

NETSCREEN-GLOBAL PRO

Installer's Guide

Version 2.6.0

P/N 093-0046-000

Rev. A

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Preface

This guide provides system administrators and managers with the procedures required to install and perform initial configuration of NetScreen-Global PRO™.

WHO SHOULD READ THIS MANUAL?

System administrators and managers who are to install, configure, and operate NetScreen-Global PRO should read this manual. An understanding of network installation and maintenance is required.

MANUAL ORGANIZATION

This section contains a brief description of the contents of each chapter in the Installer's Guide, and an example of a correctly completed installation.

Chapter 1, Introduction, explains the system requirements of NetScreen-Global PRO and the prerequisites that must be completed prior to the installation.

Chapter 2, System Requirements, details the external products that are installed and configured before NetScreen-Global PRO.

Chapter 3, Installing NetScreen- Global PRO, describes how to configure the Global PRO hardware and software combinations.

RELATED PUBLICATIONS

This documentation is included in the NetScreen-Global PRO software package.

- *NetScreen-Global PRO Administrator Console User's Guide*, P/N 093-0053-000 Rev. A
- *NetScreen-Global Manager User's Guide*, P/N 093-0015-000 Rev. C, Version 2.6
- *NetScreen-Global PRO Reports Guide*, P/N 093-0054-000, Rev. A, Version 2.6)

PUBLICATION RECORD

093-0046-000 Rev. A

March, 2001

Introduction

1

NetScreen-Global PRO is a software package that allows you to monitor and manage NetScreen devices located anywhere on the network. Using NetScreen-Global PRO, you can:

- Configure numerous NetScreen Devices located anywhere on the network.
- Administer and change configurations.
- Monitor all NetScreen devices attached to the network.
- Receive alerts via e-mail or other configured methods.
- Receive real-time performance and logging reports.
- Receive and store detailed historical reports, using the Crystal Reports software.

The architecture of a network controlled by NetScreen-Global PRO is divided into three tiers according to their hierarchy in the data management relationship. This architecture is shown in Figure 1-1:

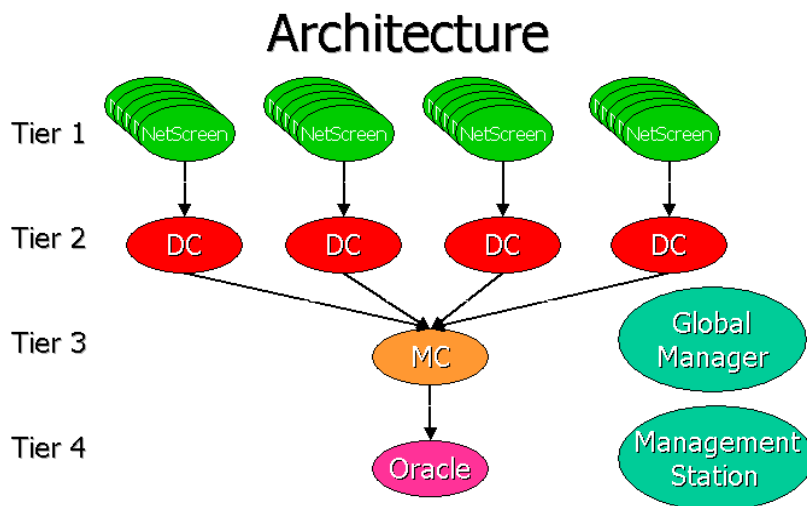


Figure 1-1 Architecture Hierarchy

Tier 1: NetScreen® devices managed by NetScreen-Global Manager™ are connected to a specific Data Collector. The devices then report data to the Data Collector.

Tier 2: The Data Collectors take the NetScreen device data and forwards it to the Master Controller.

Tier 3: The Master Controller, receives performance data from the Data Collectors and forwards it to a permanent Oracle database.

Tier 4: The Oracle® database stores historical data which can be manipulated and analyzed with reporting packages such as Seagate® Crystal Reports™.

The System in Practice

In practice, the NetScreen-Global PRO system is used to manage large, diverse installations. Figure 1-2 illustrates a typical large installation.

