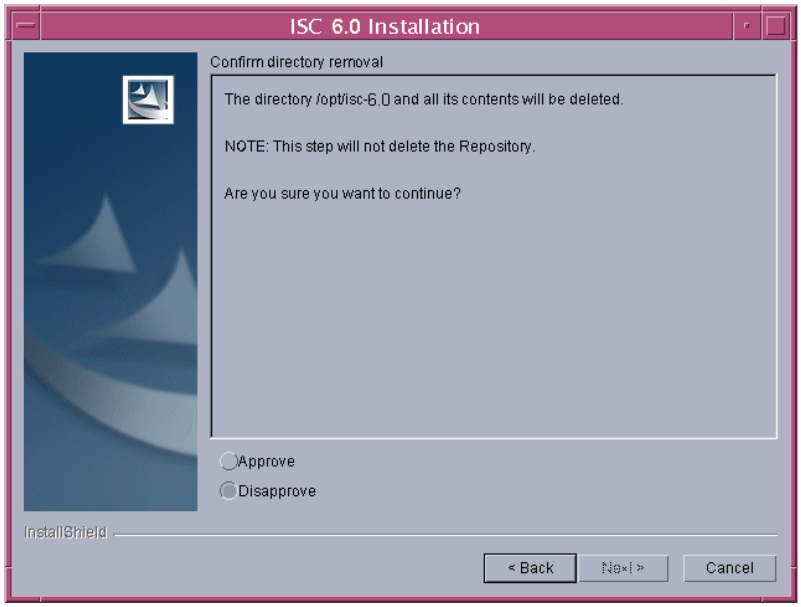


Step 9 If in Step 8 you chose a directory that already exists, you proceed as follows. If you chose a new directory to be created, you proceed to Step 10.

In Figure 2-4, "Confirm Directory Removal," if the directory you chose already exists and you must click the default radio button **Disapprove**, you cannot proceed. You must click **Back** and return to Step 8.

Be *very* careful. If you click the radio button **Approve**, you will overwrite the contents in the existing directory. Click **Next**.

Figure 2-4 Confirm Directory Removal

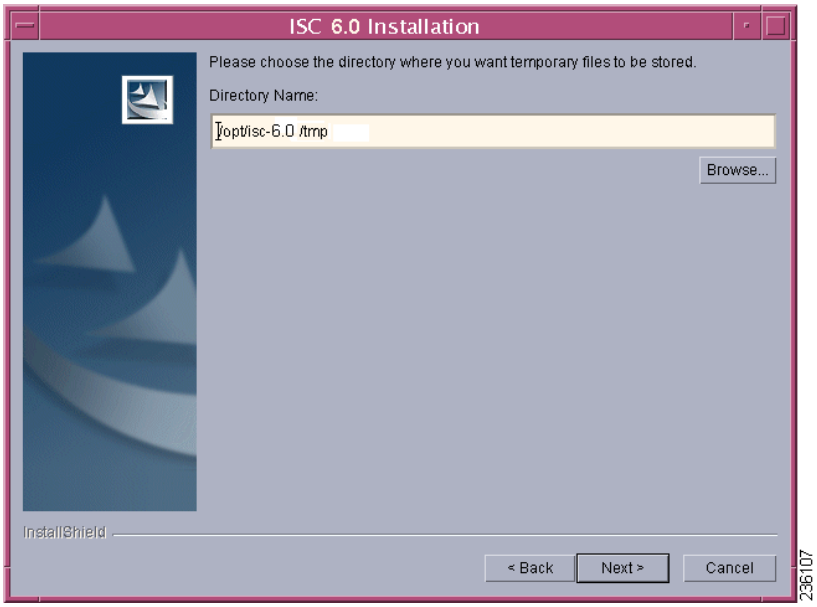


Step 10 If in Step 6 you chose **express**, proceed to Step 29. If you chose **custom**, then you must enter the location where you want temporary files stored, as shown in Figure 2-5, "Choosing the Directory for Temporary Files."

Note In the intended install location, you need 1.2 GB free for the binaries plus an extra 250 MB for log file growth and the installation of the Cisco Configuration Engine software.

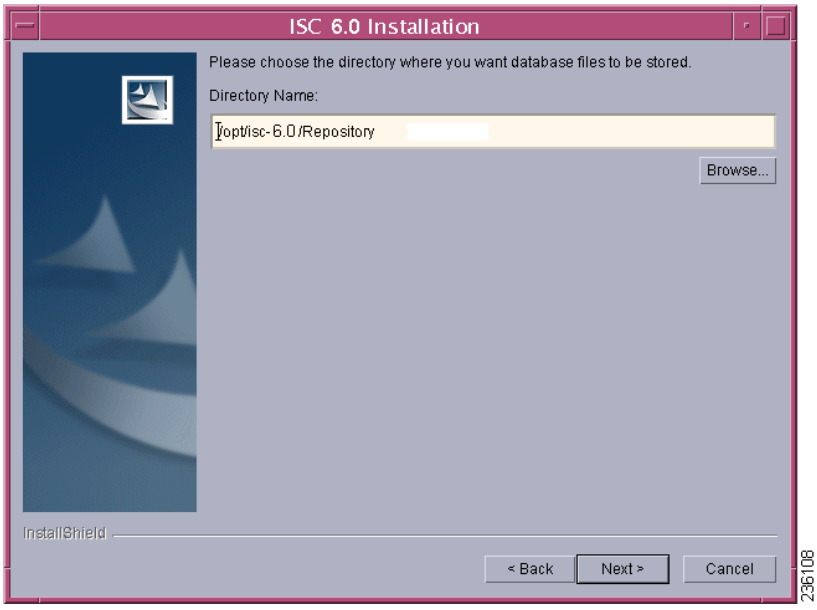
In the database directory, you need 1 GB free. For large systems, you should have 4 to 5 GB of space. If the directory has less than 1.2 GB free, you can still install ISC, but you might run out of space.

Figure 2-5 Choosing the Directory for Temporary Files



Step 11 Specify the Directory Name where you want database files to be stored, as shown in Figure 2-6, "Where to Store Database Files," and then click **Next**.

Figure 2-6 Where to Store Database Files



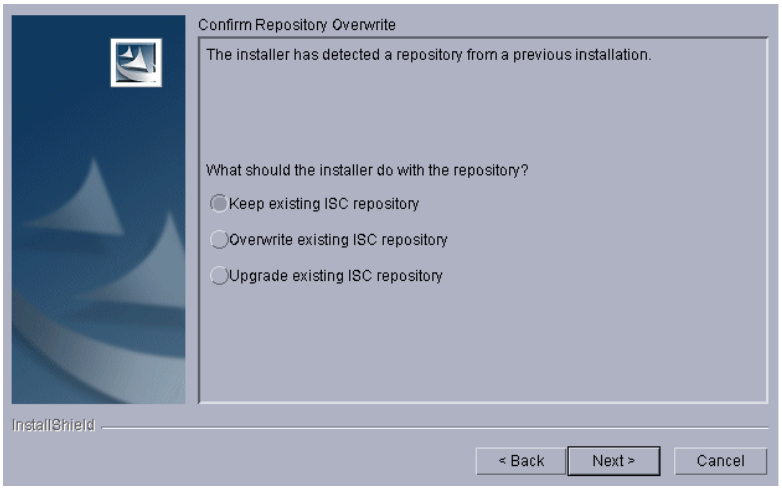
Step 12 If in Step 11 you chose a directory that already contains a repository, you have three options, as shown in Figure 2-7, "Repository Choices,": **Keep existing ISC repository**, **Overwrite existing ISC repository**, or **Upgrade existing ISC repository**. Then click **Next** to proceed. Otherwise proceed to Step 13.

