DEFINITY® Proxy Agent Release 4.0

Installation and Administration

585-229-772
Issue 1
December 2001

Contents

Resources and Notices

Introduction

This chapter contains resources and notices that are pertinent to the **DEFINITY Network Management (DNM)** products.

The ***DEFINITY Network Management CD-ROMs*** section lists the contents of the product CD-ROMs that are delivered to customers.

The ***Avaya Resources*** section describes the services that are available from the Sales and Design Support Center (SDSC), Lucent Worldwide Services (LWS), and Technical Services Center (TSC).

The ***References*** section contains Avaya contact information, including web sites, phone numbers, and email addresses. The section also contains contact information for third-party vendors.

The ***System Security*** section defines the precautions that customers must take to maintain the security of their networks and systems. The section also contains information on toll fraud security.

Avaya Resources

Avaya provides customers with a variety of planning, consulting, and technical services.

The ***client executives*** are the customers' primary source to obtain information and explore custom options to meet their specific business needs.

Note: DNM and DPA are ***software-only*** offers. Therefore, ***customers*** are solely responsible for the purchase and maintenance of all third-party hardware and software that are required to run these products.

The DEFINITY Solutions web site contains the system requirements and other provisioning and connectivity information for the DNM products. Refer to "Avaya References" on page 15 for the web address.

The sections below briefly describe the resources and services that are available to customers.

Sales and Design Support Center (SDSC)

The Sales and Design Support Center (SDSC) works with customers and client teams to develop detailed solutions for connectivity to DEFINITY and other supported systems. The SDSC also designs network configurations to support DNM and DPA.

Lucent Worldwide Services (LWS)

Lucent Worldwide Services (LWS) is available to work with customers to design and build a ***turn-key*** network management system.

Lucent Worldwide Services offers the consulting services listed below:

- Plan and design a custom network system
- Purchase and configure Caldera-certified hardware and external devices for the DEFINITY Proxy Agent
- Install and set up the UnixWare Operating System on the DEFINITY Proxy Agent platform
- Connect and administer all devices, ports, and cards
- Install and integrate the DEFINITY Network Management products on the Windows NT PC
- Train users on the operation and management of the products

Technical Services Center (TSC)

The Technical Services Center (TSC) provides support for DNM and DPA to client teams, field technicians, and customers.

The TSC works with the customer and the Avaya field technicians to perform the tasks below and to ensure that the products are properly installed and working:

- Platform Acceptance Test from the DPA computer
- Installation support for the DEFINITY Network Management products
- Technician Verification checklist
- Customer Acceptance checklist

Time and materials charges

The Technical Services Center (TSC) will ***bill*** customers for support on a time and materials basis if the following conditions exist:

- Customers do not have a current maintenance agreement
- Customers do not procure and install the required systems and software as defined in the Project Provisioning Package
- Customers request support that is outside of the purchase agreement

The Technical Services Center (TSC) does ***not*** support hardware or software that customers purchase from third-party vendors.

References

This section contains references to web sites, phone numbers, and email addresses for Avaya and third-party vendors.

The contact information is listed in the sections below:

- "Avaya References" on page 15
- "Vendor References" on page 18

Customers can access web sites that are ***outside*** the Avaya fire wall.

Note: The owners of the web sites may change the universal resource location (URL) for a specific web site address ***without*** notice. The reference information will be updated with each new release of the DEFINITY Network Management products.

Avaya References

The table below contains Avaya web sites, phone numbers, and email addresses for various sources. Some of the web sites are inside the fire wall and are ***not*** accessible to customers.

Table 1. Avaya resource sites

Source	Web Sites
DEFINITY Enterprise Management Support	DEFINITY Proxy Agent internal web site: *http://aem-support.dr.avaya.com*
DEFINITY Solutions	Systems Management site: **http://toolsa.bcs.avaya.com/~sysmgmt/**
Documentation and Training Information Development	DNM 4.0 project website: *http://pubnet.avaya.com/Projects/DNM/*
IntraWorks Catalog	DEFINITY Network Management User Document Set: *http://prodpubs.avaya.com/repubdoc.htm*
Lucent Worldwide Services (LWS)	Email: **dnmconsulting@lucent.com** Consulting offer: *https://www.esight.com/cgi-bin/gx.cgi/AppLogic+dns.home*
Project Provisioning Package	**http://aem-support.dr.avaya.com**
	(1 of 2)

Table 1. Avaya resource sites

Source	Web Sites
Sales and Design Support Center (SDSC)	Phone: 1-888-29704700, prompt 6 Main web site (requires a password) http://sdsc.avaya.com
Technical Services Center (TSC)	Technical Support: **1-800-242-2121, ext. 4-1080 or 720-444-1080** Fax for PA001 form: **1-303-804-3367** Connectivity Guide: **http://associate2.avaya.com/tech_info/tso/**
Tier IV Support Registry	International Customers only: Fax for PA001 form: **(U.S. code) 303-538-5506**
Toll Fraud Intervention	**1-800-643-2353**
	(2 of 2)

Table 2. Avaya resource sites INSIDE Firewall

Source	Web Sites
Documentation and Training Information Development	DNM 4.0 project web site: **http://pubnet.avaya.com/Projects/DNM/**
DEFINITY Enterprise Management Support	**http://aem-support.dr.avaya.com/**
Project Provisioning Package	**http://aem-support.dr.avaya.com/**
Sales and Design Support Center (SDSC)	Phone: **1-888-297-4700, prompt 6** Main site (requires a password): **http://sdsc.avaya.com**

Vendor References

The table below contains the web sites for third-party vendors.

Table 3. Vendor web sites

Vendor	Web Sites
AIX	AIX patches: **0** **http://techsupport.services.ibm.com/rs6000/support**
Computone I/O cards	Main site: *http://www.computone.com*
Equinox	Main site: *http://www.equinox.com*
Hewlett Packard	Main site: *http://www.hp.com* OpenView site: *http://www.openview.hp.com*
IBM	Main site: *http://www.ibm.com*
Microport	Main site: *http://www.microport.com*
Microsoft	Main site: *http://www.microsoft.com*
Remedy ARS	Main site: *http://www.remedy.com*
Caldera International (Caldera)Release	Main site: *http://www.sco.com* UnixWare certified hardware: *http://wdb1.sco.com/chwp/owa/hch_search/form* Upgrade patch: *ftp://ftp.sco.com/UW21*
	(1 of 2)

Table 3. Vendor web sites

Vendor	Web Sites
Sun Microsystems, Inc.	Main site: *http://www.sun.com* Solutions site: *http://sunsolve.sun.com*
Telamon TelAlert	Main site: *http://www.telamon.com*
Tivoli	Main site: *http://www.tivoli.com*
Versant	Main site:*http://www.versant.com*
	(2 of 2)

System Security Notices

Customers are ***solely*** responsible for the security of their system, network, and access to hardware and software.

The sections below define the precautions that all customers should take to maintain the security of their systems.

Network Security

The DEFINITY Network Management products use the standard security features on the UNIX, UNIX stand-alone, and NT operating systems.

Avaya ***strongly*** recommends that customers use passwords to prohibit access to their systems and to routinely change those passwords to maintain security.

Avaya also ***strongly*** recommends that customers assign the “browse” login to managed systems and disable the “password-aging” feature. SNMP set enabled on the proxy agent requires Maintenance and Administrator permissions when SNMP is used to set system time and/or to do busy-out/release.

SECURITY ALERT:

Customers should always change passwords immediately after external vendors have completed installation, maintenance, troubleshooting, or other tasks on their system.

Toll Fraud Security

Although the DEFINITY Network Management products are generally not at risk for toll fraud, ***customers*** are solely responsible for the security of their entire telecommunications systems.

Toll Fraud is the unauthorized use of a company's telecommunications system by unauthorized parties. Unauthorized parties are persons other than the company's employees, agents, subcontractors, or persons working on behalf of the company.

Note: Toll fraud can result in substantial additional charges for the company's telecommunications services.

The company's system manager is responsible for the security of the company's system, which includes programming and configuring the equipment to prevent unauthorized use.

Avaya Disclaimer

Avaya does ***not*** warrant that this product is immune from or will prevent unauthorized use of common-carrier telecommunications services or facilities accessed through or connected to it. Avaya will ***not*** be responsible for any charges that result from such unauthorized use.

Avaya Fraud Intervention

If customers suspect that they are a victims of toll fraud and need technical assistance, customers should refer to the "Avaya References" on page 15 for the Toll Fraud Intervention phone number.

1 Overview

Introduction

DEFINITY Network Management (DNM) and DEFINITY Proxy Agent (DPA) provide a complete solution to manage network resources from a central point of entry.

These products provide users with a snapshot of the health and performance of their network systems. DNM and DPA work together as an integrated application.

Software-only offer

DNM and DPA are ***software-only*** offers. **Avaya** is *solely* responsible for the support and maintenance of the product software.

Customers are *solely* responsible for the purchase, support, and maintenance of third-party hardware and software products that are *required* for this offer.

Product Description

DPA is a protocol conversion resource. It resides on a stand-alone personal computer and operates on the UnixWare Operating System.

DPA uses serial or TCP/IP ports to collect configuration and management data from supported systems. It converts the data into the Simple Network Management Protocol (SNMP). In addition, it generates SNMP traps when supported systems generate alarms and system errors.

DPA then transmits the SNMP data to DNM, which resides on the Network Management System (NMS). The NMS can be either a UNIX system or a Windows NT system.

Management Information Base (MIB)

The Management Information Base (MIB) allows DPA to access management data from the supported systems through the Simple Network Management Protocol (SNMP).

The MIB view consists of three groups:

- MIB-II group contains the standard SNMP MIB
- DEFINITY G3-MIB defines the management data that DPA collects and converts from the Operations Support System Interface (OSSI) protocol to the SNMP
- CONVERSANT, AUDIX, Intuity, Intuity Interchange, and CMS MIB

DPA places the data extracted from the system into the appropriate MIB group. Then, the management application uses SNMP to access the information.

To find the ans1 format MIB definition files, use the UNIX path **/usr/g3-ma/appl_fls/agent**.

Cache mechanism

The cache mechanism speeds up data access to management information. Due to the nature of the interface to the system data, DPA cannot directly extract the data for each SNMP *GetRequest* or *GetNext Request* message. Therefore, DPA places the system data in a cache file and uses the cache data to respond to requests from the network manager for MIB data.

For example, DPA will cache data from a system form that contains a table. A series of GetNextRequests that are used to parse the table will initiate a single request for that form. DPA provides the cached data in a set of ***objects*** for each cached group. This allows the network manager to make use of the cached data in the DNM applications.

Cache objects

DPA creates the cache file when the user establishes the first connection to the supported system. In addition, DPA will retrieve any missing cache data when re-connections are established.

DPA automatically refreshes cache data. Users can manually execute the “refresh” command from the DNM product.

DPA adds these ***objects*** to the cache files for each group that uses caching:

- A read-only object that specifies the time since the data in the cache was extracted from the system.
- A read-write object that specifies the time interval for which cached data is considered valid. DPA uses this value and the age value to determine if the system data needs to be refreshed.
- A read-only object that contains the amount of time that DPA used to extract the system data.
- A read-write object that indicates the cache contains refreshed data.
- A read-only object that identifies the groups that contain table data and indicates the number entries in the table.

If DPA encounters system command errors during the refresh process, then the cache file will contain ***null*** data. The empty cache file will still exist, but it will only contain the objects for all the system releases. However, if an attempt to refresh a cached object fails because of command contention on the system, then the existing cache will not be disturbed.

Alarm-to-Trap Conversion

DPA receives alarm notifications from each supported system that is administered on the MANAGED NODES screen on DPA.

To receive alarm notifications, users must also administer the *alarm source* fields on the ALARM DEVICES screen in DPA. Users must also administer the supported systems to send their alarm notifications to DPA's alarm receiver.

DPA also receives alarm dispatches and close notifications from the Initialization and Administration System (INADS).

Enterprise traps

DPA encapsulates the information contained in the alarm in an Enterprise-specific trap and sends the trap to the set of administered network managers. The format of the created traps match the trap definitions in the MIB files for each of the supported systems. These ASN.1 MIB files are included with DPA and reside in the **appl_fls/agent** directory.

When sending DEFINITY alarm traps, DPA refreshes health, alarm, error, and restart data. This refresh process allows the data to be current when the NMS requests the alarm traps.

User-defined script

DPA also calls a user-defined script, located in /usr/g3-ma/agent, that is based on the supported systems. The arguments that are passed to the script also match the arguments that are currently sent to corresponding scripts on the NMS. The scripts that are included in DPA are ***not*** set up. Users must modify the scripts to meet their needs.

Script directories

The following sample scripts are located in the **/usr/g3-ma/agent** directory.

The bin directory contains the following sample scripts:

- DEFINITY_ARS
- AUDIX_ARS
- CMS_ARS
- CONVERSANT_ARS

DEFINITY_ARS Script

Alarm notification options

System administrators can use the pager or email features or edit the scripts to enable thrid-party products.

The NMSI looks for the **DEFINITY_ARS** script when one of the following events occur:

- NMSI receives an alarm trap from the managed nodes listed below:
  - DEFINITY
  - MCU
  - IP600
  - DEFINITY One
- NMSI receives an exception event from the DNM application for these managed nodes

Then the NMSI calls the script and passes the values listed below to the alarm notification program. If a value is ***not*** defined, then the NMSI assigns the alarm the string "NULL_ FIELD."

Alarm notification values:

1 System name

2 Error description

3 New status severity

4 Old status severity

5 Product ID

6 Alarm sequence number

7 Alarming Port
8 Maintenance object name
9 On board fault
10 Type of alarm
11 Alternate name for the device
12 Describes the external device
13 Product Identifier of external device
14 Building location of external device
15 Address of external device
16 Restart date time
17 Restart level
18 Restart carrier
19 Restart craft demand
20 Restart escalated
21 Restart interchange
22 Restart unavailable
23 Restart cause
24 Restart speA release
25 Restart speB release
26 Restart speA update
27 Restart speB update

AUDIX_ARS Script

The NMSI looks for the **AUDIX_ARS** script when one of the following events occur:

- NMSI receives an alarm trap from the managed nodes listed below:
  - DEFINITY AUDIX
  - Intuity AUDIX
  - Intuity Interchange
- NMSI receives an exception event from the DNM application for these managed nodes

Then the NMSI calls the script and passes the values listed below to the alarm notification program. If a value is ***not*** defined, then the NMSI assigns the alarm the string "NULL_FIELD."

Alarm notification values:

1 System name

2 Product ID

3 Alarm sequence number

4 Source of the alarm:
- DEFINITY (for DEFINITY AUDIX)
- Intuity Interchange

5 Error description

6 New status severity

7 Old status severity

8 Alarm location
9 Alarm date
10 Alarm time
11 Resource
12 Fault code
13 Module ID
14 Event number
15 Count number

CMS_ARS Script

The NMSI looks for the **CMS_ARS** script when one of the following events occur:

- NMSI receives an alarm trap from the Call Management System (CMS)
- NMSI receives an exception event from the DNM application for the CMS

Then the NMSI calls the script and passes the values listed below to the alarm notification program. If a value is ***not*** defined, then the NMSI assigns the alarm the string "NULL_ FIELD."

Alarm notification values:

1 System name
2 Product ID
3 Alarm sequence
4 Error description
5 New status severity
6 Old status severity
7 Product type
8 Version
9 ID value
10 Number
11 Name

CONVERSANT_ARS Script

The NMSI looks for the **CONVERSANT_ARS** script when one of the following events occur:

- NMSI receives an alarm trap from the CONVERSANT system
- NMSI receives an exception event from the DNM application for the CONVERSANT system

Then the NMSI calls the script and passes the values listed below to the alarm notification program. If a value is ***not*** defined, then the NMSI assigns the alarm the string "NULL_FIELD."

Alarm notification values:

1 System name
2 Product ID
3 alarm number
4 Error description
5 New status severity
6 Old status severity
7 Location
8 Date
9 Time
10 Resource

11 Fault code

12 Module ID

13 Event number

14 Count number

Alarm Forwarding

Users can administer the ALARM DEVICES screen on DPA to forward alarms to INADS. When the supported system generates an alarm, DPA adds an additional field that contains a sequence number to the end of the alarm stream. DPA stores the sequence number in the alarm logs.

DPA uses the sequence number for tracking purposes. DPA forwards the alarms and the sequence number to INADS and includes the number as part of the alarm traps and alarm script arguments.

The Technical Services Center (TSC) uses the sequence number to trace alarms and verify that the alarms received by DPA are successfully delivered to the TSC, INADS, and the NMS.

Administration

Users must activate the alarm forwarding feature on the ALARM DEVICES screen. Users must also administer the supported systems as ***managed nodes*** on the MANAGED NODES screen. The screen also allows users to administer alarm forwarding on a node-by-node basis.

Alarm filtering

DPA also provides an alarm filtering feature that allows users to block the forwarding of certain alarms to INADS. Users can create sets of filtering criteria on the FILTER SET screen and then apply the filter sets to all or individual systems on the MANAGED NODES screen.

When a managed node generates an alarm, DPA checks the filter set and compares each set of criteria for a ***match*** against the alarm. If DPA finds a match for any criteria, then DPA does ***not*** forward the alarm to INADS. If no match is found, DPA forwards the alarm to INADS.

Reports

DPA reports any problems when trying to forward alarms to INADS. Alarm forwarding includes SNMP traps and the execution of the user-defined alarm scripts.

DPA creates two types of problem reports:

- Receipt of a negative acknowledgement (NAK) from INADS. This usually means that the product ID for the managed node has not been administered in INADS.
- Receipt of an invalid acknowledgment from INADS. This usually occurs if INADS drops the connection too soon, and DPA receives only part of the acknowledgement (ACK) needed to complete the “handshake” between the two systems.

SNMP Access

During the installation of DPA, installers have the option to enable or disable the SNMP access to DEFINITY management data. For DPA to work properly with the DNM applications, installers should enable SNMP polling.

However, installers can select other options to meet their specific business requirements. The installation script contains three prompts to enable or disable SNMP Polling, SNMP Traps, and SNMP Set Capabilities. These options are explained in the following sections:

To change settings for SNMP access ***after*** DPA is installed, installers must reinstall DPA and select the appropriate options for SNMP access at the installation prompts.

SNMP Polling

For DPA to poll the supported systems and create Enterprise-specific traps, installers should ***enable*** SNMP Polling. The installation script automatically enables SNMP Traps, since both options are required for SNMP polling.

Installers can choose to ***disable*** SNMP polling if DPA is used only as an alarm notification device ***and*** the DEFINITY Network Management product is ***not*** used.

SNMP Traps

If SNMP Polling is disabled, then the installation script displays the prompt to enable or disable SNMP Traps.

Installers should ***enable*** SNMP Traps if they want to receive traps from a large number of supported systems. In this release, if SNMP Polling is disabled and SNMP Traps are enabled, then DPA allows installers to administer up to **600** managed nodes for each Proxy Agent. This option reduces the load on DPA and requires a less powerful computer to manage a larger number of supported systems.

Installers also have the option to ***disable*** SNMP Traps if the SNMP Proxy Agent is only used for alarming.

SNMP Set Capability

During DPA installation, installers can also enable or disable the SNMP Set Capability.