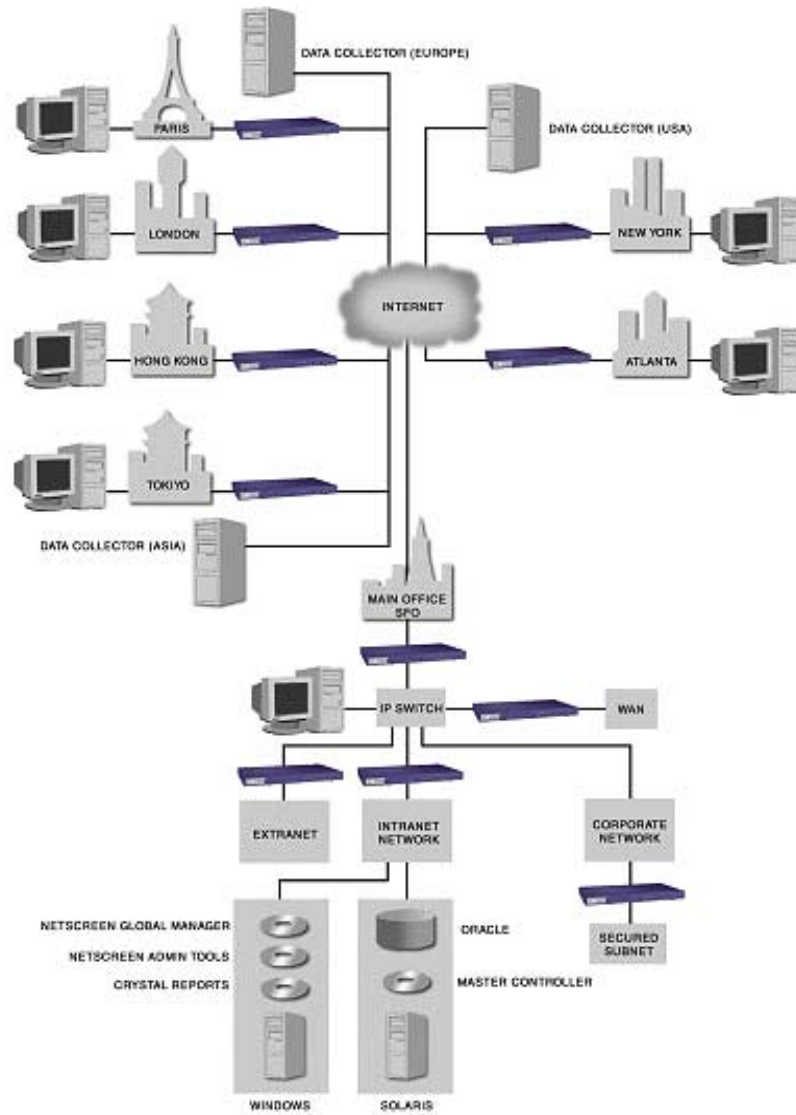


Figure 1-2 Typical Large Installation

System Requirements

2

Before beginning the installation, review the system requirements necessary to install NetScreen-Global PRO.

Supported Platforms

The NetScreen-Global PRO Data Collector, Master Controller, and Administrator Console run on the platforms as described in these tables:

Table 2-1 Data Collector

Operating System	Architecture	Required Memory	Required Disk Space
Sun Solaris 8	SPARC	128 MB minimum	100 MB, with the device log stored externally 1 GB minimum, with the device log stored internally RAID for redundancy

Table 2-2 Master Controller

Operating System	Architecture	Required Memory	Required Disk Space
Sun Solaris 8	SPARC	128 MB minimum	100 MB minimum

Table 2-3 Administrator Console

Operating System	Architecture	Required Memory	Required Disk Space
Win NT 4.0, Windows 2000	Intel	64MB Minimum	20MB minimum

System Requirements

NetScreen-Global PRO contains several key elements that require specific system configurations. These minimum requirements are:

Master Controller

The Master Controller (MC) requires:

- Sun Microsystems SPARC Ili 400 MHz
- 256 MB RAM, 8 Gig HD, minimum
- Solaris 8
- Netras (recommended)
- */opt* partition of at least 1 Gig

Data Collector

The Data Collector (DC) requires:

- Sun Microsystems SPARC Ili 400 MHz
- 256 MB RAM, 8 Gig HD, minimum
- Solaris 8
- Netras (recommended)
- */opt* partition of at least 1 Gig

Note: For simpler configurations, the Oracle database and the MC can be installed on the same workstation.

Oracle Database

The Oracle database requires:

- Sun Microsystems SPARC Ili 400 MHz
- 256 MB RAM, 8 Gig HD, minimum
- Solaris 8
- Oracle 8i
- Database partition of at least 2 Gig

Administrator Console

Administrator Console requires:

- IBM-compatible PC running one of these operating systems:
 - Microsoft Windows 2000 with Service Pack 1
 - Windows NT Server with Service Pack GA
 - Windows NT Workstation
- 128 MB RAM, minimum

NetScreen-Global PRO Crystal Reports

The optional NetScreen-Global PRO Crystal Reports package runs on the Windows platform. Crystal Reports requires:

- One of these operating systems:
 - Windows NT 4.0 Server with Service Pack 6a
 - Windows 2000 Server with Service Pack 1
 - Windows 2000 Advanced Server with Service Pack 1
- Oracle 8.1.6 NT Client with Net8 Service
- 128 MB RAM
- 200 MB free disk space, minimum
- Windows IIS Web Server