When you click **Keep existing ISC repository**, proceed to Step 13.

When you click **Overwrite existing ISC repository**, proceed to Step 14.

When you click **Upgrade existing ISC repository**, proceed to Step 15.

Figure 2-7 Repository Choices



Step 13 After choosing **Keep existing ISC repository** in Figure 2-7, "Repository Choices," you will be given the opportunity in Figure 2-8, "Confirmation of Keeping Existing ISC Repository," to **Disapprove** (the default). If you choose **Approve**, you will keep your existing ISC repository, which could be incompatible with this version of ISC.

Note After you complete your installation and before you use ISC to upgrade your repository, you *must* follow the steps in the Upgrading an Existing Installation to ISC 6.0, page 2-21 and Using the Repository Upgrade Tool, page 2-22.

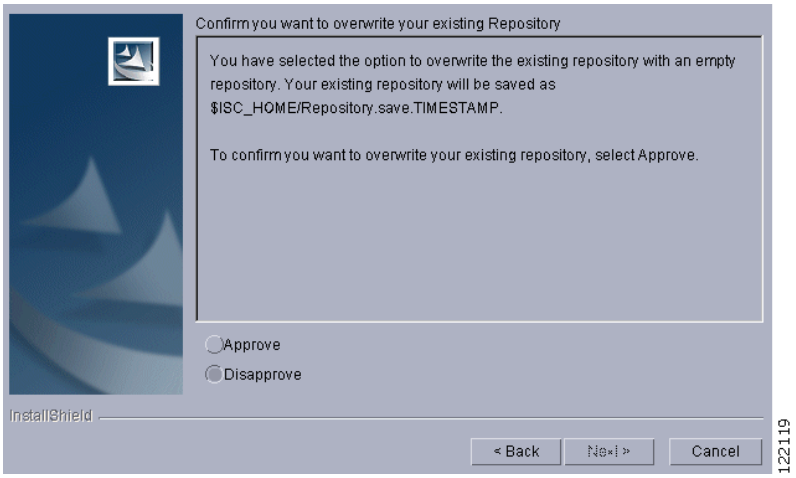
Click **Next** and proceed to Step 18.

Figure 2-8 Confirmation of Keeping Existing ISC Repository

Step 14 After choosing **Overwrite existing ISC repository** in Figure 2-7, "Repository Choices," you will be given the opportunity in Figure 2-9, "Confirmation of Overwriting Existing ISC Repository," to **Disapprove** (the default). If you choose **Approve**, you will overwrite the existing repository with an empty repository and your existing repository will be saved as **$ISC_HOME/Repository.save.**<*timestamp*>.

Click **Next** and proceed to Step 18.

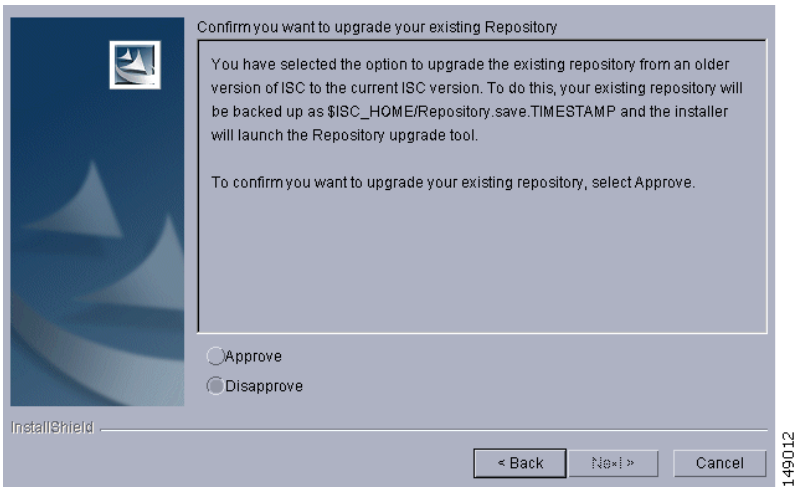
Figure 2-9 Confirmation of Overwriting Existing ISC Repository



Step 15 After choosing **Upgrade existing ISC repository** in Figure 2-7, "Repository Choices," you will be given the opportunity in Figure 2-10, "Confirmation of Upgrading Your ISC Repository After Installation," to **Disapprove** (the default). If you choose **Approve**, you will overwrite the existing repository with an empty repository and your existing repository will be saved as **$ISC_HOME/Repository.save.**<*timestamp*>. Then your installation will proceed with a new empty repository.

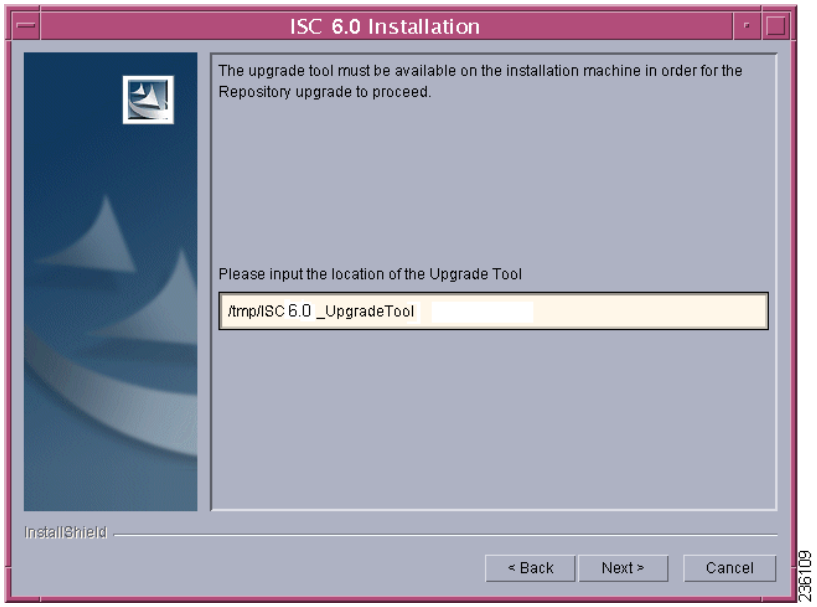
Click **Next** and proceed to Step 18.