This feature allows users on the NMS server to managed the following tasks from the DEFINITY Network Management product:

- Busy-out and release boards, ports, trunk groups and trunks
- Set system date and time

SECURITY ALERT:

Due to security limitations in the SNMP, installers should only *enable* the SNMP Set Capability *if* DPA is behind a fire wall.

Enhanced Cut-Through

DPA provides enhanced cut-through features to the user interface on the DEFINITY G3 and ECS systems. The enhancements include color screen displays and pop-up windows that display help and error messages.

The user of a Network Management System (NMS) can access the DEFINITY administration and management screens. From the NMS, the user telnets to DPA computer, logs in, and initiates the emulation application to cut-through to the DEFINITY system.

In addition, users can manually connect to one or two managed nodes to conduct an emulation session from DPA using the Communication Manager.

DEFINITY Network Management

DNM provides users with graphical and tabular tools to monitor the status and performance of a network of supported systems and external devices.

DNM collects configuration, fault, and performance data from a DEFINITY Proxy Agent via Simple Network Management Protocol (SNMP) and displays the data in text, tables, and graphic formats.

The primary features of DNM include:

- **Graphical User Interface (GUI)** -- The DNM main window contains a navigation tree that lists all the supported systems and displays a colored alert symbol that indicates highest exception level. You can expand the list to view all of the configuration components and specific alert symbols for each component.
- **Configuration** -- You can view the configuration and administered properties of all supported systems (managed nodes) in both a graphic view and a table view.
- **Administration** -- You define the system-wide parameters for the following features:
  - **Data collection** -- You define the parameters for the data to be collected from each system, including the type of data, the schedule for collecting data, and the length of time to store the data.
  - **Exception logging** -- You define the conditions to log exceptions for performance thresholds, faults, and system errors.
  - **Exception alerting** -- You specify the alert levels for exceptions from each supported system. Alert levels may include exceptions that are critical, major, minor, or warning. The alert level and location of the exception appear in the main window as long as the exception exists.

- **Report Manager** -- You can define the parameters for individual reports for all or selected systems. The report options include:
  - Performance
  - Configuration
  - Exceptions
  - Trunk group

  You can immediately view the reports on screen in both the table and chart formats or direct the output of reports to a printer or an HTML file.
- **Scheduled Reports** -- You can schedule reports to run on a daily, weekly, or monthly basis, and can edit and delete schedules as needed.

DNM runs on the network server platforms that are required for the current release:

- Sun Solaris or HP-UX, with or without HP OpenView
- AIX, with or without Tivoli TME 10 NetView
- Windows NT platform

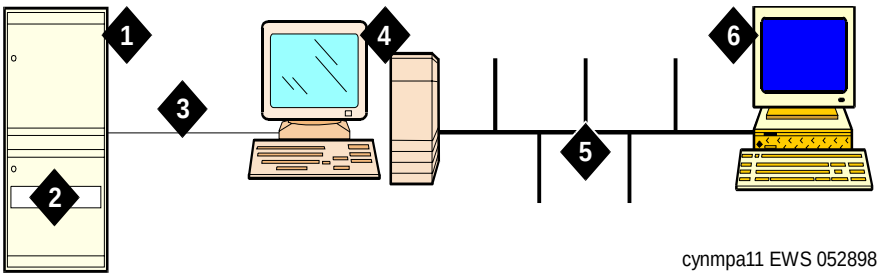
New Features

New features, improvements, and changes to DPA Release 4.0 include:

- Support for SNMP V2 get and set requests and SNMP V1 alarm traps from the DEFINITY Release 9.x
- Support for alarm traps from Intuity AUDIX Release 5.1
- DEFINITY One and IP600 can be added as managed nodes on the MANAGED NODES screen, providing IP connectivity to DPA.
- The ALARM DEVICES screen replaces the Alarm Path screen and allows the user to enter up to 15 devices for receiving alarms and sending alarms to INADS. Alarms can be sent over IP.
- IP connectivity can be used with the DEFINITY systems via the CLAN card in the DEFINITY.
- Support for DPA to run on UnixWare Release 7.1.x

Connectivity Scenarios

The following figure illustrates ***one*** possible configuration of a DEFINITY system, the DPAcomputer, and an NMS network server.



1 *DEFINITY system*

2 *Netcon channel or system access ports on the DEFINITY system*

3 *Dial-up connection between DEFINITY system and the DPA modem*

4 *DPA stand-alone computer and DPA*

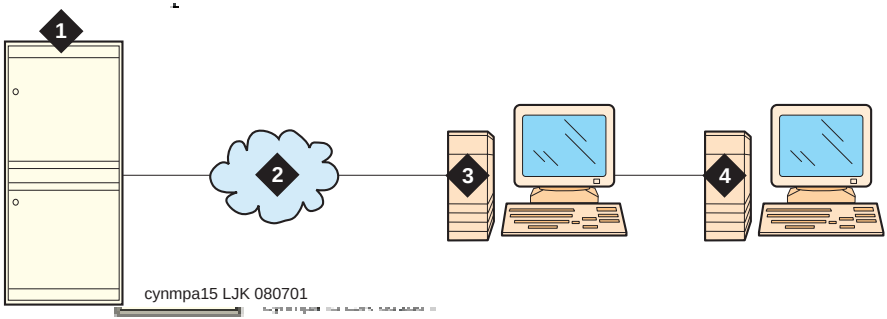
5 *Internet TCP/IP connection (LAN or WAN) between DPA computer and the NMS server*

6 *Network server (UNIX or NT) where DNM resides. The server can be:*

- *Sun Solaris or HP-UX, with or without OpenView*
- *AIX with or without NetView*
- *Windows NT system*

Figure 1. Network configuration

The following figure shows an example of the network configuration over IP between a DEFINITY system and an NMS network server.



1 *DEFINITY system with CLAN circuit pack*

2 *Internet connection (LAN or WAN)*

3 *DEFINITY Proxy Agent stand-alone computer and DEFINITY Proxy Agent product*

4 *UNIX Network server where the DEFINITY Network Management (DNM) product resides. The server can run:*

- *OpenView on Sun Solaris or HP-UX*
- *NetView on AIX*
- *HP-UX or AIX stand-alone*

Figure 2. Network over IP configuration

System Security

DPA supports both DEFINITY login sessions and the Access Security Gateway (ASG) interface.

For non-DEFINITY managed nodes, DPA provides a simple terminal emulation interface to access these systems.

Login Security

To safeguard access to the supported systems, Avaya ***strongly*** recommends that system administrators only grant the minimal permissions that DPA needs to collect management data.

During installation, users should only enable SNMP Set Capability if DPA is behind a ***secure*** fire wall.

Default Login screen

The DEFAULT LOGIN screen allows users to enter a system-wide ***default*** login and password or Access Security Gateway (ASG) key for DEFINITY systems. The system automatically displays the login and allows the user to modify the password on page F of the MANAGED NODES screen. Refer to Chapter 10, "Default Login Administration".

This feature reduces the time required to administer large numbers of new DEFINITYs on DPA. With this feature, users do ***not*** have to manually connect to each DEFINITY system and save the login data.

ASG login

For DEFINITY systems that are protected by the Access Security Gateway (ASG) system, DPA automatically generates a *response to a challenge* if the login and ASG key have already been administered when users administer new DEFINITYs on DPA.

The procedure to "Connect to DEFINITY Systems with ASG" on page 272 contain the steps to ***manually*** enter the response and challenge to login to an ASG-protected DEFINITY system.

SNMP Authentication

DPA provides minimal SNMP authentication through the community strings and node names that users administer on the NETWORK MANAGERS screen and the MANAGED NODES screen.

The SNMP provides minimal authentication based on a valid community string in the SNMP messages. The SNMP uses the same mechanism to authorize NMS access to the MIB.

Proxy Agent Security

DPA uses the standard UnixWare login controls and permissions to authorize user login to DPA applications.

PA001 Request Form

The CD-ROM for the DEFINITY Proxy Agent Release 4.0 contains the PA001 Administration Request form, entitled:

- PA001 Administration Request form

The Technical Services Center (TSC) requires customers to complete the PA001 form in order to register their systems with these organizations.

Customers should also submit an updated PA001 form whenever they add new managed nodes to DPA or make changes to their hardware, software, and network systems.

Customers can print the PA001 forms directly from DPA CD-ROM.

Supported Systems

DPA Release 4.0 product supports ***both*** SNMP V2 get and set requests and SNMP V1 alarm traps for the following systems:

- DEFINITY G3 Release 4.0 and DEFINITY ECS Releases 5.0 through 9.x
- Survivable Remote Processors (SRPs)
- MultiPoint Conferencing Unit (MCU) Release 5.0 through 6.0.

DPA treats SRPs and MCUs as DEFINITY systems.

DPA Release 4.0 supports ***only*** SNMP alarm traps from the following systems:

- DEFINITY AUDIX Releases 3.1 through 4.0
- Intuity AUDIX Release 4.3 or later (with or without the remote maintenance board)
- Intuity Interchange Release 5.1 through 5.3
- Call Management System (CMS) R3V6 through R3V8
- CONVERSANT Release 7.0

System Requirements

The following sections outline the hardware and software products that are required for DPA Release 4.0.

Customers should work with their Avaya client team to determine the hardware requirements that meet their business and performance specifications. The Avaya client team helps recommend the hardware requirements for the DPA stand-alone computer.

Hardware Certification

Avaya ***requires*** that DPA hardware must be certified by Caldera International.

Caldera maintains web sites where customers can find general information, UnixWare-certified hardware, and patches to upgrade the UnixWare.

See also Refer to "Vendor References" on page 18.

CAUTION:
Customers are solely responsible for the purchase, support, and maintenance of third-party hardware and software products that are required for this offer

The DEFINITY Solutions web site contains a list of recommended communications devices and I/O serial cards that are known to work with DPA.

See also Refer to "Avaya References" on page 15.

Software Requirements

DPA Release 4.0 operates on the UnixWare Operating System Release 2.1.3 (5-user version) or 7.1.x.

DPA Release 4.0 supports DNM Release 4.0 for UNIX systems, UNIX stand-alone systems, and Windows NT systems.

Note: Earlier releases of DNM must be upgraded to Release 4.0 in order to work with Release 4.0 of DPA.

Only these products should reside on the DPA stand-alone computer:

- UnixWare Operating System Release 2.1.3 (5-user version) or 7.1.x
- DPA Release 4.0

Note: Caldera no longer supports the UnixWare Operating System Release 2.1.3. Customers must obtain support and maintenance services from authorized third-party vendors. Microport is the authorized provider for Unixware 2.1.3. Refer to the Caldera main web site listed in the "Vendor References" on page 18 for more information.

Customers must remove all other software products from the DPA computer. Other products may interfere with the operation of DPA and communication devices.

CAUTION:
You must run DNM Release 4.0 UNIX or NT Version with DPA Release 4.0. The release numbers for the products must match.

DEFINITY Network Management CD-ROMs

Avaya delivers the product software and documentation to customers on two separate CD-ROMs, which are entitled:

- DEFINITY Network Management
- DEFINITY Proxy Agent

The DPA CD-ROM contains the following software and user documentation:

- DEFINITY Proxy Agent Release 4.0 software
- ***DEFINITY Proxy Agent Release 4.0 Installation and Administration*** book
- PA001 Administration Request form

Users should print the documentation and PA001 forms directly from the CD-ROM ***before*** they install DPA.

DNM for UNIX, stand-alone, or NT version also contains the product software and documentation for each respective version.

2 Customer Pre-Installation Tasks

Introduction

Customers are ***solely*** responsible for completing the following pre-installation tasks:

1. Plan the Connectivity, with help from the Design Specification
2. Complete the PA001 Form, with help from the Design Specification
3. Install the UnixWare Operating System
4. Administer the Communication Devices
5. Administer Security Options
6. Change the DIP Switch Settings
7. Set the Interface for 7400A Modules
8. Execute the Platform Acceptance Test, with support from the Technical Services Center (TSC)

Customers must complete all of the pre-installation tasks prior to the installation of DPA.

Note: This is a ***software-only*** offer. **Avaya** is *solely* responsible for the support and maintenance of the product software. **Customers** are *solely* responsible for the purchase, support, and maintenance of third-party hardware and software products that are *required* for this offer.

Plan the Connectivity

The customer and the project team work together to plan the Proxy Agent connectivity between the DEFINITY system and the Network Management System (NMS).

The figures in this section show the basic configurations designs and required hardware:

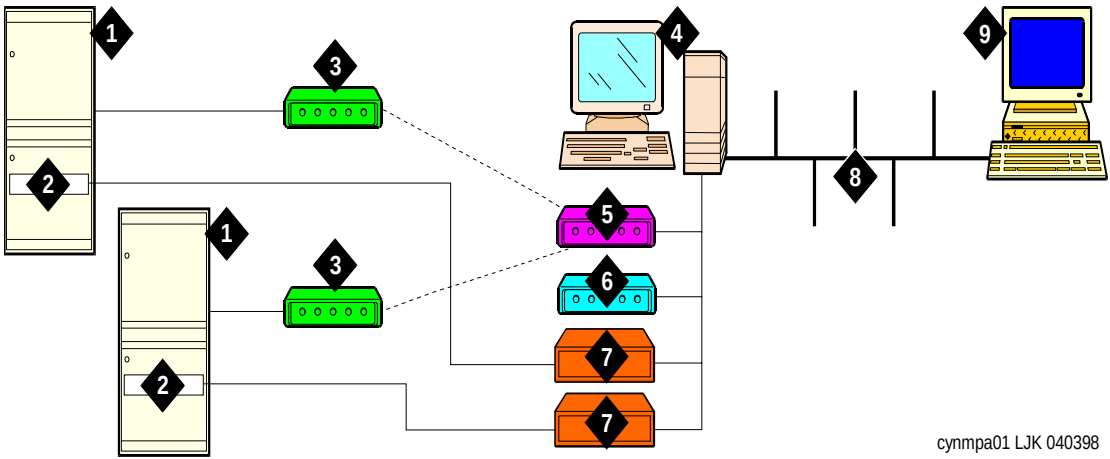
- "Connectivity overview" on page 54
- "Hardware for communication devices" on page 59
- "Cable connections for local analog modems" on page 61
- "Cable connections for remote analog modems" on page 62
- "Cable connections for digital data modules" on page 63
- "Cable connections for an ADU with a moss adaptor" on page 64

See also

For more detailed configurations, visit the web site for the Sales and Design Support Center (SDSC). Refer to "Avaya References" on page 15.

Connectivity Overview

The following figure shows a high-level view of the Proxy Agent connectivity between DEFINITY systems and the Network Management System (NMS):



1 DEFINITY systems

2 Netcon channels or system ports

3 External or internal INADS modem connected to the DEFINITY systems

4 Proxy Agent computer

5 Proxy Agent alarm ***receiver*** modem

6 Proxy Agent ***sender*** modem to forward alarms to INADS

7 Static or Dynamic dial-up device to poll the system. The device can be an analog modem, digital data module, ADU, ***or*** a direct connection.

8 Local Area Network (LAN)

9 Network management station (NMS) where the DEFINITY Network Management products reside

Figure 3. Connectivity overview

Alarm stream

In Figure 3, the alarm stream between the DEFINITY system and the Proxy Agent contains two dedicated analog modems:

- The INADS modem on the DEFINITY system (callout 3) is usually an internal modem that is integrated on a circuit pack. The Prologix system requires an external INADS modem.
- The Proxy Agent modem that ***receives*** the alarm from the DEFINITY system (callout 5)

The alarm stream can also contain a Proxy Agent modem that ***sends*** alarms to the INADS or a Trouble Tracker modem. This option is not shown in Figure 3.

Dial-up connections

Figure 3 only shows a permanent dial-up connection between the DEFINITY system and the Proxy Agent (callout 7). You can also add a temporary dial-up connection to cut-through from the Network Management Station (NMS) to the Proxy Agent computer in order to administer the DEFINITY system.

Dial-up connections may use the public network to connect the Proxy Agent computer to the DEFINITY system.

Analog dial-up connections

Analog dial-up connections to the DEFINITY system require modem pooling on the system.

Multiple dial-up connections

Multiple dial-up connections allow simultaneous connections to the DEFINITY system for administration. Administration terminals can be the Proxy Agent computer or any other type of administration terminals.

- The **DEFINITY G3r** systems allow up to 8 simultaneous administration logins on the system. Only 5 administration commands can be used at one time.
- The **DEFINITY G3i V4** systems allow up to 3 simultaneous administration logins.
- The **DEFINITY G3i V5** systems allow up to 5 simultaneous administration logins. Only 1 administration command can be used at a time.
- **IP600** systems allow up to 10 simultaneous administration logins. Only 1 add/change/remove command can be used at a time.
- **DEFINITY One** allows up to 10 simultaneous administration logins. Only 1 add/change/remove command can be used at a time.

See also

Refer to the DEFINITY product documentation for more information about multiple dial-up connections and administration of the system.

Data Communication Hardware

Customers must use only communication hardware that is ***certified*** by Avaya. Customers must also follow the Avaya certified diagrams to configure the hardware connections.

Circuit Packs

The following table matches the communication device and the line type to appropriate the circuit pack.

Note: The TN numbers for the circuit packs are for use in the U.S.A. Other users can refer to the ***DEFINITY ECS System Description*** or check with their Avaya representative for more information about the correct circuit pack.

Table 4. Circuit pack selection

Communicate Device	Connection Type	Circuit Pack
Any supported modem	Analog	TN746 and TN742
Data modules 7400B and 7400B+	Digital	TN754
Data module 8400B+	Digital	TN2181 or TN2224
ADU	Data	TN726B
CLAN	Network	TN799

Hardware requirements

The connections between the DEFINITY system and the Proxy Agent computer require the following types of hardware:

- Communication devices including:
  - Analog modems
  - Digital data modules (7400A, 7400B, 7400B+, or 8400B+),
  - Asynchronous Data Units (ADUs)
  - Direct connections
  - TCP/IP connections
- House wiring and cables for the LAN
- Gender changers between the connections

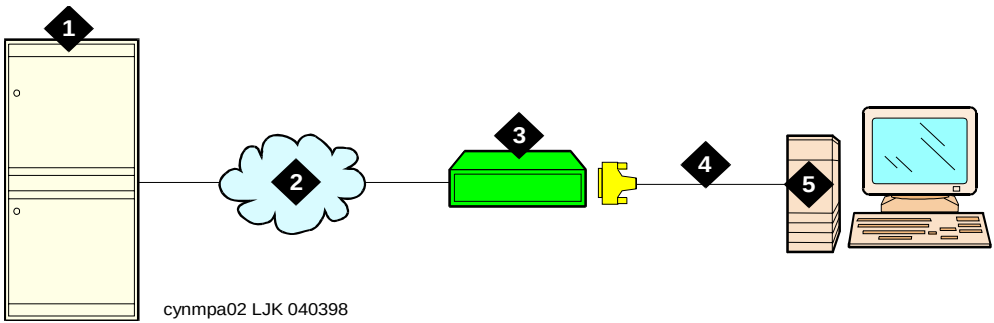
The following table lists hardware requirements for a public or private network.

Table 5. Hardware requirements for network connections

Network Type	Communication Device	Distance from DEFINITY system	Hardware Requirements
Public	Any supported modem	Unlimited	Modem pooling on the DEFINITY system
Private	Digital data module	Within 5000 feet	A port on a digital board (TN754 in the U.S.A.)
	ADU	Within 2000 feet	A port on a dataline board (TN726E in the U.S.A.)