Global Manager

Global Manager requires:

- IBM-compatible PC running one of these operating systems:
 - Windows NT Workstation or Server 4.0, Service Pack 4 or higher
 - Windows 2000 Professional Server or Advanced Server editions
- 64 MB RAM minimum, 128 MB RAM recommended
- 3 MB of disk space available for the software
- 5 MB of disk space available for each NetScreen device you plan to monitor. This disk space is used to store the log files for each device.
- Ethernet adapter

Note: *NetScreen-Global Manager and Administrator Console can be installed on the same workstation, as long as their hardware and software requirements are met.*

NetScreen Devices

The NetScreen devices require:

- NetScreen-OS 2.6.x

3

Installing NetScreen-Global PRO

NetScreen-Global PRO includes client and server components. The illustration shown in Figure 3-1 represents the example configuration described in this guide. However, in your installation, the actual location of the components might vary.

Important: Because some components cannot be configured before others are installed, follow this order of installation even when installing on a network with a different configuration than shown here.

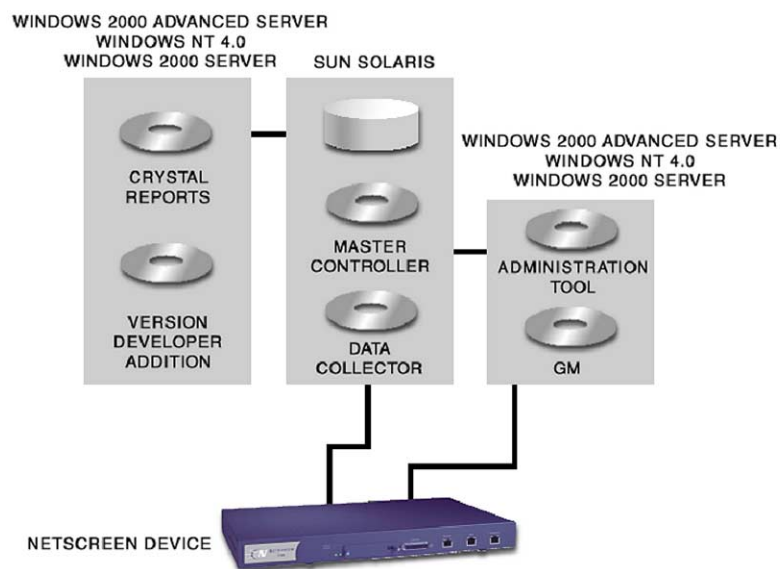


Figure 3-1 Global PRO Installation Example

PREPARING FOR INSTALLATION

To prepare for installation, gather the network's IP addresses, URLs, passwords, network addresses, gateways, servers, device relationships, and other machine identification elements. Have this information with you when beginning the installation.

Important: Prior to beginning installation, ensure that an Oracle database is in place and operating. The Oracle database operates on a Sun[®] server running the Solaris 8[®] operating system.

NetScreen suggests preparing at least two documents:

- A network evaluation diagram
- A table listing IP addresses, gateways, DNS servers, and any other information your system requires for network interoperation.


Important: You must have Root privileges or permissions to write to the directories necessary to perform the NetScreen-Global PRO installation.

INSTALLATIONS AND PROCEDURES

The sequence of the installation procedures for Global PRO is described in the next section.

Sequence of Installation Steps

Important: NetScreen recommends that you begin installation of the DC and the MC on a workstation with a new or reloaded Sun Solaris 8 platform.

 **Caution** Solaris 8 ships in an insecure mode. Check these defaults and set them to your preferred level of security level before continuing the installation.

Install the NetScreen-Global PRO components in the order listed in this table:

Table 3-1 Installation Steps

Component	Installation Step
Oracle Database	Verify that the Oracle database instance and Oracle Listener are running. Verify that you have an 'oracle' login and password. As 'oracle', run the database scripts located in the <install directory>/scripts directory. The order in which to run the scripts is as follows: glpro_orcl_create_table.sql, glpro_orcl_create_constraint.sql, glpro_orcl_init_table.sql. You must also run these scripts as system/manager.
Master Controller	Run proinstall.bin from the NetScreen Global PRO installation CD. Select Master Controller component. When prompted, enter the database name, the database server ID address and the customer authentication ID. Note: Do not forget the customer authentication ID as you will need it again when you install the Data Collector and Administration Console components. You can accept all other database default values given unless they are different from your installation.
Data Collector	Run proinstall.bin from the NetScreen Global PRO installation CD. Select Data Collector component. When prompted, enter the IP address for the Master Controller and the Customer authentication ID you previously entered above.
NetScreen Devices	Assign the Global Manager IP address to the devices.
Global Manager	Install Global Manager on the Windows platform and add NetScreen devices. See the NetScreen-Global Manager documentation for more details.
Administrator Console	Install the AC from the NetScreen Global PRO installation CD onto the Windows platform. Select Admin Tool install. When prompted, enter the IP address of the Master Controller and the customer authentication ID you previously entered above.

