eNiku 4.1

Installation and System Administration Guide for Sun Solaris

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Mailing Address

Niku Corporation
305 Main Street
Redwood City, California 94063
USA

Contents

Installing Fulcrum

Installing and Configuring Netscape Enterprise Server

Installing the Servlet Engine

Preparing the RDBMS

Create the Java Policy File

Installing eNiku 4.1

Installing Crystal Reports

Post Installation Tasks

Remote Client Installation

Customizing the Crystal Reports Web Server

Removing the Crystal Reports Web Server

Configuring the Secure Socket Layer (SSL)

Index

Preface

About Niku

Niku Corporation is the pioneering developer of Professional Services Automation (PSA) software, a new class of enterprise applications for Professional Services Organizations (PSOs). The Niku family of applications makes innovative use of knowledge management technologies and takes a unique approach to PSA, one built around the idea of helping customers gain more leverage from their intellectual assets.

The essence of professional services lies in the delivery of expertise, advice, and strategy. Information is typically found in diverse, unstructured sources. The Niku family of PSA software tools enables firms to better capture, organize, and deliver their expertise by automating and integrating key business processes.

Consequently, Niku software users gain tremendous operational efficiency, better practice methodologies, and new strategic insight—three key components for competitive advantage.

Contacting Technical Support

Our focus is always on you, our customers. Whether you are part of a large organization or an individual contributor, your business needs are important to us. That's why we offer a wide range of strategic services and partners to deliver unmatched systems integration, production rollout, technical support, and training services. Our support offerings range, from web-based electronic and e-mail support to 24x7 production system support services all tailored to meet your needs.

You can contact Niku's Customer Support team at:

support@niku.com, or 1-888-550-6458

For general information about Niku, visit the Niku web site at

http://www.niku.com

or contact,

Niku Corporation

305 Main Street
Redwood City, CA 94063
USA

Tel: (650) 298-4600
Fax: (650) 298-4601

Typographical Conventions

Some or all of the following conventions listed in the table below appear in this guide:

Convention	Represents	Example
Bold	a new term, field names.	A **corporate detail item** is an individual code or company-specific value that allows Time and Expense to work within your corporate structure.
Green Text	hyperlinked text (online publications only)	The Preface contains information about Contacting Technical Support.
Italic	words that are emphasized, titles of documents, syntax variables	Refer to the *eNiku User Guide* for more information.
Monospace	directories, file names, command names, computer code	eniku / manuals
—	symbol that links together a series of commands or menu options	File—New—Document

1 Introduction

Overview

Welcome to eNiku 4.1, the Professional Services Automation (PSA) software for today's IT consulting firms.

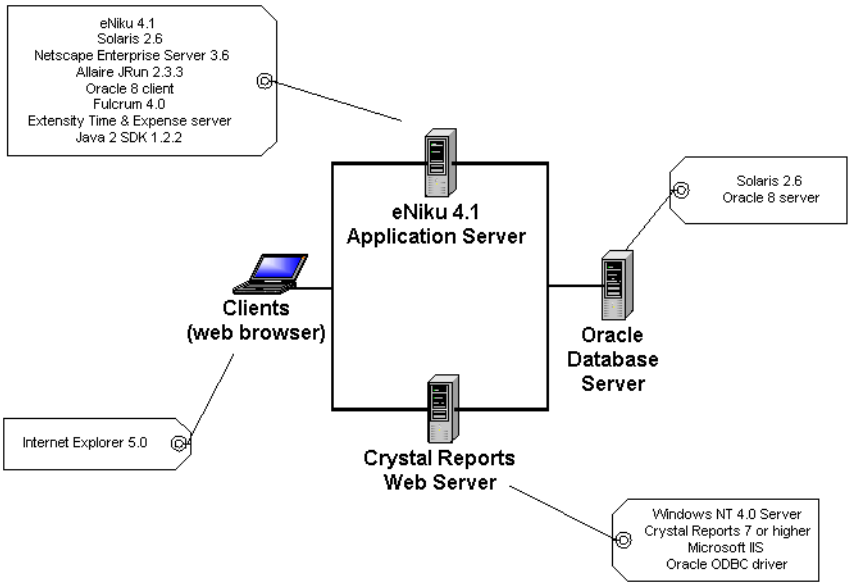
This guide provides the system administrator with step-by-step instructions to install all the components required to run in this stand-alone application.

Notes to the System Administrator

- The system administrator must install every component as the same user and must be assigned administrator privileges.
- To optimize performance, it is recommended that eNiku 4.1 and its third party applications are the only non-operating system related components installed on the server.

Application Configuration

This document specifies the step required to install eNiku 4.1 for Sun Solaris. The environment described by this document is depicted below:



Server Software Requirements

Note: All required third party software products must be installed before you install eNiku. The eNiku installation program does not detect the presence or absence of the third party software.

Component	Description
Operating System	**Application Server OS:** • Sun Solaris 2.6 with patches 106841-01, 106842-08, and 108091-03 **Crystal Reports Web Server OS:** • Windows NT 4.0
Plug-in	eNiku uses several features of the Netscape Enterprise Server and the Allaire JRun to provide Servlets, page compilation, and session tracking. Use the following Servlet engine: • Allaire JRunPro 2.3.3 (build 157)* • Sun Microsystem's Javamail 1.1.2* • Sun Microsystem's Javabeans Activation Framework Software 1.01*
Portable Document Format (PDF) Reader	Adobe Acrobat Reader 4.0*
RDBMS	eNiku stores system data in a Relational Database Management System (RDBMS). The following database engine is used: • Oracle Corporation's Oracle 8 server version 8.0.5.0.0 with Oracle native JDBC drivers
Reports	• Crystal Reports 7.0 Runtime for Windows NT* **Note:** It is possible to use Crystal Reports Server 8 with eNiku, especially to run reports with Netscape Navigator.
Java SDK 1.2.2 or higher	Sun's Java SDK 1.2.2 or higher

* indicates components that are provided on the eNiku CD-ROM

Component	Description
Search Engine	Fulcrum Corporation's Search Server, 4.0E for Solaris*
SSL (Secure Socket Layer)	SSL Certificate (if using secure protocol)
Time & Expense	Extensity 4.2—BEA Weblogic 3.0.4 for Solaris*
Web Server	Netscape Enterprise Server 3.6.3 SP3

* indicates components that are provided on the eNiku CD-ROM

Server Hardware Requirements

- 1 x86 computer
- 2 Sun SPARC computer(s)

The following server hardware configurations apply to servers running Solaris OS:

Configuration	CPU	RAM	Hard Disk Space
1	2 400 MHz Sun Sparc	2 GB	At least 20 GB
2	4 400 MHz Sun Sparc	4 GB	At least 40 GB
3	• 4 400 MHz Sun Sparc • 4 400 MHz Sun Sparc	• 4 GB • 4 GB	• At least 80 GB • At least 4 RAID array disks, each 20 GB

The Hard Disk Space listed in the table above refers to the amount of space required for eNiku's filestore and database data. It also includes the space required for the eNiku application, supporting software, operating system, and swap space.

To avoid disk I/O contention, it is advisable to have at least 4 separate physical hard disks with the following distribution of data:

1. Disk 1: operating system, supporting software (approximately 1GB of disk space), page file (at least 4GB for a machine with 4GB RAM)
2. Disk 2: database tables
3. Disk 3: indices
4. Disk 4: redo logs, filestore

Server Configuration

- 128 MB RAM
- 1.6 GB hard disk space
- Root access during the installation process
- Access to all installation files on your local network

Server Software License Requirements

eNiku accesses the database engine through NAKS and FrontWorks, simultaneously. Seagate Crystal Reports Server also queries the database engine separately when generating the parameters page to display HTML reports. Use the following formula to determine the required number of Database Server software licenses:

Peak Reports Users	Peak Simultaneous eNiku Users	Database Licenses
m	n	(2 * n) + m

Client Hardware Requirements

With the Disconnected Client

The client system requires the following minimum hardware profile when using the Time and Expense disconnected client:

- 128 MB RAM
- 333 MHz Pentium class CPU
- 1024 x 768 VGA Monitor with 256-colors

Without the Disconnected Client

The client system requires the following minimum hardware profile when not using the Time and Expense disconnected client:

- 64 MB RAM
- 333 MHz Pentium class CPU
- 1024 x 768 VGA Monitor with 256-colors

Client Software Requirements

The client system requires the following software:

- Microsoft Windows 98 or Windows NT 4.0 with Service Pack 5
- Microsoft Internet Explorer 5.0 with Microsoft® virtual machine (Microsoft VM) build 3193 or Netscape Communicator 4.7
- Microsoft Word 97 with Service Release 2 or Word 2000
- Adobe Acrobat Reader 4.0

Software Distribution

The following information summarizes the software products required to run eNiku according to how you acquire each item.

Licensed Separately

Server Operating System

- Sun Solaris 2.6
- Windows NT 4.0 server

Client Operating Systems

- Windows 98 or Windows NT Workstation 4 Service Pack 5
- Microsoft Word 97 with SR 2 or Microsoft Word 2000

Web Servers

- Netscape Enterprise Server 3.6.3 SP3

Client Browser

- Microsoft Internet Explorer 5.0 (Microsoft® virtual machine (Microsoft VM) build 3193)
- Netscape Communicator 4.7

Database

- Oracle Corporation's Oracle 8 server version 8.0.5.0.0 with Oracle native JDBC drivers

Provided with eNiku

Third Party Components

- Allaire JRun Pro 2.3.3 (build 157)
- Fulcrum Search Server 4.0
- Sun Microsystems's Javamail 1.1.2
- Sun Microsystems's Javabeans Activation Framework 1.0.1
- Seagate Crystal Reports Server Runtime 7.0— The runtime version of this product is provided on the eNiku product CD. However, the developer version must be licensed separately from Seagate.
- Adobe Acrobat Reader 4.0

Niku Components

- NAKS (Niku Adaptable Knowledge Store) 4
- Niku Common Package 4
- Niku FrontWorks 4
- Time and Expense (includes BEA WebLogic 3.04)

Conventions Used in this Guide

- Command line steps will be displayed as:

  ```
  $some_command
  ```

- When referring to servers, shortcut names will be used:

Server	Shortcut Name
eNiku 4.1 Application Server	app server
Oracle Database Server	database server
Crystal Reports Web Server	Crystal server

- The base Niku directory where all Niku software will be installed will be referred to as `/niku`.
- The base path to the 3rd party software will be referred to as `/local`.
- `JAVA_HOME` will refer to the home directory of the Java 2 SDK.

Warning! Do not set the `JAVA_HOME` environment variable.

Pre-Installation

The following steps need to be performed prior to the installation of eNiku and the Third Party software.

1. Download and install the most recent recommended cluster of patches for Solaris 2.6 from `http://sunsolve.sun.com` on the application server and database server. Ensure the following patches are installed:

   `106841-01`

   `106842-08`

   `108091-03`

2. Install Java 2 SDK per Sun's installation instructions (`http://java.sun.com/products/jdk/1.2`) on the application server. If necessary, remove the old SDKs. Also, install any required Solaris patches for the SDK.

3. Ensure a decompression tool, such as GNU's `gzip`, is installed on the application server and database server. `gzip` is available at `http://www.gnu.org`.

4 Unzip / decompress and extract all 3rd party software distribution files.

5 Ensure each server has static IP address and DNS name entry.

6 Ensure a web browser is installed on the servers.

Note: It is recommended to create a new Solaris user account (eniku) and group (niku) to own, install, and run the eNiku application. Specifically, Netscape and Fulcrum should be installed as root and owned by the niku group. JRun and eNiku should be installed by the eNiku user and also owned by the niku group. The niku group should have write access to the following directories and their sub-directories:

- <path to eNiku install dir>

- /local/fulcrum

- /local/jrun

- /local/netscape/suitespot

- /tmp

You must modify the permissions of these directories after each third party product is installed, before moving on to the next step.

Installation Overview

The installation process consists of these steps:

1 Pre-Installation steps (listed previously)

2 Installing Fulcrum

3 Installing and Configuring Netscape Enterprise Server

  a Installing Netscape Enterprise Server 3.6

  b Configuring Netscape Enterprise Server 3.6

4 Installing the Servlet Engine

  a Install Jrun

  b Upgrading JRun

5. Preparing the RDBMS
    a. Installing Oracle Software
    b. Configure Oracle Client
6. Create the Java Policy File
7. Installing eNiku
8. Installing Crystal Reports
9. Post Installation Tasks
    a. Configure Netscape
    b. Configure Jrun
10. Remote Client Installation
11. Customize the Crystal Reports Web Server
12. Removing the Crystal Reports Web Server
13. Configuring the Secure Socket Layer (SSL)

2 Installing Fulcrum

Overview

This chapter explains how to install the Fulcrum Search engine from the eNiku product CD to the application server.

Installing the Fulcrum Search Engine

Read all the screen prompts as you perform the steps below:

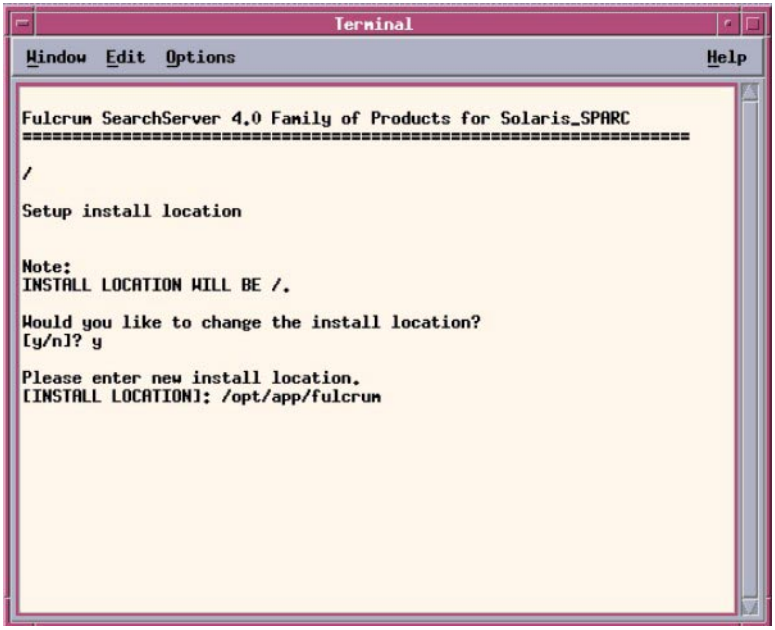
1. Create the install directory for Fulcrum:

   ```
   $mkdir /local/fulcrum
   ```

2. Run install script:

   ```
   $./<fulcrum files>/unix/solaris/ssinstal.sh
   ```

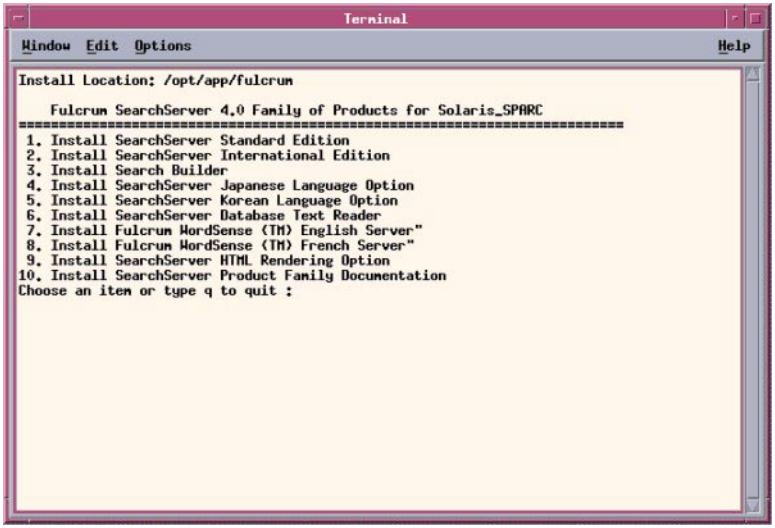
Note: This installation script is located on the eNiku installation CD.



3 Type **y** to change install location to:

`/local/fulcrum`

4 Press **Enter**.



5 Select **SearchServer International Edition** from the Fulcrum product list menu, and press **Enter**.

6 Enter the license key found on the **`LicenseKeyReadMe.txt`** file.

7 Select **Fulcrum WordSense English Server** from the product list menu and press **Enter**.

8 Type **q** to skip exit installation program.

9 Add the following lines to `.profile`:

```
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/openwin/lib:/usr/
dt/lib:/local/fulcrum/lib

PATH=$PATH:/local/fulcrum/bin

export LD_LIBRARY_PATH PATH
```

3 Installing and Configuring Netscape Enterprise Server

Overview

This chapter lists the steps to install and configure Netscape Enterprise Server (NES) on the server before installing eNiku.

Note: All required third party software products must be installed before you install eNiku. The eNiku installation program does not detect the presence or absence of the third party software.

Installing Netscape Enterprise Server

Netscape Enterprise Server Installation Requirements

1. A minimum of 115MB of hard disk space is required for Netscape Enterprise Server files.
2. To administer the server, you will need Netscape Navigator or Navigator Gold 3.0 or later.
3. Enable Java and JavaScript in Netscape Navigator for Server administration.

4 Create a Solaris user (`nsuser`) and group (`nsgroup`). The `nsuser` and `nsgroup` names are suggested by Netscape.

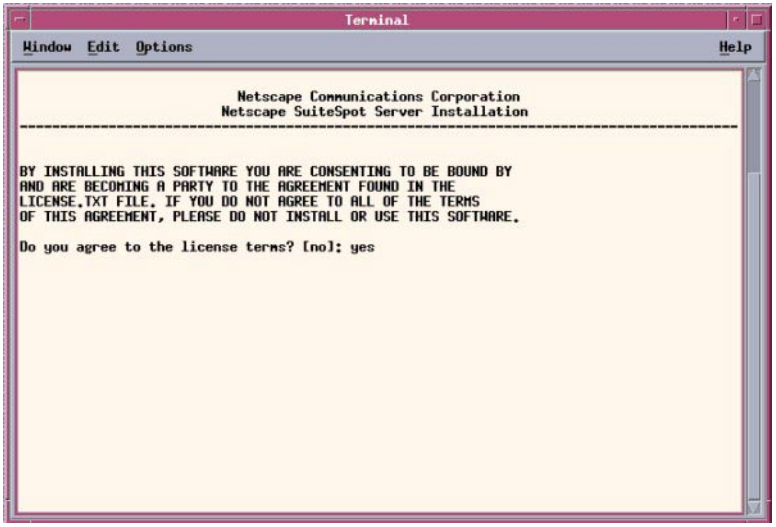
To install Netscape Enterprise Server

Read all the screen prompts as you perform the steps below:

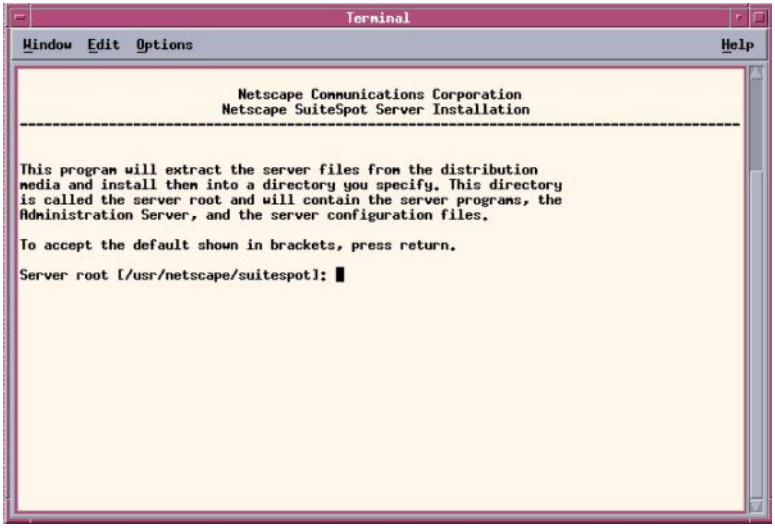
Note: If you are upgrading from an earlier version of Netscape Enterprise Server, you need to stop your existing Administration and Enterprise Servers before starting to install Enterprise Server 3.6.

1 If not already done, unpack Netscape Enterprise Server installation files.

2 Run `./ns-setup` script to start the server installation.



3 Accept the software license agreement. Type **yes** and press **Enter**.



4 Enter the **server root directory**:

`/local/netscape/suitespot`

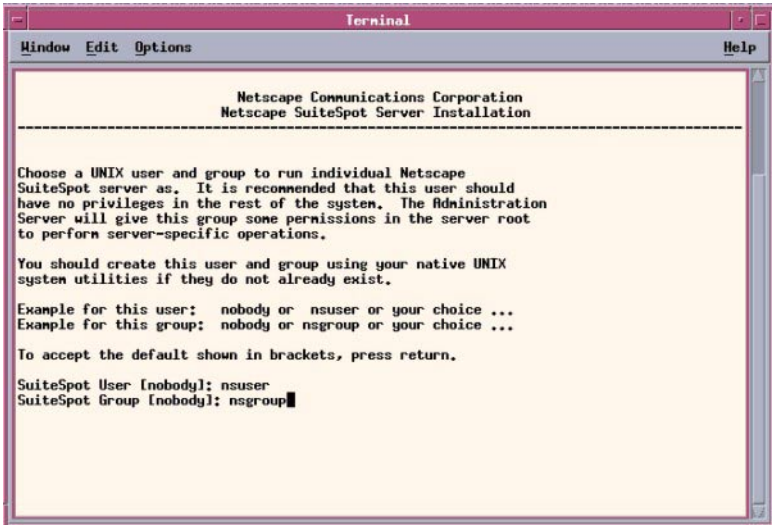
or

press **Enter** for default.

5 Enter the **application server name** (hostname)

or

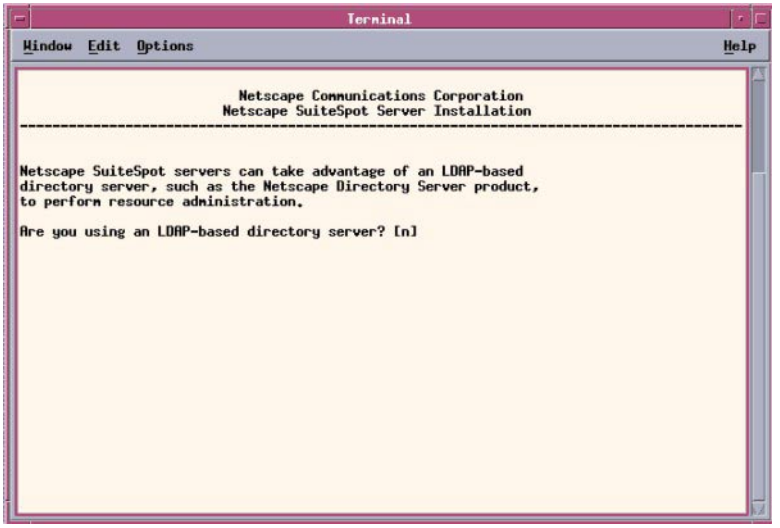
accept the default name by pressing **Enter**.



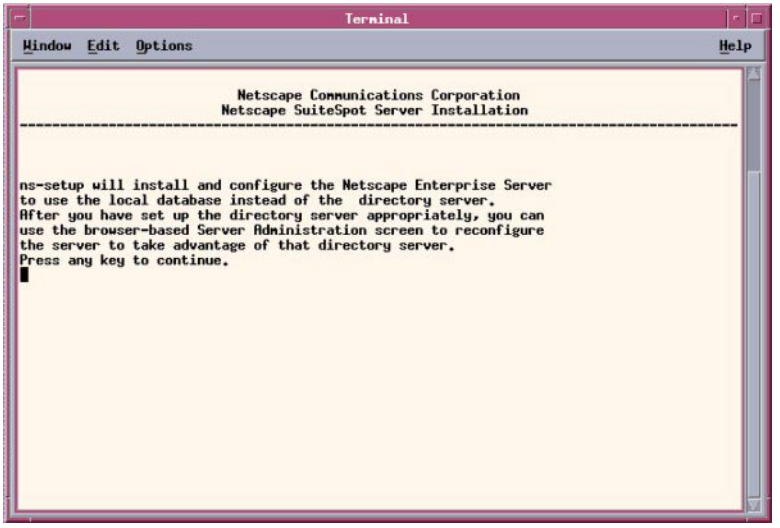
6 Enter **Netscape Enterprise Server user name** and **group name**

or

to accept the defaults of **nsuser** for user name and **nsgroup** for group name, press **Enter**.