Note: If you are connecting to a DEFINITY One or IP600 system, no additioanl hardware is required. The DEFINITY Proxy Agent will telnet directly into your system.

Figure The following figure shows hardware for communication devices.



1 DEFINITY system with circuit packs: TN754C, TN2181, and TN2224

2 Site-specific network connection

3 Communication device that is either an analog modem, a digital data module, ***or*** an ADU with a moss adapter

4 Serial I/O modular adapter and cable that connects the device to a serial port on the Proxy Agent computer

5 Proxy Agent computer

Figure 4. Hardware for communication devices

Cables for Communication Devices

The figures in this section illustrate the cable connections for the various communication devices, including:

- "Cable connections for local analog modems" on page 61
- "Cable connections for remote analog modems" on page 62
- "Cable connections for digital data modules" on page 63
- "Cable connections for an ADU with a moss adaptor" on page 64

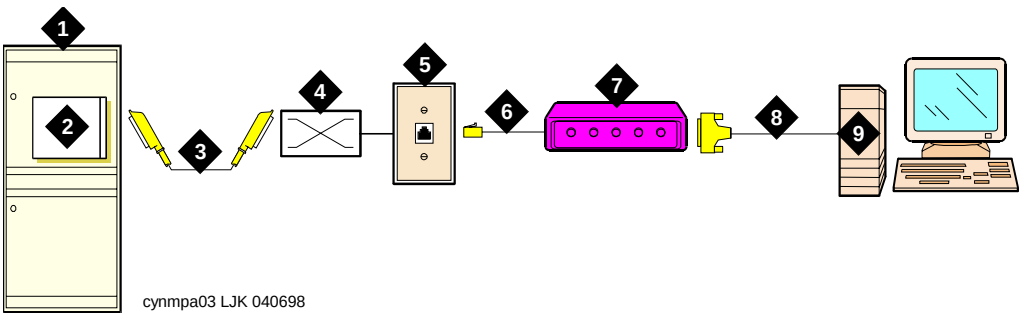
The type of DEFINITY system does **NOT** affect the cabling for communication devices.

See also

Refer to the documentation from the vendor to:

- Install the correct cables to connect a modem to the computer
- Install the port card hardware and software on the computer

Figure The following figure shows the cable connections for ***local*** analog modems:



1 DEFINITY system with modem pooling

2 Analog line circuit pack on the DEFINITY system

3 B25A cable with connectors

4 Cross-connection at main distribution frame

5 103A or wall jack

6 RJ11 cable to the analog modem

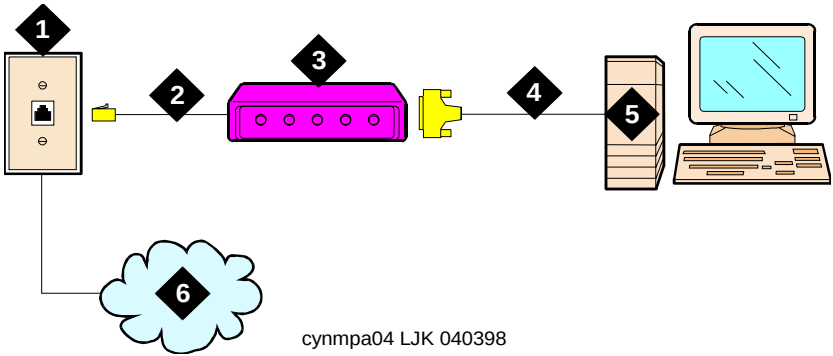
7 Analog modem

8 Serial I/O modular adapter and cable that connects the device to a serial port on the Proxy Agent computer

9 Proxy Agent computer

*Figure 5. Cable connections for **local** analog modems*

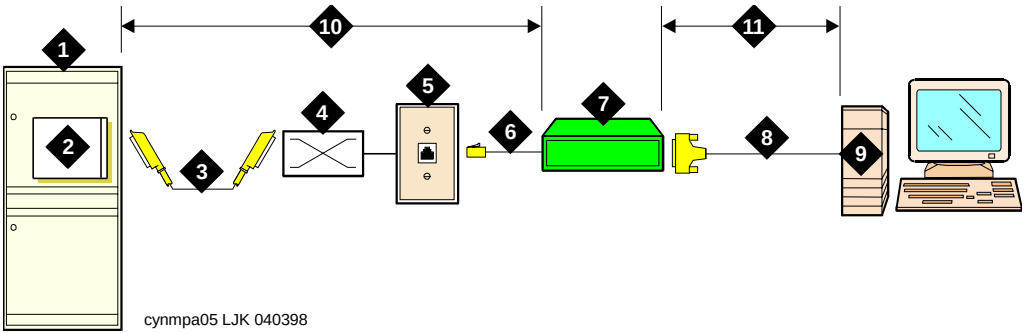
Figure The following figure shows the cable connections for ***remote*** analog modems:



1 103A or wall jack
2 RJ11 cable to the modem
3 Analog modem
4 Serial I/O modular adapter and cable that connect the device to a serial port on the Proxy Agent computer
5 Proxy Agent computer
6 Analog public or private network

*Figure 6. Cable connections for **remote** analog modems*

Figure The following figure shows the cable connections for digital data modules and maximum distance between systems:



1 DEFINITY system

2 Digital line circuit pack on the DEFINITY system

3 B25A cable with connectors

4 Cross-connection at main distribution frame

5 103A or wall jack

6 D82-87 cable to the digital data module

7 Digital data module

8 Serial I/O modular adapter and cable that connects the device to a serial port on the Proxy Agent computer

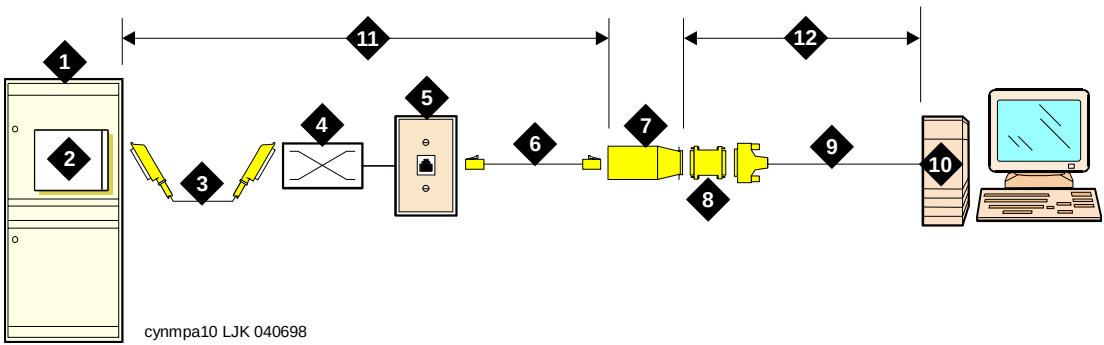
9 Proxy Agent computer

10 Maximum of 5000 feet between the DEFINITY system and the data module

11 Maximum of 50 feet between the data module and the Proxy Agent computer

Figure 7. Cable connections for digital data modules

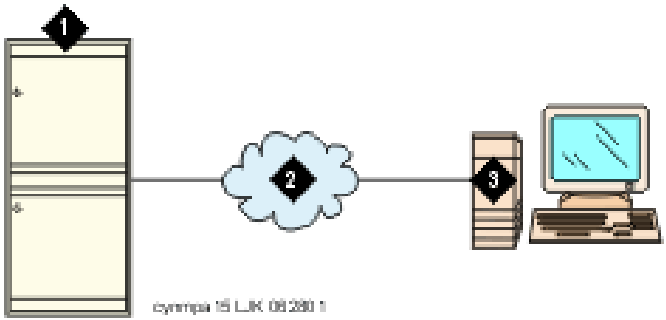
Figure The following figure shows the cable connections for an ADU with moss adaptor and maximum distance between systems:



1 DEFINITY system
2 Digital line circuit pack on the DEFINITY
3 B25A cable with connectors
4 Cross-connection at main distribution frame
5 103A or wall jack
6 D82-87 cable to the digital data module
7 ADU
8 Moss adaptor
9 Serial I/O modular adapter and cable that connects the device to a serial port on the Proxy Agent computer
10 Proxy Agent computer
11 Maximum of 2000 feet between the DEFINITY system and the data module
12 Maximum of 50 feet between the data module and the Proxy Agent computer

Figure 8. Cable connections for an ADU with a moss adaptor

The following figure shows an example of the network configuration over IP between a DEFINITY system and an NMS network server.



1 *DEFINITY system with CLAN circuit pack*

2 *Internet connection (LAN or WAN)*

3 *UNIX Network server where the DEFINITY Network Management (DNM) product resides. The server can run:*

- *OpenView on Sun Solaris or HP-UX;*
- *NetView on AIX*
- *HP-UX or AIX stand-alone*

Figure 9. Network over IP configuration

Complete the PA001 Form

The Technical Services Center (TSC) ***requires*** all U.S.A. and Canadian customers to register their systems with the TSC. Customers must complete the ***PA001 Administration Request*** and fax the form to the TSC.

International customers

International customers must work with their local service organizations to plan and install their systems and software.

International customers must complete the ***PA001 Administration Request*** and fax the form to the Tier IV Registry. Instructions are on the Fax Cover Sheet.

The local service organization should also fax the completed PA001 form to ITAC.

Updates to the PA001 form

Customers only need to complete the portions of the form that pertain to the upgrades or changes to their systems and fax those pages to the TSC.

Customers must update the PA001 form whenever they:

- Upgrade the system hardware and software
- Change or upgrade the network and Network Management System (NMS) platform
- Add, delete, or change data for the managed nodes or communication devices

Customers can print the ***current*** version of the PA001 form directly from the Proxy Agent CD-ROM for this release.

Install the UnixWare Operating System

Customers are ***solely*** responsible for the following requirements:

- Procure and set up the UnixWare-certified hardware for the Proxy Agent computer
- Install and configure the UnixWare operating system.

CAUTION:
Avaya does ***not*** install, support, or maintain the UnixWare operating system or other vendor hardware and software products.

UnixWare Upgrade Patches

Users must verify which release of UnixWare is installed on the Proxy Agent computer. Refer to CHANGE HARDWARE screen.

Then execute ***one*** of the following options:

- If UnixWare 7.0 is installed, install the UnixWare 7.1.1 upgrade patch from the Caldera web site. Refer to "Vendor References" on page 18 for the web address.
- If UnixWare 2.1.0 or later is installed, install UnixWare 2.1.3.
- If a release of UnixWare prior to release 2.1.0 is currently installed, then you must complete a Destructive installation of the UnixWare 2.1.3 or the 7.1.x operating systems. Non-destructive upgrades of the UnixWare 2.0.x and earlier versions have been error-prone.

UnixWare Installation Tasks

Customers must complete the following tasks to install the UnixWare operating system:

1. ***Set up*** the UnixWare-certified Proxy Agent computer hardware:
   - Install the network interface card
   - Install the host bus adapter
   - Install the serial I/O port cards
2. ***Install*** the UnixWare Release 2.1.3 or 7.1.x on the Proxy Agent computer.
3. ***Add*** the following packages to UnixWare Release 2.1.3:
   - **bsdcompat** -- BSD compatibility
   - **bkrs** -- Extended backup and restore
   - **ccs** -- Optimizing C compilation system
   - **cmds** -- Advanced commands
   - **oam** -- Operations, administration & maintenance
   - **terminf** -- Terminfo utilities
   - **manpages** -- Traditional manual pages
4. ***Delete*** the following packages from UnixWare Release 2.1.3:
   - **nwnet** -- NetWare Networking
   - **nuc** -- NetWare UNIX Client
   - **nwsup** -- NetWare Integration Kit

5 ***Disable*** the plug-n-play cards for all add-on interface cards installed on the Proxy Agent computer. Unixware 2.1.3 and 7.1.1 do **not** support plug and play hardware. Some plug-n-play cards use interrupts or I/O addresses that have been previously assigned to other hardware devices and drivers. Unless you disable the plug-n-play, you may experience installation difficulties.

There are no additional packages to install or delete for UnixWare 7.1.1. for use with DEFINITY Proxy Agent. For any updates to this information, please consult the Project Provisioning Package for DEFINITY Network Management and DEFINITY Proxy Agent.

UNIX backup

Avaya strongly recommends that users backup the UNIX system at least twice a month.

- For tape drive backups, perform a full system backup and then reboot the UNIX system.
- For backups on floppy diskettes, backup the **/usr/g3-ma** directory and then reboot the UNIX system.

Administer the Communication Devices

Customers must complete the following tasks to connect the communication devices:

1. Administer the TCP/IP connections:
   - Configure the Ethernet/Token Ring interface
   - Set up the IP address in the **Hosts** file
   - Test the TCP/IP connection
2. Verify that the routing table contains the default router command
3. Configure Dial-In access to the DEFINITY system for system management access. This may entail Data Modules, Modem Pools, and/or System Port/ Netcon Channels and Hunt Groups.
   - On DEFINITY G3r systems, the **system port** is an administered resource and requires a *data board* and *pdata board*. You execute the following commands to administer the system port:
     – Execute the ***add data-module*** command to assign the system port to an extension.
     – Execute the ***add hunt-group*** command to add the system port extension as a member of a hunt group.
   - On DEFINITY G3i systems, the **netcon port** is an internal channel that you can assign as a port. You execute the following commands to administer the netcon port:
     – Execute the ***add data-module*** command to assign the netcon port to an extension.
     – Execute the ***add hunt-group*** command to add the netcon port extension as a member of a hunt group.

4 Execute the ***add station*** command to administer the following devices:

- Analog line
- Digital voice and data module
- Digital data-only module (may require modem pooling)
- ADU

5 To forward alarms to INADS or to the Proxy Agent for DEFINITY G3 systems, execute the command ***change system-parameters maintenance*** and enter the phone number in the *OSS Telephone Number* field 1 or 2.

6 The DEFINITY ECS systems are set up to forward alarms to INADS. To also set up the Proxy Agent to receive and forward alarms, then

- Enter the phone numbers for both the INADS and Proxy Agent on the form entitled **Maintenance-Related System Parameters**.
- Execute the command ***change system-parameters maintenance***, then enter the telephone number for the Proxy Agent in one of the *OSS Telephone Number* fields.

7 To set up the Proxy Agent to receive alarms from other types of supported system, enter the phone number for the Proxy Agent alarm receiver devices on the systems.

Administer Security Options

Customers must complete the following tasks to administer the security options:

1 For DEFINITY systems, execute the following commands:

- ***add login*** [***name***]
- ***change permissions*** [***login name***], then
  - Enter **Y** in the fields entitled: *Display Admin and Maint Data* and *System Measurements*.
  - Set the permissions to "**browse only**" or "**non-superuser read-only"**

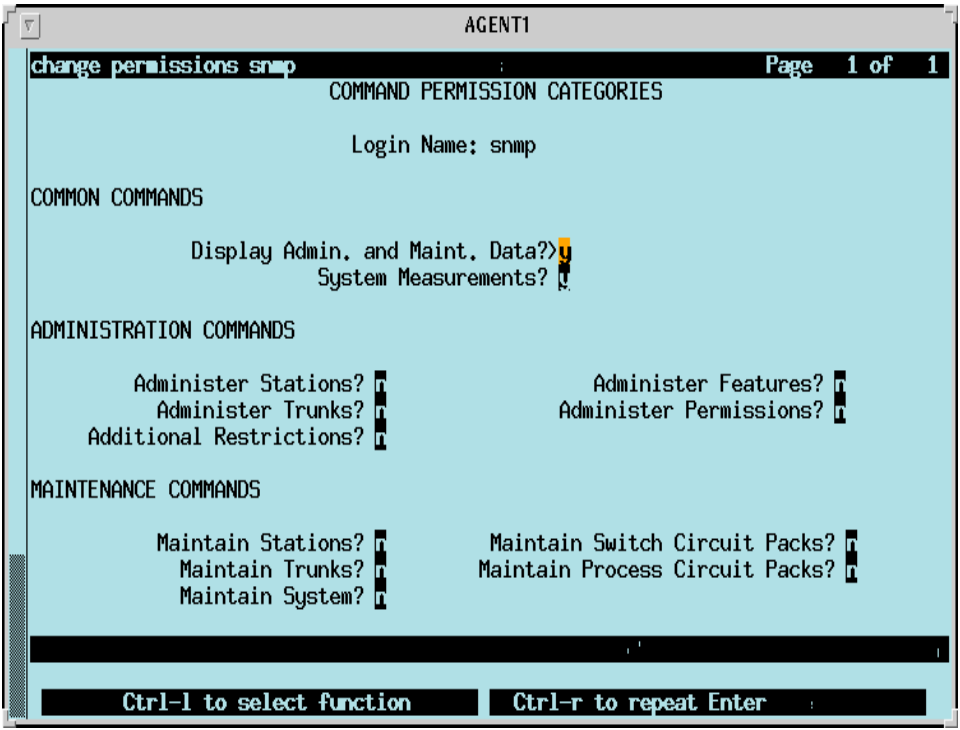


Figure 10. Browser Change Permissions SNMP

  - Disable the "**password-aging**" feature
  - All other fields on the form should be set to **No**
- Fields for basic DPA use no SNMP Sets:
  - Display Admin and Maintenance Data = y
  - System Measurements = y
- Busy/Release use of DPA w/snmp sets and above plus:
  - Maintain Stations = y
  - Maintain Trunks = y
  - Maintain System = y
  - Maintain Switch Circuit packs = y
  - Maintain Process circuit packs = y

2 For other types of supported systems, access the appropriate forms and administer the following security options:

- Set the permissions to "**browse only**," unless the users wants to be able to do busy-outs/releases and set DEFINITY time via SNMP. SNMP sets requires Maintenance and Administrator permissions.
- Disable the "**password-aging**" feature

Change the DIP Switch Settings

Customers may need to change the dip switch settings for each communication device that is connected to the Proxy Agent.

The tables in this section contain the dip switch settings for the following data communications devices:

- AT&T 2224CEO analog modem
- 7400B/B+ data module
- Port data module (PDM)
- MPDM

Settings for AT&T 2224CEO Modems

For the AT&T 2224 CEO analog modem, change the dip switches on the front panel of the modem:

1. Set dip switch **#1** to the **up** position
2. Set dip switch **#6** to the **up** position
3. All other dip switches must be in the **down** position

Note: The AT&T 2224CEO modem is ***not*** certified for Proxy Agent modems that ***send alarms*** to INADS or a Trouble Tracker.

Settings for 7400B/B+ Data Modules

For 7400B/B+ data modules, change the dip switches to match the settings in the following table.

Table 6. Dip switch settings for 7400B/B+ modules

Data Module	Dip Switch Setting
Stand alone, data-only: • 7400B • 7400B+	• Change the **SW1** dip switch to the **on** position • All other dip switches should be in the **off** position
Voice-and-data: • 7400B • 7400B+	All dip switches should be in the **off** position. This module requires a connection to a digital phone and is rarely used with the Proxy Agent.

Settings for PDMs

For PDMs, change the dip switches to match the settings in the following table.

Note: For **9600** baud, the dip switch must be set to the **ON** position.