Beginning the Installation

To start the installation of the NetScreen-Global PRO MC and DC on the Solaris workstation using a CD-ROM, follow these steps:

1. Log in to the server as Root or a UNIX user created for Global PRO. You can use user “nobody” and group “nobody” for this purpose or create your own specific user and group.
2. Insert the NetScreen-Global PRO CD-ROM into the CD-ROM drive.

Important: Depending on your system, you may have to mount the CD manually.

3. Change directory to:

```
cd /cdrom/Global_PRO
```

Note: To see the complete contents of the directory, issue the `ls` command.

The *proinstall.bin* program is inside this directory.

To run the program, enter:

```
./PROinstall.bin
```

4. This command starts the NetScreen-Global PRO installer.

Note: The installer requires X Windows or CDE Window system to run.

Installing the Master Controller and the Data Collector

Follow the steps in this section to install the MC and the DC.

After you start the installer, the Introduction Screen appears.

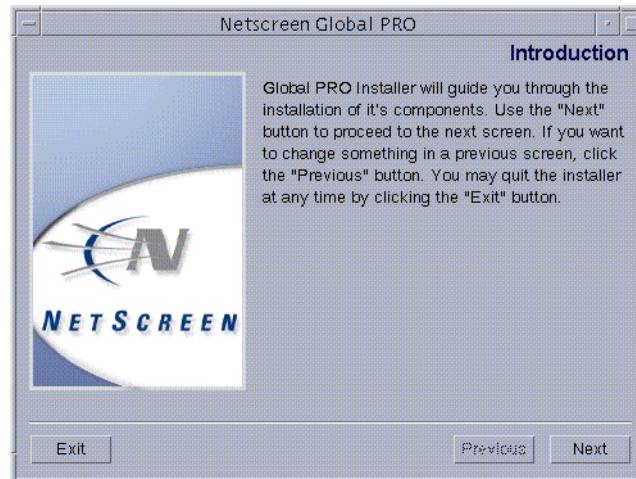


Figure 3-2 Introduction Screen

1. Click the **Next** button to display the License Agreement screen shown in Figure 3-3.

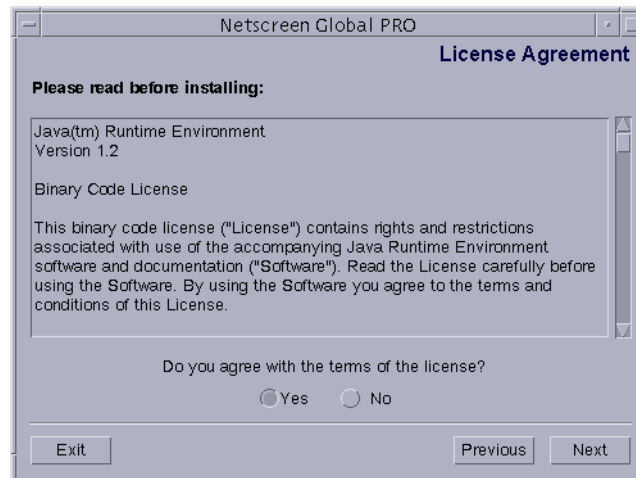


Figure 3-3 License Agreement Screen

2. Read the entire license agreement using the scroll bar to view text that is below the visible window. Then click the **Yes** radio button followed by the **Next** button to display the Important Information screen shown in Figure 3-4.

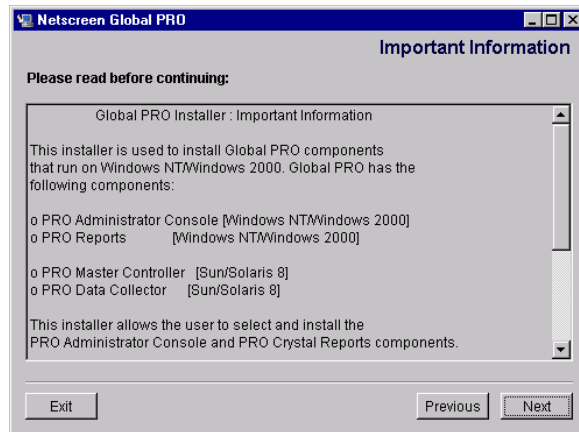


Figure 3-4 Important Information Screen

3. Read the information on the NetScreen-Global PRO Important Information Screen. Use the scroll bar to view the information below the edge of the window. When you have read all the information, click the **Next** button to display the Select Installation Directory screen shown in Figure 3-5 on page 3-12.