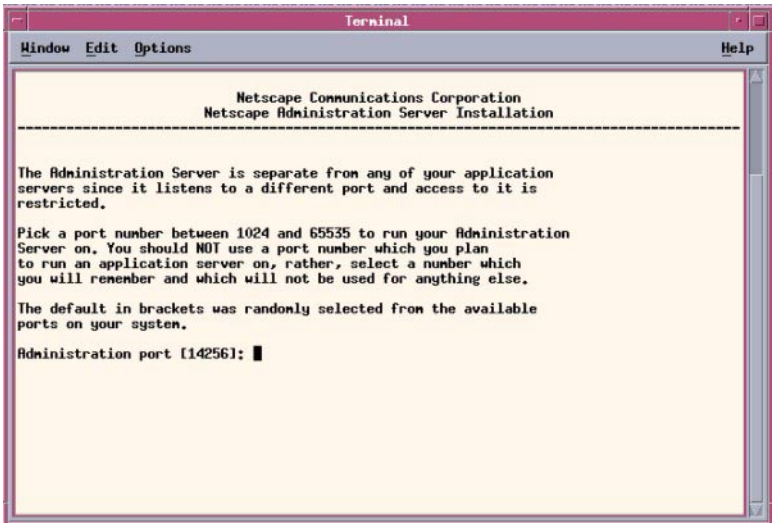


7 At the **LDAP server** prompt type **n** for **no** and press **Enter**.



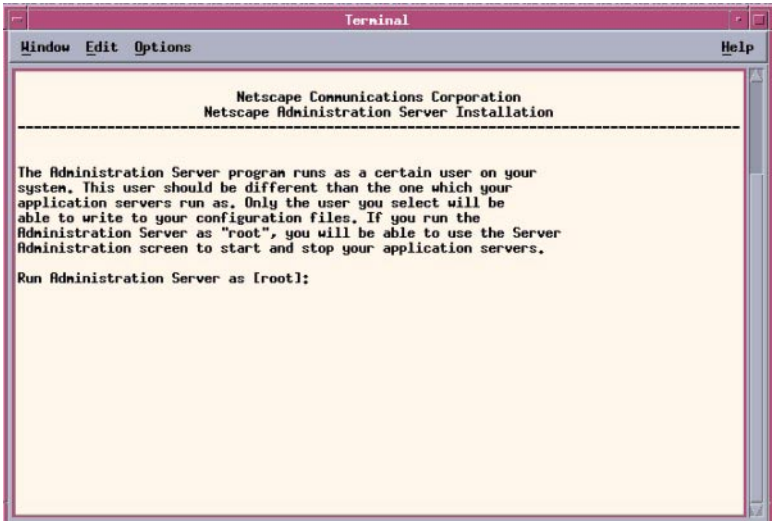
8 Press any key to confirm and continue.

9 Wait for the files to extract.



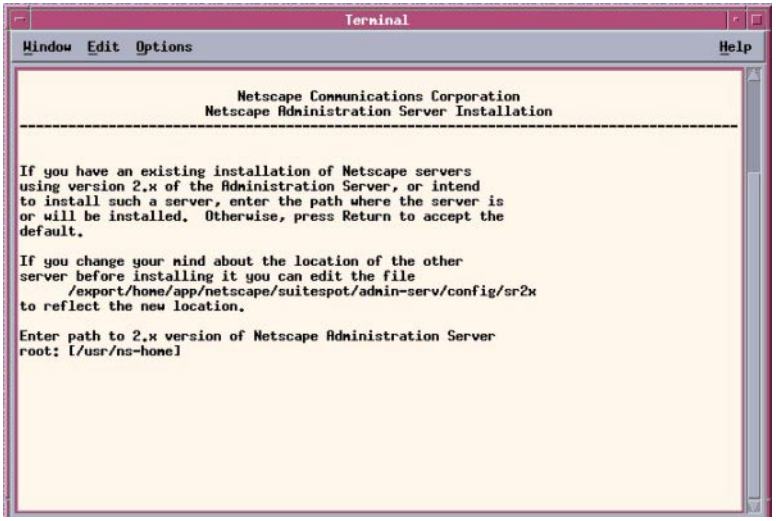
10 Enter the **administration server port number**. An example is shown above.

11 Press **Enter**.



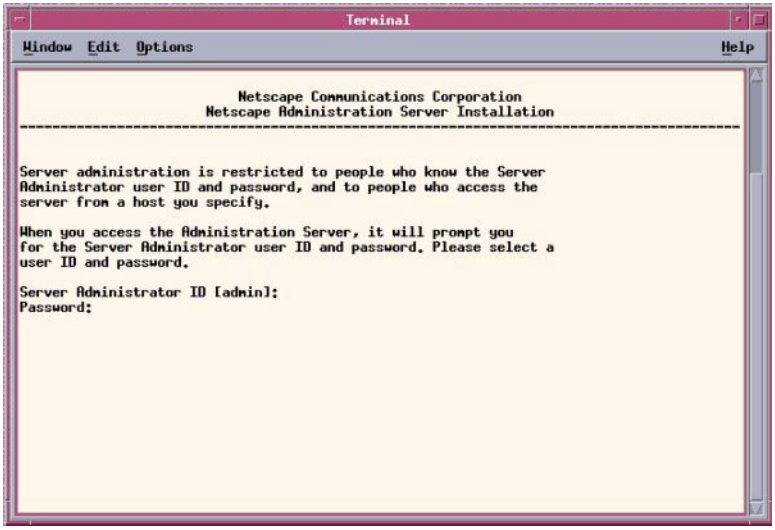
12 If you want the admin server to run as root, accept the default as shown above. Otherwise, enter the username of the user as whom you would like to run the admin server.

13 Press **Enter**.



14 If upgrading from a previous version of Netscape Enterprise Server, enter the current install directory. Otherwise, accept the default.

15 Press **Enter**.



16 Enter the **Server Administrator ID** (default is `admin`) and **password**.

17 Press **Enter**.

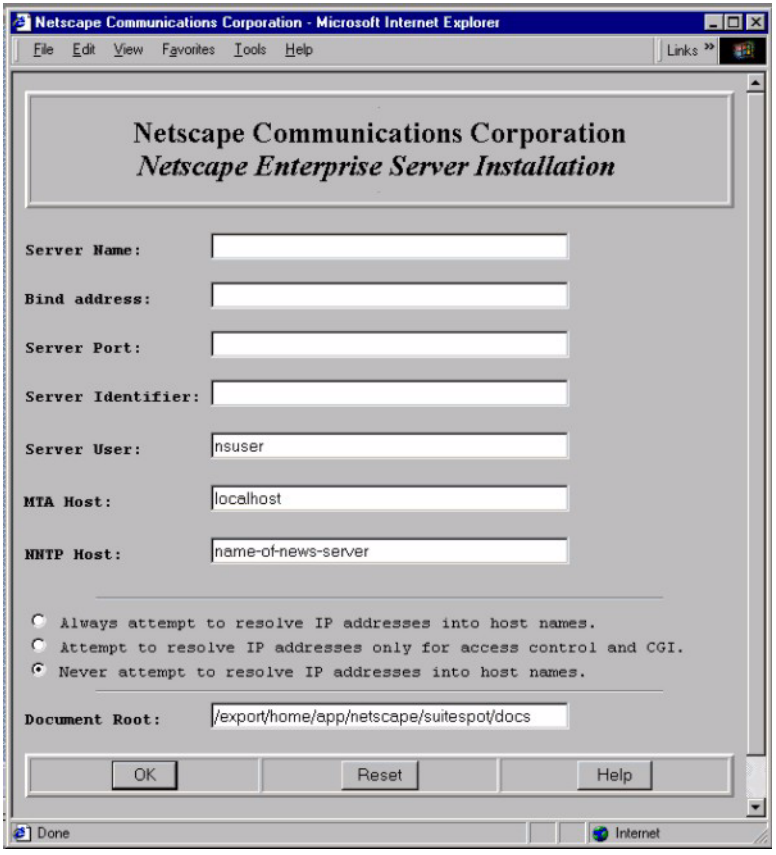
18 The installation program writes the parameters in the administration server configuration files and starts the administration server. Press any key to continue with the installation.

You are now ready to configure your new web server. A prompt appears, asking you for the name of your web browser; the default is **Netscape Navigator**.

Configuring Netscape Enterprise Server

To complete the installation, you must configure your server using the administration server's Server Administration page. You must now start your browser and point it to `http:\\<app server name>:<admin port number>`.

1 On the Netscape Server Administration page, click **Create New Netscape Enterprise Server 3.63**.



2 In the **Server Name** field, type the fully qualified application server name.

3 In the **Bind address** field:

If your web server will be accepting requests on different IP Address, then type in the IP Address that this server instance should listen to.

or

Leave this field blank if you are not planning to have this system accept requests on different IP Addresses.

4 Enter `80` in the **Server Port** field.

5 In the **Server Identifier** field, type the server identifier that the administration server will use for your web server. The server identifier should contain no spaces or slashes. This identifier will also be used as the name for the directory in your server root where configuration files are stored

6 In the **Server User** field, type the user name you want the server to run as:

```
nsuser
```

7 In the **MTA Host** field, accept the default:

```
localhost
```

8 Leave the **NNTP Host** field blank.

9 Leave the default setting on the resolving IP Addresses radio buttons.

10 Leave the **Document Root** field as is.

11 Click **OK** to finish Server configuration.

12 Click **Return to Server Administration** to verify that new Netscape Enterprise Server has been created.

13 Click the **ON** button to start the server to verify successful installation.

14 You should get a message stating that the installation succeeded. Click **OK**.

15 Press the **OFF** button on the **Netscape Server Administration** page to shut down the server.

4 Installing the Servlet Engine

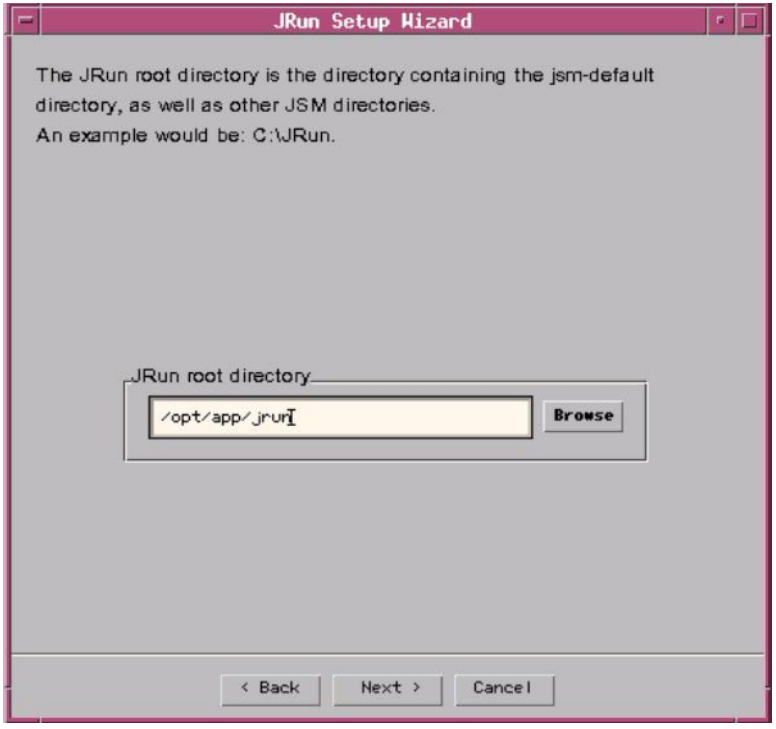
Overview

This chapter explains how to install the Servlet Engine.

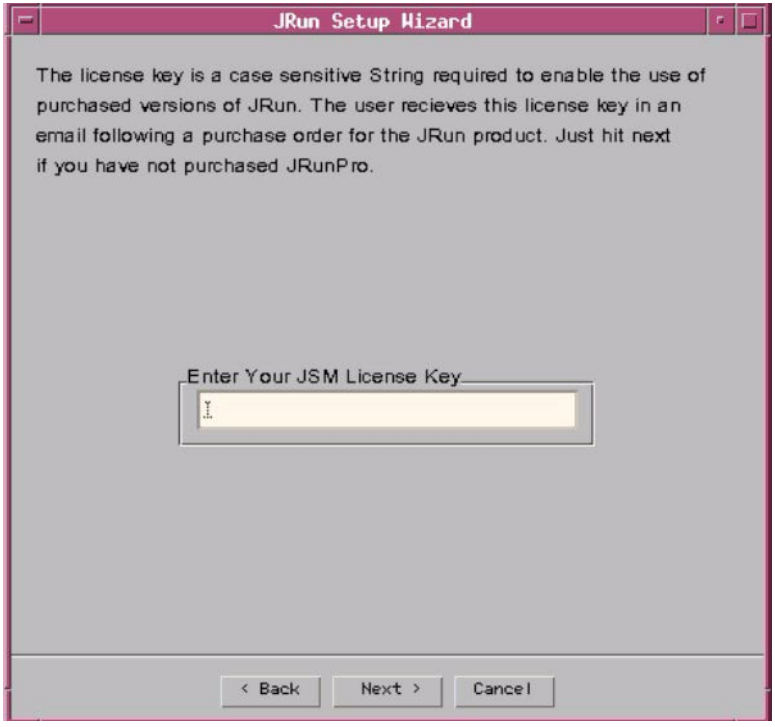
Install JRun

Read all the screen prompts as you perform the steps below:

1. Ensure Netscape Enterprise Server and Server Administration are stopped.
2. If not already done, unpack the JRun archive and move the `jrun` folder to `/local/jrun`
3. Run the `$./local/jrun/install.sh` script:
4. Type **y** to start **JRun Setup Wizard** (GUI)

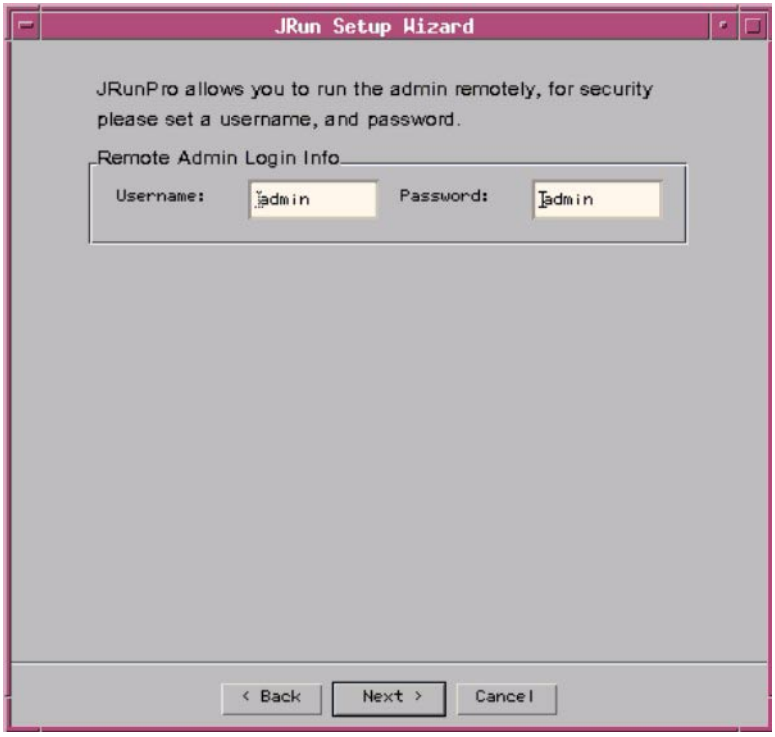


5 At the **JRun root directory** prompt, enter `/local/jrun` and click **Next**.



6 At the **JSM License Key** prompt, enter the Key found in the **`LicenseKeyReadMe.txt`** file and click **Next**.

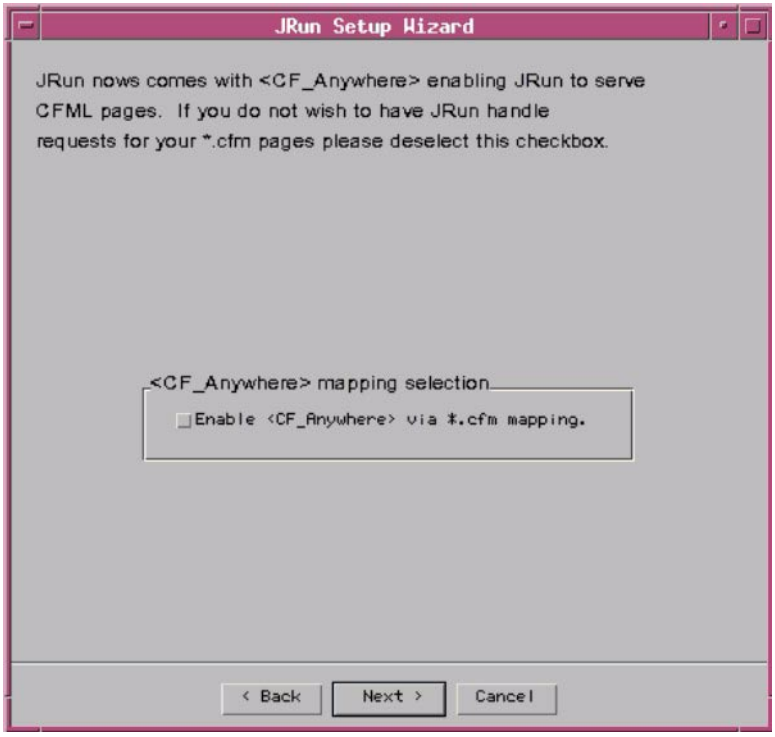
Note: The LiscenceKeyReadMe.txt file is on your eNiku installation CD.



7 In the **Username** field, leave the default (`admin`) or enter a username.

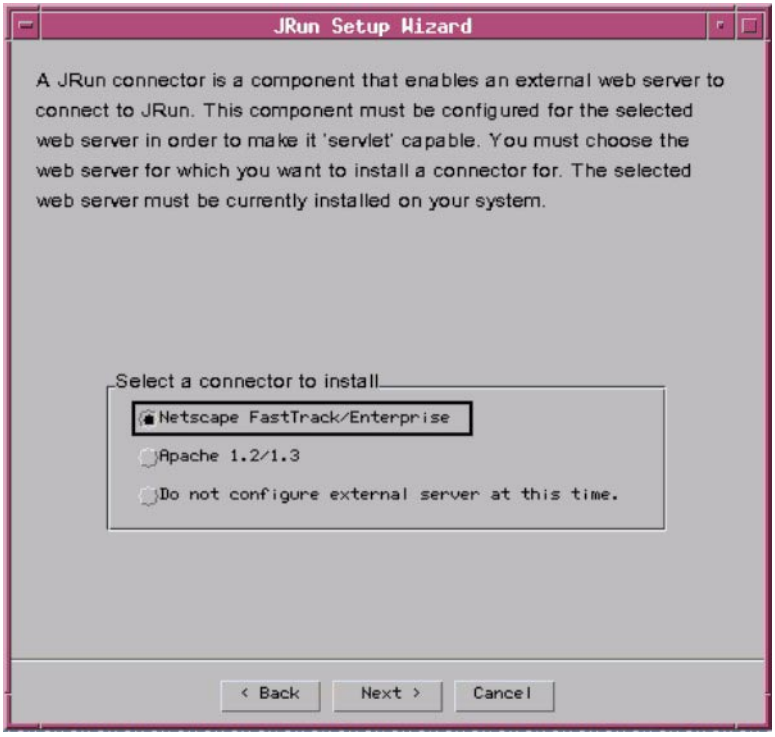
8 At the **Password** field, leave the default (`admin`) or enter a password.

9 Click **Next**.

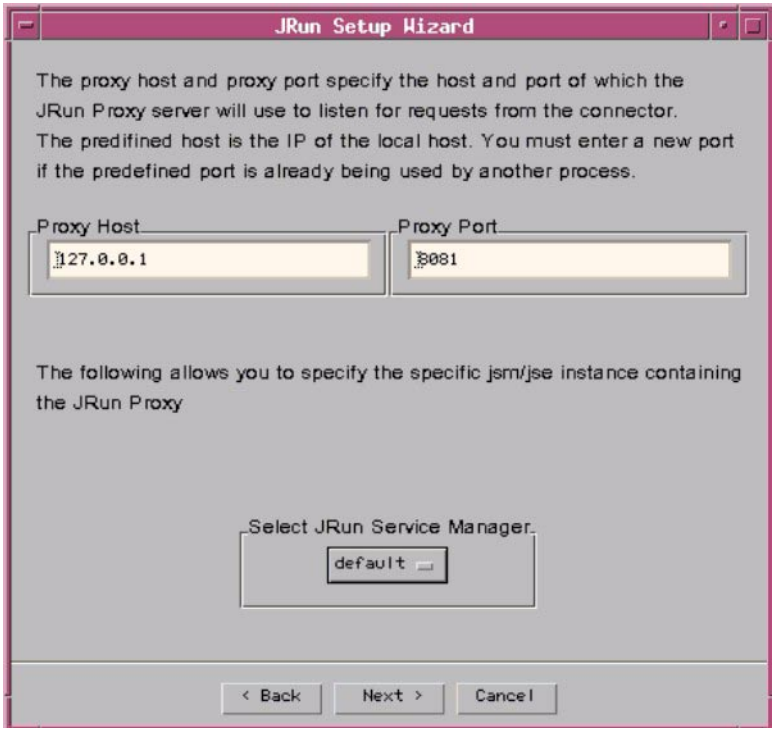


10 At the **Enable Cold Fusion (CF_Anywhere)** prompt, de-select the checkbox and click **Next**.

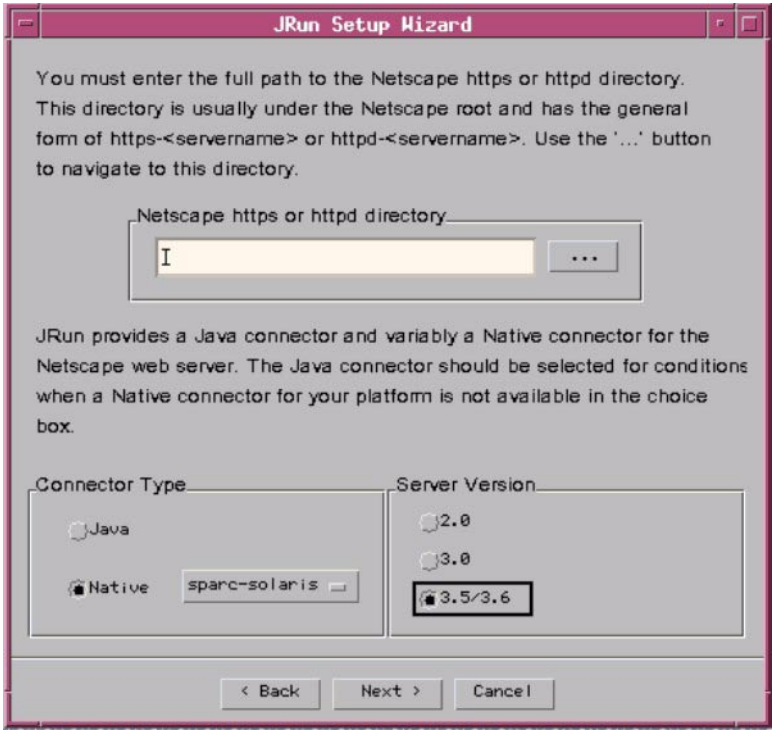
11 At the **JSP Version mapping** prompt, select **JSP 1.0.** and click **Next**.



12 At the **Web Server Connector** prompt, select **Netscape FastTrack/ Enterprise** and click **Next**.



13 At the **Proxy Host**, **Proxy Port**, and **JRun Service Manager** prompts, accept all the defaults and click **Next**.



14 At the **Netscape https directory** prompt, enter `/local/netscape/suitespot/https-<app server hostname>`.

15 At the **Connector Type** field, select **Native**.

16 At the **Server Version** field, select **3.5/3.6**.

17 Click **Next**. Installation is complete.

5 Preparing the RDBMS

Overview

This chapter describes starting the Installer and creating a new Oracle8 Server installation.