Table 7. Dip switch settings for PDMs

Dip Switch	Setting	Dip Switch	Setting
LOW	OFF	PRTY	OFF
300	OFF	I/OD	OFF
1200	OFF	DMLL	OFF
2400	OFF	MKBY	OFF
4800	OFF	SPARE	(none)
9600	ON	SIGLS	ON
19.2	OFF	AANS	ON
SPARE	(none)	DL-HI	OFF
SPARE	(none)	CN25	OFF
SPARE	(none)	CN18	OFF
HDX	OFF	RL21	OFF
SYNC	OFF	CI12	OFF
			(1 of 2)

Table 7. Dip switch settings for PDMs

Dip Switch	Setting	Dip Switch	Setting
INT	OFF	PRTY	OFF
DISC	OFF	I/OD	OFF
KYBD	ON	DMLL	OFF
			(2 of 2)

Settings for MPDMs

For MPDMs, change the dip switches to match the settings in the following table.

Note: For **9600** baud, the dip switch must be set to the **ON** position.

Table 8. Dip switch settings for MPDMs

Dip Switch	Setting	Dip Switch	Setting
LOW	OFF	SYNC	ASYN
300	OFF	INT	EXT
1200	OFF	DISC	OFF
2400	OFF	KYBD	OFF
4800	OFF	PRTY	OFF
9600	ON	I/OD	OEN
19.2	OFF	DMLL	OFF
56K	OFF	MKBY	OFF
64K	OFF	SPARE	(none)
TRDK	OFF	SIGLS	OFF
HDX	FDX	AANS	OFF
LOW	OFF	SYNC	ASYN

Set the Interface for 7400A Modules

For the 7400A data modules, customers must set the interface on the device before you connect the device to the DPA computer.

1 On the front panel of the module, set the interface control:

- Press **Next/No** until the system displays the prompt: `SET INTERFACE?`
- Press **Enter/Yes**

If the `SET INTERFACE?` prompt does **NOT** display, then

- Continuously press **Next/Yes** until the system displays the `SET INTERFACE?` prompt
- Press **Enter/Yes**

Result: The system displays the prompt: `INT = AT COMM?`

2 Press **Enter/Yes** to exit.

Result: The data module resets the interface and performs a self test.

Execute the Platform Acceptance Test

The customer and a TSC engineer work together to execute the Platform Acceptance Test.

Use the Platform Acceptance Test to:

- Verify that the Network Management Station (NMS) is functioning
- Verify that the correct version of the UnixWare operating system is installed
- Verify that the modem connection is functioning

Required materials

Customers need the following materials and information:

- Root login and password
- PA001 form

Procedure

Complete the following procedure to execute the Platform Acceptance Test.

1. The user calls the TSC to set up the test. For the TSC Technical Support phone number, refer to "Avaya References" on page 15.
2. To begin the test, ping the NMS from the Proxy Agent computer.

   At the UNIX prompt:

   - Type **/usr/sbin/ping** [**nms_name**]
   - Press **ENTER**

   Result: The system displays the message: `[nms_name] is alive`

3 Verify the release number for the UnixWare software.

At the UNIX prompt:

- Type **uname -v**
- Press **ENTER**

Result: The system displays the UnixWare release number `2.1.3` or `7.1.x` depending on the configuration of your system.

4 Hook-up a modem to a serial card port on the Proxy Agent. For the UNIX device name, refer to the ***Devices*** section on the PA001 form. In UNIX, the correct device name must be entered.

At the UNIX prompt, connect the device:

- Type **cu -s 9600 -l /dev/[device name]**
- Press **ENTER**

Result: The system displays the message: `Connected`

5 Identify the port for the device:

- Type **#echo "Direct tty1a1,M - Any direct_modem">> /etc/uucp/Devices** where tty1a1 is the correct port for the device you hooked up in the previous step. This could be another port or even a different format depending on the type of I/O card you are using.
- Press **ENTER**

6 At the UNIX prompt, verify the connection:

- Type **at&f**
- Press **ENTER**

Result: The system displays the message: `OK`

7 At the UNIX prompt, disconnect the modem:

- Type **~.**
- Press **ENTER**

Example: Type: tilde (**~**) period (**.**) with ***no*** space between them.

Result: The system displays the message: `Disconnected`

8 At the completion of the test, go to the ***Proxy Agent*** section of the PA001 form and complete the following field:

Platform Acceptance Test completed by:

- In the *Name* field, enter the name customer's employee who completed the test with the TSC
- In the *Date* field, enter the date of the test

9 Complete the fields on the Fax Cover Sheet. Then, fax the completed PA001 form to TSC at the telephone number on cover sheet.

3 Installing or Upgrading DPA

Introduction

This chapter contains the procedures to install or upgrade **DEFINITY Proxy Agent (DPA) Release 4.0**.

Pre-installation tasks

Customers must complete all of the pre-installation tasks ***before*** you install or upgrade DPA. Refer to chapter 2, "Customer Pre-Installation Tasks" on page 52.

Post installation options

The system administrator (root user) can execute the maintenance options listed below ***after*** the Proxy Agent has been installed:

- "Add New Devices" on page 319
- "Change Settings for SNMP Access" on page 320

User documentation

The installation script for this release automatically copies the DPA documentation to the **avayadoc** directory.

Users can access the documentation only from the UnixWare Desktop. Refer to the procedure to "Access the User Documentation" on page 139.

Installation Checklists

The installation checklists contain the tasks that installation technicians must complete to install the new Proxy Agent 4.0 or upgrade to the Proxy Agent 4.0.

Installation Checklist

Installers must execute the installation tasks listed below in the order presented.

1. Verify that all tasks in Chapter 2, "Customer Pre-Installation Tasks" have been completed.
2. Call the Technical Services Center (TSC) to verify that the procedure to "Execute the Platform Acceptance Test" on page 81 has been completed.
3. Assemble the required materials and information, including:
   - Root login and password
   - Default **login ID** and **password** or **ASG secret key** for new DEFINITY systems
   - New password for the **g3maadm** login
   - Completed PA001 form
   - CD-ROMs DEFINITY Network Management Proxy Agent Release 4.0
   - Printed copy of the DNM 4.0 Proxy Agent User Documentation for Installation and Administration (this book)
   - Technical Services Center (TSC) number: **1-800-242-2121**, ext. **8-6767**

4 Execute ***one*** of the installation procedures (a, b, or c) listed below:
   - **a** "Installing DPA" on page 97.
   - **b** "Upgrading from DPA 3.0 and Later" on page 107
   - **c** "Upgrading from DPA 2.0.2 and Earlier" on page 117

5 Complete the procedure to "Administer the Network Managers" on page 163.

6 Complete the procedure to "Administer the Default Location" on page 174.

7 Complete the procedure to "Administer the Alarm Device" on page 181.

8 Complete the procedure to "Administer the Filter Sets" on page 202.

9 Complete the procedure to "Administer the Default Login" on page 218

10 Complete the procedure to "Administer the Managed Nodes" on page 248

11 Complete the tasks on the "Technical Verification Checklist" on page 87.

12 Complete the tasks on the "Customer Acceptance Checklist" on page 88.

Technical Verification Checklist

The installation technician and the engineer at the Technical Services Center (TSC) must complete the ***post installation*** tasks below to insure that DPA is properly administered and functioning.

1. Verify that the ***customer*** completed and faxed **PA001** form to the TSC.
2. Verify that the ***TSC*** has updated the System Management database with the current data from the PA001 form.
3. Verify that all of the tasks on the "Installation Checklist" on page 85 have been completed.
4. Verify that the Proxy Agent is connected to each managed node.
5. If “alarm forwarding” is active, then check the ALARM DEVICES screen to validate that “alarm forwarding” is properly functioning:
   - Verify that the Proxy Agent can ***receive*** alarms from each managed node and ***forward*** alarms to INADS
   - Verify that INADS ***received*** each alarm that was sent to them
   - Verify that INADS ***created*** a TSC-SS ticket for each alarm

   Refer to "Administer the Alarm Device" on page 181.
6. If the DEFINITY system is set up to send alarms, verify that both INADS and the Proxy Agent receive them.
7. Verify that the TSC login and password for ***root2*** and ***ncsc*** have been administered. Avaya uses these logins to conduct maintenance tasks.

Customer Acceptance Checklist

The engineer at the TSC and the customer must complete the ***post installation*** tasks below to insure the that customer can operate DPA and accepts the installation as “complete.”

1. Verify that the customer can log in to the Proxy Agent from both the UNIX shell or the UnixWare Desktop. Refer to the procedures below:
   - "Log in from the UNIX Shell" on page 132
   - "Log in from the Desktop" on page 134
2. Verify that the customer can view the Proxy Agent User Documentation from the UnixWare Desktop. Refer to "Access the User Documentation" on page 139.
3. Verify that the customer can start the Proxy Agent, display the STATUS screen, and stop the Proxy Agent. Refer to the procedures below:
   - "Start the Proxy Agent" on page 149
   - "Display of the Status Screen" on page 150
   - "Stop the Proxy Agent" on page 156
4. Review the Proxy Agent application screens with the customer. Refer to chapters 4 through 14.
5. Verify that the customer has changed the ***root*** and ***g3maadm*** logins.

Understanding the Installation Prompts

The installation script for this release has been ***revised*** in order to simplify the process and to make the installation of DPA more automatic.

PA001 form

The completed **PA001 Administration Request** form contains most of the information that is specific to the customer's system. Installers must refer to the various sections on the PA001 form in order to enter the information that is requested at the installation prompts.

Default options

The sections below describe the prompts in the order presented in the installation script. Avaya ***strongly*** recommends that installers select the default options where appropriate. The default options allow users to maintain consistency when upgrading to new releases. The installation script overwrites previous settings during the installation process.

Directory Prompt

The directory prompt requests the installer to define the directory where the Proxy Agent software will reside on the system.

Installers can enter ***one*** of the options below:

- **a** Accept the default **/usr/g3-ma** directory (recommended)
- **b** Enter a different directory path (not recommended)

RAM Megabytes Prompt

The RAM megabytes prompt requests the installer to enter the megabytes of RAM on the Proxy Agent stand-alone computer. If the number is more than 128 megabytes, the installation script makes modifications to the kernel boot file.

The PA001 form contains the system information in the Proxy Agent section.

SNMP Polling Prompt

For the Proxy Agent to poll the supported systems and create Enterprise-specific traps installers should ***enable*** SNMP Polling. The installation script automatically enables SNMP Traps, since both options are required for SNMP polling.

Installers can choose to ***disable*** SNMP polling if the Proxy Agent is used only as an alarm notification device ***and*** the DEFINITY Network Management product is ***not*** used.

SNMP Traps Prompt

If SNMP Polling is disabled, then the installation script displays the prompt to enable or disable SNMP Traps.

Installers should ***enable*** SNMP Traps if they want to receive SNMP traps only. In this release, if SNMP Polling is disabled and SNMP Traps are enabled, then the Proxy Agent allows installers to administer up to **600** managed nodes for each Proxy Agent. This option reduces the load on the Proxy Agent and requires a less powerful computer to manage a larger number of supported systems.

Installers also have the option to ***disable*** SNMP Traps if the Proxy Agent is only used for alarm processing.

SNMP Set Capability Prompt

During the Proxy Agent installation, installers can also enable or disable the SNMP Set Capability.

This feature allows users on the NMS server to managed the tasks listed below from the DEFINITY Network Management product:

- Busy Out/Release boards, ports, trunk groups, and trunks
- Set DEFINITY system date and time

SECURITY ALERT:
Due to security limitations in SNMP, installers should *enable* the SNMP Set Capability only *if* the Proxy Agent is behind a fire wall.

Password Prompts

For new installations only, the password prompts require the installer to enter the ***g3maadm*** login password to allow access to the Proxy Agent user interface.

Function Prompt

The customer may administer four types of communication devices on the *serial I/O subsystem* to perform the four functions required by the Proxy Agent:

- Remote maintenance access
- Product access
- Receive alarms
- Send alarms

IP-based devices do not need to be configured. They are automatically configured by the DEFINITY Proxy Agent installation software.

Refer to the "Serial I/O Subsystem" on page 95 for examples of naming formats for the different types of the subsystems.

If the customer administers additional devices, then the PA001 form also should contain the information for those devices.

The installation script runs the Modem Setup program and displays the UNIX device name (/dev/ttyxxx) for all devices administered on the serial I/O subsystem and displays the prompt to select the function for that device.

The following is an example of the device name (/dev/ttysa1) and function prompt:

```
UNIX device name: /dev/ttysa1:
Select the function for this device:
[M] Maintenance Remote Access (TSC/ITAC)
[P] Product Access (default)
[R] Receive Alarms
[S] Send Alarms
Or, select one of the options below:
[N] Next Device (skip this one)
[X] Exit Modem Setup and continue the installation

Enter the device function or another option [default=P]:
```

Installers must execute the appropriate option for each device detected by the installation script. Installers can exit the Modem Setup program only from the function prompt.

Device Type Prompt

The installation script then displays the second prompt for the *device type* of the device name (/dev/ttysa1) shown in the previous prompt. The device type prompt refers to the make and model of the device.

The installation script displays different lists in the device type prompt that are based on the ***function*** that the installer selected for this device.

The following is an example of the *device type* prompt for the ***remote maintenance*** function:

```
UNIX device name: /dev/ttysa1:
Select the device type for the maintenance remote access
function:
[1] 3710 AT&T Dataport
[2] 3715 AT&T Dataport Express
[3] US Robotics Sportster 33.6 Kbps
[4] Other (manually)
Or select the option below:
[N] Next Device (skip this one)

Enter the device type or another option[default=1]:
```

Installers must execute the appropriate option for each device assigned to the Proxy Agent.

If the device type is ***not*** on the list, then the installer should enter the number for **Other** (4) at the prompt. The system administrator must manually administer a different type of modem in the *Devices* file ***after*** the installation is complete.

The installation script continues to display the next device name and function prompt for all devices on the serial I/O subsystem. When all the devices on the PA001 form have been administered, then the installer exits the Modem Setup program from the function prompt.

Reboot Prompt

The reboot prompt is the last prompt in the installation script. Installations must enter the *shutdown* command to reboot the system ***before*** they execute the procedures to administer the Proxy Agent.

Serial I/O Subsystem

Generally, the devices are connected to serial input/output (I/O) subsystems, such as the ones listed below:

- Equinox XP
- Equinox SST
- Computone RackPort 3
- Specialix SIO
- Standard COM Ports /dev/tty00 - /dev/tty03

The UNIX device name (/dev/ttyxxx) is based on the different numbering formats used by each subsystem (ttyxxx) as described below.

Subsystem numbering format

A subsystem usually consists of several “bricks” linked together through a plug-in module. Each port on the brick has a different port number (ttyxxx). In addition, each type of subsystem has a different numbering format for the ports on each brick.

The table below shows the numbering format for the serial I/O subsystems listed above. The number of “bricks” supported by each subsystem will vary.

Table 9. Serial I/O Subsystems

Brick Number	Port Number	Equinox XP	Equinox SST	Computone RackPort 3	Specialix SIO
Brick 1	Port1	ttysa1	tty1a1	ttyS01	ttyA1
	Port2	ttysa2	tty1a2	ttyS02	ttyA2
	Port[n] *****	ttysa[n]	tty1a[n]	ttyS0[n]	ttyA[n]
Brick 2	Port1	ttysb1	tty1b1	ttyS016	ttyB1
	Port2	ttysb2	tty1b2	ttyS017	ttyB2
	Port[n]	ttysb[n]	tty1b[n]	ttyS0[n]	ttyB[n]
Brick 3	Port1	ttysc1	tty1c1	ttyS031	ttyC1
	Port2	ttysc2	tty1c2	ttyS032	ttyC2
	Port[n]	ttysc[n]	tty1c[n]	ttyS0[n]	ttyC[n]
Brick 4	Port1	n/a	tty1d1	ttyS046	ttyD1
	Port2	n/a	tty1d2	ttyS047	ttyD2
	Port[n]	n/a	tty1d[n]	ttyS0[n]	ttyD[n]

***** [n] represents the ***next*** port number on the brick

Installing DPA

This section contains the procedures to install DPA Release 4.0 product on the Proxy Agent stand-alone computer.

Before installers begin the installation procedures, verify the completion of the tasks listed below:

- Verify that all tasks in Chapter 2, "Customer Pre-Installation Tasks" have been completed.
- Review the "Installation Checklist" on page 85 and complete the tasks in the order listed in the checklist.
- Read the entire section entitled "Understanding the Installation Prompts" on page 89. This section explains how to respond to the prompts in the installation script.

Required materials

Installers need the materials and information listed below:

- Root login and password
- New password for the **g3maadm** login
- Completed PA001 Administration Request form
- CD-ROM entitled DEFINITY Network Management Proxy Agent Release 4.0

New installation procedure

Complete the procedure below to install DPA Release 4.0.

1 Execute the tasks below:

- Request all users to log off the system.
- Close all open windows and applications.

2 At the UNIX *login* prompt, login as the root user:

- Type [**root login**]
- Press **ENTER**

3 At the *Password* prompt,

- Type [**root password**]
- Press **ENTER**

4 At the *Display Desktop? y/n* prompt,

- Type **N** (no)
- Press **ENTER**

Result: The system displays the UNIX prompt.

5 At the UNIX prompt (#), start the installation process:

- Type **pkgadd -d cdrom1 DG3PA**
- Press **ENTER**

Result: The system displays the name of the package and the prompt:

```
Insert CD into CD-Rom Drive. Type [go] when ready
or [q] to quit (default=go):
```

6 Insert the CD-ROM entitled **DEFINITY Network Management Proxy Agent Release 4.0**, into the CD-ROM drive.

At the UNIX prompt,

- Type **go**
- Press **ENTER**

Result: The system displays the prompt: `Strike ENTER when ready or ESC to stop`.

7 At the UNIX prompt, press **ENTER**

Result: The system installs the program, which takes a few moments.

8 **RAM Megabytes Prompt**. The system displays the prompt:

```
How much RAM does the Proxy Agent serve have in it? If
it is more than 128 Megabytes, then a modifications
must be made to the kernel boot file.

How many megabytes of RAM?
```

On the PA001 form, go to the *Proxy Agent* section, then refer to the *Random Access Memory (RAM)* field for the number of megabytes of RAM (MB).

At the UNIX prompt,

- Type the [**number**] of megabytes of RAM
- Press **ENTER**

Result: The system modifies the kernel boot file.

9 **SNMP Polling Prompt**. The system displays an explanation of the reasons to enable (default) or disable SNMP Polling. Then, the system displays the current setting and the prompt:

```
The current setting is SNMP polling ENABLED.
Should SNMP Polling be DISABLED? [n] y:
```

At the prompt, execute ***one*** of the options (a or b) below:

a To ***enable*** SNMP polling (default),

– Press **ENTER**.

– Go to step 11

b To ***disable*** SNMP polling,

– Type **Y** (yes)

– Press **ENTER**

– Go to step 10

10 **SNMP Traps Prompt**. If users ***disabled*** SNMP polling in step 9, then the system displays an explanation of the reasons to enable (default) or disable SNMP traps. This prompt will **not** display if users ***enabled*** the SNMP Polling because SNMP Traps are required for SNMP Polling.

Then, the system displays the current setting and the prompt:

```
The current setting is SNMP Traps are ENABLED.
Should SNMP Traps be DISABLED? [n] y:
```

At the prompt, execute ***one*** of the options (a or b) below:

a To ***enable*** SNMP traps (default),

– Press **ENTER**

– Go to step 11

b To ***disable*** SNMP traps,

– Type **Y** (yes)

– Press **ENTER**

– Go to step 12

11 **SNMP Set Capability Prompt**. If users ***enabled*** SNMP Polling in step 9, then the system displays an explanation of the reasons to disable (default) or enable SNMP Set Capability. The SNMP Set Capability allows network managers on the NMS to execute the tasks below from the DEFINITY Network Management product.