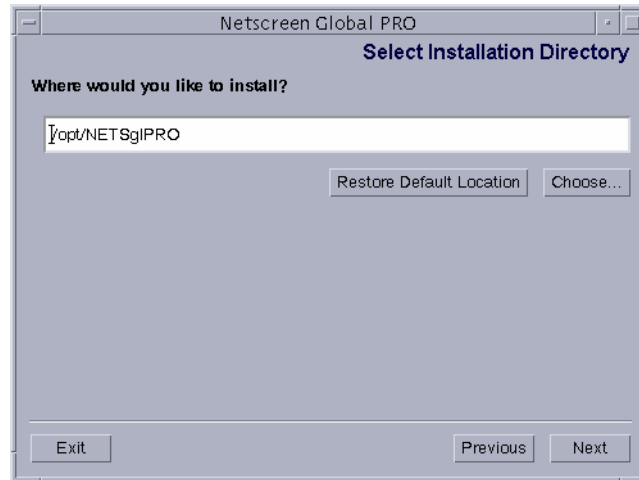


Figure 3-5 Select Installation Directory Screen

4. By default, the Select Installation Directory Screen shown in Figure 3-5 contains this name directory:

/opt/NETSglPRO

Either accept the default location or select the directory you want to use by clicking the **Choose** button and selecting a different directory. Use the **Restore Default Location** button to restore the installation directory default if you make a mistake.

After selecting the installation directory, click the **Next** button to display the Select Component to Install screen shown in Figure 3-6 on page 3-13.

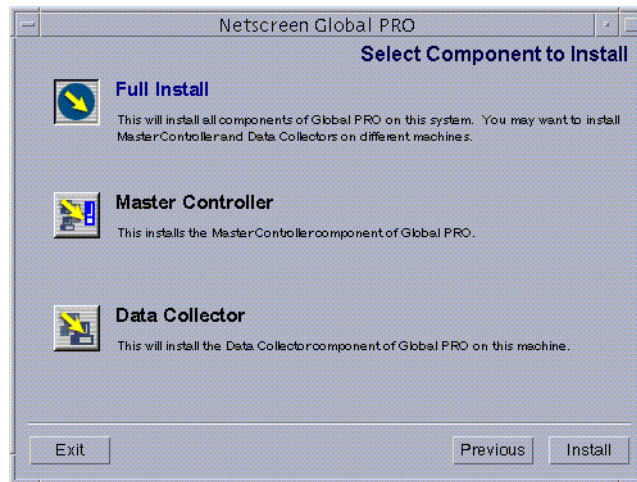


Figure 3-6 Select Component to Install Screen

The Select Component to Install screen contains three installation options:

Full Install

Selecting this option installs the MC and the DC on the same machine.

Master Controller

Selecting this option installs only the MC. Use this option to install the MC on one machine and the DC on another.

Data Collector

Selecting this option installs the DC only.

Select the desired installation by clicking on its button.

Note: *In this sample installation, the Full Install option, which installs the MC and the DC on the same machine, is used as an example.*

5. Select the **Full Install** button.

Note: NetScreen recommends installing the MC and DC on separate machines in an actual installation.

Clicking the **Full Install** button begins the installation and displays the Installation Progress screen, shown in Figure 3-7. A blue moving bar in the screen's lower right-hand corner indicates the installation's progress.



Figure 3-7 Installation Progress Screen

Note: There are other screens that display quickly, but they are for your information only and require no action.

Configuring the Master Controller

When the MC installation is complete, the Configure Master Controller Component screen appears. See Figure 3-8 on page 3-15.

Note: The screens that display are determined by the installation choice you made earlier. If you selected Full Install, configuration screens for both the MC and the DC display. If you are installing individual components, only the configuration screen for the component you are installing displays.

Figure 3-8 Configure Master Controller Component Screen

The Configure Master Controller Component screen generates the script and property files required to start the service when the installation is complete.

To enter the information into the Configure Master Controller Component screen:

Enter the requested information in the fields displayed on the Configure Master Controller Component screen:

Database Name	The name assigned to the Oracle database.
Database Port	The port number on which the database is found.
Database Server IP Address	The IP address or the name of the Oracle database server.

Database User Name	The name of the authorized Oracle database user.
Database Password	The password of the authorized Oracle database user.
Data Table Space	The location of the Data Table; the default is USERS.
Index Table Space	The location of the Index Table; the default is INDX.
Customer Authentication ID	<p>This ID is extremely important, because it is used by the system to recognize its component parts. You can create any Customer Authentication ID you like, but remember to enter the same Customer Authentication ID in the Customer Authentication ID field for the other software components in NetScreen-Global PRO.</p> <p>For example, you must enter the same ID in the Configure Data Collector Component screen, no matter if the DC is installed on the same machine as the MC as in this example, or installed elsewhere on your network.</p>

When you have completed the fields on the Configure Master Controller Component Screen, click the **Next** button to display the Configure Data Collector Component screen. See “Configuring the Data Collector” on page 3-17.