Note: This chapter is intended to provide an overview of how Oracle8 installation fits into the overall eNiku installation process and is not intended to replace your Oracle8 documentation. To obtain more detailed information regarding Oracle8 installation, refer to the *Oracle8 Installation Guide Release 8.0.5 for Sun SPARC Solaris 2.x*. at `http://technet.oracle.com` under the documentation link.

System Installation Requirements

Verify that your system meets the installation requirements before you install the Oracle8 Server.

Hardware Requirements

Hardware	Requirements
Memory	A minimum of 32 MB RAM is required. 128 MB is recommended if you are using the ConText Cartridge.
Swap Space	In general, three times the amount of RAM is recommended. In systems with large amounts of memory (more than 1 GB), this can be reduced to two times the amount of RAM or less.
Disk Drives	At least four devices: one for the Oracle software distribution and three for creating an OFA-compliant database. **Note:** To improve performance and fault tolerance, Oracle Corporation recommends that disk space be spread across many, smaller drives, rather than a few, large drives.
Disk Space	At least 600 MB is required when installing the entire Oracle8 Server distribution. Less space is required if installing only a subset of the available products.
CD-ROM Device	A CD-ROM drive supported by Solaris is required. Oracle uses High Sierra or ISO 9660 format CD-ROM disks with RockRidge extension.

UNIX Environment Summary

The following table summarizes the environmental requirements for installing the Oracle8. Server.

Environmental Factor	Requirement for Oracle
UNIX Kernel Parameters	SHMMAX 4294967295 This setting does not affect how much shared memory is needed or used by Oracle, or the operating system. It is used only to indicate the maximum allowable size. This setting also does not impact operating system kernel resources. SHMMIN 1 SHMMNI 100 SHMSEG 10 SEMMNS 200 SEMMNI 70 SEMMSL Equal to or greater than the value of the PROCESSES initialization parameter.
Mount Points (Storage Devices)	At least four mount points, all at the same level of the directory structure. One is for the software, three are for an OFA-compliant database.
UNIX Groups for Oracle Roles	A UNIX group is required for the OSDBA role, and is usually named `dba`. The OSOPER role may belong to the same group as the OSDBA, or it may belong to a different group.
UNIX Accounts	A UNIX account dedicated solely to installing and upgrading the Oracle system. The account must be a member of the group used by OSDBA.
Local `bin` directory	A directory for software shared among Oracle users. The default location for this directory on Solaris 2.x is `/opt/bin`.
`oratab` file	Contains information about Oracle instances.

Environmental Factor	Requirement for Oracle
Permissions for File Creation	Set `umask` to `022`.
DISPLAY	Set to the machine name and monitor of the station from which you are connecting to the server machine.
LD_LIBRARY_PATH	Required for Oracle products using shared libraries. Must include `$ORACLE_HOME/lib`.
ORACLE_BASE	Not required, but recommended as part of an OFA-compliant installation.
ORACLE_HOME	Set to the directory where the Oracle software will be installed.
ORACLE_SID	Specifies the instance name, or `sid` of the Oracle Server. Must be unique for Oracle instances running on same machine. Oracle Corporation recommends using four characters or fewer.
ORACLE_TERM	Required by all character mode and Motif mode Oracle products.
ORA_NLS33	Required when creating a database with character set other than US7ASCII. Set to `$ORACLE_HOME/ocommon/nls/admin/data`.
PATH	The search path must include all of the following: `$ORACLE_HOME/bin`, `/bin`, `/opt/bin`, `/usr/bin`, and `/usr/ccs/bin` **Note:** If you require `/usr/ucb` in your search path, place it after `/usr/ccs/bin` in the search order.
SRCHOME	Should be undefined when running the Installer. If SRCHOME is set, the Installer defaults to the location it specifies as the source of software to install.

Environmental Factor	Requirement for Oracle
TWO_TASK	Should be undefined when installing the Oracle8 Server.
TMPDIR	A directory with at least 20 MB available space where the *oracle* account has write permission. The default location on Solaris 2.x is `/var/tmp`.

Running the Installer

Perform the following tasks to run the Installer:

- Mount the Product Installation CD-ROM
- Start the Installer

Mount the Product Installation CD-ROM

The Oracle Product Installation CD-ROM is in RockRidge format. If you are using Solaris Volume Management software (available by default on Solaris 2.x), the CD-ROM is mounted automatically to `/cdrom/oracle` when you put it into the disk drive, and you can proceed to Start the Installer.

If you are not using the Solaris Volume Management software, you must mount the CD-ROM manually. You must have `root` privileges to mount or unmount the CD-ROM manually. Be sure to unmount the CD-ROM before removing it from the drive.

1. Place the Product CD-ROM in the CD-ROM drive.
2. Log in as `root` user and create a CD-ROM mount point directory:

   ```
   $ su root
   # mkdir cdrom_mount_point_directory
   ```

3. Mount the CD-ROM drive on the mount point directory and exit the root account:

   ```
   # mount options device_name cdrom_mount_point_directory
   # exit
   ```

Example of Mounting the CD-ROM Without Using Solaris Volume Management software:

```
$ su root
# mkdir /cdrom
# mount -r -F hsfs device_name /cdrom
# exit
```

Start the Installer

The Installer can be run in either Motif mode or character mode. To start the Installer:

1. Log in as `oracle` user.
2. Type `cd` *`cdrom_mount_point_directory`*`/orainst` at the command prompt.
3. Start the Installer by entering `./orainst` for character mode, or `./orainst /m` for Motif mode. If you are using Motif mode, make sure you set the **DISPLAY** to your current workstation.

Warning! Do not run the Installer as the `root` user.

Navigating in Character Mode

Use the **Tab** key to move to next block.

Use the **Arrow** keys to move between fields.

Use the **Spacebar** to select the current field.

Non-Interactive Installations

The Installer can record responses from one installation session and use those responses for subsequent installations. This “silent mode” can be useful for performing numerous, similar installations. See *Appendix A, Using the Oracle Installer*, in the *Oracle8 Installation Guide Release 8.0.5 for Sun SPARC Solaris 2.x* for more information.

Installing Oracle8

1. At the **Install Type** screen, select **Custom Install** and press **O** for **OK**.
2. At the **Installation Activity Choice** screen, select **Install, Upgrade, or De-install Software** and press **O** for **OK**.
3. At the **Installation Options** screen, select **Install New Products - Create DB Objects** and press **O** for **OK**.
4. At the **Environment Variables** screen, accept defaults and and press **O** for **OK**.
5. At the **Logging and Status** screen, accept defaults and and press **O** for **OK**.
6. At the **Install Source** screen, select **Install from CD-ROM** and press **O** for **OK**.
7. At the **Oracle SID** screen, enter **Niku** and press **O** for **OK**.
8. At the **NLS** screen, select **American/English** and press **O** for **OK**.
9. At the **Information** screen, press **O** for **OK**.
10. At the **Software Asset Manager** screen, select **Oracle8 Enterprise (RDBMS)**, **Oracle8 JDBC Drivers**, and **SQL*Plus 8.0.5.0.0** and press **I** for **Install**.
11. At the **DBA Group** screen, select **dba** and press **O** for **OK**.
12. At the **OSOPER Group** screen, enter **dba** and press **O** for **OK**.
13. At the **Create DB Objects: Storage Type:**, select the correct storage type for your system and press **O** for **OK**.
14. At the **Create DB Objects (F/S): Control File Distribution** screen, press **N** for **NO**.
15. At the **Create DB Objects (F/S): Mount Point Locator** screen, enter `opt/app/oracle/product/8.0.5` and press **O** for **OK**.
16. At the **Character Set** screen, select **US7ASCII** and press **O** for **OK**.
17. At the **National Character Set** screen, select **US7ASCII** and press **O** for **OK**.
18. At the **SYS Password** screen, enter in the password (default is `change_on_install`) and press **O** for **OK**.

Note: For security reasons, your input will not be echoed. After you type in the password, you will be prompted to re-enter the password for confirmation.

19 Re-enter the password for confirmation and press **O** for **OK**.

20 At the **dba Password** screen, press **Y** for **Yes**.

21 At the **orapwd entries value** screen, enter `5` and press **O** for **OK**.

22 At the **TNS Listener Password** screen, enter in the password (for example, `manager`) and press **O** for **OK**.

Note: For security reasons, your input will not be echoed. After you type in the password, you will be prompted to re-enter the password for confirmation.

23 Re-enter the password for confirmation and press **O** for **OK**.

24 At the **Configure MTS and start SQL*Net Listener ?** screen, press **N** for **No**.

25 At the **Create DB Objects (F/S): Control File Locator** screen, press **Y** for **Yes**.

26 At the **DB Defaults** screen, press **O** for **OK**.

27 At the second **DB Defaults** screen, press **O** for **OK**.

28 At the **Default Database** screen, press **N** for **No**.

29 At the **Create DB Objects (RAW): System File Locator** screen, press **O** for **OK**.

30 At the **SYSTEM Data File Size** screen, enter `100M` and press **O** for **OK**.

31 At the **Create DB Objects (F/S): Redo Log Locator** screen, press **O** for **OK**.

32 At the **Redo Log File Size** screen, enter `5120K` and press **O** for **OK**.

33 At the second **Create DB Objects (F/S): Redo Log Locator** screen, press **O** for **OK**.

34 At the second **Redo Log File Size** screen, enter `5120K` and press **O** for **OK**.

35 At the third **Create DB Objects (F/S): Redo Log Locator** screen, press **O** for **OK**.

36 At the third **Redo Log File Size** screen, enter `5120K` and press **O** for **OK**.

37 At the **Create DB Objects (F/S): Rollback Segment File Locator** screen, press **O** for **OK**.

38 At the **Rollback Segment File Size** screen, enter `15M` and press **O** for **OK**.

39 At the **Create DB Objects (F/S): Temporary Segment File Locator** screen, press **O** for **OK**.

40 At the **Temporary Segment File Size** screen, enter `50M` and press **O** for **OK**.

41 At the **Create DB Objects (F/S): USER Data File Locator** screen, press **O** for **OK**

42 At the **USER Data File Size** screen, enter `3M` and press **O** for **OK**.

43 At the **Create DB Objects (F/S): TOOLS Data File Locator** screen, press **O** for **OK**

44 At the **TOOLS Data File Size** screen, enter `25M` and press **O** for **OK**.

45 At the **DB Defaults** screen, press **O** for **OK**.

46 At the second **DB Defaults** screen, press **O** for **OK**.

47 At the **Default Database** screen, press **Y** for **Yes**.

48 At the **LSM Question** screen, press **N** for **No**.

49 At the **Installer Actions Completed** screen, press **O** for **OK**.

50 At the **Software Asset Manager** screen, press **X** for **Exit**.

Configuring the Oracle8 System

You must perform certain post-installation steps and configure the Oracle8 system after completing the Installer session.

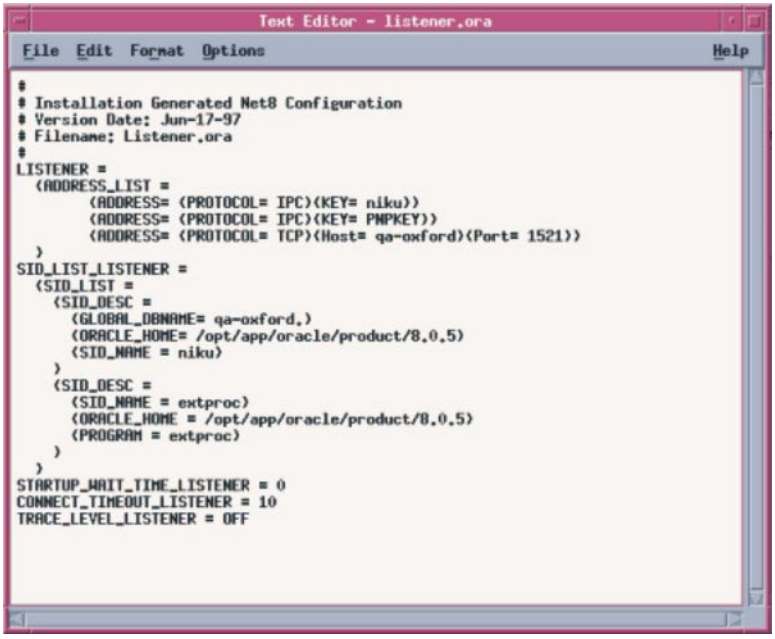
Tasks to Perform as the root User

Log in as the `root` user and perform the following tasks:

1. Run the `root.sh` script.
2. Run the `catrep.sql` script.

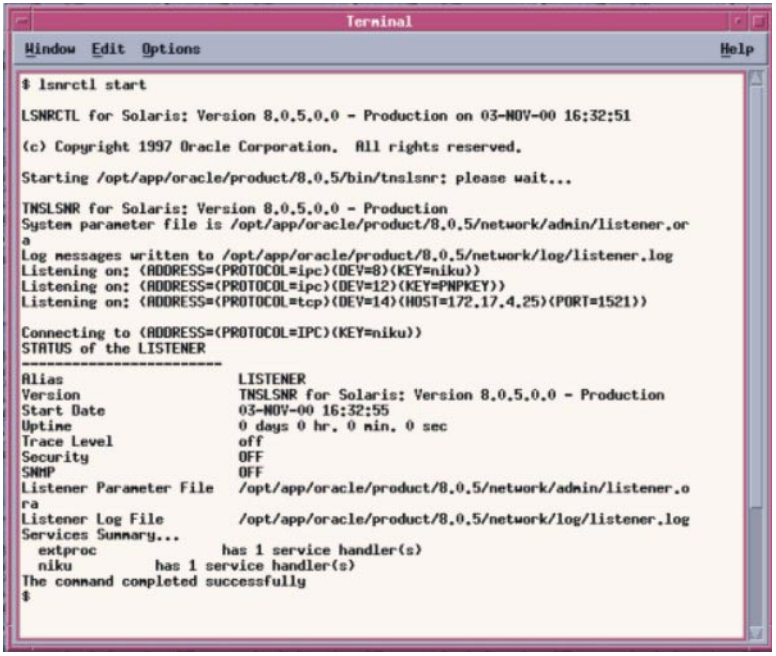
Post-Installation Steps for Oracle Net8

The Installer creates a basic listener.ora file for the Server and places it in the `$ORACLE_HOME/network/admin/` directory. The file specifies a `TCP/IP` listener on port number `1521`.



1 Check the status of the listener.

```
$ lsnrctl status
```



2 If the listener is not running, start it up:

```
$ lsnrctl start listener
```

Create Niku Oracle Service

To Create Niku Oracle Service:

1 Run the Oracle Net 8 Assistant: `$ORACLE_HOME/bin/net8asst.sh`

2 Click **Service Names**, then choose **Edit**, **Create**.

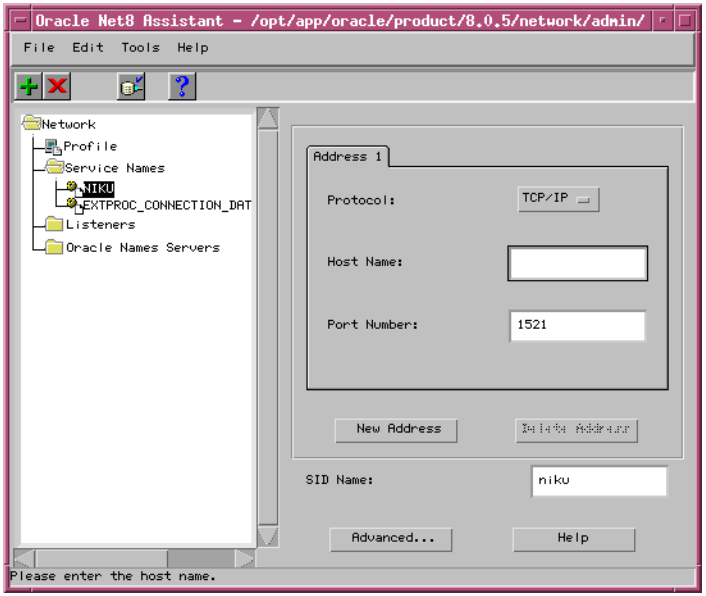
3 Enter niku for the service name.

4 Choose TCP/IP for the network protocol.

5 Enter the host name of the database server. Enter 1521 for the port number.

6 Enter niku for the database SID.

7 Click **Finish**. When completed, the Service Names screen should appear as follows:



Edit initniku.ora File

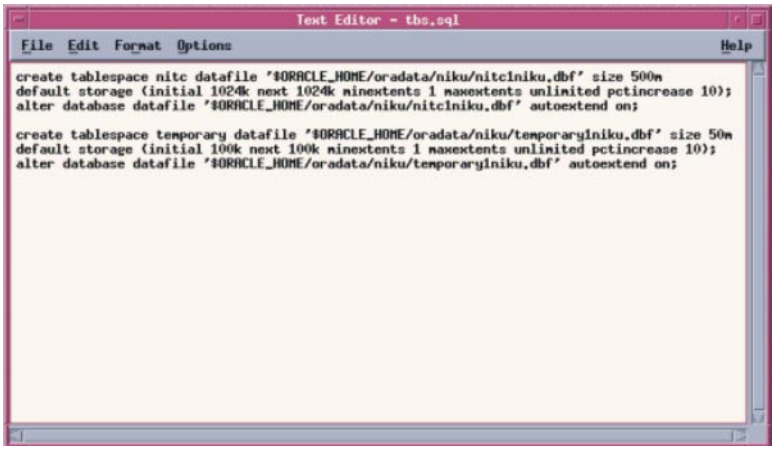
To edit the initniku.ora file:

1 Open `$ORACLE_HOME/dbs/initniku.ora` file

2 Add the following line: nls_date_format = `'YYYY-MM-DD HH24:MI'`

3 Save the file.

Create Table Space



1 In your text editor, create the following script and name it `tbs.sql`:

```
create tablespace nitc datafile '$ORACLE_HOME/oradata/
niku/nitc1niku.dbf' size 500m
default storage (initial 1024k next 1024k minextents 1
maxextents unlimited pctincrease 10);

alter database datafile '$ORACLE_HOME/oradata/niku/
nitc1niku.dbf' autoextend on;

create tablespace temporary datafile '$ORACLE_HOME/
oradata/niku/temporary1niku.dbf' size 50m
default storage (initial 100k next 100k minextents 1
maxextents unlimited pctincrease 10);

alter database datafile '$ORACLE_HOME/oradata/niku/
temporary1niku.dbf' autoextend on;
```

2 Run this script:

```
$sqlplus system/manager @tbs.sql
```

6 Create the Java Policy File

Overview

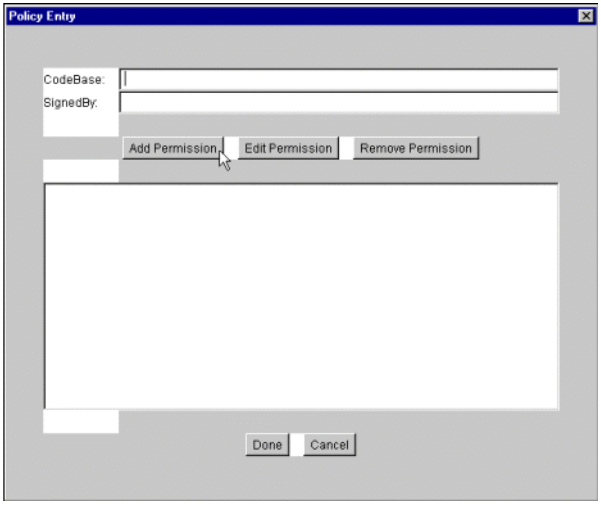
This chapter explains how to create the .java.policy file for the administrator who is installing eNiku 4.1 and other third party software. The software does not function unless the file exists for this user.

Creating the Java Policy File

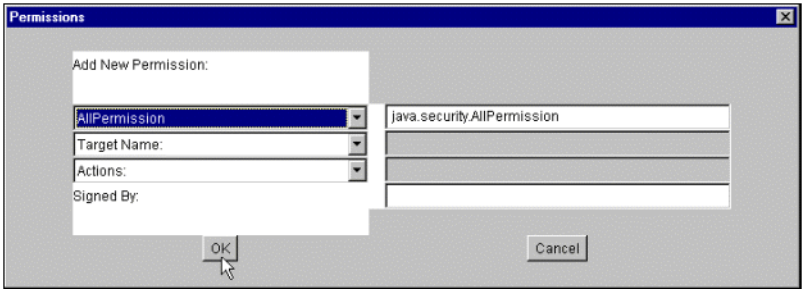
To create the Java Policy File:

1. Run `$JAVA_HOME/bin/policytool`.
2. Click **OK**. The **Java Policy Tool** displays.
3. Click **Add Policy Entry**.

.



4 Click **Add Permission**.



5 Click **All Permission**.

6 Click **OK**.

7 Click **Done**.

8 Save the file. For example:

```
/.java.policy
```

A message displays stating the Java Policy was successfully written to the profile.

9 Click **OK**.

10 Exit the **Java Policy Tool**.

7 Installing eNiku 4.1

Overview

This chapter explains how to install eNiku 4.1. The material contained in this chapter presumes that all third party components are installed. The eNiku installation program does not detect the presence or absence of the third party components. If they have not been installed, go back to Chapter 1 through 6 and install the required third party applications.

Note: eNiku needs to be installed as the application server.

Setup eNiku File Structure and System Variables

Note: Because Crystal Reports run on WindowsNT only, this installation assumes eNiku environment is setup and running on your WindowsNT workstation to support reports.

1 Add the following to your `.profile` file:

   a Add these environment variables

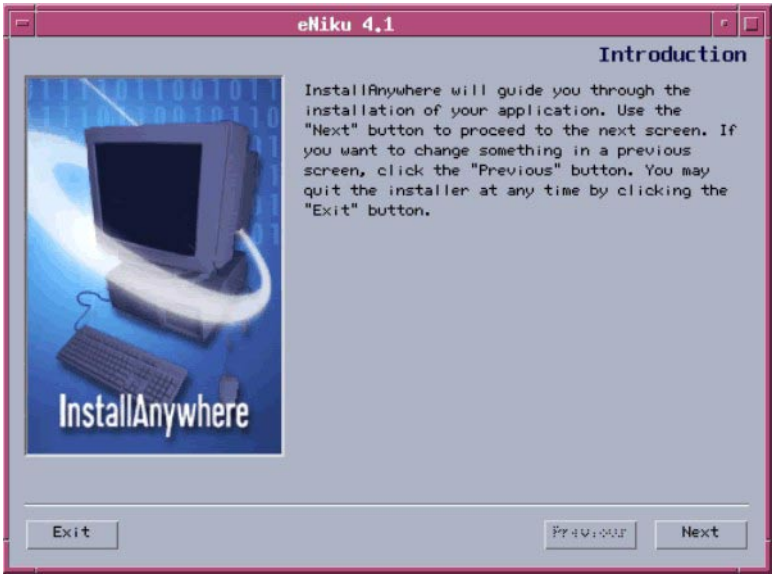
```
ORACLE_SID=niku; export ORACLE_SID
```

```
ORACLE_BASE=<path to Oracle directory>; export
ORACLE_BASE

ORACLE_HOME=$ORACLE_BASE/product/8.0.5; export
ORACLE_HOME

ORAENV_ASK=NO; export ORAENV_ASK
```

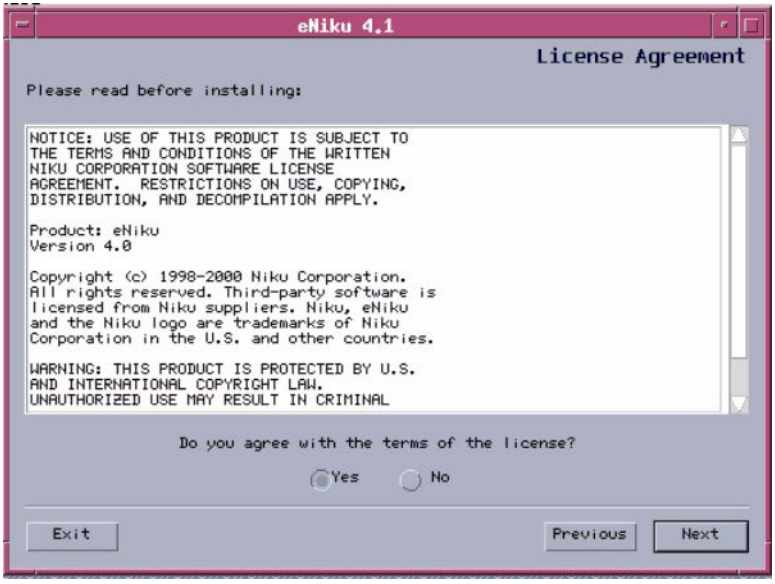
b Add the following to `LD_LIBRARY_PATH`:

```
/usr/ucblib
```

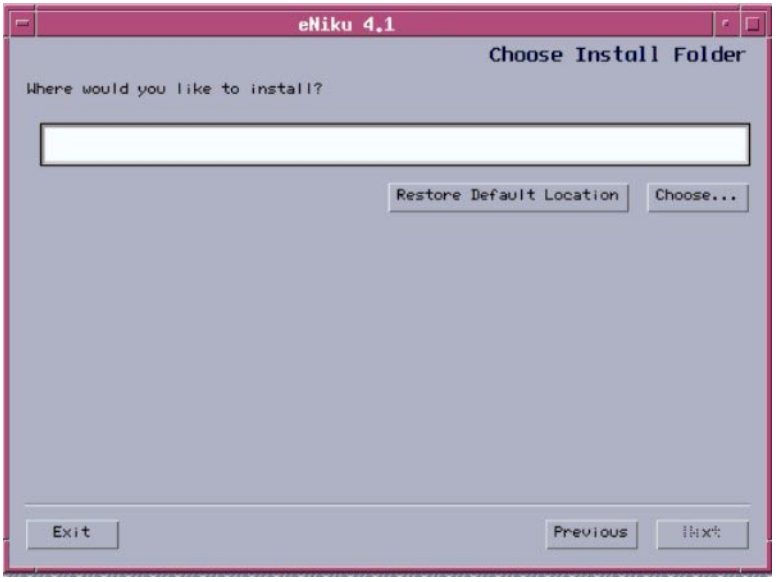
2 Start eNiku 4_1.bin.