- Busy-out and release alarms
- Set the system date and time

Then the system displays a warning and the prompt:

```
WARNING: If you are not behind a secure firewall,
it is strongly suggested that this option be
disabled!

The current setting is SNMP Set Capability is
DISABLED.

Should SNMP Set Capability be ENABLED? [n]/y:
```

At the prompt, execute ***one*** of the options (a or b) below:

a To ***disable*** SNMP set capability (default), if the Proxy Agent is ***not*** behind a secure fire wall,

– Press **ENTER**

– Go to step 12

b To ***enable*** SNMP set capability, if the Proxy Agent is behind a secure fire wall,

– Type **Y** (yes)

– Press **ENTER**

– Go to step 12

Result: The system updates the SNMP access files.

12 **Password Prompt**. Then the system displays the password fields for the *g3maadm* login. Type a new ***g3maadm*** password in the fields below. Press **ENTER** after each entry:

```
New password: xxxxxx
Re-enter new password: xxxxxx
```

Result: The system administers the *g3maadm* login and the TSC Maintenance accounts, then displays the message:

```
TSC Maintenance accounts successfully administered.
```

13 **Function Prompt**. After this message, the installation script executes the *Modem Setup* program. The Modem Setup program displays ***all*** devices detected on the serial I/O subsystem. Refer to the *Devices* section of the PA001 form and ***skip*** all devices that are not listed on the form.

The system displays the first ***device name*** from the serial I/O subsystem and the ***device function prompt*** for that device:

```
UNIX device name: /dev/ttyxxx:
Select the function for this device:
[M] Maintenance Remote Access (TSC/ITAC)
[P] Product Access (default)
[R] Receive Alarms
[S] Send Alarms
Or, select one of the options below:
[N] Next Device (skip this one)
[X] Exit Modem Setup and continue the installation

Enter the letter for the device function or another
option [default=P]:
```

Refer to the *Devices* section on the PA001 form and check the fields, *Device Name* and *Device Function,* for this device.

At the prompt, execute ***one*** of the options (a or b) below:

a If the device name is on the PA001 form, then

- Type the [**letter**] that matches the *function* for this device
- Press **ENTER**
- Go to step 14

b If the device name is ***not*** on the PA001 form, then skip this device,

- Type **N** (Next)
- Press **ENTER**
- The system displays the device name and function prompt for the next device in the I/O subsystem. Repeat this step to skip every device that is ***not*** on the PA001 form.

14 **Device Type Prompt**. The system displays the ***device type*** prompt. The prompt below is an ***example*** of the maintenance function. The list varies by the function selected in the previous prompt.

```
UNIX device name: /dev/ttyxxx:
Select the device type for the maintenance remote
access function:
[1] 3710 AT&T Dataport
[2] 3715 AT&T Dataport Express
[3] US Robotics Sportster 33.6 Kbps
[4] Other (manually)
Or select the option below:
[N] Next Device (skip this one)

Enter the number for the device type or another
option[default=1]:
```

Refer to the *Devices* section on the PA001 form and check the *Device Type* field for this device. At the prompt, execute ***one*** of the options (a or b) below:

a If the device name is on the PA001 form, then

– Type the [**number**] that matches the *device type*

– Press **ENTER**

b If the device name is not listed in the prompt, then skip the prompt,

– Type **N** (Next)

– Press **ENTER**

Result: The system displays the *device name* and the *device function prompt* for the next device in the I/O subsystem.

Note: Repeat steps 13 and 14 to set up ***all*** of the of the devices on the PA001 form. Then go to step 15 to exit the Modem Setup program.

15 Exit Modem Setup. To exit the *Modem Setup* program at a *device function* prompt,

- Type **X** (Exit)
- Press **ENTER**

Result: The system exits the *Modem Setup* program and displays the message:

```
Done setting up Devices.
```

Result: Next, the system continues the installation, lists a series of messages, which takes several minutes. Then, the system displays another message:

```
Installation of Avaya DEFINITY Proxy Agent (DG3PA)
was successful.
```

16 **Reboot Prompt**. Finally, the system displays the reboot prompt:

```
Reboot the machine by executing ‘cd /; shutdown -i6
-g0 -y’
```

At the UNIX prompt,

- Type the shutdown command: **cd /; shutdown -i6 -g0 -y**
- Press **ENTER**

Result: The system reboots the computer, which takes several minutes. Then, the system displays the UNIX *login* prompt.

17 Refer to the "Installation Checklists" on page 85 and complete each procedure in the order listed on the checklist.

Upgrading from DPA 3.0 and Later

This section contains the procedures to upgrade from DPA 3.0 and later to DPA Release 4.0.

UnixWare upgrade patches

Your system must be running UnixWare Operating System Release 2.1.3 or 7.1.x.

To download the latest patch for the UnixWare Operating System Release 7.1.x, refer to the "Vendor References" on page 18 for the Caldera web address.

CAUTION:

The customer is ***solely*** responsible for the installation and maintenance of third-party products. For technical support of these products, the customer must call the vendor. Avaya does ***not*** provide support for third-party hardware or software products.

Installation script

The *Devices* section of the PA001 form should contain all of the device names that are assigned to the Proxy Agent.

For upgrades, the installation script only searches for devices that are ***not*** currently detected on the *I/O subsystem*. If the script detects any undefined devices, then the script displays the prompts for those devices.

Please read the entire section entitled "Understanding the Installation Prompts" on page 89. This section explains how to respond to the prompts in the installation script.

Required materials

Installers need the following materials and information:

- Root login and password
- Completed PA001 form
- CD-ROM entitled DEFINITY Network Management Proxy Agent Release 4.0

Upgrade procedure

Complete the procedure below to ***upgrade*** DPA 3.0 and later to DPA Release 4.0.

1 Execute the tasks below:

- Request all users to log off the system, if necessary.
- Close all open windows and applications.
- Stop the Proxy Agent if running. Refer to "Stop the Proxy Agent" on page 156
- Log off the system.

2 At the UNIX *login* prompt, login to the root (/) directory:

- Type [**root login**]
- Press **ENTER**

3 At the *Password* prompt,

- Type [**root password**]
- Press **ENTER**

4 At the *Display Desktop? y/n* prompt,

- Type **N** (no)
- Press **ENTER**

Result: The system displays the UNIX prompt.

5 At the UNIX prompt (#), start the installation process:

- Type **pkgadd -d cdrom1 DG3PA**
- Press **ENTER**

Result: The system displays the name of the package and the prompt:

```
Insert CD into CD-Rom Drive. Type [go] when ready
or [q] to quit (default=go):
```

6 Insert the CD-ROM entitled **DEFINITY Network Management Proxy Agent Release 4.0**, into the CD-ROM drive.

At the UNIX prompt,

- Type **go**
- Press **ENTER**

Result: The system displays the prompt: `Strike ENTER when ready or ESC to stop`.

7 At the UNIX prompt, press **ENTER**

Result: The system installs the program, which takes a few moments.

8 **RAM Megabytes Prompt**. The system displays the prompt:

```
How much RAM does the Proxy Agent serve have in it?
If it is more than 128 Megabytes, then a
modifications must be made to the kernel boot file.

How many megabytes of RAM?
```

On the PA001 form, go to the *Proxy Agent* section, then refer to the *Random Access Memory (RAM)* field for the number of megabytes of RAM (MB).

At the UNIX prompt,

- Type the [**number**] of RAM megabytes
- Press **ENTER**

Result: The system modifies the kernel boot file.

9 **SNMP Polling Prompt**. The system displays an explanation of the reasons to enable (default) or disable SNMP polling. Then, the system displays the current setting and the prompt:

```
The current setting is SNMP polling ENABLED.
Should SNMP Polling be DISABLED? [n] y:
```

At the prompt, execute ***one*** of the options (a or b) below:

a To ***enable*** SNMP polling (default),

– Press **ENTER**.

– Go to step 11

b To ***disable*** SNMP polling,

– Type **Y** (yes)

– Press **ENTER**

– Go to step 10

10 **SNMP Traps Prompt**. If users ***disabled*** SNMP polling in step 9, then the system displays an explanation of the reasons to enable (default) or disable SNMP traps. This prompt will **not** display if users ***enabled*** the SNMP Polling because SNMP Traps are required for SNMP Polling.

Then, the system displays the current setting and the prompt:

```
The current setting is SNMP Traps are ENABLED.
Should SNMP Traps be DISABLED? [n] y:
```

At the prompt, execute ***one*** of the options (a or b) below:

a To ***enable*** SNMP traps (default),

– Press **ENTER**

– Go to step 11

b To ***disable*** SNMP traps,

– Type **Y** (yes)

– Press **ENTER**

– Go to step 12

11 **SNMP Set Capability Prompt**. If users ***enabled*** SNMP Polling in step 9, then the system displays an explanation of the reasons to disable (default) or enable SNMP Set Capability. The SNMP Set Capability allows network managers on the NMS to execute the tasks below from the DEFINITY Network Management product.

- Busy Out/Release boards, ports, trunk groups and trunks
- Set the DEFINITY system date and time

Then the system displays a warning and the prompt:

```
WARNING: If you are not behind a secure firewall,
it is strongly suggested that this option be
disabled!

The current setting is SNMP Set Capability is
DISABLED.
```

```
Should SNMP Set Capability be ENABLED? [n]/y:
```

At the prompt, execute ***one*** of the options (a or b) below:

a To ***disable*** SNMP set capability (default), if the Proxy Agent is ***not*** behind a secure fire wall,

- Press **ENTER**
- Go to step 12

b To ***enable*** SNMP set capability, if the Proxy Agent is behind a secure fire wall,

- Type **Y** (yes)
- Press **ENTER**
- Go to step 12

Result: The system updates the SNMP access files and executes the *Modem Setup* program.

12 **Function Prompt**. The Modem Setup program displays a list of ***all*** devices on the serial I/O subsystem that were defined during a previous installation. The function prompt contains the information listed below:

- Name of the I/O subsystem
- A list of previously defined devices
- The function prompt for the first device name on the I/O subsystem that has not been defined

The system displays the first function prompt as show in the example below:

```
Equinox SST Device Driver Detected
Device /dev/tty1a1 previously defined
Device /dev/tty1a2 previously defined
Device /dev/tty1a3 previously defined

UNIX device name: /dev/tty1a4:
Select the function for this device:
[M] Maintenance Remote Access (TSC/ITAC)
[P] Product Access (default)
[R] Receive Alarms
[S] Send Alarms
Or, select one of the options below:
[N] Next Device (skip this one)
[X] Exit Modem Setup and continue the installation

Enter the letter for the device function or another
option [default=P]:
```

Compare the list of previously defined devices on the screen to the device names and functions in the *Devices* section of the PA001 form.

At the prompt, execute ***one*** of the options (a, b, or c) below:

a If the list of previously defined devices on the screen contains the device names on the PA001 form, then exit the Modem Setup program. Go to step 14.

b To define new devices from the PA001 form,

- Type the [**letter**] that matches the *function* for this device
- Press **ENTER**
- Go to step 13

c To skip device names that are ***not*** on the PA001 form,

- Type **N** (Next) to skip this device
- Press **ENTER**
- The system displays the device name and function prompt for the next device in the I/O subsystem. Repeat this step to skip every device that is ***not*** on the PA001 form.

13 **Device Type Prompt**. The system displays the ***device type*** prompt. The prompt below is an ***example*** of the maintenance function. The list varies by the function selected in the previous prompt.

```
UNIX device name: /dev/tty1a4:
Select the device type for the maintenance remote
access function:
[1] 3710 AT&T Dataport
[2] 3715 AT&T Dataport Express
[3] US Robotics Sportster 33.6 Kbps
[4] Other (manually)
```

```
Or select the option below:
[N] Next Device (skip this one)

Enter the number for the device type or another
option[default=1]:
```

Refer to the *Devices* section on the PA001 form and check the *Device Type* field for this device.

At the prompt, execute ***one*** of the options (a or b) below:

a If the device name is on the PA001 form, then

- Type the [**number**] that matches the device type
- Press **ENTER**

b If the device name is not listed in the prompt, then skip the prompt,

- Type **N** (Next)
- Press **ENTER**

Result: The system displays the next *device name* and the *device function prompt* for the next device.

Note: Repeat steps 12 and 13 to set up ***all*** of the of the devices on the PA001 form. Then go to step 18 to exit the Modem Setup program.

14 **Exit Modem Setup**. To exit the *Modem Setup* program at a *device function* prompt,

- Type **X** (Exit)
- Press **ENTER**

Result: The system exits the *Modem Setup* program and displays the message:

```
Done setting up Devices.
```

Result: Next, the system continues the installation, lists a series of messages, which takes several minutes. Then, the system displays another message:

```
Installation of Avaya DEFINITY Proxy Agent (DG3PA)
was successful.
```

15 **Reboot Prompt**. Finally, the system displays the reboot prompt:

```
Reboot the machine by executing 'cd /; shutdown -i6
-g0 -y'
```

At the UNIX prompt,

- Type the shutdown command: **cd /; shutdown -i6 -g0 -y**
- Press **ENTER**

Result: The system reboots the computer, which takes several minutes. Then, the system displays the UNIX *login* prompt.

16 Refer to the "Installation Checklists" on page 85 and complete each procedure in the order listed on the checklist.

Upgrading from DPA 2.0.2 and Earlier

Only the ***system administrator*** should upgrade from DPA Releases 2.0.2 and earlier to DPA Release 4.0.

CAUTION:

Ugrades from DPA Releases 2.0.2 and earlier are destructive upgrades. Old DNM releases must be removed, and all historical data is lost. Upgrades from Proxy Agent Releases 2.0.2 and earlier also require an upgrade to the UnixWare Operating System Release 2.1.3 or to Release 7.1.x.

The customer is ***solely*** responsible for the installation and maintenance of third-party products. For technical support of these products, the customer must call the vendor. Avaya does ***not*** provide support for third-party hardware or software.

Installation tasks

The system administrator must execute the installation tasks listed below to upgrade UnixWare 2.1.3 and DPA.

1. Upgrade or install UnixWare Release 2.1.3.
   Execute the appropriate option below:
   - If UnixWare 2.0 through 2.0.2 are currently installed, execute a destructive installation of UnixWare. Install UnixWare 2.1.3 as a new product.

   For UnixWare installation procedures, refer to *SCO UnixWare Enterprise Computing Products Installation Handbook*
2. Complete the Customer Pre-Installation Tasks to "Install the UnixWare Operating System" on page 67 in this book.
3. Remove the Proxy Agent Releases 2.0.2 and earlier.
   Refer to "Removing DPA" on page 119.
4. Install the DEFINITY Proxy Agent 4.0 as a new product.
   Refer to "Installing DPA" on page 97.

Removing DPA

This section contains the procedure to remove DPA. Only the ***system administrator*** should execute the removal procedure as required for upgrading an earlier version of the Proxy Agent or for other business reasons.

The removal procedure only contains the basis steps. For more information on the UNIX package removal (pkgrm) command, refer to the UNIX system documentation.

Procedure

Complete the procedure below to remove DPA from the stand-alone computer.

1 Execute the tasks below:

- Request all users to log off the system, if necessary.
- Stop the Proxy Agent if running. Refer to "Stop the Proxy Agent" on page 156
- Close all open windows and applications.
- Log off the system.

2 At the UNIX *login* prompt, login as the root user:

- Type [**root login**]
- Press **ENTER**

3 At the *Password* prompt,

- Type [**root password**]
- Press **ENTER**

4 At the *Display Desktop? y/n* prompt,

- Type **N** (no)
- Press **ENTER**

Result: The system displays the UNIX prompt.

5 At the UNIX prompt,

- Type the remove command: **# pkgrm DG3PA**
- Press **ENTER**

Result: The system confirms that the package is currently installed. Then, the system displays the prompt:

```
Do you want to remove this package? [yes, no, ?,
quit] y
```

6 To select "yes" to remove the package, press **ENTER**.

The system executes the remove command, which may take several minutes. Then, the system displays the reboot prompt:

```
Reboot the machine by executing 'cd /; shutdown -i6
-g0 -y'
```

At the UNIX prompt,

- Type the shutdown command: **cd /; shutdown -i6 -g0 -y**
- Press **ENTER**

Result: The system reboots the computer, which takes several minutes. Then, the system displays the UNIX *login* prompt.

4 Help Screens and Commands

Introduction

The information in this chapter primarily targets ***new*** users who are unfamiliar with the Proxy Agent software.

The Proxy Agent application contains two types of help windows that users can access from any menu or application screen. The commands to access the help windows include the following:

- The ***list*** command (**Ctrl-L**) displays a **Functions** window that contains the available commands for the current Proxy Agent menu or application screen.
- The ***help*** command (**Ctrl-Y**) displays a **help** window for the current Proxy Agent menu or individual field on an application screen. Help windows can be lists of valid options for a specific field or instructions that explain the type of information to input in a field.

Note: Users need only type enough of each command to make it unique. For example: at the proxy main menu, instead of typing “proxy-admin”, you can type just “p”.

The Format Conventions section contains a table that describes the conventions used in this guide.

Functions Window

The figure below is an example of a Functions window with associated hotkeys.

Users can access the Functions window (**Ctrl-L**) from any menu or application screen in the Proxy Agent.

Most commands have ***hotkeys***, which are keyboard short cuts. Hotkeys allow users to execute a command without accessing the Functions window.

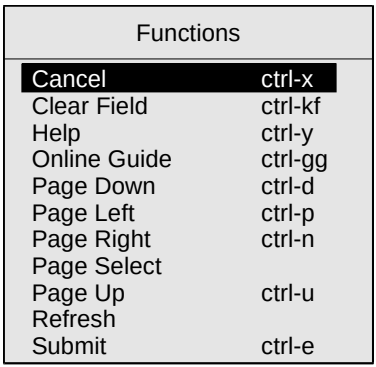


Figure 11. Functions window

Commands and Hotkeys

The table below contains the description for the commands and the hotkeys that are available on the Proxy Agent.