Figure 2-10 Confirmation of Upgrading Your ISC Repository After Installation



Step 16 After you Approve to upgrade your existing Repository, enter the location of the Upgrade Tool, as shown in Figure 2-11, "Location of Upgrade Tool."

Figure 2-11 Location of Upgrade Tool



Step 17 If you inaccurately entered the location of the Upgrade Tool, you will receive a message as shown in Figure 2-12, "Invalid location of Upgrade Tool," and you must return to Step 16 and enter the correct Upgrade Tool location.

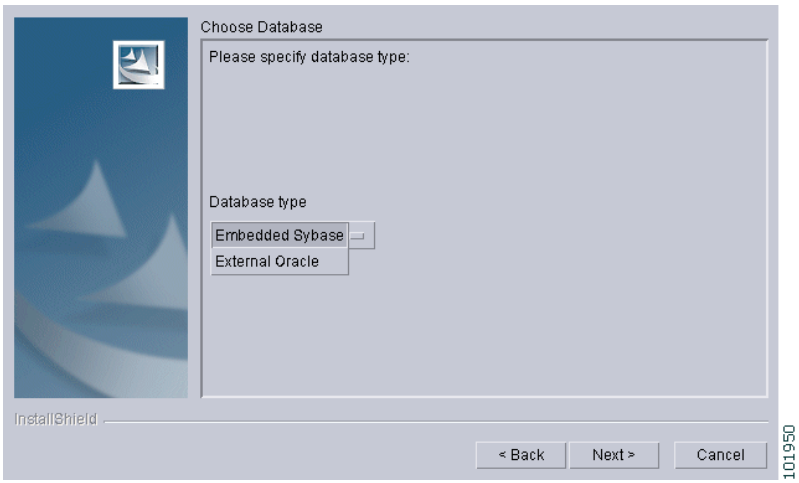
Figure 2-12 Invalid location of Upgrade Tool

Step 18 Choose the database you will use, as shown in Figure 2-13, "Choosing a Database". From the drop-down menu, choose either **Embedded Sybase** (Sybase ASA, 11.0.1 is embedded) or **External Oracle**. (Testing of ISC 6.0 has been done with Oracle Database 10g, Enterprise Edition Release 10.2.0.1.0 - 64 bit Production.) If you would like to use another version of Oracle 10g, see Oracle's compatibility information.) Then click **Next**.

Note If you are upgrading from a version of ISC before ISC 6.0, make sure your ISC repository has been imported to the Oracle Database 10g, Enterprise Edition Release 10.2.0.1.0 - 64 bit Production, as indicated in the "Initial Configuration—Creating the ISC Owner" section on page 2-2.

Note The embedded Sybase database is used for service-level agreement (SLA), independent of whether you are using Oracle as your database.

Figure 2-13 Choosing a Database

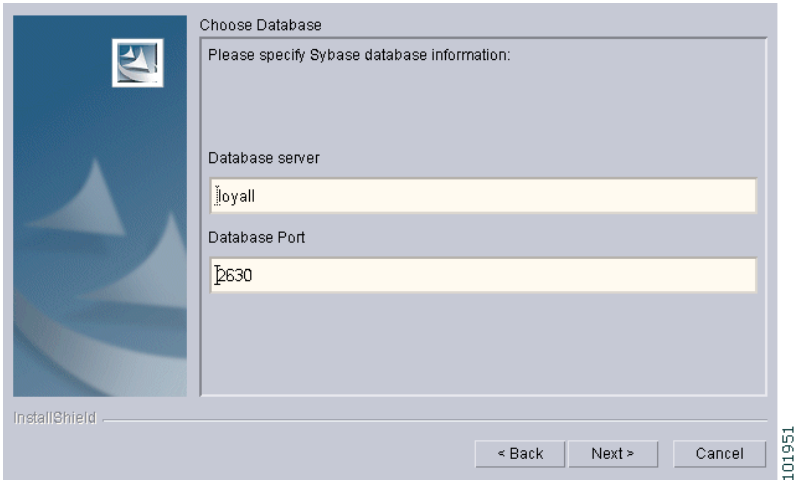


Step 19 If you chose **Embedded Sybase** in Step 18**, e**nter the **Database server** name, as shown in Figure 2-14, "Choosing a Database—Sybase." The **Database Port** number is automatically updated. If you choose to change the database port number, enter your choice in the **Database Port** field. Click **Next,** and then proceed directly to Step 22.

Note If you want to use the same Sybase repository from an original server on this new server you are now installing, see the "Restoring Your Sybase Repository to a New Server" section on page 2-23

If you chose **External Oracle** in Step 18, proceed to Step 20.

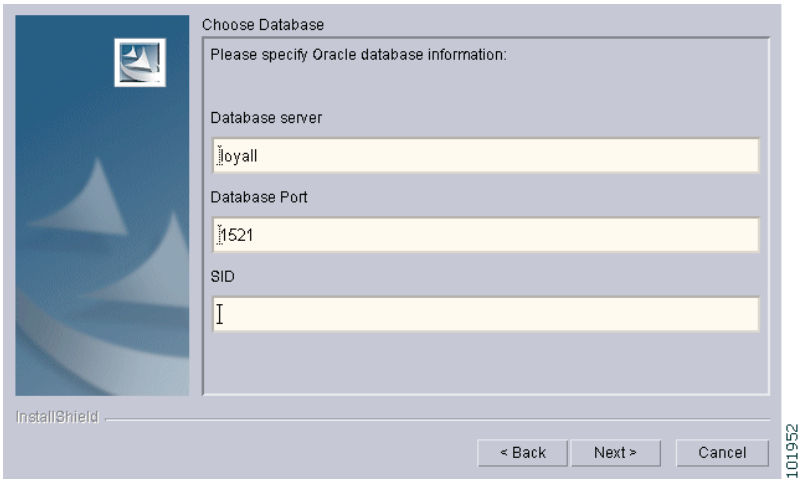
Figure 2-14 Choosing a Database—Sybase



Step 20 If you chose **External Oracle** in Step 18, you must enter the **Database server** name, the **Database Port** number, and the Oracle server instance identifier (**SID**), as shown in Figure 2-15, "Choosing a Database—Oracle." Otherwise, proceed directly to Step 22.