3 At the **Introduction** screen, click **Next**.

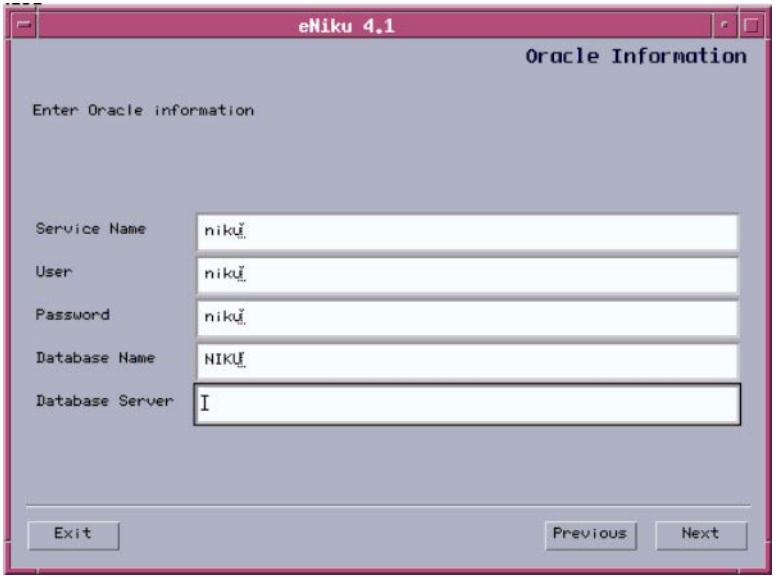


4 At the License Agreement screen, click **Yes** and then click **Next**.



5 Enter the folder path and click **Next**.

6 Choose **Typical eNiku4.1 Install** and click **Next**.



7 Enter the **Service Name** `niku`.

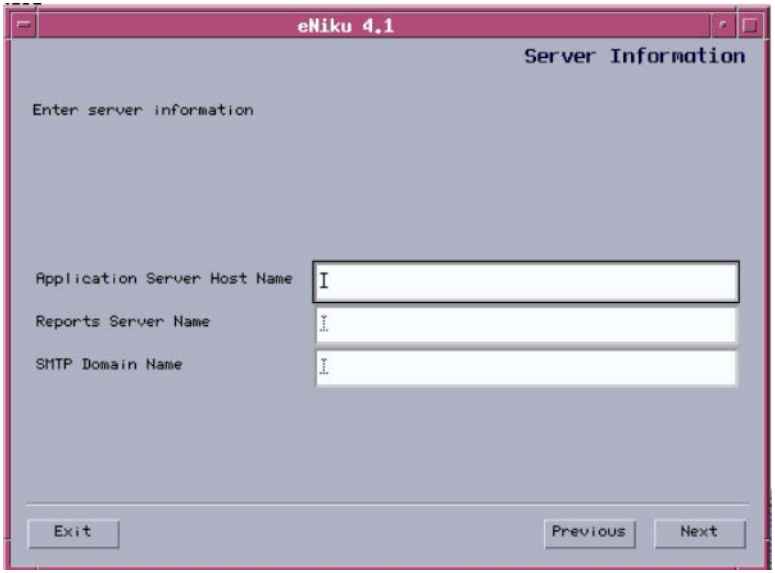
8 Enter the **User** `niku`.

9 Enter the **Password** `niku`.

10 Enter the **Database Name** `NIKU`.

11 Enter the **Database Server** name.

12 Click **Next**.

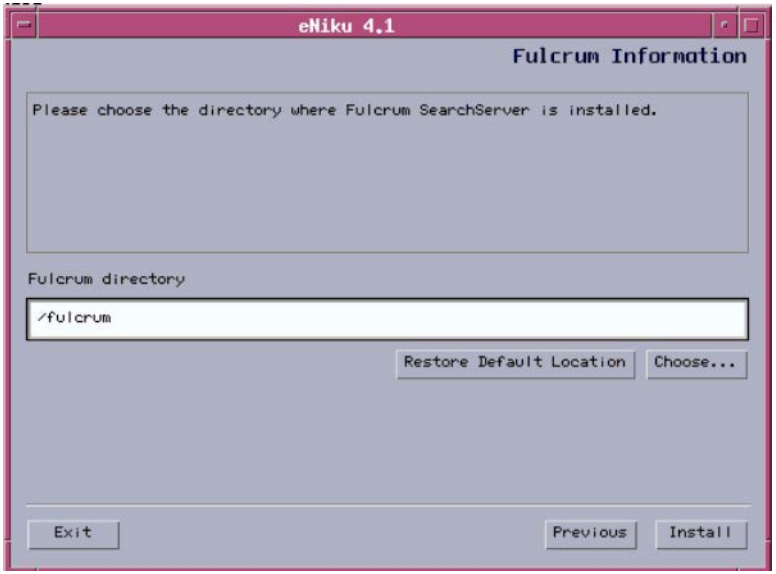


13 In the **Application Server Host Name** field, enter the application server name.

14 In the **Reports Server Name** field, enter the **Crystal** server name.

15 In the SMTP Domain Name field, enter the DNS domain name.

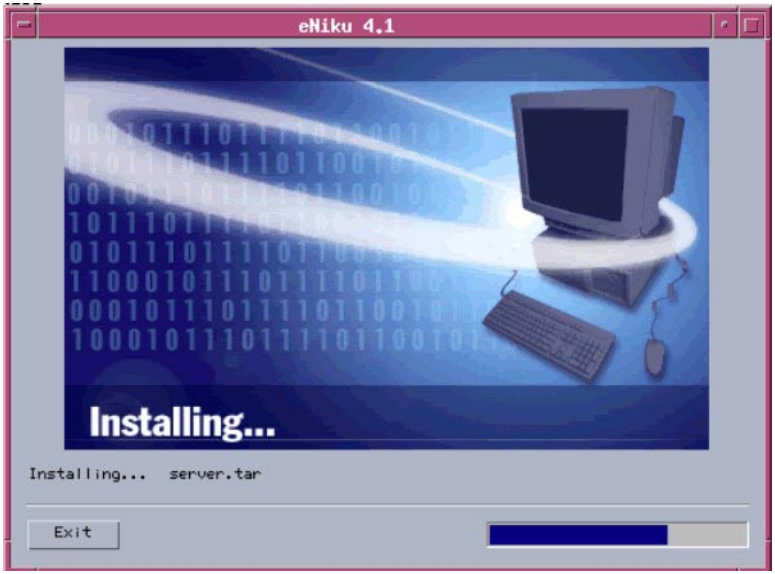
16 Click **Next**.



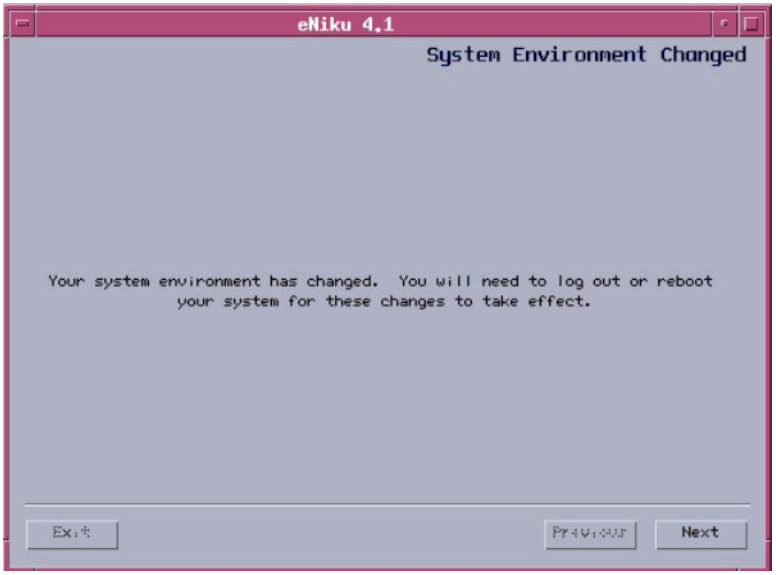
17 In the **Fulcrum directory** field, enter the Fulcrum directory:

`/local/fulcrum`

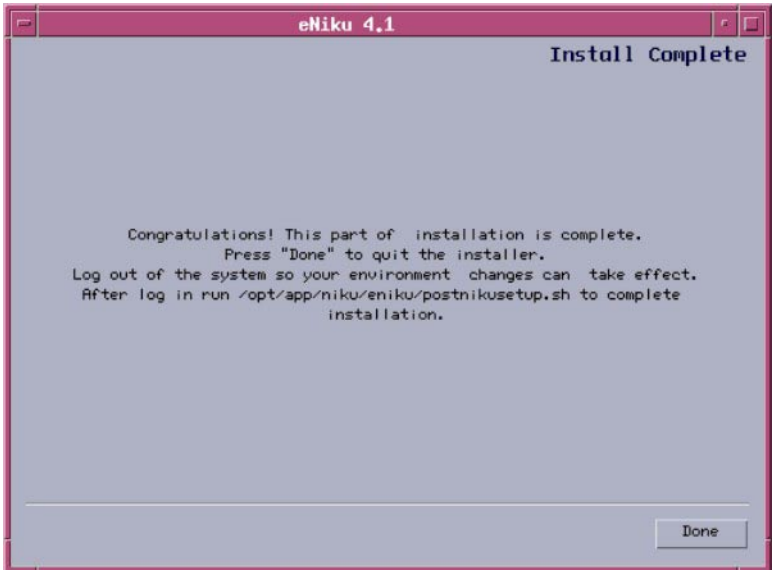
18 Click **Install**.



19 When the **Installing...** screen is finished, click **Exit**.



20 At the **System Environment Changed** screen, click **Next**.



21 At the **Install Complete** screen, click **Done**.

22 Close the terminal window.

23 Logout and log back in for the settings to take affect.

8 Installing Crystal Reports

Overview

The following sections discuss the steps required to install and configure the Crystal Web Report Server Runtime on Windows NT Workstation.

If you plan to create new or to customize existing Crystal Reports, see Appendix C to install and configure Crystal Reports Designer 7 and 8.

Note: Copy the Crystal folder and its contents from the eNiku installation CD to a local directory, For example, D:\Crystal

Configuring the Web Server

For Crystal Reports to function properly, the installed Web Server must be configured to handle report requests from the Crystal Reports server.

Netscape Enterprise Server

The following material discusses the steps required to configured the Crystal Reports Runtime with Netscape Enterprise Server 3.63.

To configure the Netscape Enterprise Server:

1. Shutdown all Netscape Web Server Services from **Start**—**Settings**—**Control Panel**—**Services** and ensure that Netscape Server Administration is not running.
2. Edit the `Netscape obj.conf` file. Under Netscape 3.63 open the following file in Notepad: `<netscape server root>\config\obj.conf`

   For example, `D:\Netscape\SuiteSpot\https-(machinename)\config\obj.conf`
3. Enter this line at the top of the file in one line:

   ```
   Init fn="load-modules"
   funcs="CrystalReportServer"shlib="D:/Crystal/bin/
   crweb.dll"
   ```
4. In `<Object name="default">` section, enter the following lines at the top of the Nametrans section as one line:

   ```
   NameTrans fn="pfx2dir" from="/viewer" dir="D:/Crystal/
   Viewers"
   ```

   ```
   NameTrans fn="pfx2dir" from="/scrreports" dir="D:/<Your
   Nitc Home>/eNiku/reports"
   ```

   For example, `D:\Niku\eNiku\reports`
5. In `<Object name="default">` section, enter the following lines at the top of the Service section as one line:

   ```
   Service fn="CrystalReportServer" method="(GET|POST)"
   type="magnus-internal/rpt"
   ```

   ```
   Service fn="CrystalReportServer" method="(GET|POST)"
   type="magnus-internal/cri"
   ```
6. Save and close the `obj.conf file`. The following is an example of an Obj.conf file with the above lines added:

   ```
   Init fn=flex-init access="D:/Netscape/SuiteSpot/https-
   ta-nt/logs/access" format.access="%Ses->client.ip% -
   %Req->vars.auth-user% [%SYSDATE%] \"%Req->reqpb.clf-
   request%\" %Req->srvhdrs.clf-status% %Req-
   >srvhdrs.content-length%"
   ```

   ```
   Init fn=load-types mime-types=mime.types
   ```

```
Init fn="load-modules" funcs="CrystalReportServer"
shlib="D:/Crystal/bin/crweb.dll"

Init fn="load-modules" shlib="D:/JRun/connectors/nsapi/
intel-win/jrun_nsapi35.dll"
funcs="jruninit,jrunfilter,jrunservice"

Init proxyport="8081" verbose="false"
proxyhost="127.0.0.1" timeout="300" rulespath="D:/JRun/
jsm-default/services/jse/properties/rules.properties"
fn="jruninit"

<Object name=default>

NameTrans fn="pfx2dir" from="/viewer" dir="D:/Crystal/
Viewers"

NameTrans fn="pfx2dir" from="/scrreports" dir="D:/Niku/
eNiku/reports"

Nametrans fn="jrunfilter"

NameTrans fn=pfx2dir from=/ns-icons dir="D:/Netscape/
SuiteSpot/ns-icons"

NameTrans fn=pfx2dir from=/mc-icons dir="D:/Netscape/
SuiteSpot/ns-icons"

NameTrans fn="pfx2dir" from="/help" dir="D:/Netscape/
SuiteSpot/manual/https/ug"

NameTrans fn=document-root root=" d:/niku/nitc/
public_html "

PathCheck fn=nt-uri-clean

PathCheck fn="check-acl" acl="default"

PathCheck fn=find-pathinfo

PathCheck fn=find-index index-
names="index.html,home.html"

ObjectType fn=type-by-extension

ObjectType fn=force-type type=text/plain

Service fn="CrystalReportServer" method="(GET|POST)"
type="magnus-internal/cri"

Service fn="CrystalReportServer" method="(GET|POST)"
type="magnus-internal/rpt"
```

```
Service method=(GET|HEAD) type=magnus-internal/imagemap
fn=imagemap

Service method=(GET|HEAD) type=magnus-internal/directory
fn=index-common

Service method=(GET|HEAD) type=*~magnus-internal/*
fn=send-file

AddLog fn=flex-log name="access"

</Object>

<Object name=cgi>

ObjectType fn=force-type type=magnus-internal/cgi

Service fn=send-cgi

</Object>

<Object name="jrun">

PathCheck fn="jrunfilter"

Service fn="jrunservice"

</Object>
```

7 In Notepad, open `<netscape server root>\config\mime.types`.

```
D:\Netscape\SuiteSpot\https-
(machinename)\config\mime.types
```

8 Enter the following lines at the top of the file:

```
type=magnus-internal/cri exts=cri

type=magnus-internal/rpt exts=rpt

type=application/octet-stream exts=exe
```

9 Save and Close the mime.types file. Here is an example of a `mime.types` file with the above lines added:

```
#--Netscape Communications Corporation MIME Information#
Do not delete the above line. It is used to identify the
file type.

type=magnus-internal/cri exts=cri

type=magnus-internal/rpt exts=rpt

type=application/octet-stream exts=exe
```

```
type=application/octet-stream exts=bintype=application/
astound exts=asd,asntype=application/fastman
exts=lcctype=application/java-archive
exts=jartype=application/java-serialized-object
exts=sertype=application/java-vm
exts=classtype=application/mac-binhex40
exts=hqxtype=application/x-stuffit exts=sit...
```

10 Start the Netscape Administration Server from **Start—Settings—Services—Netscape Administration Server 3.5/4.0**.

11 Click **Start**.

12 Login to the Netscape Administration Server from your browser.

   a Type `http://(Machinename):9090`.

   b Log in as `admin/admin`.

13 Click the eNiku web server button whose files were modified. A Java Script Alert message displays to state that manual edits were made.

14 Click **Apply** to add the changes.

15 Click **OK**.

16 Click **Apply** to load the latest configuration files.

   The following behavior has been identified in Netscape Enterprise Server: once manual edits have been applied and loaded, the Warning Manual Edits Not Loaded message continue to display even after the Success! The Most Recent Configuration Files Have Been Loaded message displays.

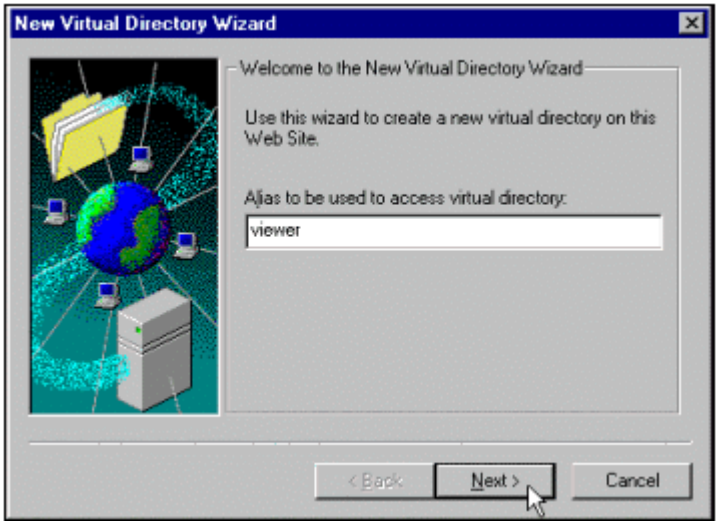
Note: If you encounter errors when attempting to restart the Netscape web server, make sure there are no quotes in the following parameter:

```
Init fn=load-types mime-types=mime.types
```

Microsoft Internet Information Server Configuration

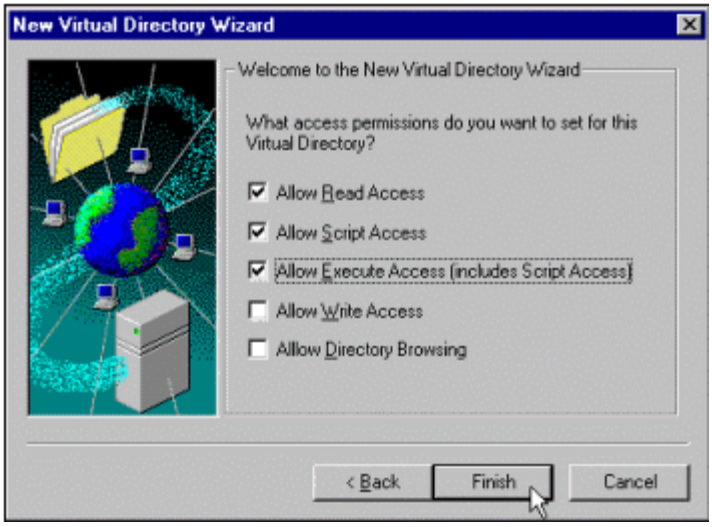
Please make sure that the Microsoft Information Administration server is running. The following section discusses the steps in configuring the Crystal Reports runtime with Microsoft Internet Information Server 4.0. A viewer and scrreports virtual directory will be created during this step.

1. Go to **Start—Programs—Windows NT 4.0 Option Pack—Microsoft Internet Information Server—Internet Service Manager**. The Internet Service Manager window displays.
2. Expand the Internet Information Server folder.
3. Expand the machine name.
4. Expand the Default Website.
5. Right-click on the default Web Site and select **New—Virtual Directory**.
6. Type viewer and click **Next**. A prompt requesting the path to publish displays.



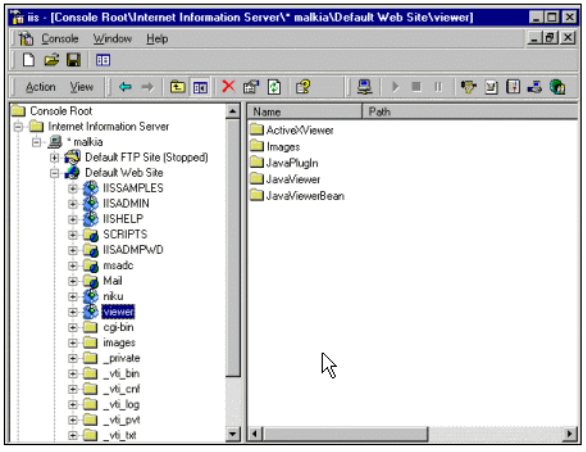
7. Browse to the `Crystal_Runtime_dir\viewers`, for example `D:\crystal\Viewers`, and click **Next**.

8 Select the following:



- Allow Read Access
- Allow Script Access
- Allow Execute Access (includes Script Access)

9 Click **Finish**.The new viewer virtual directory displays under the default website.



10 To create a second virtual directory, this one called scrreports, right-click on the default Web Site and select **New—Virtual Directory**.

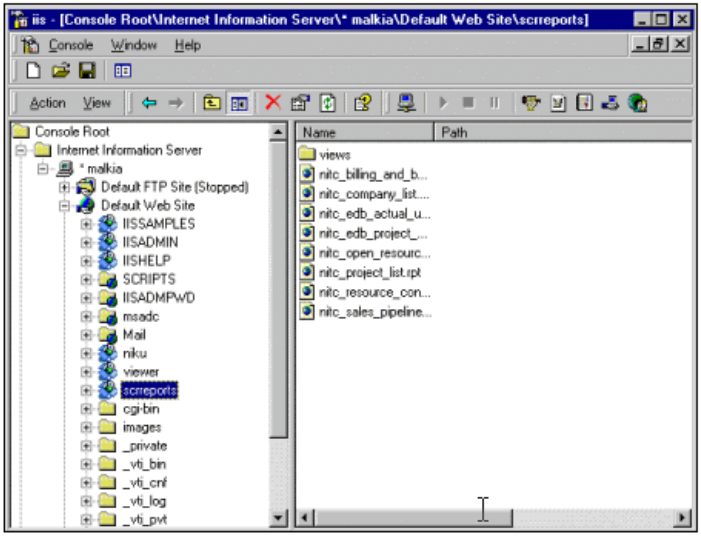
11 Type scrreports and click **Next**. A prompt request the path to publish displays.