Note: In an installation where you have installed only the MC, clicking the **Next** button displays the The NetScreen-Global PRO Install Complete Screen shown in Figure 3-10 on page 3-18.

Configuring the Data Collector

After you click the **Next** button on the Configure Master Controller Component screen, the Configure Data Collector Component screen displays. See Figure 3-9 on page 3-17.

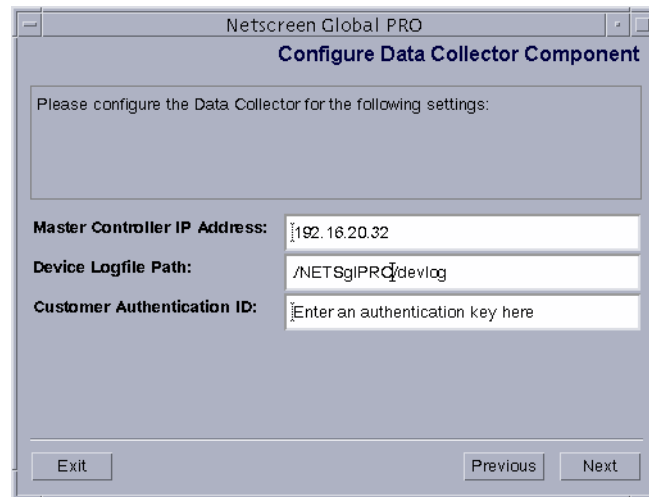


Figure 3-9 Configure Data Collector Component Screen

The Configure Data Collector Component screen contains these fields. Enter the appropriate data into the fields.

**Master Controller
IP Address**

Enter the IP address or the name of the MC, even if it is installed on the same machine as the DC.

**Device Logfile
Path**

The device log files are stored in this directory. Either accept the default or change the path as desired.

**Customer
Authentication ID**

Enter the same Customer Authentication ID as you entered in the Configure Master Controller Component screen.

Note: To review the requirements for this ID, see “Customer Authentication ID” on page 3-16.

When data entry is complete, click the **Next** button. NetScreen-Global PRO generates the files required to start the services, and then displays the Install Complete Screen, as shown in Figure 3-10 on page 3-18.



Figure 3-10 Install Complete Screen

Carefully read the information on the Install Complete screen in Figure 3-10 to start the services or for any errors encountered during installation.

Post Installation Steps

The installer generates several scripts using the data entered in the Configure Master Controller Component and the Configure Data Collector Component screens. These scripts are placed in the installation directory selected at the beginning of the installation. See Figure 3-5 “Select Installation Directory Screen” on page 3-12.

In this example installation, there are two property files that are generated as part of the post-installation process:

MC Property File

The name of the MC property file is:

pro.mc.init

DC Property File

The name of the DC property file is:

pro.dc.init

You can edit either of these files if you want to change the initialization parameters before starting the services.

SQL Scripts and Initialization

The SQL scripts given below are used to create a database user, generate Global PRO schema and initialize the Global PRO database. The scripts are generated by the install program during the MC's installation, and have to be run against the Oracle database from the `/opt/NETSglPRO` base directory:

glpro_orcl_create_user.sql (an SQL script for creating a database user).

glpro_orcl_drop_table.sql (an SQL script for dropping Global PRO tables in the database).

If there is anything in the customer's Global PRO database installation from an earlier install, these scripts will clean up the database before a fresh installation:

glpro_orcl_create_table.sql (an SQL script for creating Global PRO tables in the database).

glpro_orcl_create_constraint.sql (an SQL script for adding constraints and indices to Global PRO tables in the database).

glpro_orcl_init_table.sql (an SQL script for initializing the Global PRO database tables with predefined data).

The order in which the SQL scripts need to be run and the commands to run them are given below:

For an existing installation, start by running *glpro_orcl_drop_table.sql*.

After this, and for newer installations, follow the sequence below:

Run *glpro_orcl_create_user.sql* (if the database user and password already exists, this step can be skipped).

Run *glpro_orcl_create_table.sql*.

Run *glpro_orcl_create_constraint.sql*.

Run *glpro_orcl_init_table.sql*.

These scripts are run against the Oracle database using sqlplus (*e.g.* the following commands would run the SQL scripts with the default 'system' database account, whose default password is 'manager'):

```
> sqlplus -s system/manager < glpro_orcl_create_user.sql
```

```
> sqlplus -s system/manager < glpro_orcl_create_table.sql
```

```
> sqlplus -s system/manager < glpro_orcl_create_constraint.sql
```

```
> sqlplus -s system/manager < glpro_orcl_init_table.sql
```

Starting the Services

The Master Controller must be started first. Go to the install directory/startup folder and run `glproMC start`.