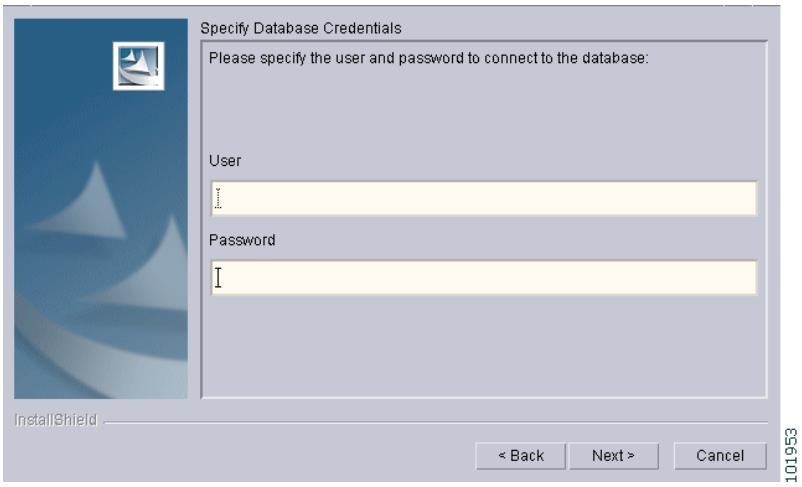
Note If you are upgrading from a version of ISC before ISC 6.0, make sure your ISC Repository has been imported to the Oracle Database 10g, Enterprise Edition Release 10.2.0.1.0 - 64 bit Production, as indicated in the "Initial Configuration—Creating the ISC Owner" section on page 2-2.

Figure 2-15 Choosing a Database—Oracle



Step 21 Because you chose **External Oracle** in Step 18, you must set the Oracle database **User** and **Password** values, as shown in Figure 2-16, "Specifying Database Credentials."

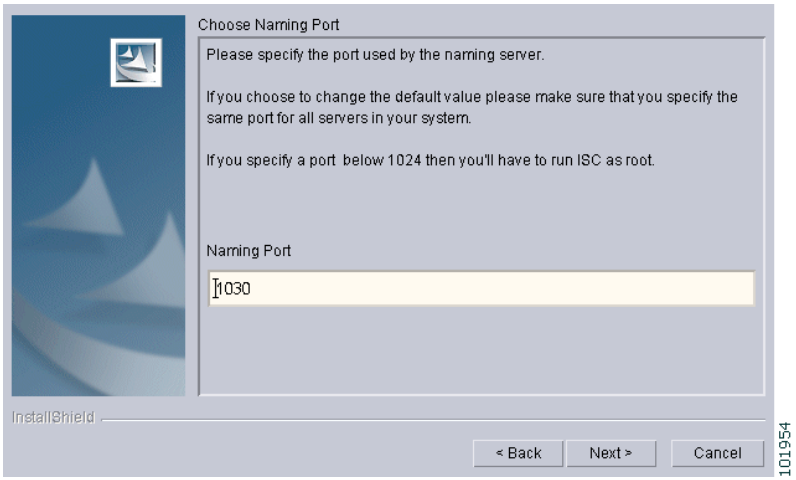
Figure 2-16 Specifying Database Credentials



Step 22 Specify the port used by the Naming Server, as shown in Figure 2-17, "Specify the Port Used by the Naming Server," then click **Next**.

Note If you enter a Naming Port value less than 1024, the owner of the installation must be **root**. The owner of the installation is the user identified in Figure 2-2 on page 2-5.

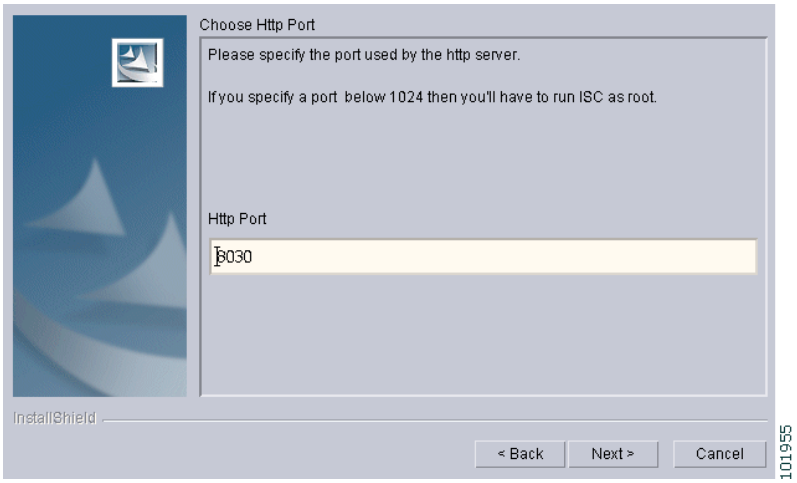
Figure 2-17 Specify the Port Used by the Naming Server



Step 23 Specify the port used by the HTTP server, as shown in Figure 2-18, "Choose HTTP Port," then click **Next**.

Note If you enter an HTTP Port value less than 1024, the owner of the installation must be **root**. The owner of the installation is the user identified in Figure 2-2.

Figure 2-18 Choose HTTP Port

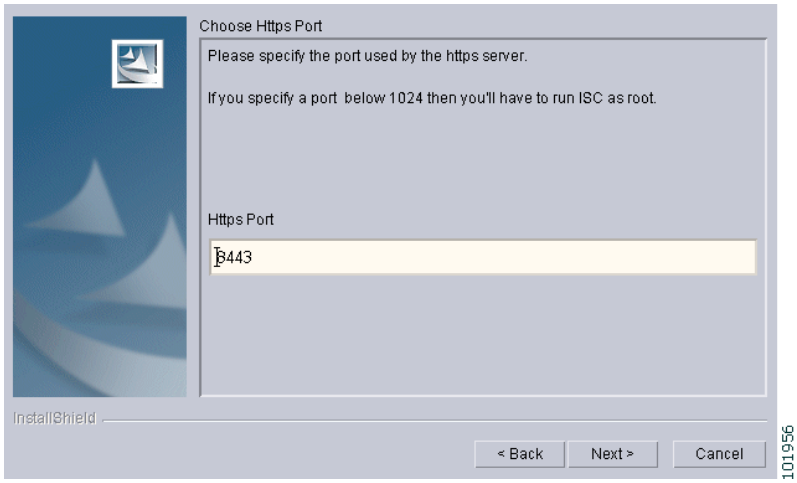


Step 24 Specify the port used by the HTTP Over Secure Socket Layer (SSL) (HTTPS) server, as shown in Figure 2-19, "Choose HTTPS Port," then click **Next**.

Note If you enter an HTTPS Port value less than 1024, the owner of the installation must be **root**. The owner of the installation is the user identified in Figure 2-2.

Note To configure the web access to ISC, you must set up the HTTPS port as explained in Step 35 and the "Configuring HTTPS" section on page 2-24.