12 Browse to the `Niku_Runtime_dir\reports` and click **Next**.

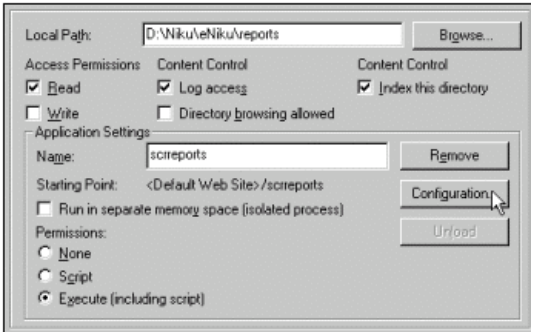
13 Select the following:

- Allow Read Access
- Allow Script Access
- Allow Execute Access (includes Script Access)

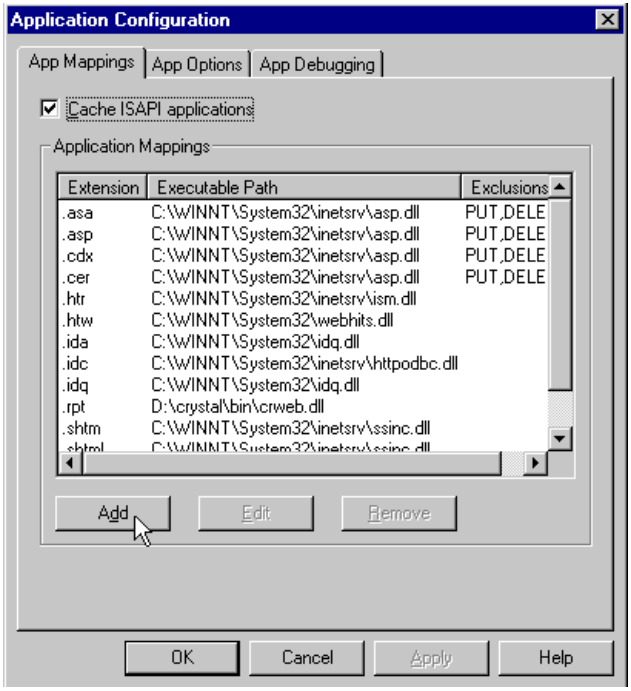
14 Click **Finish**. The new sccreports virtual directory is displayed under the viewer virtual directory you created earlier.



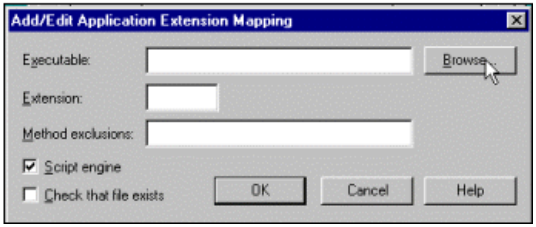
15 Right-click the scrreports virtual directory and select **Properties**.The scrreports virtual directory Properties window displays.



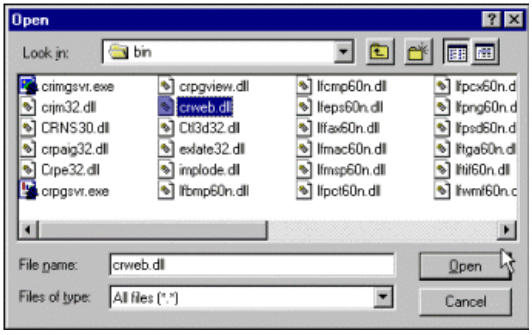
16 Click **Configuration**. The Application Configuration screen displays.



17 Click **Add**. The Add / Edit Application Extension Mapping screen displays.



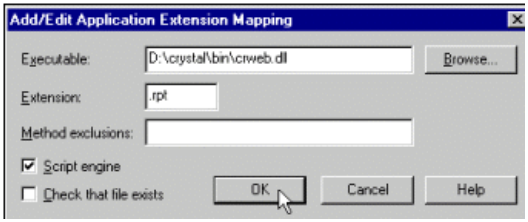
18 Click **Browse** and navigate to the `Crystal_Runtime_dir\bin\` and select `crweb.dll`. For example, `D:\crystal\bin\crweb.dll`.



19 Make sure that "All files (*.*)" is selected from the Files of Type drop-down list and that you can see extensions of Known File Types. If not, files with the .dll extension are not visible.

20 With the file selected, click **Open**.

21 In the Extension field, type .rpt



22 Click **OK**.

23 Click **OK**.

24 Click **OK**. The Internet Information Server is now configured to run with the Crystal Reports Runtime.

Crystal Web Image and Page Server Setup

To set up the Crystal Web Image Server and the Web Page Server:

1 Select **Start**—**Run** and enter the following file specification to install the service. For example,

D:\Crystal\bin\crpgsvr.exe -installservice

2 Click **OK**. The Crystal Web Page Server launches.

3 Select **Start**—**Run** and type in the following to install service. For example,

```
D:\Crystal\bin\crimgsvr.exe -installservice
```

4 Click **OK**. The Crystal Web Image Server launches.

5 Select **Start**—**Settings**—**Control Panel**—**Services** and check that both services appear and are Automatic.

Configure the Crystal Reports Web Server

If you already installed the full version of Crystal Reports, please skip these steps and proceed to Step 2. For those installing the runtime files, begin from step 1.

Crystal Reports 7 Configuration

To configure Crystal 7:

1 Navigate to your Crystal Reports installation directory \ bin. For example, D:\Crystal\bin

2 Perform one of these two steps:

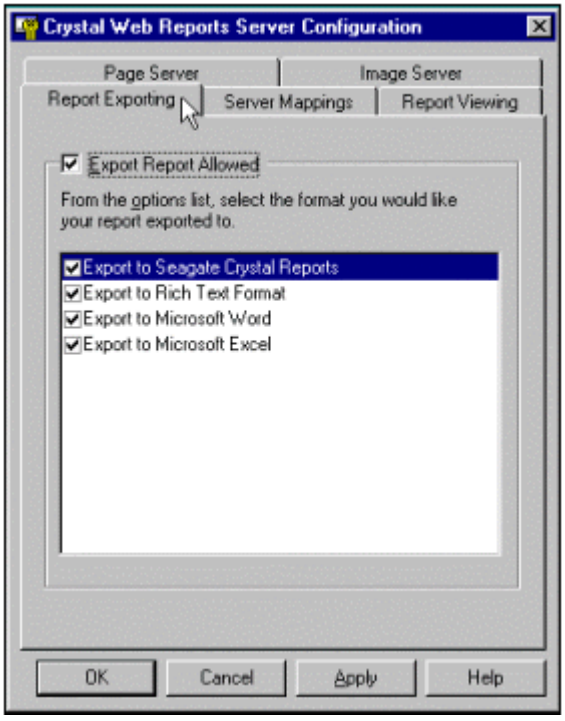
a Double-click the webconf file. For example,

```
D:\Crystal\bin\webconf
```

or,

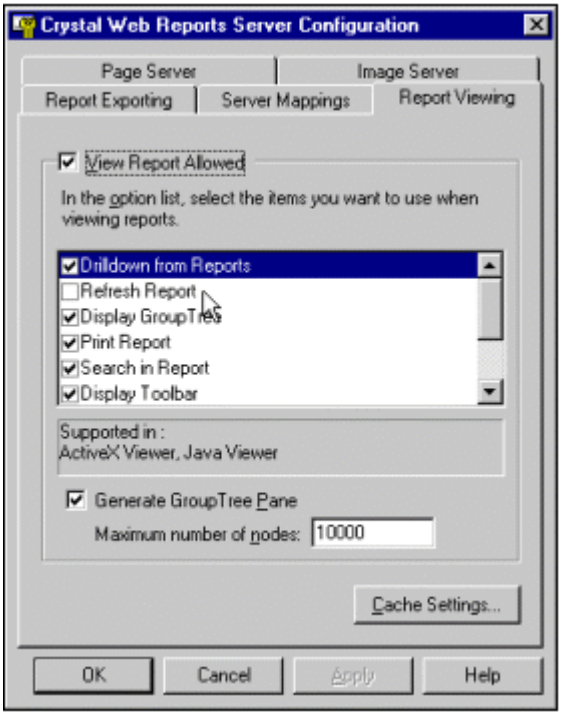
b For Crystal Reports designers, select **Start—Programs—Seagate Crystal Reports—Web Reports Server Configuration**.

3 On the Crystal Web Reports Server Configuration screen, click the Report Exporting tab.



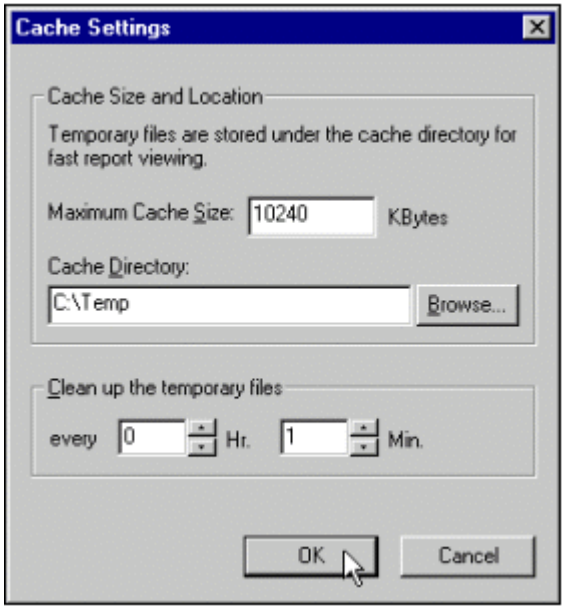
4 Make sure all four boxes are checked. The client must have the Seagate Crystal Report Viewer installed to view a report exported to a Seagate Crystal Report format.

5 Click the Report Viewing tab.



6 Deselect **Refresh Report** and **Display Group Tree**.

7 Click **Cache Settings**.



8 Make sure the following settings are correct:

Maximum Cache Size: 10240 KB

Cache Directory: C:\Temp

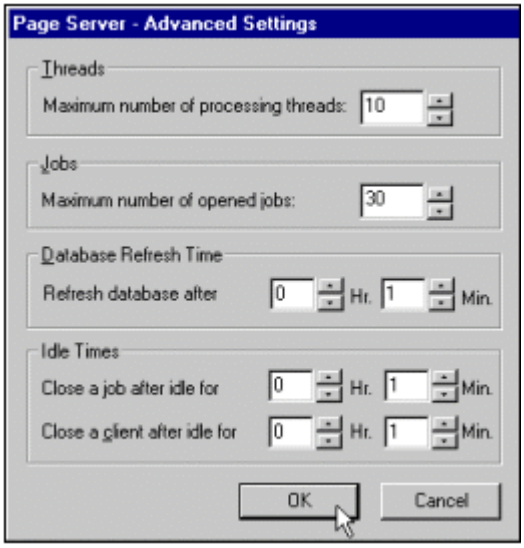
Clean up the temporary files

Every: 0 Hr.1 Min.

9 Click **OK**.

10 Click the **Page Server** tab, and then click **Advanced Settings**.

11 Enter the following values:



Database Refresh Time to: 1 Min.

Close a job after idle for to: 1 Min.

Close a client after idle for to: 1 Min.

12 Click **OK**.

13 Click **OK**.

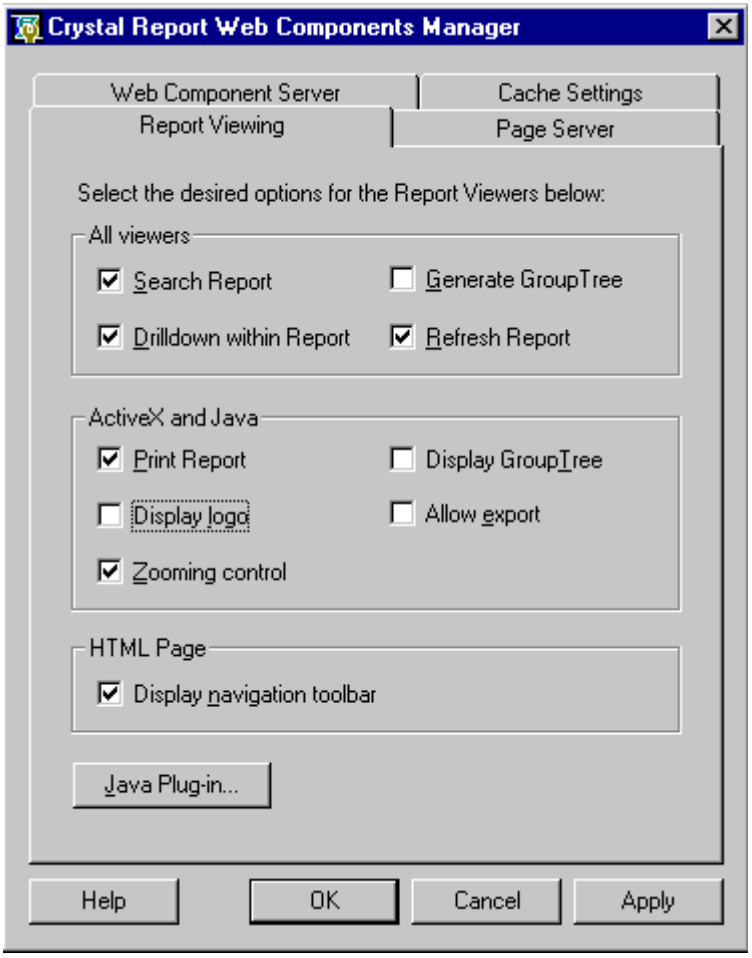
Crystal Reports 8 Configuration

For those who have installed the designer version of Crystal 8, the following section will discuss configuring Crystal 8.

To configure Crystal 8:

1 Select **Start**—**Programs**—**Seagate Crystal Reports Tools**—**Crystal Reports Web Component Manager**.

2 On the Web Component Manager screen, click the **Report Viewing** tab.

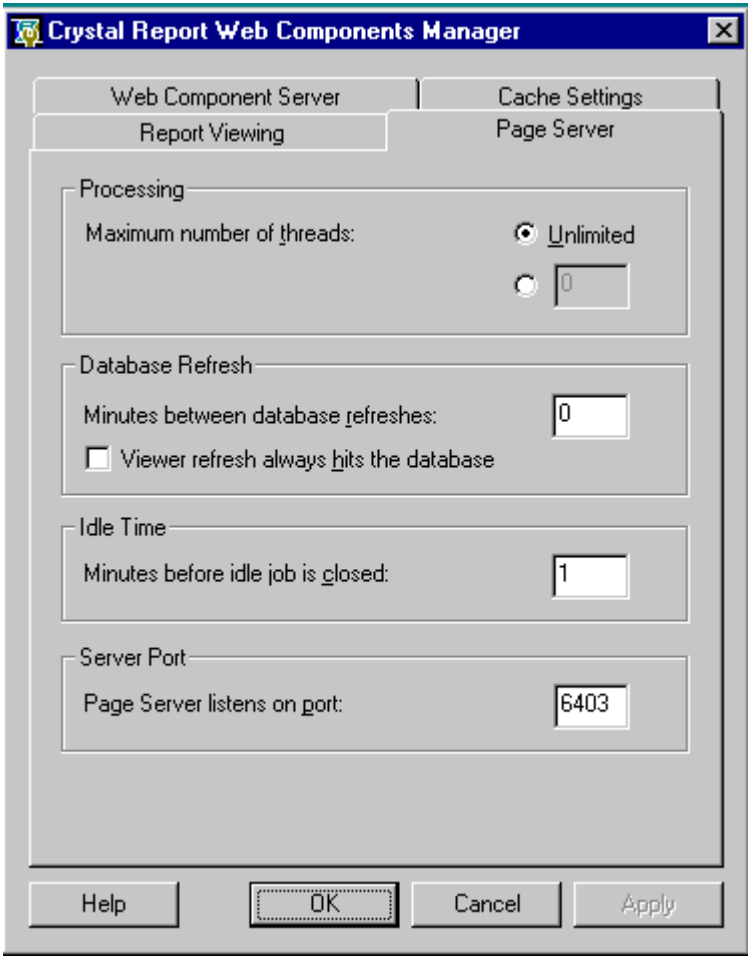


3 Deselect the following check boxes and click **OK**.

- Generate Group Tree

- Display logo
- Display Group Tree
- Allow export

4 Click the **Page Server** tab.



5 Set the following:

- Database Refresh = 0
- Idle Time = 1

6 Click **OK**.

9 Post Installation Tasks

Overview

This chapter lists the requirements necessary after the installation of eNiku.

Post Installation Tasks

1. Run the `$./postnikusetup.sh` script.
2. This script prompts you to open another shell and edit the files listed below. You must edit these files even if you are re-running this script.
   a. Enter two appropriate e-mail addresses, mail server host name and appropriate log directory in:

      `/niku/eniku/tande/largesoft/install/V0/data/Niku_Base/wf_appl_parameters.txt`

   b. Remove the `-c` parameter from `/niku/eniku/tande/appserver/load.sh`.

   c. When finished, save this file and return to the shell running `postnikusetup.sh`.

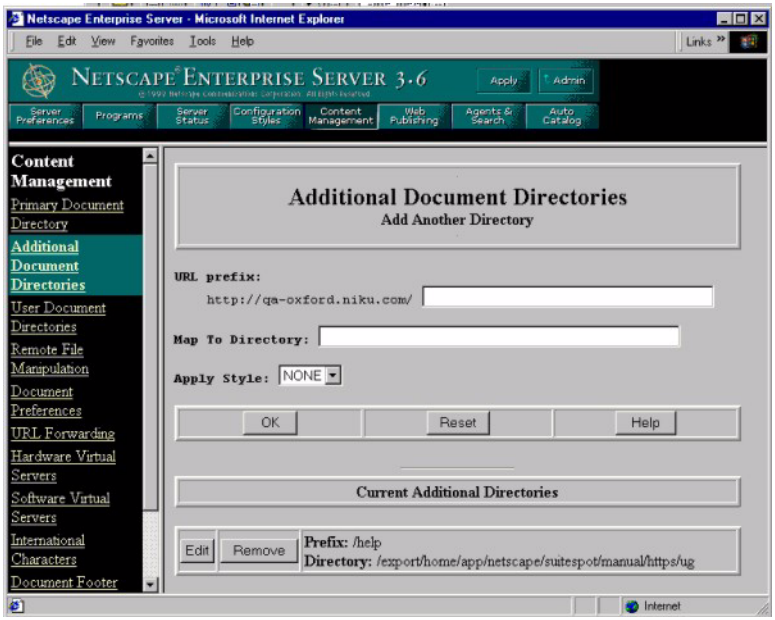
   d. Press **Enter** to continue.

Note: This script runs for up to several hours, depending on your server.

Configure Netscape

1. Start **Netscape Administration Server** and connect via browser.
2. Click **Apply** to apply any JRun configuration changes that have been made.
3. Click on ther **Server Identifier** button.

4. Click on the **Content Management** button.
5. In the **Primary directory** field, enter `/niku/eniku/html`.
6. Click on **Additional Document Directories**.



7 In the **Additional Document Directories** screen, enter in the **URL prefix** field:

```
tande
```

8 In the **Map To Directory** field, enter:

```
/niku/eniku/tande/weblib
```

9 Click **OK**, then **Save** and **Apply**.

10 In the **URL prefix** field enter:

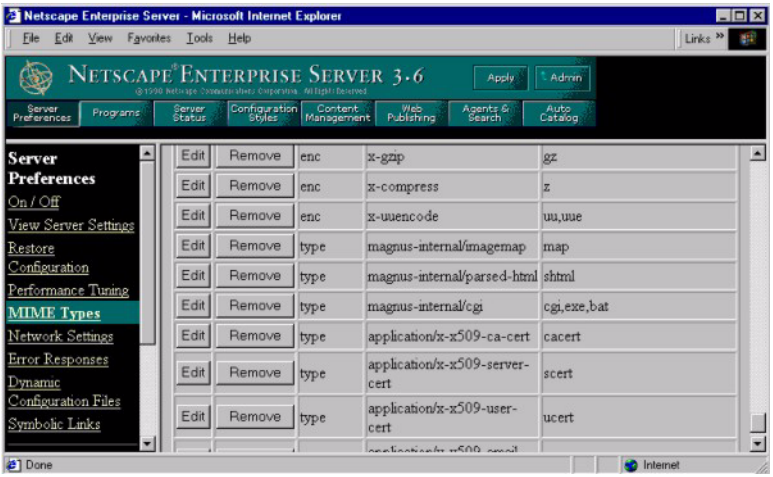
```
tande/largesoft
```

11 In the **Map To Directory** field, enter:

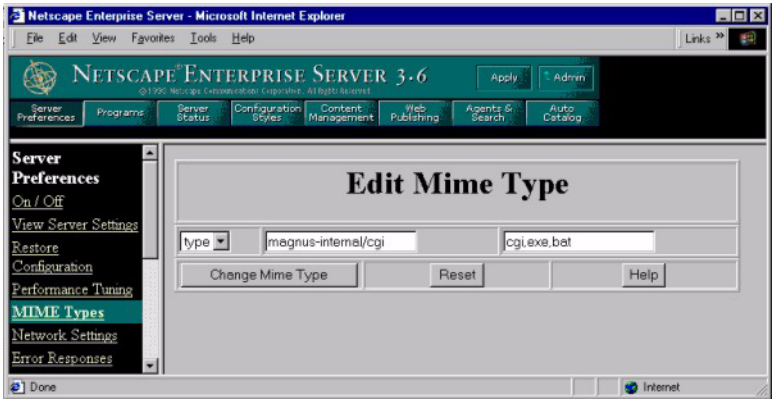
```
/niku/eniku/tande/largesoft
```

12 Click **OK**, then **Save** and **Apply**.

13 Click on **Server Preferences** button and then **MIME Types**.



14 Scroll down until you find **magnus-interknal/cgi**. Click on the **Edit** button for this type.

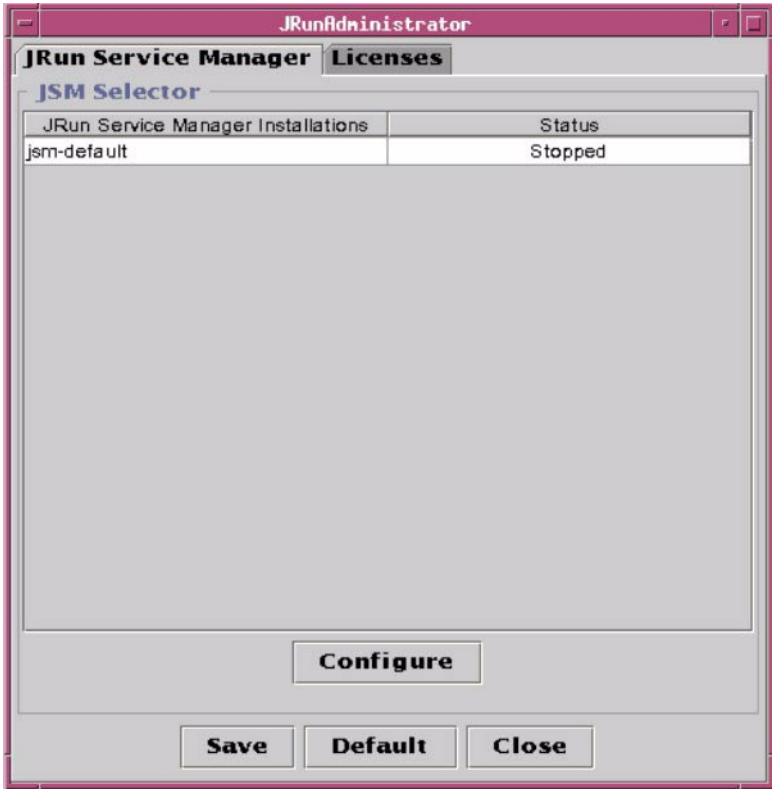


15 Remove **exe** and **bat** from the list.

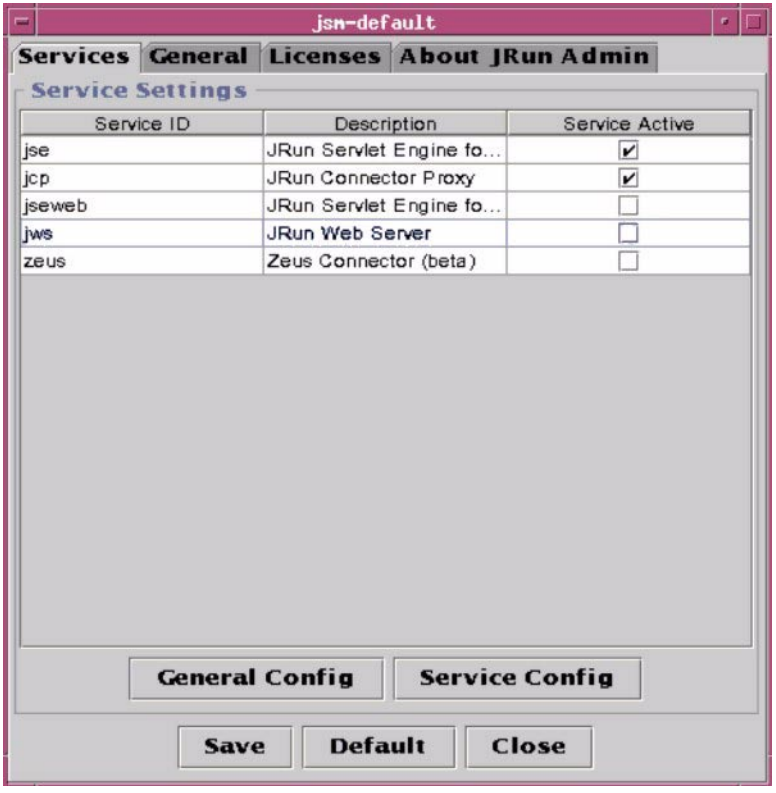
16 Click **Change MIME Type**, then **Save** and **Apply**.