Upon successful startup, launch the Administration Console from the Windows platform. You will log in as the default log in of netscreen/netscreen. Select the Data Collectors tab and add the Data Collector name and IP address. Select the Devices tab and add the NetScreen devices. Select the Users tab and create a user. (Remember, you will need the serial numbers for each device.)

Start the Data Collector process by going to the install directory/startup folder and running `glproDC start`.

Upon successful startup of the DC, go to Global Manager and select a device and select Report, Login to DC from the drop down menu. You will be prompted to log into the DC. After you have logged in, go to the Administration Console and select the Devices tab. If everything is running correctly the Status should be "Active" and the Last Heartbeat should be updated.

Note: For more information on starting the service in your installation, see Figure 3-10 on page 3-13.

Important: Although you can start the MC and the DC, before you have configured NetScreen-Global PRO, you must install the NetScreen-Global PRO Administrator Console to configure the NetScreen-Global PRO system, and install NetScreen-Global PRO Global Manager to configure and administer the firewalls.

For information on installing the Administrator Console, see “Installing the Administrator Console” on page 2-1 in Chapter 2 of the NetScreen-Global PRO Administrator Console User’s Guide, P/N 093-0053-000 Rev. A.

For information on installing Global Manager, see “Installing Global PRO” on page 3-5 in Chapter 3 of the NetScreen-Global PRO Global Manager User’s Guide, P/N 093-0015-000, Rev. C, Version 2.6.

UNINSTALLING NETSCREEN-GLOBAL PRO

To uninstall NetScreen-Global PRO

1. Navigate to the directory in which you installed NetScreen-Global PRO.
2. `cd <install_directory>UninstallerData.`
3. Run the `GlobalPROUninstall` script.

The `GlobalPROUninstall` script launches the `InstallAnywhere Uninstaller`, which uninstalls the Global PRO components.

Appendix A

NetScreen-Global PRO

Troubleshooting Guide

Installation Troubleshooting

To troubleshoot the installation of NetScreen-Global PRO, review this Appendix to correct a problem with a Global PRO component.

Master Controller

Has the number of file descriptors been increased?

See the Data Collector notes on increasing the limits.

Has the `pro.mc.init` been set properly?

- `db.name`
- `db.port`
- `db.ip.addr`
- `db.user.id`
- `db.passwd`
- `pro.customer.authenticate`

Note that `db.passwd` has to be started with a 'letter', not a numeric.

Also note that the above values must be the same for every Master Controller installation. If the user runs two Master Controllers, the same values must be used for `db.name`, `db.port`... etc. when installing the two Master Controllers.

Can the Master Controller detect the other components?

Can it ping the machine running the Oracle database (the same one that's given in db.ip.addr)?

Use the -test option in the Master Controller to test whether a connection can be created to the database, and whether the Master Controller has some initialized schema/data.

```
<install_directory>/gloPROmc -test
```

Data Collector

Has the number of file descriptors been increased?

Solaris has a low default limit. Because each socket connection needs to use up one file descriptor, edit this file to increase the limit:

```
/etc/system
```

and add these lines to the file:

```
set rlim_fd_max = 8192
```

```
set rlim_fd_cur = 4096
```

Reboot the solaris machine after making this change.

Has the pro.dc.init been set properly?

- mc.ip.addr
- dc.smelogfile.path
- pro.customer.authenticate

Note that 'pro.customer.authenticate' is a field that is entered as a 'secret identification' between the DC, MC and Oracle components. It acts like a 'password' between the components. The same value for 'pro.customer.authenticate' has to be entered in the installation of all components.

Has the Data Collector been added to Global PRO's database via the Administration Console?

- Can the Data Collector machine see the other components?
- Can it ping the Master Controller machine (the same one that's given in mc.ip.addr)?
- Can it ping all the devices that are supposed to be communicating with it?

Use the `-test` option in the Data Collector to test whether a connection can be created to the Master Controller, and also check if the Master Controller can find the Data Collector in the database:

```
<install_directory>/gloPROdc -test
```

Make sure that the device's timestamp is updated (use `ntp` to synchronize with a NTP server). Also, make sure that the machines running Data Collector (or Master Controller) have their time updated periodically.

Administrator Console

Has the `pro.admin.init` been set properly?

- `pro.admin.mc.ip.addr`
- `pro.customer.authenticate`

Can the Administrator Console see the other components?

Can it ping the machine running the Master Controller (the same one that's given in `pro.admin.mc.ip.addr`)?

Oracle Database

Has the Oracle database been started properly?

Here's a sample command for starting the Oracle database:

```
> $ORACLE_HOME/bin/dbstart
```

Has the Net8 listener been installed and started properly?