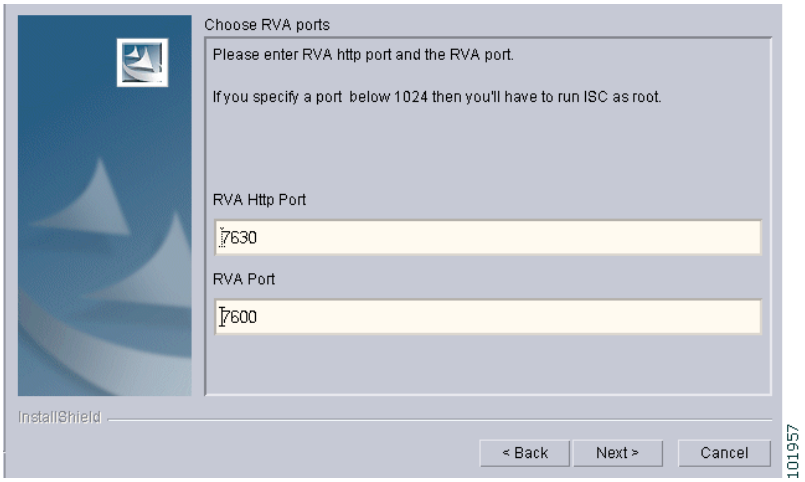
Figure 2-19 Choose HTTPS Port



Step 25 Specify the port used by the Rendezvous™ Agent (RVA). You must specify the RVA HTTP Port server, a TIBCO™ bus port used by ISC processes to communicate with each other. You must also specify the RVA Client Port, as shown in Figure 2-20, "Choose RVA Ports," then click **Next**.

Note If you enter an RVA HTTP Port or RVA Client Port value less than 1024, the owner of the installation must be **root**. The owner of the installation is the user identified in Figure 2-2.

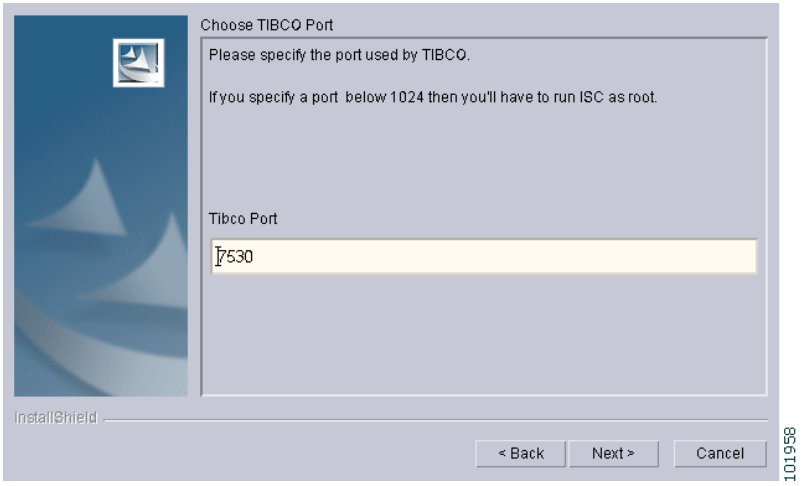
Figure 2-20 Choose RVA Ports



Step 26 Specify the port used by TIBCO, as shown in Figure 2-21, "Choose TIBCO Port," then click **Next**.

Note If you enter a TIBCO Port value less than 1024, you *must* run ISC as **root**, the specification in Figure 2-2.

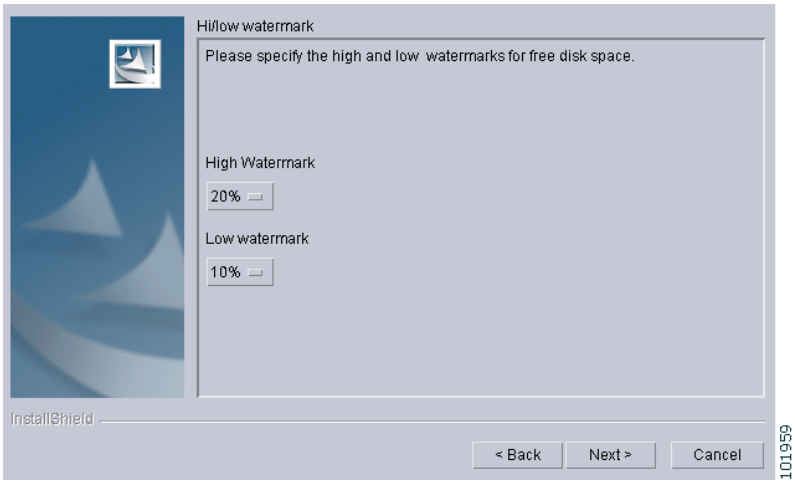
Figure 2-21 Choose TIBCO Port



Step 27 When you click **Next**, the system checks whether any of the ports entered are duplicate port numbers. If duplicate port numbers are found, an error message indicates the two ports that have duplicate entries.

Step 28 You can reset the High and Low watermarks for available disk space, as shown in Figure 2-22, "Setting Watermarks for Available Disk Space." The defaults are 20% and 10% for High and Low respectively. Be sure the High watermark is a larger percentage than the Low watermark. When the High and Low watermarks are reached, you receive an e-mail indicating this, based upon setting your e-mail address correctly in Step 29.

Figure 2-22 Setting Watermarks for Available Disk Space

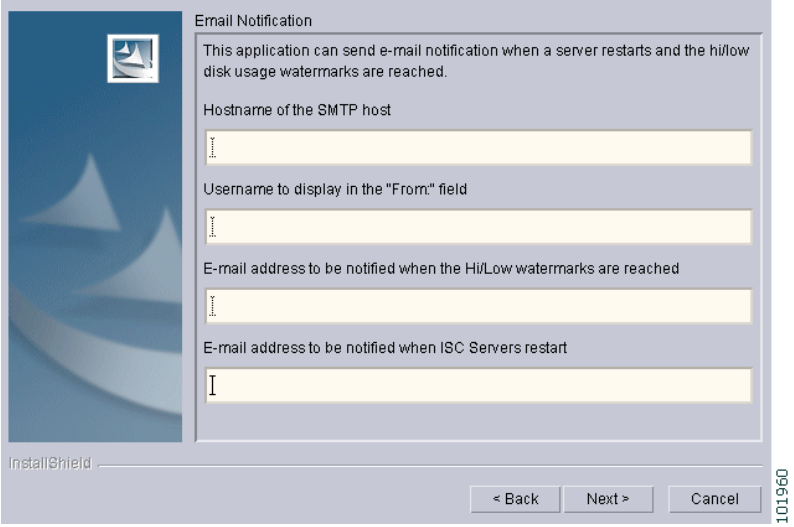


Step 29 In Figure 2-23, "Setting E-mail Address for Receiving Watermark Information," to receive e-mail you must specify the following:

- In the first text field, specify the hostname of the Simple Mail Transfer Protocol (SMTP).
- In the second text field, specify the username to display in the "From" field.
- In the third text field, specify the e-mail address to be notified when High and Low watermarks are reached, which indicates the specified disk space availability has been reached.
- In the fourth text field, specify the e-mail address to be notified when the ISC server restarts.

Then click **Next**.

Figure 2-23 Setting E-mail Address for Receiving Watermark Information



Step 30 The installation continues and the files are installed. The list of installation processes appears.

Step 31 If the installation failed, you receive a failed message.

To review the log message, click **Back**.

If there was truncation of data, reinstall and add two spaces at the end of each field for which you have modified the entry.

Step 32 If the installation was successful, you receive an Install Complete message. Even if you have a successful install, click **Back** to review the log to be sure there were no exceptions or failures. If data was truncated, reinstall and add two spaces at the end of each field for which you have modified the entry.