Table 10. Commands and Hotkeys

Command	Description
List command **Ctrl-L**	Displays the **Functions** window that contains all of the available ***commands*** and associated ***hotkeys*** for the current screen. To select an option from the Functions window, • Press **Ctrl-L** to display the Functions window: • Use the arrow keys or the **TAB** key to move the cursor to an option on the screen. • Press **ENTER** to execute the command.
	(1 of 4)

Table 10. Commands and Hotkeys

Command	Description
Help **Ctrl-Y**	Displays a help window for a field or a menu, as described below: • Field help window contains a list of options for the field. • Main Menu help window contains explanations of the applications on the menu. • Submenu help window contains available commands. To access a help list for a specific field, • Move the cursor to the field • Press **Ctrl-Y** to display the help window • Move the cursor to an option on the list • Press **ENTER** to execute the option To exit a help window ***without*** selecting an option, press **ESC**.
Submit **Ctrl-E**	Saves changes made in the fields on an application screen ***and*** exits the screen.
Cancel **Ctrl-X**	Exits a screen ***without*** saving changes.
Clear Field **Ctrl-K F**	Deletes the **data** in the field where the cursor is located. Users can also delete data in a field by pressing the **SPACE BAR**.
	(2 of 4)

Table 10. Commands and Hotkeys

Command	Description
Online Guide **Ctrl-G G**	Displays a message with directions to access the Proxy Agent Installation Guide and User Guide from the **Documentation** folder on the UnixWare Desktop. The Online Guide has been removed from the Proxy Agent.
Page Down **Ctrl-D**	Displays the ***next*** numbered page in a multiple-page application. Example: The MANAGED NODES application contains 10 pages. Press **Ctrl-D** to page ***down*** to the next page (2, 3, 4, etc.).
Page Up **Ctrl-U**	Displays the ***previous*** numbered page in a multiple-page application. Example: In the MANAGED NODES application, press **Ctrl-U** to page ***up*** to the previous page (4, 3, 2, 1).
Page Right **Ctrl-N**	Displays the ***next*** subpage that is to the ***right*** of the current page. Example: The MANAGED NODES application is similar to a spreadsheet with columns and rows on 5 subpages (a through e) for each numbered page. Press **Ctrl-N** to access the ***next*** subpage (b, c, d, e) within a spreadsheet application.
	(3 of 4)

Table 10. Commands and Hotkeys

Command	Description
Page Left **Ctrl-P**	Displays the ***previous*** subpage that is to the ***left*** of the current page. Press **Ctrl-P** to access the ***previous*** subpage (d, c, b, a) within a spreadsheet application.
Page Select (no hotkey)	Displays a window that contains all available page options within a multiple-page application. The options may include any or all of the page commands listed above.
Refresh (no hotkey)	Updates the screen with the current information.
	(4 of 4)

Format Conventions

The format conventions used in the *Proxy Agent User Documentation* are visual cues to help users identify the type of actions they should execute in the procedures.

UNIX systems have very specific rules for entering data at the UNIX prompt. The procedures in the guides show the text to be entered in **9 point bold** font.

Users should type the text ***exactly*** as shown in the step. The steps include the conventions below:

- UPPER and lower case, symbols (periods, slashes, hyphens, underscores, etc.), and spaces within the command or path.
- If a *command line* ***wraps*** to the next line, this indicates that users should press the **SPACE BAR** before they type the data on the next line.
- If a *web address* (URL) ***wraps*** to the next line, do NOT insert a space.
- The procedures in the guides contain some data that are enclosed in brackets [**password**]. The brackets indicate that users should type the requested data ***without*** the brackets.

CAUTION:
Always check the typed data ***before*** pressing the **ENTER** or **RETURN** key. Notice the difference between the capital letter "**O**" and the number zero "**0**". The only error message the UNIX system may display is: `not found`.

The format conventions described in the table below appear in the procedures and in the ***Result*** paragraph that follow most steps.

Table 11. Format Conventions

Convention	Description
Bold text	Indicates that users should type the **bold text** exactly as shown. Example: Type **display status**
[**Bold text in brackets**]	Indicates that users should type data that is ***specific*** to their system, ***without*** the brackets. Text enclosed within brackets contain either the data that may be different on your system or instructions to enter specific data for your system: • Drive name [d:] which may be different on each system. Example: Type [**d:**] **install** • System data from the PA001 form. Example: Type the [**IP address**] as shown on the PA001 form • Options from a Help list. Example: Select the [**managed node name**] from the Help list • Description of requested data. Example: Type the [**device name**] in the field as shown on the PA001 form: **/dev/ttyxxx**
	(1 of 3)

Table 11. Format Conventions

Convention	Description
Result paragraph	Describes the result of an action taken in a step, as described in the following example: ***Result:*** The system displays the MAIN MENU. A ***Result*** paragraph may also contain a message or a prompt that is displayed in the `constant width` font. A prompt sets up the action to be taken in the next step. ***Result:*** The system displays the command window that contains the prompt: `Do you wish to continue? y/n`
Series of Menu Options **File > Save**	The greater than (>) symbol indicates that users should select an option from a series of menus. For example, Click **File > Save** means that users should: • Click on the option on the menu bar (File). • Then click on the second option (Save) from the drop-down menu. The term ***select*** is used in place of ***click*** if: • A program does not accept mouse commands or • Users need to choose an option from a Help list.
	(2 of 3)

Table 11. Format Conventions

Convention	Description
Execution keys	Appear in bold capital letters and indicate that users should press that key on the keyboard to execute a specific action. Examples: Press **ENTER** (also refers to the **RETURN** key)
Combination keys **Ctrl-L** **Ctrl-K F**	The hyphen (-) between a function key (Ctrl, Alt, Shift) and a letter indicates that users should execute the actions described in the examples below: Example: Press **Ctrl-L** (list command) • Press and hold the Ctrl (Control) key • Press the letter (L) key • Then release both keys Example: Press **Ctrl-K F** (clear field command) • Press and hold the Ctrl (Control) key • Press the ***first*** letter (K) key • Release ***both*** keys • Then press the ***second*** letter (F) key
Repeated keys	Indicates that users should press the same key ***twice***. Example: Press **ESC** (closes a Help window)
	(3 of 3)

5 Access Procedures

Introduction

This chapter contains screen descriptions and procedures to log in to the Proxy Agent from the UnixWare Desktop and UNIX prompt and procedures to access the various Proxy Agent menus and application screens.

This chapter also contains the procedures to:

- "Start the Proxy Agent" on page 149
- "Display of the Status Screen" on page 150
- "Stop the Proxy Agent" on page 156

The information in this chapter primarily targets ***new*** users who are unfamiliar with the Proxy Agent software.

Log in to the Proxy Agent

Users can log in to the Proxy Agent from either the UNIX or the UnixWare Desktop. This section contains both procedures.

Users must use the Desktop procedures to access the Proxy Agent User Documentation. Refer to "Access the User Documentation" on page 139.

Log in from the UNIX Shell

When logging from the UNIX shell, users can access all applications from the Proxy Agent MAIN MENU, ***except*** the Proxy Agent User Documentation.

Procedure

Complete the following procedure to log in to the Proxy Agent MAIN MENU from the UNIX shell.

1. At the UNIX *login* prompt,
   - Type the [**g3maadm login**]
   - Press **ENTER**

   Result: The system displays the *Password* prompt.
2. At the *Password* prompt,
   - Type the g3maadm [**password**]
   - Press **ENTER**

   Result: The system displays the prompt: `Display Desktop? y/n`

3 At the prompt,

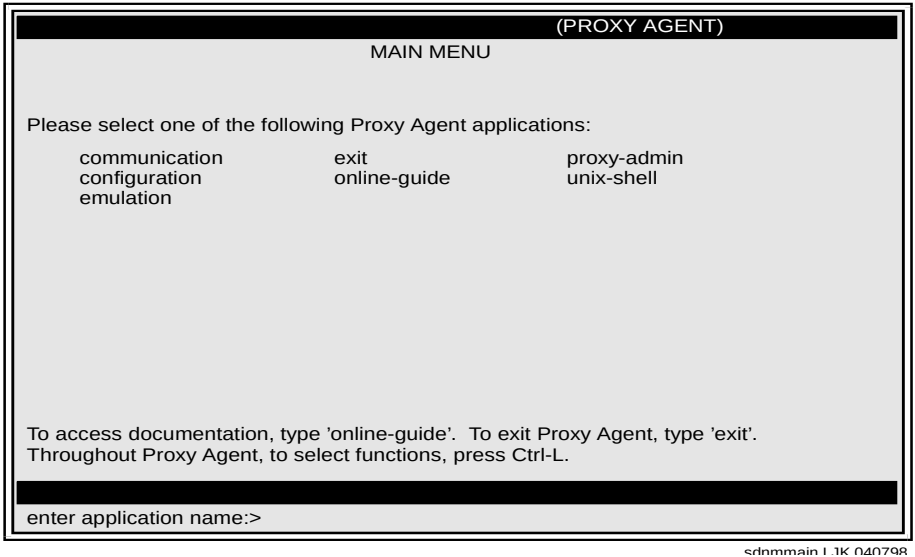
- Type **N** (no)
- Press **ENTER**

Result: The system displays the UNIX prompt.

4 At the UNIX prompt,

- Type **proxy**
- Press **ENTER**

Result: The system displays the Proxy Agent MAIN MENU.



sdpmmain LJK 040798

5 At the command line, enter an application name. For example:

- Type **proxy-admin**
- Press **ENTER**

Result: The system displays the selected application screen.

Log in from the Desktop

When logging in to the UnixWare Desktop, the system displays the following two screens before it displays the Proxy Agent MAIN MENU:

- The UnixWare Desktop contains the DEFINITY_Proxy icon that opens the DEFINITY_Proxy folder.
- The DEFINITY_Proxy folder contains the following executable icons or folders:
  - **Proxy_Agent** icon opens the MAIN MENU that lists the commands to access the Proxy Agent applications.
  - **Documentation** icon opens a PDF menu to access the Proxy Agent User Documentation and PA001 forms.
  - **IO_Setup** folder contains the icons to access the Dialers file and the Devices file. Users need root password to edit these files.

Note: The examples in this section show typical UnixWare Desktop screens. Your desktop may look somewhat different depending on the configuration of your system.

Users execute most of the daily operation tasks in the PROXY ADMIN menu. Chapters 4 through 8 contain field definitions and procedures to execute various tasks on the administration screens.

Procedure

Complete the following procedure to log in to the UnixWare Desktop and access the Proxy Agent MAIN MENU.

Note: Accessing the UnixWare Desktop can only be done from the Proxy Agent Console.

1 At the UNIX *login* prompt,

- Type the [**g3maadm login**]
- Press **ENTER**

Result: The system displays the *Password* prompt.

2 At the *Password* prompt,

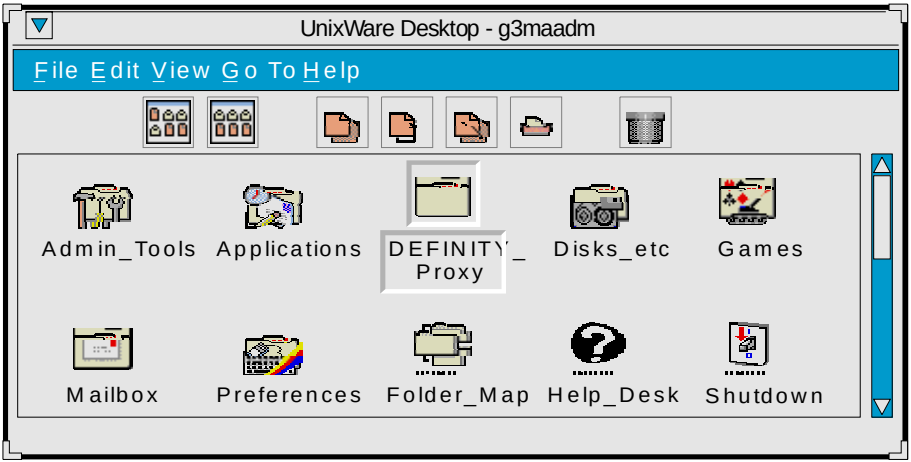
- Type your [**password**]
- Press **ENTER**

Result: The system displays the prompt: `Display Desktop? y/n`

3 At the prompt,

- Type **Y** (yes)
- Press **ENTER**

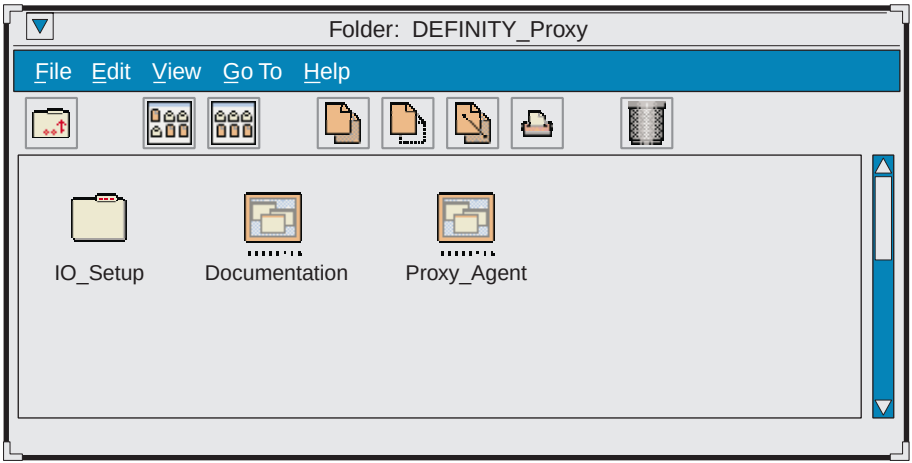
Result: The system displays the UnixWare *Desktop*.



sdnmdtop KLC 03

4 Double-click the **DEFINITY_Proxy** icon to open the folder.

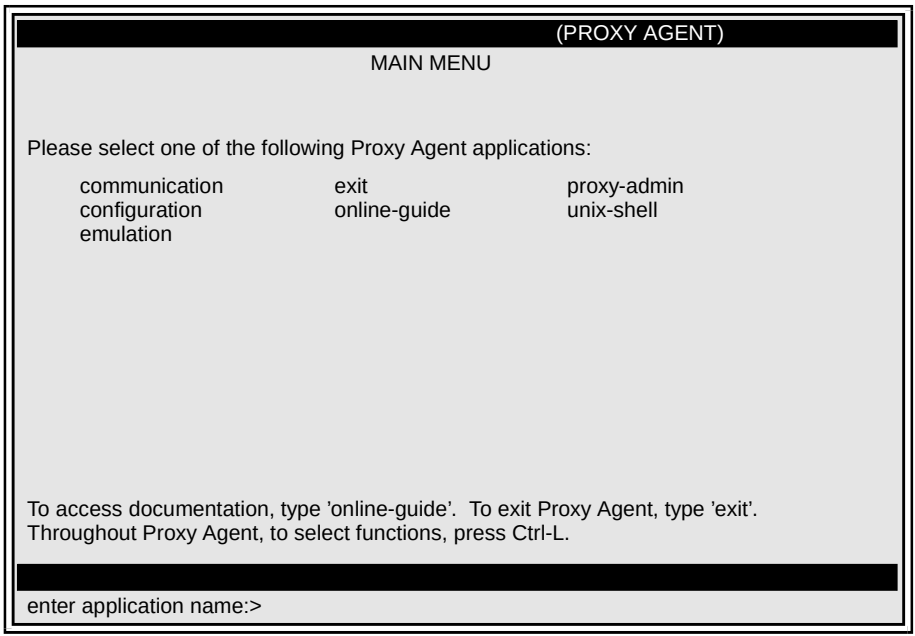
Result: The system displays the contents of the *DEFINITY_Proxy* folder.



sdnmprox LJK 092299

5 Double-click the **Proxy_Agent** icon to access the Proxy Agent MAIN MENU.

Result: The system displays the Proxy Agent MAIN MENU.



sdnmmain LJK 040798

6 At the command line, enter an application name. For example:

- Type **proxy-admin**
- Press **ENTER**

Result: The system displays the selected application screen.

Access the User Documentation

In this release, the Proxy Agent User Documentation for Installation and Administration is delivered on the product CD-ROM entitled: DEFINITY Network Management Proxy Agent Release 4.0.

During the installation of the Proxy Agent, the installation script copies the User Documentation and PA001 forms to the **avayadoc** directory. Users can only access the User Documentation from the UnixWare Desktop.

Users also have the option of printing the guides directly from the DEFINITY Network Management Proxy Agent CD-ROM.

PDF viewer

The Proxy Agent User Documentation are PDF files. Users can access any chapter in the book by using the built-in links in the table of contents, index, and chapters. Users can also use the search feature to find specific information.

The PDF viewer is public domain software. Users can learn more about the PDF viewer from the UNIX manual page entitled: XPDF. To access the manual page, enter the **man xpdf** command at a UNIX prompt.

Online_guide command

The Proxy Agent User Documentation replaces the Online Guide. The **online_guide** command is still visible on the Proxy Agent MAIN MENU and Functions screen.

If users execute the command, the system displays a window with instructions for viewing the documentation on the UnixWare Desktop.

Procedure

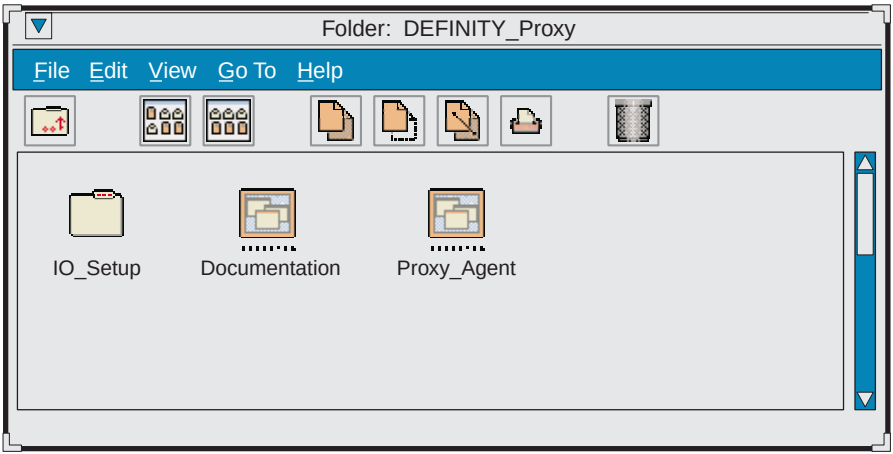
Complete the following procedure to access the Proxy Agent Installation Guide and the User Guide from the Documentation folder on the Desktop.

1 Log in as ***g3maadm*** and access the UnixWare Desktop.

Result: The system displays the *Desktop*.

2 Click the **DEFINITY_Proxy** icon.

Result: The system displays the *DEFINITY_Proxy* folder.



sdnmprox LJK 092299

3 Click the **Documentation** icon.

Result: The system displays the main menu for the PDF viewer.

4 Select an option from the main menu to access the documentation.

5 To exit the PDF viewer from the Menu Bar, select **File > Exit.**
The system displays the DEFINITY_Proxy folder.

Review of the Main Menu

The Proxy Agent MAIN MENU contains the commands to access the Proxy Agent application screens, as show in the following figure.

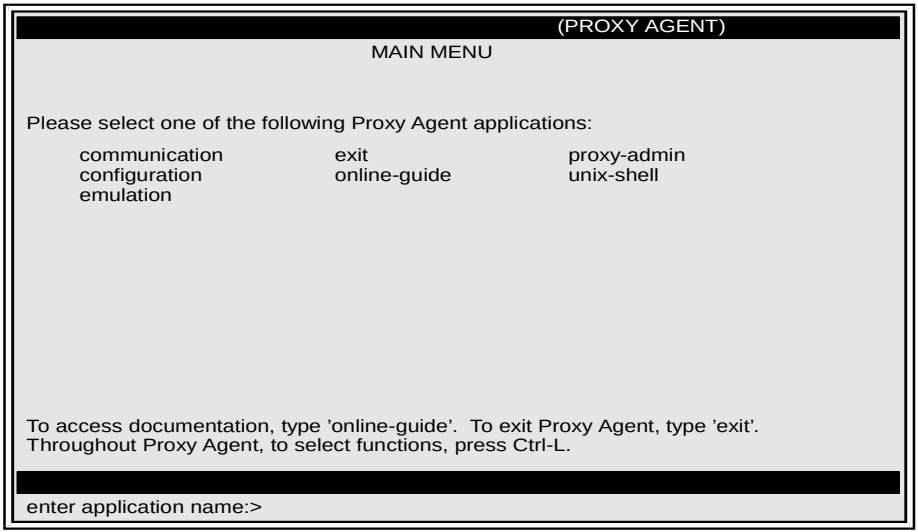


Figure 12. Proxy Agent MAIN MENU

The following table contains the descriptions of the commands on the Proxy Agent MAIN MENU.