Configure JRun

1 Run the `$/local/jrun/bin/startadmin.sh` script.



2 Highlight **jsm-default** and click **Configure**.



3 Uncheck **jseweb** and **jws**. Click on **Save**.

4 Click on **General** tab.

5 Click on **Java** sub-tab.

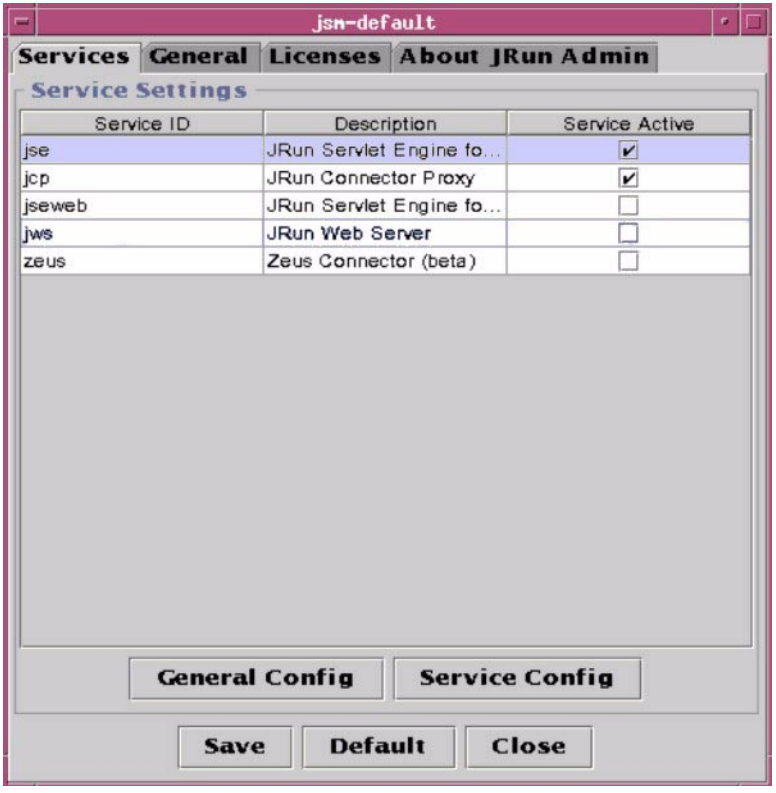
6 Add the following to the **Java Classpath**:

```
/niku/eniku/classes:$ORACLE_HOME/jdbc/lib/
classes111.zip:/local/fulcrum/lib/ssjcls01.zip:/niku/
eniku/classes/mail.jar:/niku/eniku/classes/
activation.jar:JAVA_HOME/lib/tools.jar
```

7 Add the following to the **Library Path**:

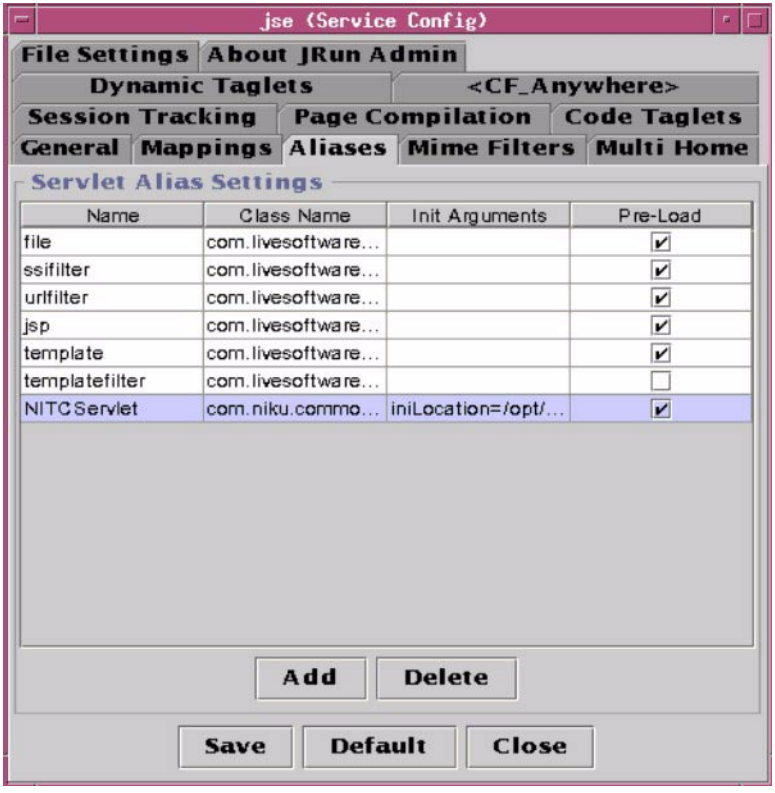
```
/local/fulcrum/lib
```

8 Click **Save**.



9 Click on the **Services** tab.

10 Highlite **jse** in services list and click **Service Config**.

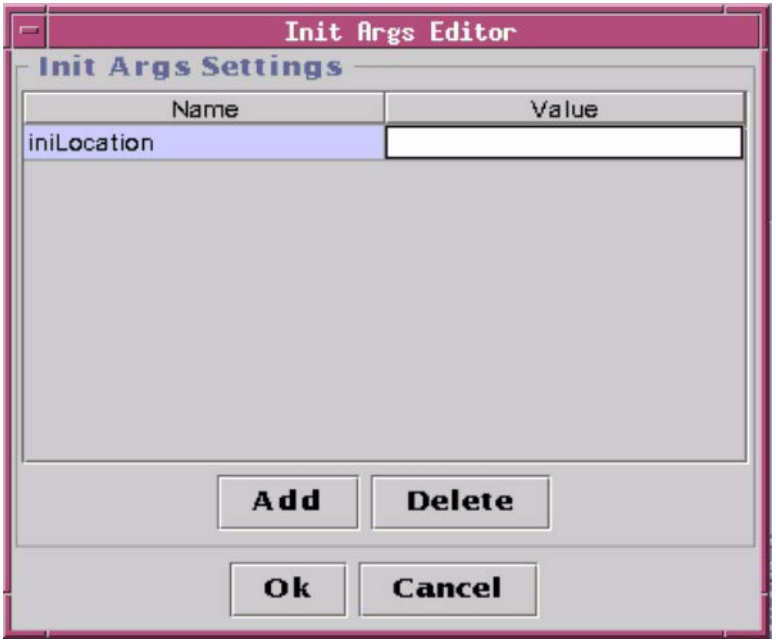


11 Click on the **Aliases** tab.

12 Click **Add**.

13 Enter `NITCServlet` in the **Name** filed.

14 Enter `com.niku.nitc.frontworks.NITCServlet` in the **Class Name** field.



15 Double-Click **Init Arguments**.

16 Click **Add**.

17 Enter `iniLocation` in the **Name** field.

18 Enter `/niku/eniku/nitc.ini` in the **Value** field.

19 Click **OK**.

20 Check **Pre-load**.

21 Click **Save** and **Close**.

22 Close **JRun Administrator**.

10 Remote Client Installation

Overview

The following steps explain how to install the Time and Expense remote client.

Installing the Remote Client

To install the remote client:

1. Login to eNiku. Navigate to the Time and Expense module.
2. Click **Remote Access**.
3. Click **Download Remote Time and Expense**. A File Download dialog displays.
4. Save the file to your local directory.
5. Run the `TimeandExpense.exe` file downloaded to your local drive. The Niku installation dialog displays.
6. Click **Next**.
7. Choose a destination to install the remote client.
8. Click **Next**. The Program Folder dialog displays.

9 Click **Next**. The installation begins. A Niku Client Configuration dialog displays.

10 Enter the name of the server where eNiku 4 is installed.

11 Enter the port number assigned to Time and Expense.

Note: See your system administrator to verify the correct port number.

12 Click **Next**.

13 Click **Finish**.

14 Follow the instructions on the Remote Access Time and Expense page to configure your remote client installation.

11 Customizing the Crystal Reports Web Server

Overview

This appendix is intended for those who plan to customize Crystal Reports. eNiku 4 ships with Crystal Reports Runtime files. These files allow you to view current eNiku 4 reports. To modify and create reports, you must purchase and license the Crystal Reports Designer.

Crystal Reports 7

The following steps describe how to install Crystal ReportsDesigner 7.

To install Crystal Reports:

1 Insert the product CD. The following screen displays.

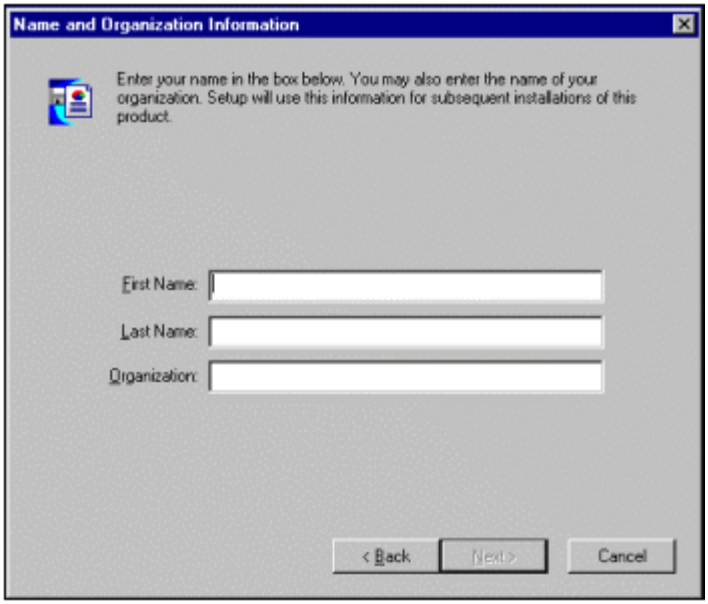
2 Click **Install (Win32)**. The Welcome screen displays.

3 To continue, click **Next**. The License Agreement screen displays.

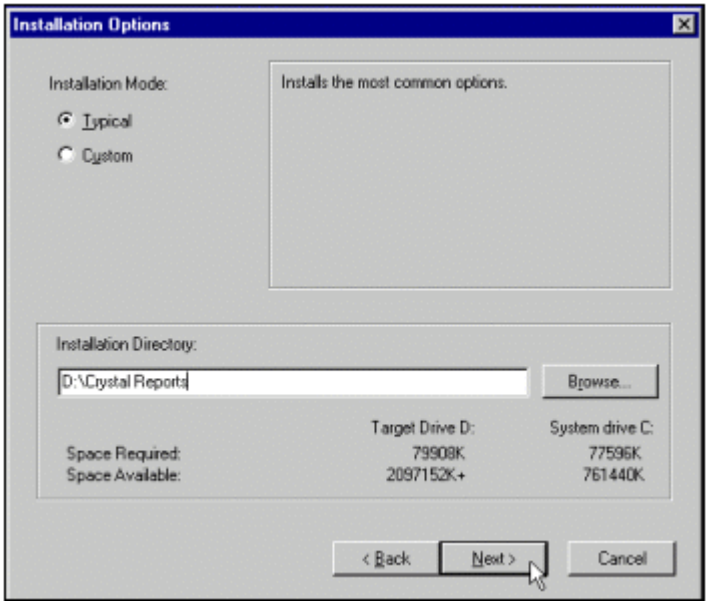
4 To continue, click **Next**. The License Key screen displays.

5 To continue, click **Yes**. The Installation Key screen displays.

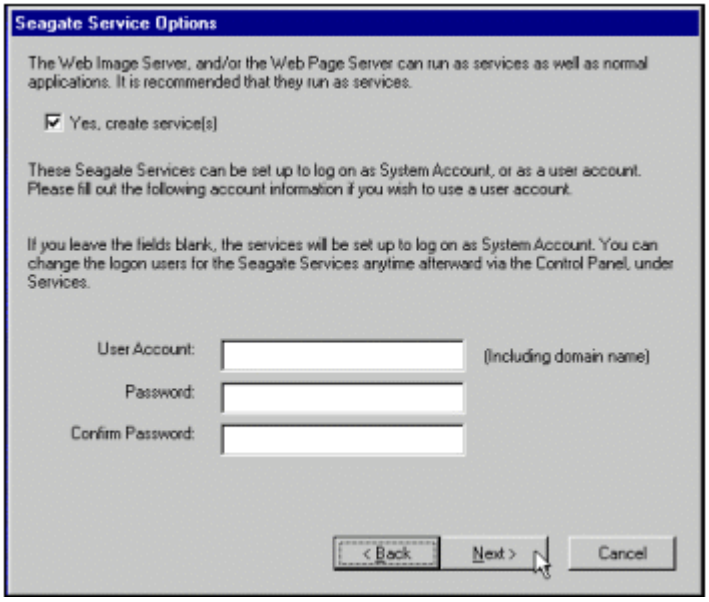
6 Enter the Crystal Key code and click **Next**. The Information Request screen displays.



7 To continue, enter the desired information and click **Next**. The Installation option screen displays.



8 Select Typical Installation Mode and click **Next**.



9 Leave the fields blank and click **Next**. The Program Group screen displays.

10 To accept the default Program Group, click **Next**. The Crystal installation starts. a message displays.

11 When Setup is complete, click **Next**. The Read File message displays.

12 To continue without reading the file, click **No**. The Setup Complete message displays.

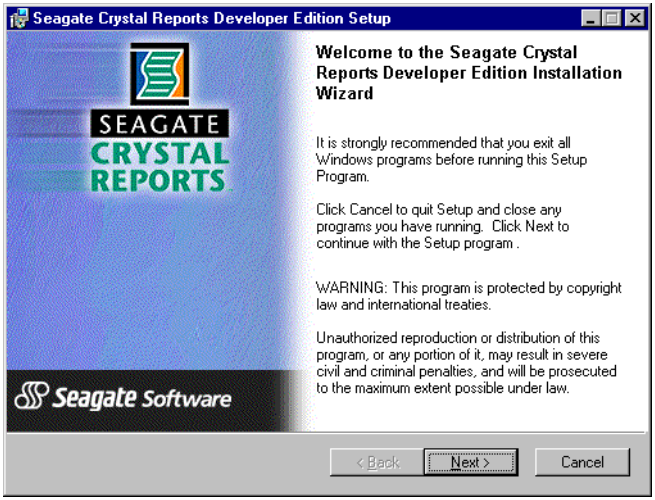
13 To dismiss the message and to restart the computer, click **OK**.

Crystal Reports 8

The following steps describe how to install Crystal Reports Designer 8.

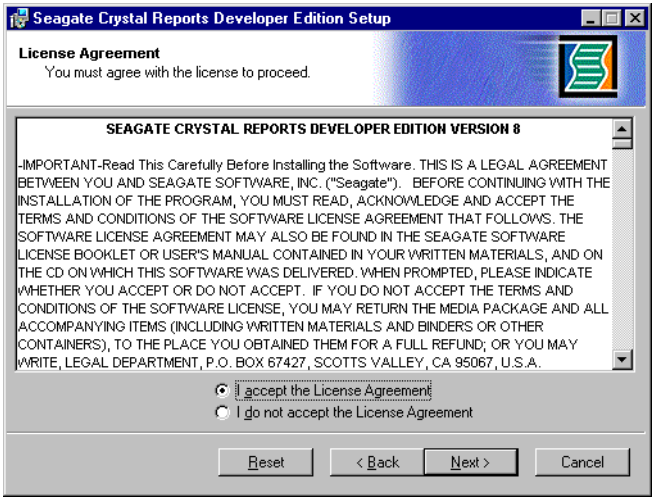
To install Crystal Reports:

1 Insert the product CD. The following screen displays.

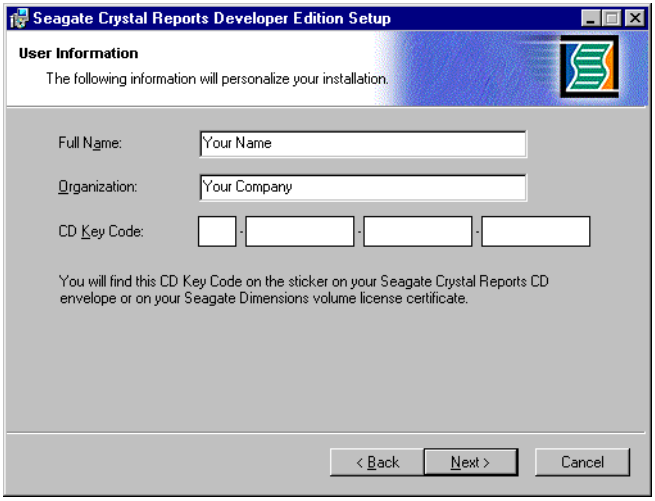


2 Click **Next**.

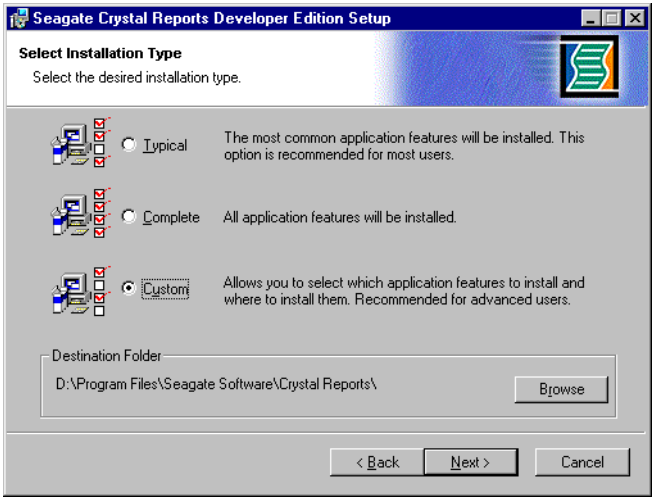
3 Select **Accept License Agreement** and click **Next**.



4 The Seagate License screen displays. Enter a valid Crystal Key code and click **Next**.



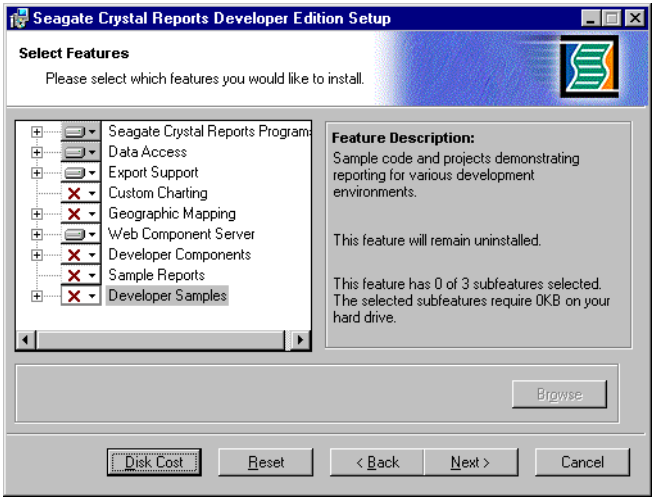
5 The Seagate Crystal setup option screen displays.



6 Select **Custom**.

7 Browse to the appropriate directory and click **Next**.

8 Options display for a custom Crystal setup.



9 Leave Custom Charting, Geographic Mapping, Developer Components, Sample Reports and Developer Sample components un-installed.

10 Click **Next**.

11 Click **Next**. The Crystal installation starts. When Setup is complete, a message displays to reboot your machine.

12 Click **Yes**.

13 When the system is rebooted, the installation finishes.

14 Click **Finish** to end the installation.

Running the Invoice Report

To run the Invoice Report on Seagate Crystal Report Server 8, the server configuration is required.

To run an Invoice report:

1 Select **Start—Programs—Seagate Crystal Reports Tools—Crystal Reports Web Component Manager**.

2 Select the following two options and click **OK**.

- Generate Group Tree, contained in All Viewers
- Display Group Tree, contained in ActiveX and Java

3 Select **Services** and restart the Seagate Web Component Server.

Netscape Enterprise Server

The following steps explain how to configure the Netscape Enterprise Server to run with Crystal Reports Designer.

To configure the Netscape Enterprise Server:

1 Login to the Netscape Administration Server.

2 Login to http://<servername>:9090.

Username: admin

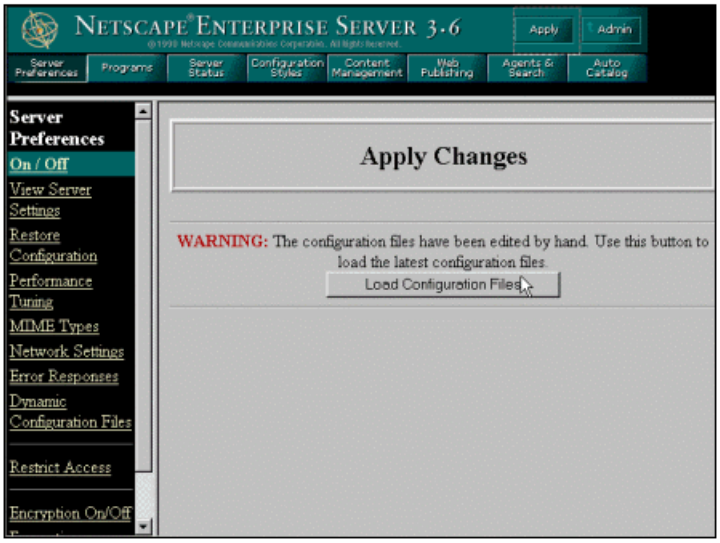
Password: admin

3 Click the **Netscape Server**.

4 To dismiss the Manual Edits Not Loaded message, click **OK**.

5 Click **Apply**.

6 Click **Load Configuration Files**.



7 To dismiss the Success! message, click **OK**.

8 Exit the Netscape Administration Server.

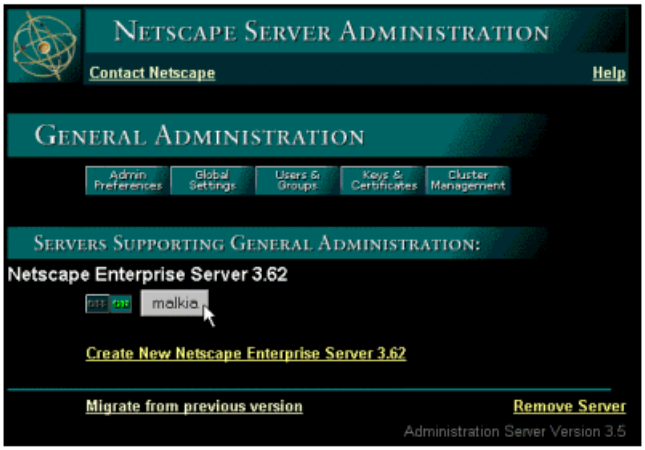
9 Restart both Netscape Services from **Start—Settings—Services**.