- Here's a sample command for starting the Net8 listener:

```
> $ORACLE_HOME/bin/lsnrctl start
```

Here's a sample command for verifying the status of the listener:

```
> $ORACLE_HOME/bin/lsnrctl status
```

Has the database been setup properly?

A sample command to use Oracle's sqlplus to connect to the database, using a dummy user identification and password (userid/passwd) is as follows:

```
> sqlplus userid/passwd tiger
```

SQL

Has the Global PRO database schema been installed properly?

The Global PRO's Master Controller installation process generates several SQL scripts. The following scripts have to be run against the database to create the database schema used by Global PRO:

glpro_orcl_create_user.sql for creating an Oracle database user so that Global PRO can connect to the database (if the database user already exists in the database, this script does not need to be run).

glpro_orcl_drop_table.sql for erasing all the Global PRO related database schema from the database. This script works like an 'uninstall' of Global PRO's database schema. It is only needed if the user wants to remove all Global PRO related tables/data and start from scratch again.

glpro_orcl_create_table.sql for creating the database tables used by Global PRO.

glpro_orcl_create_constraint.sql for adding optimizations/constraints to the database schema.

glpro_orcl_init_table.sql for adding initial data to the database tables required by Global PRO.

Note that the scripts have to be run against the Oracle database using sqlplus, e.g., the following commands would run the sql scripts with the default 'system' database account (whose default password is 'manager'):

```
> sqlplus -s system/manager < glpro_orcl_create_user.sql
> sqlplus -s system/manager < glpro_orcl_create_table.sql
> sqlplus -s system/manager < glpro_orcl_create_constraint.sql
> sqlplus -s system/manager < glpro_orcl_init_table.sql
```

Note that the above sql scripts rely on the existence of the Oracle tablespaces that are given to Global PRO during the Master Controller installation. The sql scripts create the database tables in the given tablespaces. The following is a sample sql command for creating a tablespace called PRO_DATA in Oracle, using a data file located in /u02/oradata/myora/PRO_DATA.dbf:

```
SQL> CREATE TABLESPACE PRO_DATA LOGGING DATAFILE '/u02/oradata/
myora/PRO_DATA.dbf SIZE 300M AUTOEXTEND ON NEXT 100M MAXSIZE
UNLIMITED;
```

NetScreen Devices

Has the device been set to enable Global-Pro?

Has the primary/secondary host (of Global-Pro) been configured correctly?

These can be verified by using CLI at the device:

```
get global-pro config
```

The Global-PRO status should be enabled.

The Primary Host/Secondary Host should point to the primary and secondary Data Collector's IP address.

Has the device been added to the database via the Administration Console?

Global Manager

Can it connect to the device it intends to manage?

Is the device setup for Global-Pro?

See above notes on 'enable Global-Pro' and 'primary-secondary host'.

Can the machine running the Global Manager see the other components.

Can it ping the Data Collector machine managing the devices it wants to retrieve reports from?

When the Global Manager is connected to a Data Collector, it will be prompted for a Global PRO userid, password:

- that user has to be pre-created via the Administrator Console.
- that user (or one of the groups that he belongs to) has to be given 'read-device' privilege to the device he is accessing, so that the Data Collector would let the user view the corresponding devices' log/alarm/traffic-counters.

Runtime Troubleshooting

If the user generates the error message:

Master Controller: cannot connect to database: ORA-00020: maximum number of processes (50) exceeded.

The default property setting in pro.mc.init:

```
workers=10
```

would use up $(2 * workers + 1)$ connections to the Oracle. To add a second Master Controller, one have to change the 'processes' setting in Oracle's init file from 50 to 70.

By the same token, if one has to add a third Master Controller, one have to change that value to 91.

The location of the init.ora file:

```
$ORACLE_BASE/admin/<db-instance-name>/pfile/init<db-instance-name>.ora
```

To support two Master Controllers, the following line needs to be changed:

```
processes = 50
```

to:

```
processes = 70
```

If the user generates the error message:

```
DEBUG [Cli #1:Worker #3] common.SmeApiDc(NspProcessGetResponse) - DC:
setAuthenticate: [07 Nov 2000 09:36:03,783]
```

```
DEBUG [Cli #1:Worker #3] common.SmeApiDc(NspProcessGetResponse) - 0:
[07 Nov 2000 09:36:03,793]
```

```
...
```

```
DEBUG [Cli #1:Receiver #1] nsp.NSPReceiverThread -
SocketException....Descriptor not a socket: JVM_recv in socket input
stream read [07 Nov 2000 09:36:03,853]
```

```
ERROR [Cli #1:Worker #3] common.SmeApiDc(NspProcessGetResponse) - Dc
to Mc's authentication failed [07 Nov 2000 09:36:04,124]
```

The above error messages indicate that Data Collector to Master Controller authentication failed, most likely because the Data Collector has not been added to the database via the Administration Console.

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