Step 33 The ISC server is started automatically after the installation is successful.

Step 34 Verify that ISC is properly installed, as follows:

a. Source the ISC environment file in the $ISC_HOME/bin directory:

If Bourne or K shell: **. $ISC_HOME/bin/vpnenv.sh**

If C shell: **source $ISC_HOME/bin/vpnenv.csh**

b. Before logging in, repeat the following command until the servers are in the **started** mode. If any server is reported as **disabled**, ISC is not installed or configured correctly:

wdclient status

For more information about WatchDog commands, see the *Cisco IP Solution Center Infrastructure Reference, 6.0.*

Step 35 If you want to set up secure web access by using HTTPS, see the "Configuring HTTPS" section on page 2-24. Then, proceed to Step 36.

Step 36 If you are logging in for the first time, proceed to the "Logging In for the First Time" section on page 2-25." Then, proceed to Step 37.

Step 37 Before you can use any of the licensed services, proceed to the "Installing License Keys" section on page 2-26. Then, proceed to Step 38.

Step 38 If you have an ISC repository, you *must* upgrade your repository to have access to it, as explained in the "Upgrading an Existing Installation to ISC 6.0" section on page 2-21.

Note If you have an existing repository prior to ISC 5.2, see the references to the upgrade instructions for your version at Installing ISC, page 2-2.

Step 39 If you want to eventually use the Inventory Manager or the Topology Tool, your client machine *must* be set up properly. Proceed to the "Launching Topology Tool" section on page 2-27. This section explains what occurs and leads you to the launching explanations in the *Cisco IP Solution Center Infrastructure Reference, 6.0*. Then, proceed to Step 40.

Step 40 To uninstall ISC, proceed to the "Uninstalling ISC" section on page 2-27.

Note To determine if servers are installed correctly, use the WatchDog commands explained in the *Cisco IP Solution Center Infrastructure Reference, 6.0*.

Installing ISC Using the Command Line Installer

Note It is not possible to install ISC for use with an Oracle database using the Command Line Installer. Therefore, if you will be using Oracle, be sure to use the GUI installation method, explained in the "Installing ISC Using the Graphical User Interface" section on page 2-3.

After reviewing the information in the "Installing ISC" section on page 2-2, you can follow these steps to install the ISC software using the Command Line Installer:

Note The command line installer only allows you to configure the installation directory and ISC owner. All other configuration options use default values. For more configuration options, use the GUI installer, explained in the "Installing ISC Using the Graphical User Interface" section on page 2-3.

Step 1 Insert the ISC product CD-ROM.

Note When you insert the CD-ROM, the File Manager is automatically invoked. Do *not* use the File Manager to install the ISC product. Run the installation script from a terminal window.

Note If you choose to remotely install over a wide area network, you must add two spaces at the end of each field for which you modify the entry. This is to work around a potential problem that occurs when you have two or more SSH tunnels between your location and your installation machine's location.

Step 2 Open a terminal window and log in as the identified UNIX user.

Step 3 Change to the CD-ROM directory, as follows:

$ cd /cdrom/cdrom0

Step 4 If you are upgrading ISC from an existing version, use the **stopall** command to be sure the existing ISC is shut down completely. See the *Cisco IP Solution Center Infrastructure Reference, 6.0* for information about all WatchDog commands.

Step 5 If you have an existing ISC installation with a database, you *must* back up your current database. See the instructions to back up and restore an ISC repository or create a standby system, as explained in Appendix D, "Backup and Restore of ISC Repository and Standby System."

Caution If you use the command line installer to install ISC in a directory containing an existing installation of ISC, the installer replaces the existing repository with a new empty repository. You are not asked to confirm this operation and no alternative option is given. The directory containing the existing repository is renamed to **Repository.save.**<*timestamp*>.

Step 6 Execute the ISC product installation script, as follows:

cdrom> **./install.sh** <*target_dir*> <*owner*>

where:

<*target_dir*> Specify the location of the directory where you want to install ISC. If you are upgrading an existing ISC installation, see the options in this step.

<*owner*> Enter the username you created in Step 2 of the "Initial Configuration—Creating the ISC Owner" section on page 2-2.

If you are upgrading an existing ISC installation, use *one* of the following options to specify the target directory:

a. Install this version of ISC into the same directory as the existing ISC product.

For example, if you are upgrading from ISC 5.2 to ISC 6.0 and the existing ISC 5.2 installation is under the directory **/opt/isc-5.2**, then install ISC 6.0 in the same directory, with steps like the following:

- Save the ISC installation for possible uninstall purposes, as follows:

  tar cvf isc-5.2.tar /opt/isc-5.2

- Execute the ISC product installation script, specifying the existing ISC directory name as the <*target_dir*>.

  cdrom> **./install.sh /opt/isc-5.2** <*owner*>

-or-

b. Rename the existing ISC directory before installing this new version of ISC into this directory.

For example, if you are upgrading from ISC 5.2 to ISC 6.0 and the existing ISC 5.2 installation is under the directory **/opt/isc-5.2**, rename this directory to **/opt/isc-6.0** then install ISC 6.0 in the same directory, with steps like the following:

- Save the ISC 5.2 installation for possible uninstall purposes, as follows:

  tar cvf isc-5.2.tar /opt/isc-5.2

- Rename the directory, as follows:

  mv /opt/isc-5.2 /opt/isc-6.0

- Execute the ISC installation script, specifying the renamed directory name as the <*target_dir*>.

  cdrom> **./install.sh /opt/isc-6.0** <*owner*>

-or-

c. Install ISC in a new directory.

For example, if you are upgrading from ISC 5.2 to ISC 6.0 and the existing ISC 5.2 installation is under the directory **/opt/isc-5.2**, then install ISC 6.0 in a new directory **/opt/isc-6.0**, with steps like the following:

- Save the ISC 5.2 installation for possible uninstall purposes, as follows:

  tar cvf isc-5.2.tar /opt/isc-5.2

- Specify a new directory such as **/opt/isc-6.0** as the <*target_dir*>

  cdrom> **./install.sh /opt/isc-6.0** <*owner*>

Step 7 If you upgraded from an existing ISC installation and want to retain the database from that installation, manually copy the database directory to the new installation before running the upgrade tool.

a. The directory in which you installed this release contains a directory named Repository that contains an empty repository. Temporarily rename this directory before copying the old repository. For example, you might wish to rename this directory to **Repository.empty**, as follows:

mv $ISC_HOME/Repository $ISC_HOME/Repository.empty

b. If you installed ISC in a directory that contains an existing version of ISC by following either option a. or b. in Step 6, then the existing repository has been renamed to **$ISC_HOME/Repository.save.**<*timestamp*>. To restore the original database, enter the following:

mv $ISC_HOME/Repository.save.**<*timestamp*> **$ISC_HOME.Repository

c. If you installed ISC in a new directory, as explained in option c. of Step 6, copy the Repository directory and its contents from the old ISC installation directory to the new ISC installation directory. For example, if you are upgrading from ISC 5.2 to ISC 6.0, where the old installation directory is **/opt/isc-5.2** and the new installation directory is **/opt/isc-5.2**, enter the following:

cp -R /opt/isc-5.2/Repository /opt/isc-6.0/Repository

Step 8 If you have upgraded a previous ISC installation and want to retain the database from this installation, you *must* run the upgrade tool. Run the upgrade tool as explained in the "Upgrading an Existing Installation to ISC 6.0" section on page 2-21.