Table 12. Proxy Agent MAIN MENU

Command	Description
communication	Accesses the **Communication** application and displays the COMMUNICATION MANAGER screen. Users can manually connect and disconnect a Proxy Agent to and from managed nodes for real-time administration. Refer to Chapter 12, "Communication Application"
emulation	Accesses the **Emulation** application. The Emulation screen provides direct communication with a managed node for real-time administration. Refer to Chapter 13, "Emulation Application"
configuration	Accesses the **Configuration** application. This application contains two commands to edit either of the configuration screens: • **change hardware** to edit the CHANGE HARDWARE screen • **change user-interface** to edit of the CHANGE USER_ INTERFACE screens (4 pages) Refer to Chapter 14, "Configuration Application"
	(1 of 3)

Table 12. Proxy Agent MAIN MENU

Command	Description
proxy-admin	Accesses the PROXY ADMIN menu. This menu contains the following ***commands***: • The ***change*** and ***display*** commands allow users to administer or view the application following screens: – Alarm Devices – Filter Set – Default Location – Managed Nodes – Network Managers – Default Login • The ***add*** and ***remove*** commands allow users to access the FILTER SET screen and create or delete filter sets • The ***start*** and ***stop*** commands allow users to turn on or turn off the Proxy Agent • The ***quit*** command allows users to exit the PROXY ADMIN menu • The ***status*** command allows users to view the STATUS screen. The STATUS screen is for display only. Refer to "Review of the Proxy Admin Menu" on page 145
	(2 of 3)

Table 12. Proxy Agent MAIN MENU

Command	Description
exit	Closes the Proxy Agent MAIN MENU.
online-guide	Displays a window with instructions to access the UnixWare Desktop in order to view the Proxy Agent Installation Guide and the User Guide. The Online Guide has been ***removed*** from the Proxy Agent. Refer to "Access the User Documentation" on page 139
unix-shell	Accesses the UNIX prompt.
	(3 of 3)

Review of the Proxy Admin Menu

The PROXY ADMIN menu contains the commands to access the Proxy Agent administration screens and to start and stop the Proxy Agent. The following figure shows the commands on the PROXY ADMIN screen.

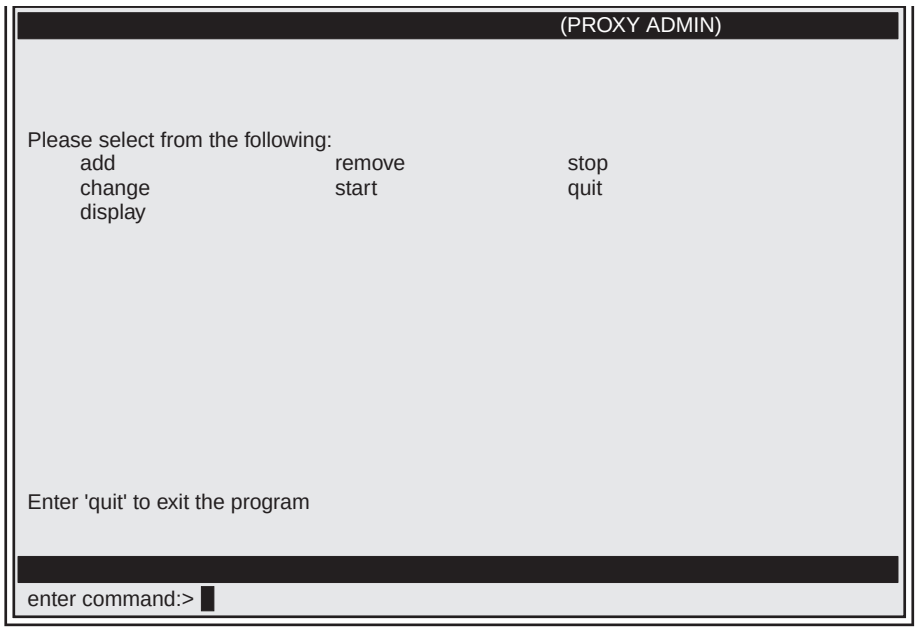


Figure 13. PROXY ADMIN screen

Command descriptions

The following table describes the commands on the PROXY ADMIN screen. Users must have a *g3maadm* login to execute the commands and administer the Proxy Agent.

Table 13. PROXY ADMIN screen

Command	Description
add	Accesses the FILTER SET screen in the “add” mode. Users create the alarm filtering criteria for a new filter set with this command. ***Note:*** Users must STOP the Proxy Agent ***before*** executing the **add** command. Refer to Chapter 9, "Filter Set Administration".
remove	Accesses the FILTER SET screen in the “remove” mode. Users can delete existing alarm filters with this command. ***Note:*** Users must STOP the Proxy Agent ***before*** executing the **remove** command. The Proxy Agent executes one of the following options: • Deletes the filter set ***if*** it is not assigned to any managed node • Replaces the filter set with the *default* filter ***if*** the filter is assigned to managed nodes Refer to Chapter 9, "Filter Set Administration".
	(1 of 3)

Table 13. PROXY ADMIN screen

Command	Description
change	Accesses the **administration** following screens. The *change* command allows users to edit the selected screen. ***Note:*** Users must STOP the Proxy Agent ***before*** executing the *change* command. • **change network-managers** Refer to Chapter 6, "Review the Network Managers Screen" • **change default-location** Refer to Chapter 7, "Review of the Default Location Screen" • **change alarm-devices** Refer to Chapter 8, "Review of the ALARM DEVICES Screen" • **change filter-set** Refer to Chapter 9, "Review of the Filter Set Screen" • **change managed-nodes** Refer to Chapter 11, "Review of the Managed Nodes Screen" • **change default login** Refer to Chapter 10, "Review of the Default Login Screen"
	(2 of 3)

Table 13. PROXY ADMIN screen

Command	Description
display	Shows the administration screens and the STATUS screen in the ***view-only*** mode. The **display** command does ***not*** allow users to change the screens. ***Note:*** Users do ***not*** have to STOP the Proxy Agent before executing the *display* command. • **display alarm-devices** • **display filter-set** • **display default-location** • **display default-login** • **display managed-nodes** • **display status** -- Refer to "Display the Status Screen" on page 155
start	Initiates a Proxy Agent **connection** to the managed nodes. Refer to "Start the Proxy Agent" on page 149
stop	Drops the Proxy Agent **connection** to the managed nodes. Refer to "Stop the Proxy Agent" on page 156
quit	Closes the PROXY ADMIN screen and displays the Proxy Agent MAIN MENU.
	(3 of 3)

Start the Proxy Agent

The PROXY ADMIN screen contains the command to ***start*** the Proxy Agent System connection to the administered managed nodes.

Each time users start the Proxy Agent, they should also display the STATUS screen to verify that the Proxy Agent is active.

Procedure

Complete the following procedure to start the Proxy Agent connection.

1 Access the PROXY ADMIN screen. In the command line,

- Type **start proxy-agent**
- Press **ENTER**

Result: The system displays the command window that contains the prompt: `Do you wish to continue? Yes No`

2 To select *Yes*, press **ENTER**.

Result: The system starts the Proxy Agent. Then, the system displays the PROXY ADMIN screen with the confirmation message:

`Command completed successfully.`

Display of the Status Screen

The STATUS screen is a ***view-only*** screen that contains the following information:

- Proxy Agent state and connection type
- Alarm forwarding state
- Node name and state
- Connection statistics ***only*** for the ECS, G3, MCU, IP600, and DEFINITY One managed nodes
- Status of the Proxy Agent

The STATUS screen does ***not*** display any connection statistics for the following managed nodes:

- DEFINITY AUDIX
- Intuity AUDIX
- Intuity Interchange
- Call Management System (CMS)
- CONVERSANT

The Proxy Agent ***only*** supports alarm handling for these products.

Figure The following figure shows an example of a STATUS screen (view-only).

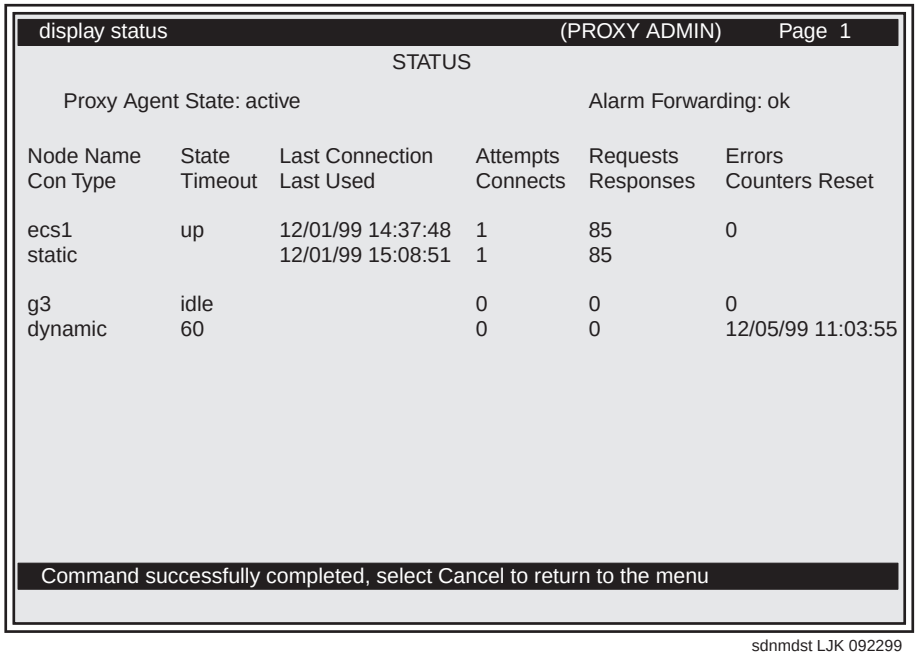


Figure 14. STATUS screen

Review of the Status Screen Fields

The following table contains the description for each column on the STATUS screen.

Several of the columns contain two types of data in the column.

Table 14. STATUS screen

Column	Description
Proxy Agent State	Identifies the current activity status of the Proxy Agent: **active** -- The Proxy Agent has been started **not active** -- The Proxy Agent has been stopped
Alarm Forwarding	Identifies the current state of the alarm forwarding feature. The alarm forwarding feature is active ***only*** if the user has administered the ALARM DEVICES screen. Users can turn-off alarm forwarding for individual managed nodes from the MANAGED NODES screen. The states include: **ok** -- Alarm forwarding is active and functioning **failed** -- Alarm forwarding is active, but is ***not*** functioning **other** -- Identifies one of the following conditions: • Proxy Agent is ***not*** active • Alarm forwarding feature is ***not*** turned on
	(1 of 3)

Table 14. STATUS screen

Column	Description
Node Name	Identifies the name of the managed node that is associated with the Proxy Agent.
Con Type	Identifies the type of Proxy Agent ***connection*** that users administer for ECS, G3, MCU, IP600, and DEFINITY One systems. A connection can be one of the following types: • **static** (continuous connection) • **dynamic** (temporary connection on an as-needed basis)
State	The ***State*** field identifies the current status of the Proxy Agent connection to a managed node. The states include: **init** (initiate) -- A connection attempt is in progress **up** -- The connection is established **down** -- The connection attempt has failed **off** -- The connection has been turned off **idle** -- A **dynamic** connection is ***not*** connected in standby mode **other** -- The connection has failed and the state is unknown
Timeout	Contains the number of **minutes** a dynamic connection will remain up without receiving data transmission.
	(2 of 3)

Table 14. STATUS screen

Column	Description
Last Connection	The **date** and **time** of the last successful ***connection***.
Last Used	The **date** and **time** of the last successful ***data retrieval***.
Attempts	The **number** of connection ***attempts*** since the counter was reset to zero.
Connects	The **number** of successful ***connections*** since the counter was reset to zero.
Data Requests	The **number** of ***requests*** for data since the counter was reset to zero.
Data Responses	The **number** of successful ***responses*** to data requests since the counter was reset to zero.
Errors	The **number** of ***errors*** that occurred during data requests since the counter was reset to zero.
Counters Reset	The **date** and **time** the ***counter*** was reset to zero.
	(3 of 3)

Display the Status Screen

Users should display the STATUS screen each time they start the Proxy Agent so that they can review the following information:

- Verify that the Proxy Agent connection is active
- View the status of the Alarm Forwarding feature
- View the connection statistics for the G3, ECS, and MCU managed nodes

Procedure

Complete the following procedure to display the STATUS screen.

1 Access the PROXY ADMIN menu. In the command line,

- Type **display status**
- Press **ENTER**

Result: The system displays the STATUS screen.

2 Check the STATUS screen to verify the current state of the Proxy Agent connections and statistics.

3 Press **Ctrl-X** to exit the screen.

Result: The system closes the STATUS screen and displays the PROXY ADMIN screen.

Stop the Proxy Agent

The PROXY ADMIN screen contains the command to ***stop*** a Proxy Agent connection to the administered managed nodes.

Users must **stop** the Proxy Agent ***before*** they can enter a **change** command to edit an administration screen.

CAUTION:
When you stop the Proxy Agent, the nodes connected to the Proxy Agent are dropped.

Users do ***not*** have to stop the Proxy Agent entering a **display** command. Users can view an administration screen while the Proxy Agent is running.

Complete the following procedures to stop the Proxy Agent connection.

1 Access the PROXY ADMIN screen. In the command line,

- Type **stop proxy-agent**
- Press **ENTER**

Result: The system displays the command window that contains the prompt: `Do you wish to continue? Yes No`

2 To select *Yes*, press **ENTER**.

Result: The system stops the Proxy Agent. Then, displays the PROXY ADMIN screen with the confirmation message: `Command completed successfully`.

6 Network Managers Administration

Introduction

The NETWORK MANAGERS screen provides the Network Management System (NMS) with access to the SNMP data collected from the managed nodes. The NMS applications use the SNMP data to populate the tables and graphical displays in the appropriate DEFINITY Network Management (DNM) screens.

The purpose of the NETWORK MANAGERS screen is to administer the communication link between the Proxy Agent and the Network Management System (NMS).

see also:

- Management Information Base (MIB) Chapter 1, "Management Information Base (MIB)"
- Cache Mechanism Chapter 1, "Cache mechanism"
- SNMP Traps Chapter 1, "SNMP Access"

The sections below describe interactions between the network managers and the Proxy Agent.

Review the Network Managers Screen

The figure below shows the fields on the NETWORK MANAGERS screen.

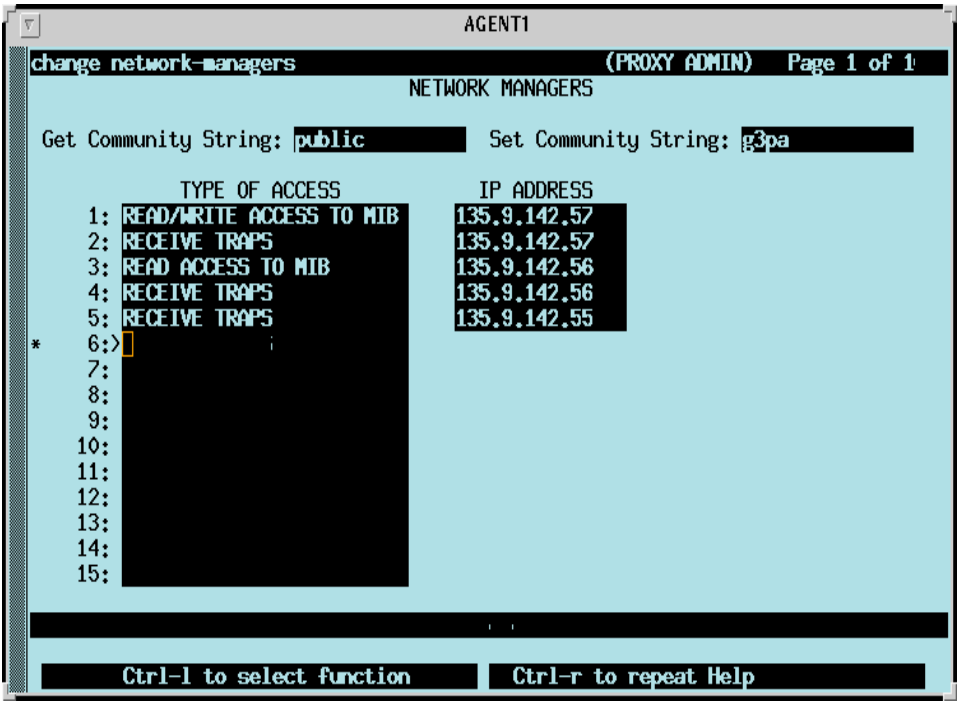


Figure 15. Network Managers screen

The table below contains the field descriptions for the NETWORK MANAGERS screen.

Table 15. Network Managers Screen

Field	Description
Get Community String	Identifies the Proxy Agent's SNMP Get Community String. The NMS network manager uses the **get community string** to validate SNMP ***get*** requests. Valid options for this field are: • **public** (default) • Any **name** that identifies a private network **CAUTION:** Users must administer the ***name*** of the get community string (public or private) in the comparable fields on the NMS screens. The name must ***match*** on both systems, otherwise the ***get*** request will fail. Required field. Field size: 15 characters
	(1 of 4)

Table 15. Network Managers Screen

Field	Description
Set Community String	Identifies the Proxy Agent's Get Community String. The NMS network manager uses the **set community string** to validate SNMP ***set*** requests. The default for this field is: **g3pa** **⚠ CAUTION:** Users must administer the ***g3pa*** as the name of the set community string in the comparable fields on the NMS screens. The name must ***match*** on both systems, otherwise the ***set*** request will fail. Required field. Field size: 15 characters
	(2 of 4)

Table 15. Network Managers Screen

Field	Description
TYPE OF ACCESS	Identifies the type of access a network manager has to the Proxy Agent. The HELP list (**Ctrl-Y**) contains the valid options for this field: **READ/WRITE ACCESS TO MIB** **READ ACCESS TO MIB** **RECEIVE TRAPS** • **Read/Write access to MIB** -- allows the NMS to read and write data to the MIB. The network manager has complete access to the MIB. The DNM applications ***require*** read/write access. • **Read access to MIB** -- allows the NMS to ***only*** read data in the MIB. The NMS cannot change MIB objects that are set with the SNMP SET command. • **Receive Traps** -- allows the NMS to receive SNMP traps from the Proxy Agent. ***Note:*** DNM Applications also require SNMP trap reception. Default: **READ/WRITE ACCESS TO MIB** in line 1
	(3 of 4)

Table 15. Network Managers Screen

Field	Description
IP ADDRESS	Identifies the Internet Protocol (IP) address of the NMS network manager. The valid options for this field: • Asterisk (*****) -- default in line 1. The asterisk allows access to ***all*** NMS network managers. The asterisk is **not** valid for RECEIVE TRAPS access. or • IP address of the NMS in dot format. Example: 126.1.205.86 **SECURITY ALERT:** **Users should enter the IP address for each network manager to limit access to the MIB.** Required field. Field size: 15 characters
	(4 of 4)

Administer the Network Managers

The NETWORK MANAGERS screen contains the fields to administer the communication link between the Proxy Agent and Network Management System (NMS).