10 Log back into the Netscape Administration Server.

11 Login to http://<servername>:9090.

Username: admin

Password: admin

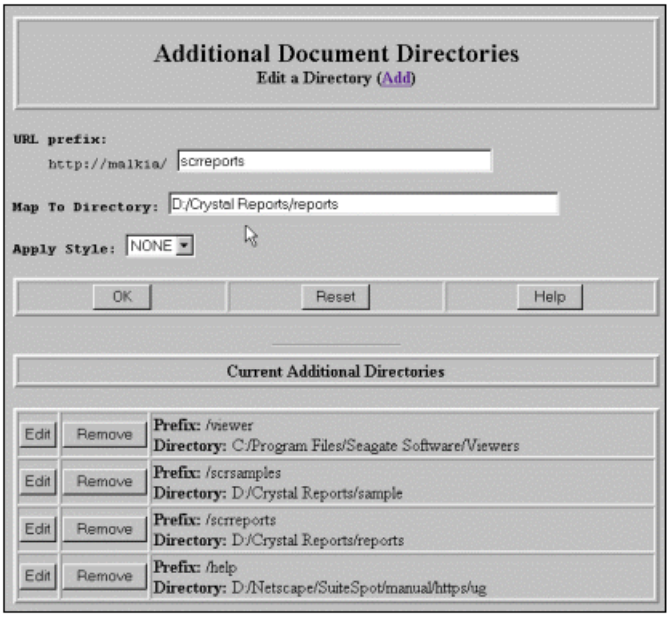


12 Click the created Netscape Server.

13 Under Server Preferences, click **View Server Settings**. The View Server Settings screen displays.

14 Scroll to the Additional Document Directory with Prefix/scrreports and click the **Additional Document Directory** link. The Additional Document Directories screen displays.

15 Click **Edit** for Prefix: /scrreports.



16 Change Map to Directory to NITC_RUNTIME_DIR/eNiku/reports.

17 Click **OK**.

18 Click **Save** and **Apply**.

19 To dismiss the **Success!** message, click **OK**.

20 Exit the Netscape Administration Service and configure the Crystal Web Server from **Start—Programs—Seagate Crystal Reports—Web Reports Server Configuration**.

21 Follow the instructions from Step 3 on in Configuring the Crystal Reports Web Server section.

Internet Information Server 4.0

The following steps explain how to configure the Microsoft Internet Information Server to run with Crystal Reports Designer.

To configure the Internet Information Server:

1. Go to **Start**—**Programs**—**Windows NT 4.0 Option Pack**—**Microsoft Internet Information Server**—**Internet Service Manager**. The Internet Service Manager window displays.
2. Expand the Internet Information Server folder.
3. Expand the machine name.
4. Expand the Default Website.
5. Right-click the scrreports virtual directory and select **Properties**.The scrreports virtual directory Properties window displays.
6. Browse to the NITC_RUNTIME_DIR\reports directory.
7. Click **Open**. The path displays in the Local Path.
8. Exit Internet Service Manager. The Internet Information Server is now configured to run with the Crystal Reports Designer.

12 Removing the Crystal Reports Web Server

Overview

If you need to remove the Crystal Reports Web Server, use the following steps to remove the application from the server.

Note: These instructions are for reference purposes only.

Remove Crystal Reports

To remove the Crystal Reports Web Server:

1 Stop the following services from **Start—Settings—Control Panel—Services**:

- Crystal Web Image Server
- Crystal Web Page Server
- Netscape Enterprise Server 3.6 or 4.0

2 Select **Start—Run** and type,

```
D:\Crystal\bin\crpgsvr.exe -removeservice
```

3. Click **OK**.
4. Select **Start**—**Run** and type,

   ```
   D:\Crystal\bin\crimgsvr.exe -removeservice
   ```

5. Click **OK**.
6. Restore the Netscape Enterprise Server configuration settings.
7. Remove the directory named `D:\Crystal`.
8. Remove the entry `D:\Crystal\bin` from the System Path variable Configuration and Initialization.

13 Configuring the Secure Socket Layer (SSL)

Overview

This appendix explains how to install the Secure Socket Layer (SSL) protocol. Four primary steps are required to configure the SSL protocol:

- Edit nitc.ini
- Generate the Server Key-pair file
- Request a Certificate
- Install the Certificate

This material describes how to use the SSL protocol with:

- Netscape Enterprise Web Server 3.63
- Microsoft Internet Information Server 4.0
- Niku Time and Expense

nitc.ini File Configuration

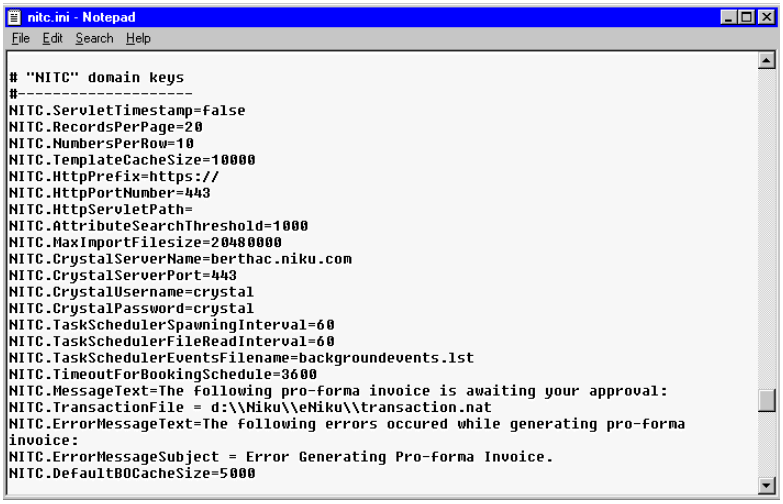
The nitc.ini file needs to be modified to reflect changes to the Hostname and SSL activation.

To successfully edit the nitc.ini file:

Edit the nitc.ini file from D:\Niku\Nitc to include or replace the following lines.

From	To
SSL	
NITC.NitcPrefix=http://	NITC.NitcPrefix=https:/ /
eNiku Port SSL	
NITC.HttpPortNumber = <port#>	NITC.HttpPortNumber = 443
Crystal Port SSL	
System.CrystalServerPort =<port#>	System.CrystalServerPort=443

The following figure displays a sample Nitc.ini file after it was edited.

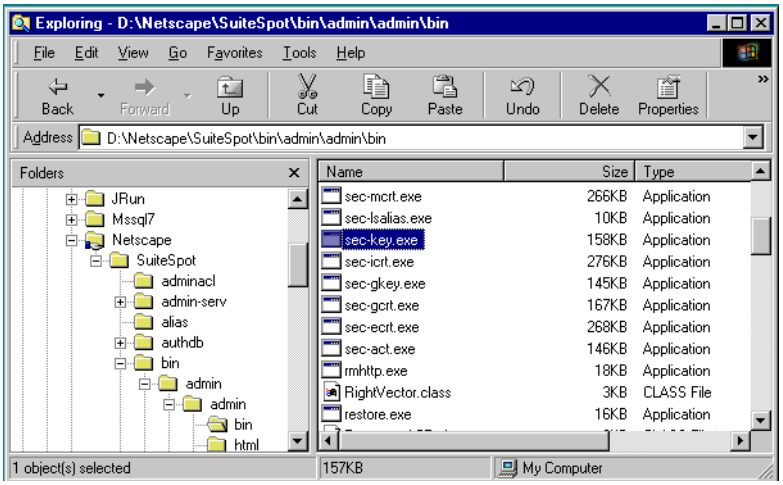


Netscape Web Server SSL Configuration

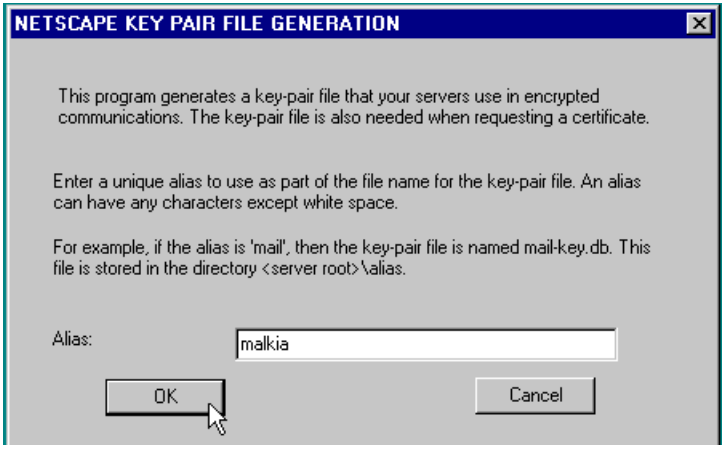
The following section discusses the steps in configuring the Netscape 3.63 web server with the secure socket layer (SSL) protocol.

To configure Netscape:

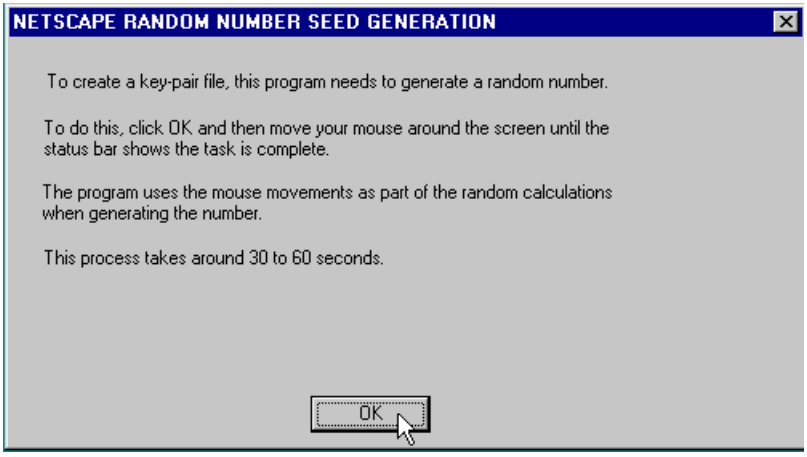
1 Navigate to `D:\Netscape\SuiteSpot\bin\admin\admin\bin` directory and double-click `sec-key.exe`.



A Netscape key pair file generation window displays.

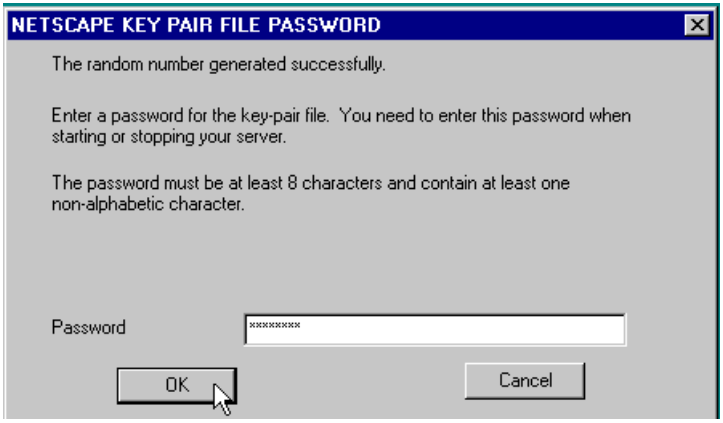


2 Type in your Netscape server name and click **OK**. A Netscape random number seed generation window displays.

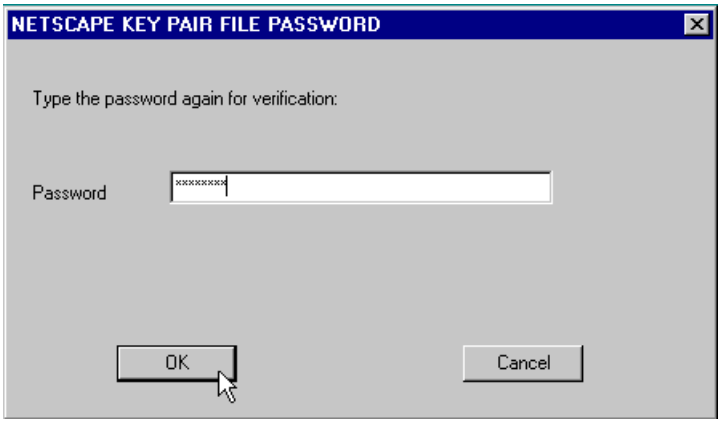


3 Click **OK**. Move your mouse to generate the random number. Once completed, a Netscape key pair file password window displays.

4 Type your password and click **OK**.



5 Make sure you record this password since you will need it every time you restart the Netscape server. A password confirmation window displays.



6 Re-enter the password and click **OK**. A key pair file successfully generated message displays.

7 Click **OK** to exit.

8 Login to your Netscape Administrative Server. The Netscape Server Administration window displays.

9 Click **Keys & Certificates**. The General Administration window displays.

10 Click the **Request Certificate** link. The Request Certificate window displays.

11 Fill in the fields with the appropriate information. For more information on the field descriptions, click the Netscape Help button.

12 Once the fields have been filled, click **OK**. The common name should be the address desired to log into the eNiku application. A creating certificate request is created.

Creating certificate request

Creating certificate request...
Done. The certificate request contains:

```
Certificate Request:
    Data:
        Version: 0 (0x0)
        Subject: CN=malkia.niku.com, OU=Product Management, O=Niku, L=Redwood City, ST=California, C=US
        Subject Public Key Info:
            Public Key Algorithm: PKCS #1 RSA Encryption
            Public Key:
                Modulus:
                    00:c8:41:70:f7:0d:12:d0:c3:ac:28:3e:e2:15:a1:
                    5b:f3:7b:2f:1a:3c:ad:7a:cd:7f:32:59:65:ed:c5:
                    5b:00:db:b0:f9:4d:7f:3e:2b:c7:4a:b9:ef:74:ed:
                    0a:56:0e:8a:ef:e5:99:a1:ea:19:6d:50:ba:ea:10:
                    a4:18:06:49:f1
                Exponent: 65537 (0x10001)
    Signature Algorithm: PKCS #1 MD5 With RSA Encryption
    Signature:
        be:cb:9f:82:e5:b8:10:0c:8c:0d:9b:ae:0c:15:d6:4c:98:70:
        d7:12:2d:9f:9f:d2:81:c0:92:8f:ca:03:da:e5:62:dc:5f:18:
        4a:e5:34:97:55:0b:dc:fe:25:62:c9:18:6e:7f:2d:71:cd:db:
        e6:48:0f:2c:4c:46:6a:6e:d0:9b
```

Creating a temporary file for mail...
Headers generated. Converting binary request to ascii data...
Finishing mail message...
Done. The mail message contains:

```
To: ryan@niku.com
Subject: Certificate request
Reply-To: ryan@niku.com

Webmaster: ryan@niku.com
Phone: 650-298-5914
Server: Netscape-Administrator/3.5

Common-name: malkia.niku.com
Email: ryan@niku.com
Organization: Niku
Org-unit: Product Management
Locality: Redwood City
State: California
Country: US

-----BEGIN NEW CERTIFICATE REQUEST-----
MIIBOTCB5AIBADB/MQswCQYDVQQGEwJVUzETMBEGA1UECBMKQ2FsaWZvcm5pYTEV
MBMGA1UEBxMMUmVkd29vZCBDaXR5MQOwCwYDVQQKEwRoaWt1MRswGQYDVQQLExJQ
cm9kdWNOIE1hbmFnZW1lbnQxGDAWBgNVBAMTD21hbGtpYS5uaWt1LmNvbTBcMA0G
CSqGSIb3DQEBAQUAA0sAMEgCQDIQXD3DRLQw6woPuIVoVvzey8aPK16zX8yWWXt
xVsA27D5TX8+K8dKue9O7QpWDorv5Zmh6hltULrqEKQYBknxAgMBAAGgADANBgkq
hkiG9w0BAQQFAANBAL7Ln4L1uBAMjA2brgwV1kyYcNcSLZ+fOoHAko/KA9rlYtxf
GErlNJdVC9z+JWLJGG5/LXHN2+ZIDyxMRmpuOJs=
-----END NEW CERTIFICATE REQUEST-----
```

Success!

The mail that you should send is in the file D:\temp\.264.mailtmp It contains the To, Subject and Reply-To fields. Please use your mailer to enter the rest of the file as the body of the message. When the response arrives, you can use the Install a Certificate form to put it in place.

Install a certificate | Back

13 Copy the text as displayed in the following image.

```
To: ryan@niku.com
Subject: Certificate request
Reply-To: ryan@niku.com

Webmaster: ryan@niku.com
Phone: 650-298-5914
Server: Netscape-Administrator/3.5

Common-name: malkia.niku.com
Email: ryan@niku.com
Organization: Niku
Org-unit: Product Management
Locality: Redwood City
State: California
Country: US

-----BEGIN NEW CERTIFICATE REQUEST-----
MIIBOTCB5AIBADB/MQswCQYDVQQGEwJVUzETMBEGA1UECBMKQ2FsaWZvcm5pYTEV
MBMGA1UEBxMMUmVkd29vZCBDaXR5MQ0wCwYDVQQKEwROaWt1MRswGQYDVQQLExJQ
cm9kdWN0IE1hbmFnZW1lbnQxGDAWBgNVBAMTD21hbGtpYS5uaWt1LmNvbTBcMA0G
CSqGSIb3DQEBAQUAA0sAMEgCQQDIQXD3DRLQw6woPuIVoVvzey8aPK16zX8yWWXt
xVsA27D5TX8+K8dKue9O7QpWDorv5Zmh6hltULrqEKQYBknxAgMBAAGgADANBgkq
hkiG9w0BAQQFAANBAL7Ln4L1uBAMjA2brgwV1kyYcNcSLZ+fOoHAko/KA9rlYtxf
GErlNJdVC9z+JWLJGG5/LXHN2+ZIDyxMRmpuOJs=
-----END NEW CERTIFICATE REQUEST-----
```

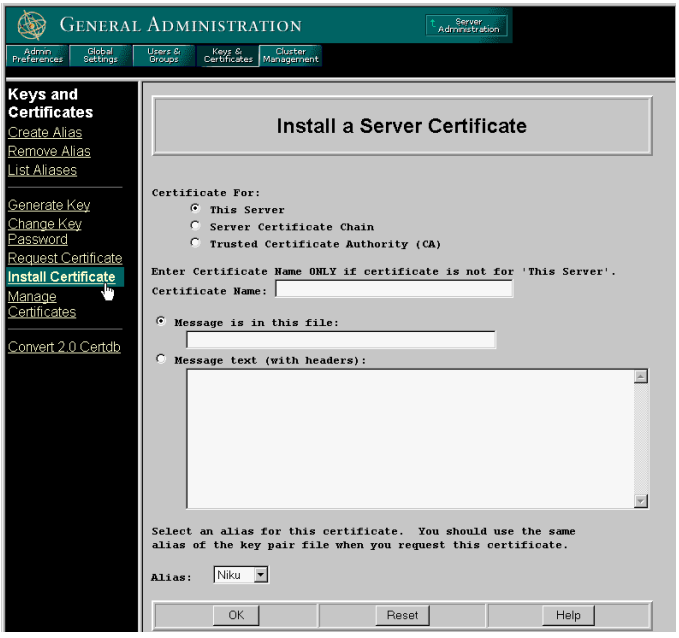
Note: This information is needed for a company like Verisign. To obtain a temporary certificate, visit the VeriSign website and follow the directions provided there.

When the selected text has been submitted to Verisign, you will receive a certificate that is similar to what you sent.

14 When you receive the certificate, log into the Netscape Administrative Server.

15 Click **Keys & Certificates**.

16 Click the **Install Certificate** link. The Install a Server Certificate screen displays.



17 Select **Message Text**.

18 Copy the certificate text from the E-mail you received.

19 Paste the text into the Message text field.

20 Select the correct Alias from the drop-down list.

21 Click **OK**. The certificate has now been installed onto the server.

22 Click **Administrative Services**.

23 Click your Netscape Enterprise Server button.

24 Click **Server Preferences**.

25 Click the **Encryption On/Off** link. The Encryption section displays.

26 Select the following:

Encryption: On

Port Number: 443

Alias: <MachineName>

27 Click **OK**. SSL is now configured on your Netscape Enterprise Server. For more information on SSL configuration on your Netscape Enterprise Server, see your Netscape Enterprise Server Administration Guide.

Note: When logging into the eNiku application under SSL, you are required to log in using https:

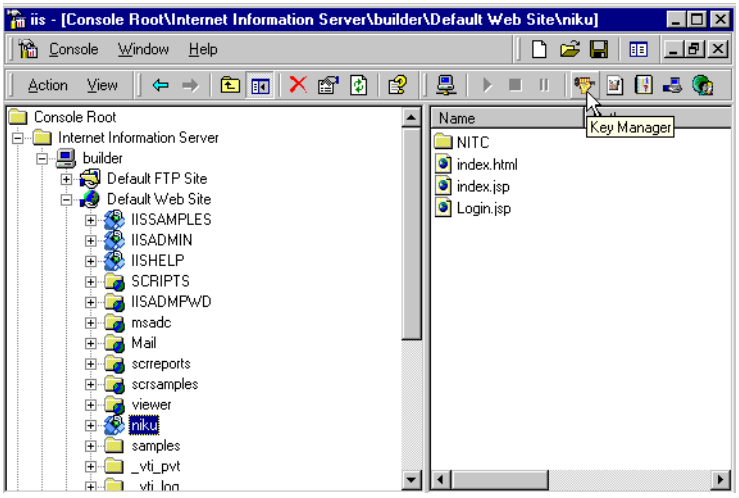
IIS Web Server Configuration

The following section discusses the steps in configuring the IIS 4.0 web server with the secure socket layer (SSL) protocol.

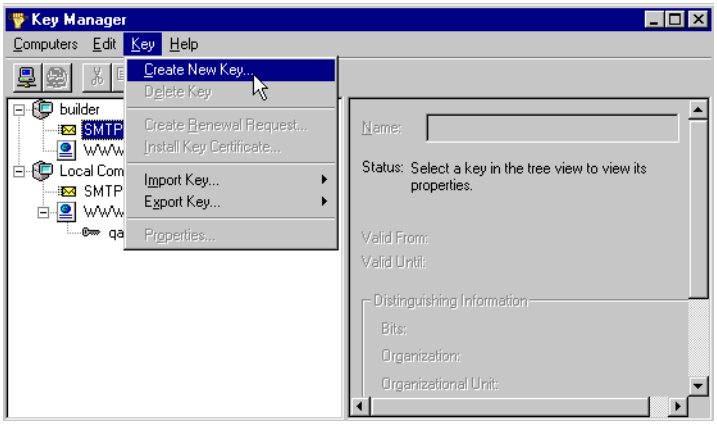
To configure IISL:

1 Go to **Start—Programs—Windows NT 4.0 Option Pack—Microsoft Internet Information Server—Internet Service Manager**. The Internet Service Manager displays.

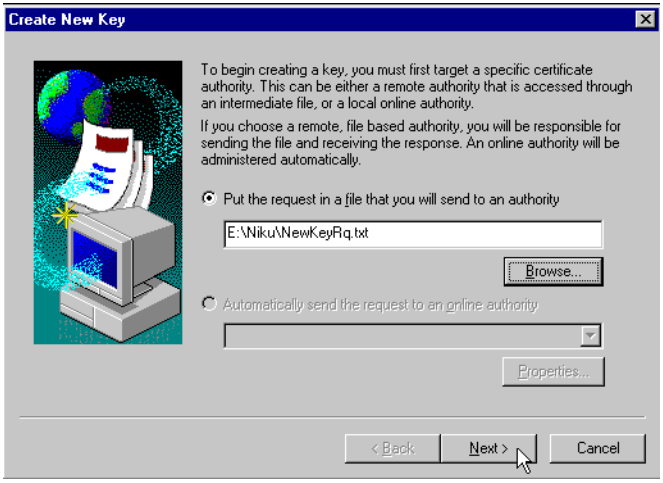
2 In Internet Service Manager, click the **Key Manager** icon. The Key Manager displays.



3 On the Key menu, select **Create New Key** and follow the instructions.



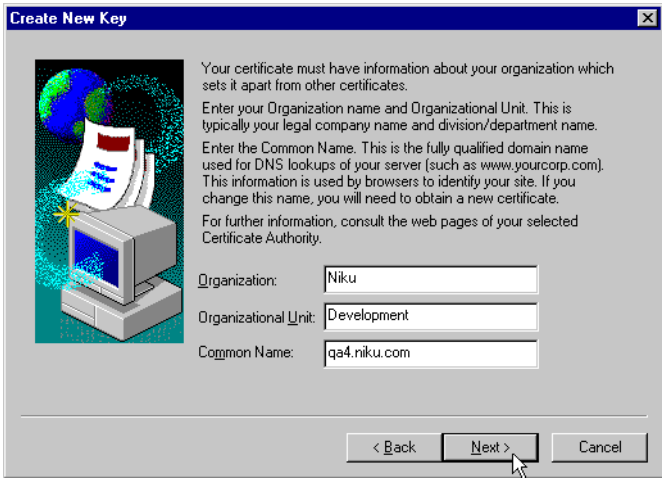
4 Click **OK**. A Create New Key dialog displays.