Upgrading an Existing Installation to ISC 6.0

If you want to migrate from an existing installation to ISC 6.0, your upgrade path depends on which release you are upgrading from. This process is described in the following.

This section contains the following:

Upgrade Matrix

The various possible upgrade paths are described in Table 2-1.

Table 2-1 Upgrade Path to ISC 6.0

Procedure	Current ISC Version	Steps to Upgrade to ISC 6.0 (run in order stated)	Supported Oracle Database	Supported Solaris OS
—	Prior to 4.2.5	E-mail isc-mktg@cisco.com for upgrade instructions	—	—
Direct	4.2.5	ISC60_UpgradeTool.tar.gz	Enterprise Oracle 10G 10.2.0.1.0	Sol. 8 and Sol. 10
1 hop	5.0	1. ISC5.0.1_UpgradeTool.tar.gz 2. ISC60_UpgradeTool.tar.gz	Enterprise Oracle 10G 10.2.0.1.0	Sol. 10
Direct	5.0.1	ISC60_UpgradeTool.tar.gz	Enterprise Oracle 10G 10.2.0.1.0	Sol. 10
1 hop	5.0.2	ISC60_UpgradeTool.tar.gz	Enterprise Oracle 10G 10.2.0.1.0	Sol. 10
1 hop	5.0.3	1. ISC51_UpgradeTool.tar.gz 2. ISC60_UpgradeTool.tar.gz	Enterprise Oracle 10G 10.2.0.1.0	Sol. 10
Direct	5.0.4 (non-GA)	ISC60_UpgradeTool.tar.gz	Enterprise Oracle 10G 10.2.0.1.0	Sol. 10
Direct	5.1	ISC60_UpgradeTool.tar.gz	Enterprise Oracle 10G 10.2.0.1.0	Sol. 10
Direct	5.1.1	ISC60_UpgradeTool.tar.gz	Enterprise Oracle 10G 10.2.0.1.0	Sol. 10
Direct	5.2	ISC60_UpgradeTool.tar.gz	Enterprise Oracle 10G 10.2.0.1.0	Sol. 10
Direct	5.2.1	ISC60_UpgradeTool.tar.gz	Enterprise Oracle 10G 10.2.0.1.0	Sol. 10
Direct	5.2.2	ISC60_UpgradeTool.tar.gz	Enterprise Oracle 10G 10.2.0.1.0	Sol. 10

If you have an existing ISC repository, you *must* upgrade it to be able to use it with ISC 6.0, using the upgrade tool as stated in Table 2-1.

Note Understand that the only Sybase version to which you can upgrade is the embedded Sybase ASA, 11.0.1. Also, understand that Oracle testing of ISC 6.0 has been done with Oracle Database 10g, Enterprise Edition Release 10.2.0.1.0 - 64 bit Production. If you would like to use another version of Oracle 10g, see Oracle's compatibility information.

Locating the ISC 5.1, 5.2, and 6.0 Upgrade Tools

The location for the ISC 5.1, 5.2 ,and 6.0 upgrade tools have changed compared with the documentation for the previous ISC releases. You now need to access these tools from the respective CD-ROMs (ISC 6.0 Upgrade Tool used as an example):

/cdrom/cdrom0/ISC60_UpgradeTool.tar.gz

Using the Repository Upgrade Tool

The same upgrade procedure steps independent of whether your repository is a Sybase or Oracle repository.

Note Before you upgrade your repository, you *must* have followed the steps in the "Installing ISC" section on page 2-2. You *must* have backed up your database, as explained in Step 4, and you *must* have followed all the steps and reached this section from Step 38. A repository can be upgraded only once. If there is any problem during upgrade, a new copy of the backed up repository is needed for subsequent upgrade attempts.

Note See Appendix D, "Backup and Restore of ISC Repository and Standby System," before upgrading your repository.

Upgrade your repository as follows (using the ISC 6.0 Upgrade Tool as an example):

Step 1 Get the upgrade package **ISC60_UpgradeTool.tar.gz** from your CD-ROM:
/cdrom/cdrom0/ISC60_UpgradeTool.tar.gz
and place it on the ISC Master machine in a directory where you can access the ISC environment.

Step 2 Untar the upgrade tool tar file.
gzip -d < ISC60_UpgradeTool.tar.gz | tar xvf -

Step 3 Source the ISC environment files.
If Bourne shell: **. $ISC_HOME/bin/vpnenv.sh**
If C or K shell: source **$ISC_HOME/bin/vpnenv.csh**

Step 4 Stop ISC.
stopall

Step 5 Run the upgrade script.
cd ISC60_UpgradeTool
./upgradeISCSchema.sh <*ISC home*>
where: <*ISC home*> is the full pathname of the ISC home directory.

Step 6 Check for a success or error message.

Note After upgrading between ISC versions, you should ensure that the cache of the ISC client browser has been cleared or that your browser does not use the cache. This will ensure the latest ISC images and pages are returned.

Step 7 Proceed to Step 39 in the "Installing ISC Using the Graphical User Interface" section.

Restoring Your Sybase Repository to a New Server

If you are restoring your Sybase repository from your original server to a new server, you must first do the following:

Step 1 On the new server, if ISC is running, source your ISC environment as the ISC user account:
For the Bourne shell: **.$ISC_HOME/bin/vpnenv.sh**
For the C shell: **source $ISC_HOME/bin/vpnenv.csh**

Step 2 Run the ISC command **stopall**.

Step 3 **cd /var/tmp** and remove (or save, if needed) all the files under these directories.

Step 4 Backup the **$ISC_HOME/Repository** on the new server, using the command:
mv Repository Repository.bkp

Step 5 On the original server, source the ISC environment as the ISC user account:
For the Bourne and Korn shell: **.$ISC_HOME/bin/vpnenv.sh**
For the C shell: **source $ISC_HOME/bin/vpnenv.csh**

Step 6 Run the ISC command **stopall**.

Step 7 **cd $ISC_HOME/Repository**

Step 8 Copy the Repository directory from the original server onto the ISC repository on the new server. You can tar up the full Repository directory and untar in the same location on the new server.

Step 9 On the new server, run the ISC command **startdb** as the ISC installation owner.

Step 10 Run the ISC command **initdb.sh** as the ISC installation owner.

Step 11 Run the ISC command **startwd** as the ISC installation owner.

Configuring HTTPS

To configure the secure web access to ISC, set up the Hypertext Transfer Protocol (HTTP) Over Secure Socket Layer (SSL) (HTTPS) port, as follows:

Note If you configure HTTPS, it does not disable HTTP. If you want to only allow HTTPS, then you need to block HTTP (default port: 8030) by a firewall.

Step 1 Source the environment file, as follows:

For K shell: **. $ISC_HOME/bin/vpnenv.sh**

For C shell: **source $ISC_HOME/bin/vpnenv.csh**

Step 2 Run the command: **configSecurePort.sh** <*isc_home*> <*https_port*> <*hostname*>

where:

<*isc_home*> is the home directory for ISC, for example: **/opt/isc-6.0**

<*https_port*> is the secure HTTPS port you want to use, for example: **8443**.

<*hostname*> is the name of the machine that ISC is installed on, for example: **machinename.cisco.com**

Step 3 Copy the certificate **server.cer** from $ISC_HOME to all client ISC machines. Configure the browser on your client to store this certificate as trusted. For information on how to do this, see your browser documentation.

Note If you specify an IP address instead of a hostname, you must then use this IP address for all HTTPS sessions. If you attempt to use the hostname after configuring with an IP address, you will receive hostname mismatch warnings and might see unexpected behavior while using ISC.

Note If you do not implement Step 3 correctly, your browser might warn you that it is unable to verify or trust the security of the ISC server. Always accept ISC's digital certificates when prompted. Additional security precautions might be generated by your browser but should not affect the performance of ISC.

Logging In for the First Time

To log in to ISC for the first time, follow these steps:

Step 1 In the browser, enter the following URL:

http://*server:port***/isc/**

Note If you are using HTTP, the default for *server:port* is <*HOSTNAME*>**:8030**.

If you are using secure HTTPS access, as explained in the "Configuring HTTPS" section on page 2-24, enter **https://***server***:***port***/isc/** instead. The default for *server:port* in this case is <*HOSTNAME*>**:8443**.

In both of the above cases: <*HOSTNAME*> is the UNIX workstation name (or IP address) of the server to which you installed ISC.

See the "Installing ISC" section on page 2-2 for information about the installation log.

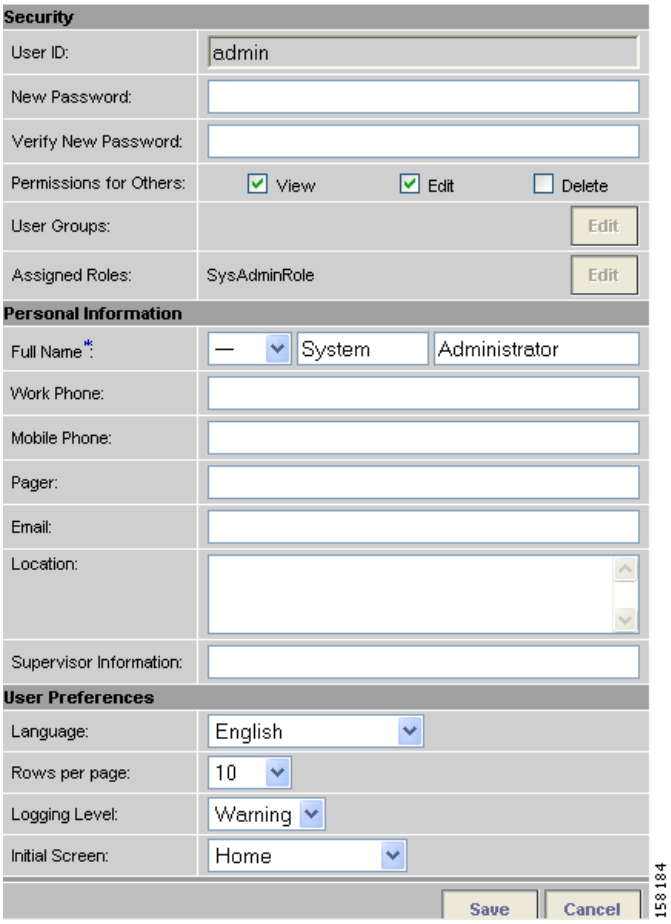
Step 2 Enter the default administrative login name, **admin**, and password, **cisco**, then click **Login**.

This default user provides administrative access to ISC. You cannot delete this user.

Step 3 We highly recommend you change the password for **admin** from **cisco** to something secure for you. To do this, click the **Administration** tab, then click **Security**, then click **Users**. Select the **admin** check box and then click **Edit**.

The window, as shown in Figure 2-24, "Changing the Password for Security Reasons" appears.

Figure 2-24 Changing the Password for Security Reasons



Step 4 Enter the **Security** and **Personal Information**, then click **Save**.

Installing License Keys

To install license keys, do the following:

Note For detailed instructions, see the Licensing section in the *Cisco IP Solution Center Infrastructure Reference, 6.0*.

Step 1 From the **Home** page of the installed ISC product, navigate as follows: **Administration** > **Control Center** > from the **TOC**, click **Licensing**.

Step 2 From the **Installed Licenses** table, click **Install**.

Step 3 In the resulting window, enter a **License Key** that you received on your *Right to Use* paperwork with your product.

Step 4 Click **Save**. Your newly installed license appears in an updated version of the Installed Licenses table.

Step 5 Repeat Step 2, Step 3, and Step 4 for each of the *Right to Use* documents shipped with your product.

Launching Topology Tool

ISC provides a downloadable version of Version 1.6.0_07 of Java Runtime Environment (JRE) for various operating systems when you launch the Topology Tool. Ensure that your client machine is configured to use this version of the JRE for launching Java applications and Applets. This can be done via Java's Control Panel.

Specific instructions to launch the Topology Tool are explained in the *Cisco IP Solution Center Infrastructure Reference, 6.0*.

Uninstalling ISC

Note It is advised to uninstall using the same user who performed the installation of ISC.

If you attempt to uninstall ISC as **root**, but **root** is not the ISC owner, if you attempt to use the **stopall** command to halt all ISC processes, the processes will remain running. If you did not install as **root,** use the **stopall** command before following the next steps, but be sure to execute **stopall** *only* as the ISC owner.

If you installed as **root**, files were created to automatically restart ISC when rebooting the server. To remove these files, uninstall ISC as **root**.

Next, uninstall the server, as follows:

Step 1 Log in to the server.

Step 2 At the Solaris prompt, log in as the identified UNIX user.

Step 3 Go to the ISC installation directory.

Step 4 Source the environment, as follows:

For an Bourne or K shell:

```
. bin/vpnenv.sh
```

For a C shell:

```
source bin/vpnenv.csh
```

Step 5 Remove ISC by entering the following command from a location outside the *<ISC_HOME directory>*:

*<ISC_HOME directory>***/bin/uninstall.sh**

This command removes all files from the installation directory. This command also removes the database and its contents. Database backups are not removed if they reside in a different directory from the installation directory.