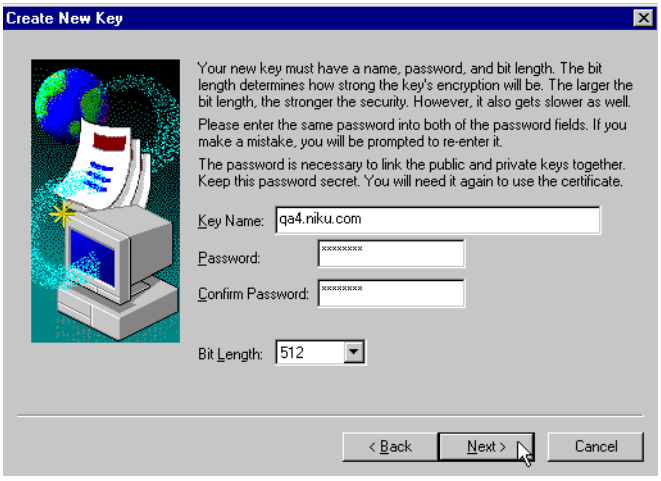
5 Browse to the directory to save the file to and click **Next**.

6 Name your key and assign a password.

7 Click **Next**. A key information screen displays.



8 Type in your company information and domain name.

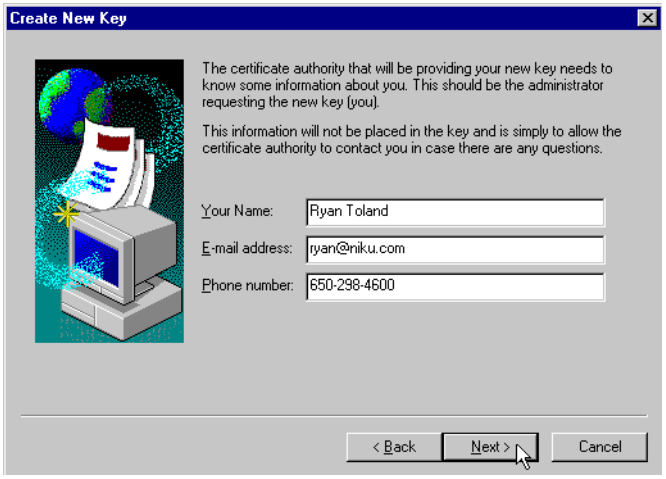


Note: Make sure the NikuHostName in the nitc.ini file matches the Common Name.

9 Click **Next**.

10 Fill in the Country, State and City fields. Click **Next**.

11 Fill in Your Name, E-mail address and Phone number.

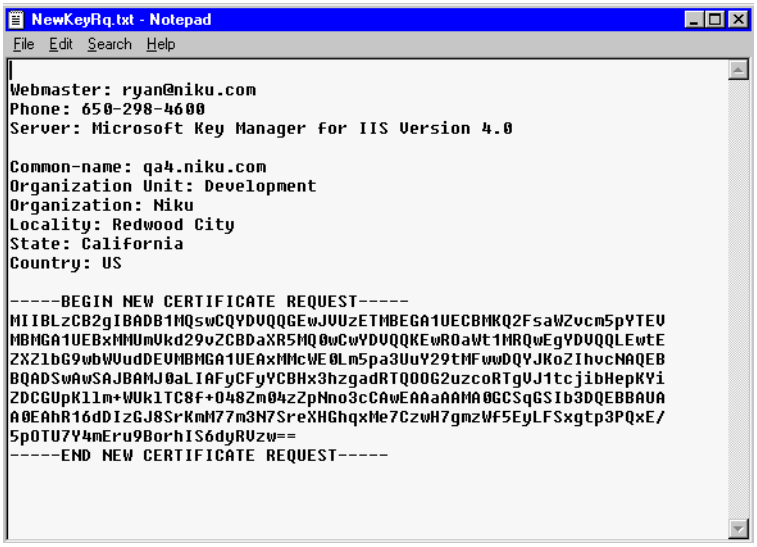


12 Click **Next**.

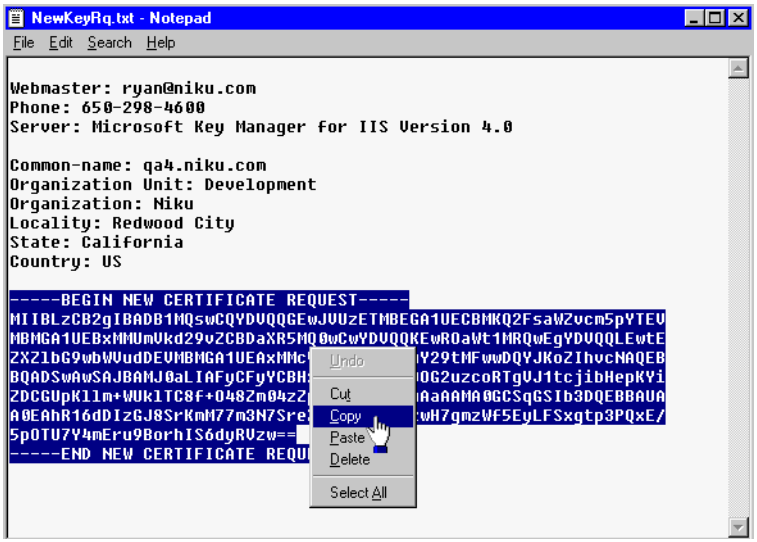
13 Click **Finish**.

14 Click **OK**. A key-pair is created.

15 Navigate to and Open the saved key-pair file.



16 Highlight the following text. Right-click the highlighted area and select copy.



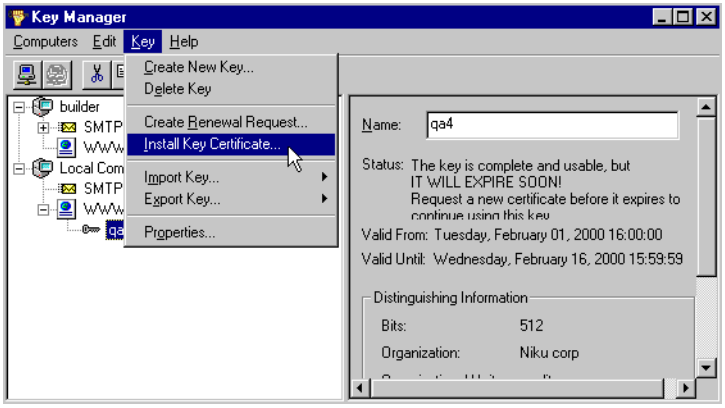
This information needs to be sent to a company like Verisign. To obtain a temporary certificate, visit the VeriSign website and follow the directions provided there.

When the selected text has been submitted to Verisign, you will receive a certificate that is similar to what you sent.

17 To install the certificate save the text of the certificate file that you received from the certificate authority, as a standard (ASCII) text file. Use a .txt file name extension.

Note: Consult specific instructions sent by the certificate authority that issued the certificate.

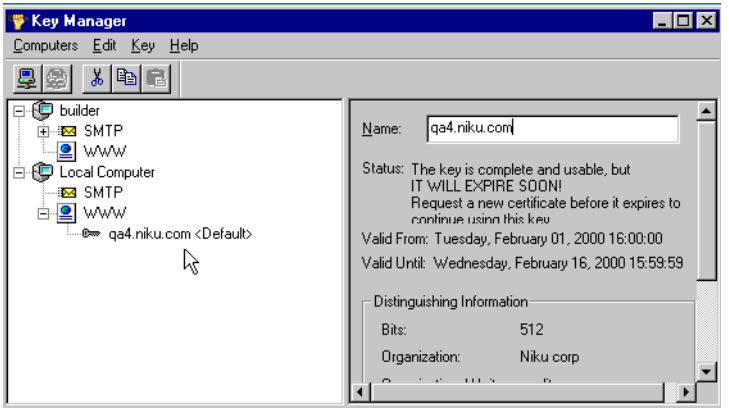
18 From the Internet Service Manager, click the **Key Manager** icon. From the Key Manager window, select the key you are installing the certificate for.



19 From the Key menu, select **Install Key Certificate**. In the Open dialog box, select the certificate text file.

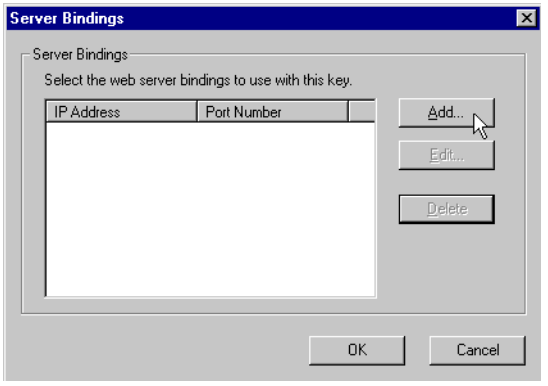
20 Click **Open**.

21 In the Password text box, enter the certificate file password, then click **OK**. The server now has a valid certificate.

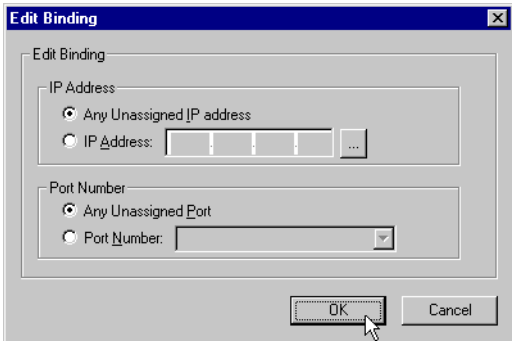


22 In the Key Manager window, select the key that you wish to configure. On the Key menu, select Properties.

23 In the Server Bindings dialog box, either click **Add** or select an IP binding and click **Edit**.



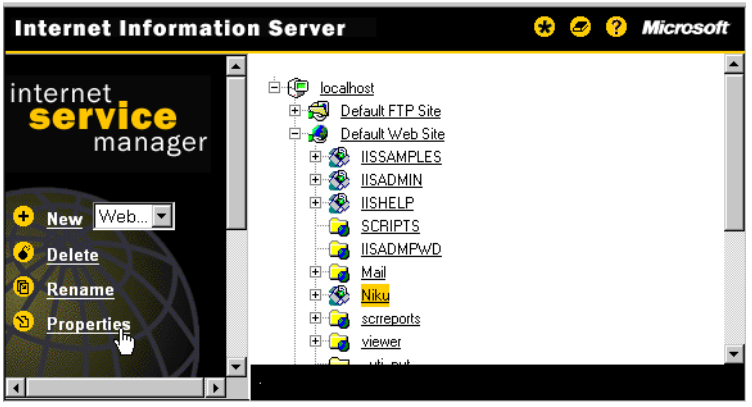
24 In the Edit Bindings dialog box, select Any Unassigned IP address and Any Unassigned Port.



25 Click **OK**.

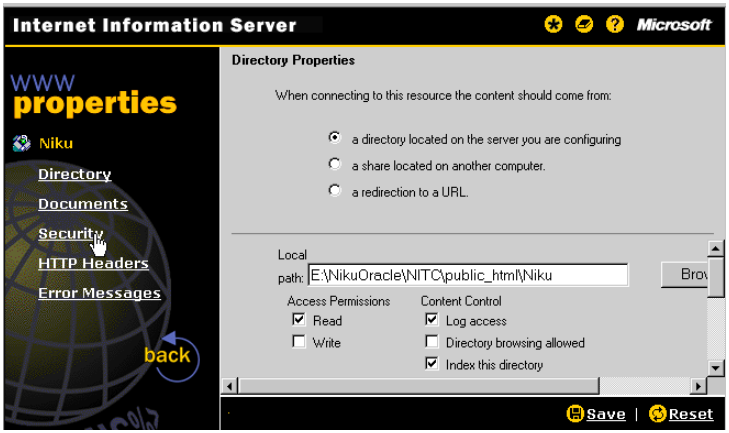
26 Click OK. Now that we have the certificate installed, we need to require that the secured protocol be used.

27 Go to **Start—Programs—Windows NT 4.0 Option Pack—Internet Information Server**. The Internet Information Server HTML page displays.

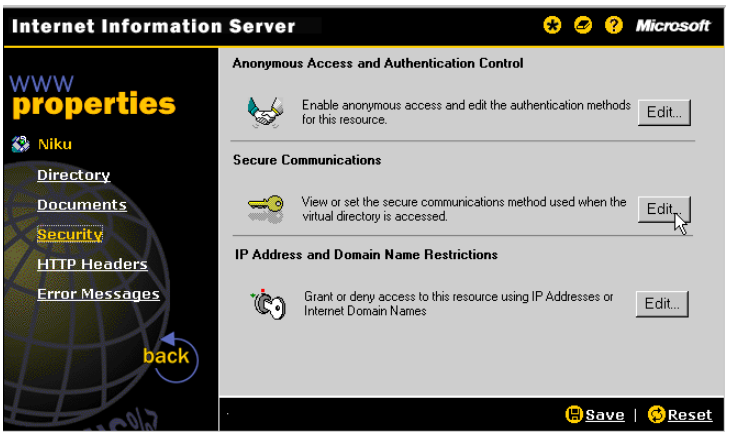


28 Highlight your web server and click the Properties link. Your web server Directory Properties page displays.

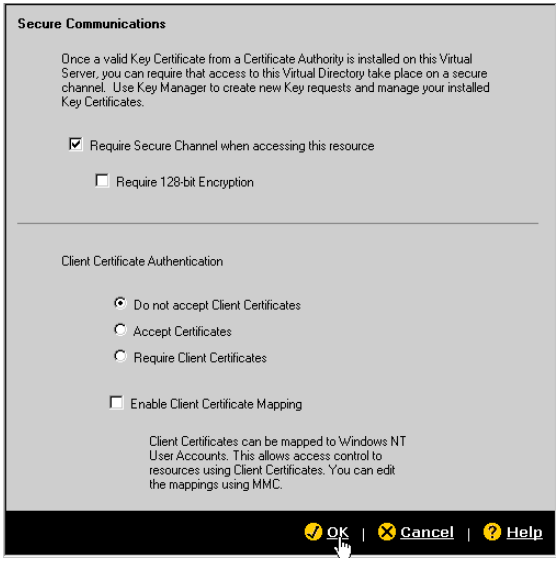
29 Click the **Security** link.



30 Click **Edit** from the Secure Communications section.



The Secure Communications section displays.



31 Select **Require Secure Channel** when accessing this resource. The Client Certificate Authentication can remain at default and click **OK**.

32 Click **Save**. Exit the Internet Information Server. The eNiku application is now ready for access via the SSL protocol. For more information regarding IIS and SSL protocol, see your Windows NT 4.0 Option Pack Documentation.

Time and Expense SSL Configuration

The following steps are required to setup secure socket layer (SSL) for Time and Expense.

- Edit the nitc.ini file
- Edit the weblogic.properties file
- Edit the Extensity.cfg file
- Edit the database table alco_background_process
- Install BEA WebLogic 4.5.1 demo application
- Generate a key

- Send key to Verisign
- Install certificate received from Verisign
- Un-install the Weblogic 4.5.1 demo application
- Start the Time and Expense application server

nitc.ini File Configuration

1. Navigate to and open your nitc.ini file. Scroll down to the bottom of the file.
2. Change all references of http to https
3. Change all references of -portNumber 7001 to -portNumber 7009
4. Change all references of -secureConnection false to secureConnection true

   The following is an example of a configured applet section for SSL:

```
## IE Client Applet

NITC.TimeAndExpenseCab40HTML=<APPLET codebase="https://
cap4/TandE" CODE="largesoft.sys.Application.class"
WIDTH="450" HEIGHT="250" MAYSCRIPT>\

        <PARAM NAME="useslibrary" VALUE="Extensity-Niku
Client">\

        <PARAM NAME="namespace" VALUE="Extensity-Niku
Client">\

        <PARAM NAME="useslibrarycodebase"
VALUE="ext40.cab">\

<PARAM NAME="useslibraryversion" VALUE="4,2,5,132">\

<PARAM NAME="arguments" VALUE="-startupClass
largesoft.bob_cs.Client -appServer cap4 -portNumber 7009
-secureConnection true -logTo 3 -logLevel 3 -
ccExpenseWarning 1 -Variant NIKU -module application -
login.userName %user% -login.userPassword %pwd%">\

</APPLET>

## IE Admin Applet
```

```
NITC.TimeAndExpenseCab40HTMLAdmin=<APPLET
codebase="https://cap4/TandE"
CODE="largesoft.sys.Application.class" WIDTH="450"
HEIGHT="250" MAYSCRIPT>\

        <PARAM NAME="useslibrary" VALUE="Extensity-Niku
Admin">\

<PARAM NAME="namespace" VALUE="Extensity-Niku Admin">\

<PARAM NAME="useslibrarycodebase" VALUE="ext-
admin40.cab">\

        <PARAM NAME="useslibraryversion"
VALUE="4,2,5,132">\

<PARAM NAME="arguments" VALUE="-startupClass
largesoft.bob_cs.Client -appServer cap4 -portNumber 7009
-secureConnection true -logTo 3 -logLevel 3 -Variant NIKU
-login.userName %user% -login.userPassword %pwd% -
appType Admin">\

</APPLET>

NITC.TimeAndExpenseRemoteHTML=https://cap4/TandE/
RemoteTimeandExpense.exe

## Netscape Client Applet

NITC.TimeAndExpenseExtHTML=<APPLET codebase="http://
cap4/TandE" CODE="largesoft.sys.Application.class"
WIDTH="450" HEIGHT="250" MAYSCRIPT VIEWASTEXT>\

<PARAM NAME="arguments" VALUE="-startupClass
largesoft.bob_cs.Client -appServer cap4 -portNumber 7009
-secureConnection true -logTo 3 -logLevel 3 -Variant NIKU
-ccExpenseWarning 1 -module application -login.userName
%user% -login.userPassword %pwd%">\

</APPLET>

NITC.TimeAndExpenseRemoteHTML=https://cap4/TandE/
RemoteTimeandExpense.exe

NITC.TimeAndExpenseInstallHTML=https://cap4/TandE/ext-
install.jar

NITC.TimeAndExpenseInstallHTMLAdmin=https://cap4/TandE/
ext-admin-install.jar

## Admin tool for Extensity - Netscape.
```

```
NITC.TimeAndExpenseExtHTMLAdmin = <APPLET
codebase="https://cap4/TandE"
CODE="largesoft.sys.Application.class" WIDTH="450"
HEIGHT="250" MAYSCRIPT> \

<PARAM NAME="arguments" VALUE="-startupClass
largesoft.bob_cs.Client -appServer cap4 -portNumber 7009
-secureConnection true -logTo 3 -logLevel 3 -Variant NIKU
-appType Admin -login.userName %user% -
login.userPassword %pwd%">\

</APPLET>
```

5 Save Nitc.ini when all edits are completed.

Weblogic.properties File Configuration

1 Navigate to and open your weblogic.properties file. Scroll down to the following parameter:

TCP/IP port number at which the T3Server listens for connections

weblogic.system.listenPort=7001

2 Change the Port number to 9999. For example,

TCP/IP port number at which the T3Server listens for connections

weblogic.system.listenPort=9999

3 Scroll down to the following parameters:

#

SSL properties

#

#weblogic.system.SSLListenPort=7009

#weblogic.security.certificate.server=democert.der

#weblogic.security.key.server=demokey.der

#weblogic.security.certificate.authority=ca.der

4 Edit the parameters with your server specific certificate and key parameter. Use this information when generating your Weblogic application server key later. For example,

#

```
# SSL properties
#
weblogic.system.SSLListenPort=7009
weblogic.security.certificate.server=bertha_niku_com-cert.pem
weblogic.security.key.server=bertha_niku_com-key.der
#weblogic.security.certificate.authority=ca.der
```

5 Save the weblogic.properties file once all edits have been made.

Extensity.cfg File Configuration

To configure extensity.cfg:

1 Navigate to and open Extensity.cfg.

2 Edit the following parameters:

   a Change portNumber=7001 to portNumber=9009

   b Change secureConnection=false to secureConnection=true

3 Save Extensity.cfg.

Edit the Database Table

To edit the Microsoft SQL database table:

1 Edit the alco_background_process in the database. Launch Microsoft Enterprise Manager. Enterprise Manager displays.

2 Expand the SQL Server Group. Expand the ServerName. Expand Databases. Expand nitc.

3 Select Tables. All tables in the database display to the right. Scroll down to alco_background_process.

4 Right-click alco_background_process and select Open Table - Return all rows. The table opens in a new window.

5 Scroll right to the server_port column. Change all values from 7001 to 9999. Close the window once all values are edited.

6 Restart the database. Exit Enterprise Manager

To edit the Oracle database table:

1. Edit the alco_background_process in the database. Launch SQL Worksheet.
2. Type select * from alco_background_processs and press Ctrl/Enter. Seven rows are selected.
3. Scroll to SERVER_PORT. All values under this heading are set to 7001.
4. Type update alco_background_process set SERVER_PORT=9999 where SERVER_PORT=7001 and press Ctrl/Enter. Seven rows are processed.
5. Type select * from alco_background_process and press Ctrl/Enter. Seven rows are selected. All SERVER_PORT values now display 9999.
6. Type commit and press Ctrl/Enter. The statement is processed.
7. Exit SQL Worksheet.

To edit the Sybase database table:

1. Edit the alco_background_process in the database.
2. Launch SQL Advantage.
3. Login using nitc/niku99 for username/password.
4. Type select * from alco_background_process and click execute. Seven rows are selected.
5. Scroll to server_port. All values under this heading are set to 7001.
6. Type update alco_background_process set server_port=9999 where server_port=7001 and click Execute. Seven rows are processed.
7. Type select * from alco_background_process and press Ctrl/Enter. Seven rows are selected. All server_port values now display 9999.
8. Restart the database.
9. Exit SQL Advantage.

Install BEA WebLogic 4.5.1 Demo

1. Download BEA WebLogic 4.5.1 demo version from `http://www.beasys.com/download.html`.
2. Install WebLogic 4.5.1 demo.
3. When prompted to enter a password, type niku2000. The installation completes.

Generate Key and Send to Verisign

1. Start WebLogic from Start - Programs - WebLogic 4.5.1 - WebLogic Server. A Weblogic Server DOS screen displays.
2. Open Internet Explorer and navigate to `http://<servername>:7001/Certificate`. A Login window displays.
3. Type system for user and niku2000 for the password.
4. Click **OK**.
5. The WebLogic Server Certificate Request Generator page displays. Fill in the table at the bottom of the page. Make sure you use the full host name (<hostname>.<domain name>.com) and click Generate Request.
6. A certificate request is generated along with a key filename and request filename. Make sure the key filename matches the key filename in the weblogic.properties file.
7. Copy the key file to the D:\Niku\eNiku\TandE\AppServer\myserver folder.
8. Click **Submit** to send the certificate request to Verisign for a test digital ID.

Install Certificate

1. When you receive the certificate e-mailed to you from Verisign, copy the digital ID in the message and save it to a new text file.
2. Rename the text file to <server>_<domain>_com-cert.pem. This filename should match that of the parameter in the weblogic.properties file.

3 Save this file to the D:\Niku\eNiku\TandE\AppServer\myserver folder.

Un-install WebLogic 4.5.1 Demo

1 Close the WebLogic Server DOS window.

2 Select **Start—Settings—Control Panel—Add/Remove Programs**. The Add/Remove Programs Properties window displays.

3 Scroll down and highlight WebLogic version 4.5.1.

4 Click **Add/Remove**. The WebLogic un-install programs starts.

5 Once un-installed, navigate to the installation folder and delete all references to the WebLogic 4.5.1 installation.

Caution: It important that the Weblogic 4.5.1 demo is un-installed before running Niku Time and Expense.

Start Niku Time and Expense

1 Start the Niku Time and Expense application server. Time and Expense now runs under the SSL protocol.

Index

L

M

N

O

P

R

S

U

W