Users administer each NMS as a ***network manager*** and assign the type of access each network manager has to the Proxy Agent Management Information Base (MIB)

Required access

Users must administer ***three*** types of access for each network manager:

- Read/Write Access to MIB
- Read only Access to MIB
- Receive Traps

Users assign each type of access on a separate line in the NETWORK MANAGERS screen.

PA001 form

The data that users enter in the fields on the NETWORK MANAGERS screen must ***match*** the data on the PA001 form in the Proxy Agent section.

Procedure

Complete the procedure below to ***add*** new network managers or to ***change*** data for existing network managers.

1 At the Proxy Agent MAIN MENU,

- Type **proxy-admin**
- Press **ENTER**

Result: The system displays the PROXY ADMIN menu.

2 In the command line,

- Type **change network-managers**
- Press **ENTER**

Result: The system displays the NETWORK MANAGERS screen.

3 Compare the data on the PA001 form to the fields on the NETWORK MANAGERS screen:

`Get Community String:` **public**

`Set Community String:` **g3pa**

If the data does ***not*** match, then change the fields to match the data on the PA001 form.

4 For ***each*** network manager, complete the fields below to add the READ/WRITE ACCESS TO MIB permission:

- In the **TYPE OF ACCESS** column, move the cursor to a blank line number.
  - Press **Ctrl-Y** to display the Help list
  - Select **READ/WRITE ACCESS TO MIB**
  - Press **ENTER** to display the selection in the field
- In the **IP ADDRESS** column, type the [**IP address**] in the field for the same line number. Example of an IP Address in the dot format: **126.1.205.86**

5 For ***each*** network manager, complete the fields below to add the RECEIVE TRAPS permission. The IP address should match the address in step 4 for each network manager.

- In the **TYPE OF ACCESS** column, move the cursor to a blank line number.
  - Press **Ctrl-Y** to display the Help list
  - Select **RECEIVE TRAPS**
  - Press **ENTER** to display the selection in the field
- In the **IP ADDRESS** column, type the [**IP address**] in the field for the same line number.

6 Repeat steps 4 and 5 to administer ***each*** network manager.

7 Press **Ctrl-E** to submit the changes.

Result: The system save the data and displays the PROXY ADMIN menu.

8 **New Installations**. Complete the procedure to "Administer the Default Location" on page 174.

7 Default Location Administration

Introduction

Use the DEFAULT LOCATION screen to administer the system-wide default location submaps for supported systems. Users can override the default location map for individual managed nodes from the MANAGED NODES screen on the Proxy Agent and from the NMS network server.

The DEFAULT LOCATION screen allows users to designate the type of submap that shows the location of managed nodes and their associated Proxy Agents.

The Network Management System (NMS) displays the submaps in a graphical format with icons that represent the managed nodes and the Proxy Agent. Users can easily monitor the health and status of all the managed nodes from the submaps.

Users can organize the managed nodes by location or by custom categories.

The examples below offer some suggestions for organizing the managed nodes:

- **Generic submap** -- Select the generic submap to view all the managed nodes and Proxy Agents on one submap. The generic submap is the system default.
- **USA submap** -- Select the USA submap to show the location of managed nodes in the lower 48 states and in Alaska and Hawaii. The associated ***State*** submap shows the Proxy Agent icon with connecting lines to the managed nodes icons that are located in that state.

- **Custom submap** -- Select the custom submap to organize the managed nodes by categories, such as private networks, regions, functions, or international locations. Use the associated ***Submap Name*** to identify groups or locations within the categorizes, such as:
  - Private Network may consist of the Lab and Testing groups
  - Regions may consist of North, East, South, and West groups
  - Functions may consist of Telemarketing, Sales, and Customer Service groups
  - International locations may consist of Africa, Spain, Greece groups

Users can organize the managed nodes by selecting one type of submap or any combination of the three submaps.

Managed Nodes screen

Users can change the type of submap on the MANAGED NODES screen for individual managed nodes. The change ***overrides*** the submap selection on the DEFAULT LOCATION screen ***only*** for the individual managed node.

NMS submaps

The submaps that display on the NMS network servers provide the current status of the managed nodes through the use of colored icons and different types of connecting lines.

The ***color*** of the managed node icons identifies the health status of the managed nodes. The icon color changes to indicate the highest severity level of any DNM exception that has occurred on the managed nodes.

The ***type*** of the connecting lines (broken or solid lines) between the Proxy Agent and managed nodes icons identify either a static or dynamic connection. The ***color*** of the line indicates the connection status of the Proxy Agent.

Review of the Default Location Screen

The fields that display on the DEFAULT LOCATION screen depend on the type of submap that users select as the default location for new managed nodes.

The figures on the next pages show the fields that display on the DEFAULT LOCATION screen for the submaps listed below:

- Generic submap (default)
- USA submap
- Custom submap

Generic submap screen

The figure below shows the DEFAULT LOCATION screen for the generic submap. Only the Submap Type field displays for generic submaps.

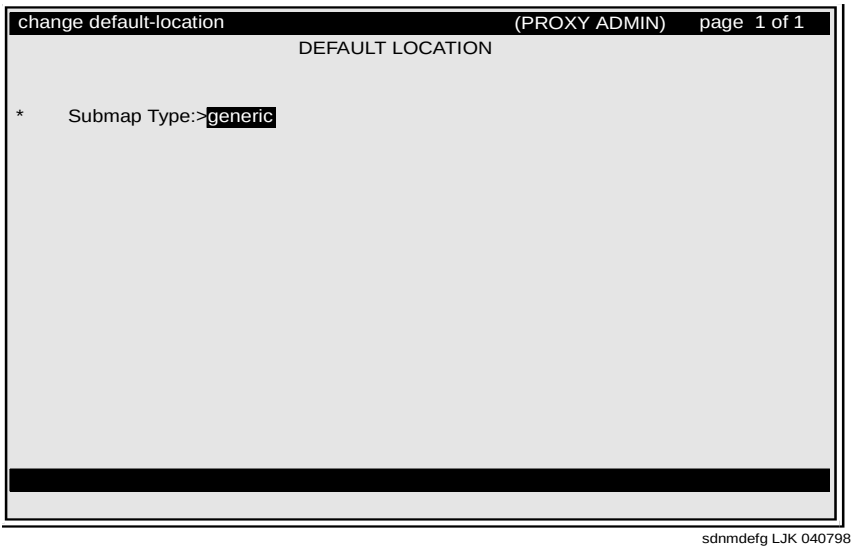


Figure 16. Generic submap field

USA submap screen

The figure below shows the DEFAULT LOCATION screen for the USA submap with the following fields:

- Submap Type
- State (Alabama is the default state)

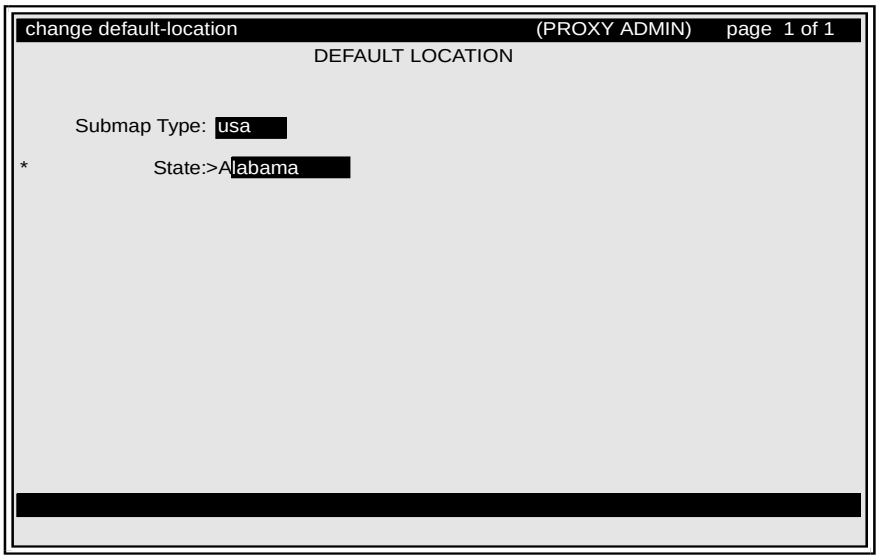


Figure 17. USA submap fields

Custom submap screen

The figure below shows the DEFAULT LOCATION screen for the custom map with the following fields:

- Submap Type
- Submap Name

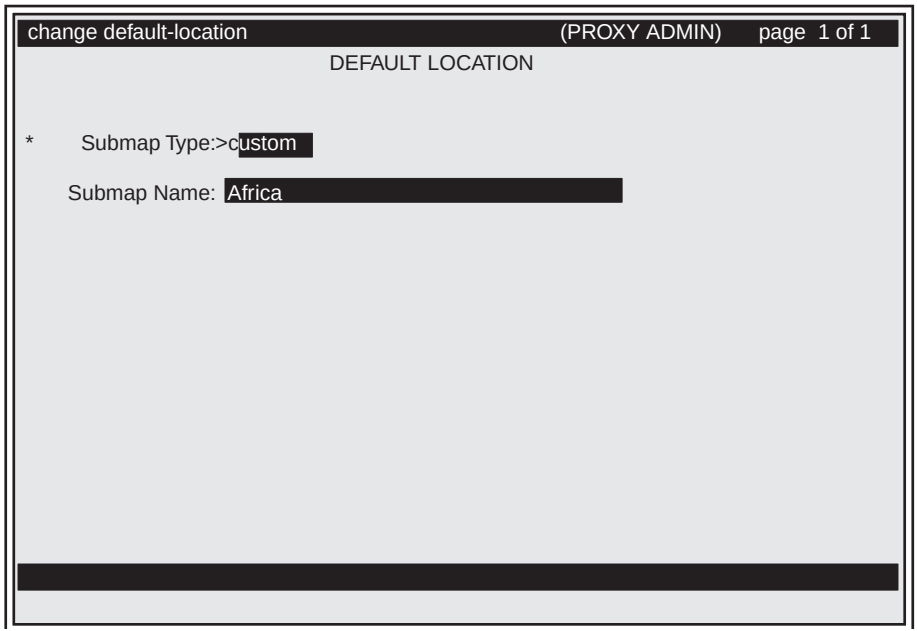


Figure 18. Custom submap fields

Field descriptions The table below contains the field descriptions for the DEFAULT LOCATION screen.

Table 16. Default Location Screen

Field	Description
Submap Type	Identifies the **type** of submap. The Help list (**Ctrl-y**) contains the valid options for this field: **generic** (default) **usa** **custom** The fields that display on the DEFAULT LOCATION screen will change depending on the type of submap: • If users select **usa**, the system displays the **State** field • If users select **custom**, the system displays the **Submap Name** field Users can change the submap type for individual managed nodes on page **C** of the MANAGED NODES screen. The changes ***override*** the submap type selected on the DEFAULT LOCATION screen only for the individual managed node.
	(1 of 2)

Table 16. Default Location Screen

Field	Description
State	If users select **usa** in the *Submap Type* field, the system displays the **State** field. The Help list (**ctrl-y**) contains **50** states as valid options for this field. Users select the appropriate state for the ***location*** of the managed nodes. When users administer the managed nodes on the MANAGED NODES screen, they can change the state location for individual managed nodes. System default: Alabama
Submap Name	If users select **custom** in the *Submap Type* field, the system displays the **Submap Name** field. Users can type a default name for the custom submaps. When users administer the managed nodes on the MANAGED NODES screen, then they can change the submap name for individual managed nodes. Default: Blank Field size: 40 characters
	(2 of 2)

Administer the Default Location

This section contains the procedures to select a submap as the ***system*** default location for new managed nodes.

Note: To save time during the administration of many managed nodes with different locations, users can change the submap selection on the DEFAULT LOCATION ***before*** they administer managed nodes with the same on the MANAGED NODES screen.

Procedure

Complete the procedure below to select the system ***default*** location for new managed nodes.

1. Access the PROXY ADMIN menu.
2. Stop the Proxy Agent, if running.
3. In the command line on the PROXY ADMIN menu,
   - Type **change default-location**
   - Press **ENTER**

   Result: The system displays the DEFAULT LOCATION screen.

4 In the *Submap Type* field,

- Press **Ctrl-Y** to display the Help list
- Select a submap type from the list.
- Press **ENTER**.
- Then, go to the appropriate step for the selected submap:

  generic (go to step 7)

  usa (go to step 5)

  custom (go to step 6)

5 **USA submap type.** In the *State* field select a state as the default location:

- Press **Ctrl-Y** to display the Help list
- Select a **state** from the list
- Press **ENTER**
- Go to step **7**

6 **Custom submap type.** In the *Submap Type* field,

- Type a [**custom name**] for the default location
- Go to step **7**

7 Press **Ctrl-E** to submit the changes.

Result: The system saves the changes and displays the PROXY ADMIN menu.

8 **New Installation**. Complete the procedure to "Administer the Alarm Device" on page 181.

8 Alarm Device Administration

Introduction

Use the ALARM DEVICES screen to administer alarm devices that receive alarms from supported managed nodes or send the alarms to INADS. Also administer the supported systems as ***managed nodes*** on the MANAGED NODES screen. The MANAGED NODES screen also allows users to administer alarm forwarding on a node-by-node basis.

The ALARM DEVICES screen contains the fields to administer the alarm stream to enable the Proxy Agent to receive alarms from managed nodes and to forward alarms to the Initialization and Administration System (INADS).

In this release, the Proxy Agent only ***receives*** alarms from the managed nodes listed below:

- DEFINITY ECS, G3, MCU, IP600, and DEFINITY One systems
- DEFINITY AUDIX
- Intuity AUDIX
- Intuity Interchange
- Call Management System (CMS)
- CONVERSANT system

The Proxy Agent ***forwards*** the alarms received from the managed nodes to INADS, which is the default destination. Users can edit the alarm destination fields in order to forward the alarms to an alarm reception device that is supported by the ***current*** release of the Proxy Agent.

Alarm forwarding

The alarm forwarding feature is active only if at least one alarm sender is administered.

You can turn alarm forwarding on and off for individual managed nodes on page **A** of the MANAGED NODES screen.

See also

To troubleshoot alarm problems, refer to "View Alarm and Error Logs" on page 321.

Review of the ALARM DEVICES Screen

Use the ALARM DEVICES screen to enter up to 15 alarm devices to receive alarms from managed nodes or to forward alarms to the Initialization and Administration System (INADS).

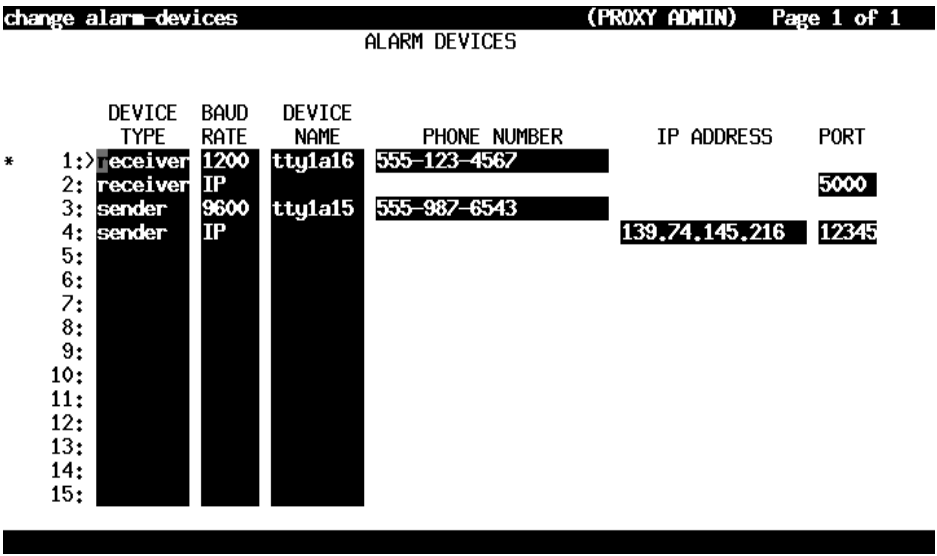


Figure 19. Alarm Devices screen

Field descriptions The table below contains the descriptions of the fields on the ALARM DEVICES screen.

Table 17. Alarm Devices Screen

Field	Description
DEVICE TYPE receiver sender	Identifies the device as a receiver or sender of alarms. Default: Blank Field size: 8 characters
BAUD RATE 1200 2400 9600 19200 IP	Specifies the baud rate for modem connections. Enter IP for TCP/IP connections. Default: Blank Field size: 5 characters
DEVICE NAME ttyxxxx	Specifies the tty device used to receive or send alarms. Required for serial alarm devices (baud rate field contains baud rate information). Leave blank if baud rate field is “IP.“ Default: Blank Field size: 8 characters
	(1 of 2)

Table 17. Alarm Devices Screen

Field	Description
PHONE NUMBER	Specifies the phone number used to receive or send alarms. Appears when the baud rate field contains baud rate information, and does not appear if the baud rate field is “IP.” If the baud rate field is not IP, and the device type is receiver, the phone number deafult is the INADS phone number. Default: blank Field size: 20 characters
IP ADDRESS	Contains the IP address used to send alarms over IP. This field is turned on when the device type is “sender” and the baud rate is “IP.” Default: blank Field size: 16 characters
PORT	Contains the port number used to receive or send alarms over IP. The field is turned on when and the baud rate is “IP.”2.0.2 Default: blank Field size: 5 characters
	(2 of 2)

Administer the Alarm Device

The ALARM DEVICES screen enables the Proxy Agent to ***receive*** alarms from managed nodes and to ***forward*** alarms to INADS.

PA001 form

Users should refer to the sections on the PA001 form to get the data that they must enter on the ALARM DEVICES screen:

- In the ***Devices*** section, refer to the *Device Name* fields for the TTY ports that Receive Alarms and Send (forward) Alarms.
- In the ***Proxy Agent*** section, refer to *Alarm Device* table for phone numbers of the devices for the alarm source and alarm destination.

The default for the destination phone number is the INADS phone number. Users can enter a different phone number in the field.

Procedure

Complete the procedure below to administer the ALARM DEVICES screen to receive and forward alarms.

1. Access the PROXY ADMIN menu.
2. Stop the Proxy Agent, if running.
3. In the command line on the PROXY ADMIN menu,
   - Type **change alarm-device**
   - Press **ENTER**

   Result: The system displays the ALARM DEVICES screen.

Refer to the PA001 form for the information you need to fill in the fields on the screen.

4 In the DEVICE TYPE column, specify if the alarm device is a receiver or a sender.

5 In the BAUD RATE column, specify the baud rate for the modem connection. Enter 1200, 2400, 9600, 19200, or enter IP for TCP/IP connections.

6 In the DEVICE NAME column, identify the tty device to use for receiving or sending alarms. If the BAUD RATE field is IP, leave this field blank.

7 In the PHONE NUMBER column, enter the phone number used to receive or send alarms. This field appears only if a numeric baud rate is entered in the BAUD RATE field.

   Enter **1-800-535-3573** to forward alarms to INADS if the DEVICE TYPE field is sender.

8 In the IP ADDRESS column, enter the IP address used to send alarms over IP. This field appears only if the DEVICE TYPE field is sender and the BAUD RATE field is IP.

9 In the PORT field, enter the port number to use to receive and send alarms over IP. The BAUD RATE field must be IP.

10 Press **Ctrl-E** to submit the changes.

   Result: The system saves the changes and displays the PROXY ADMIN screen.

11 **New Installation**. Complete the procedure to "Administer the Filter Sets" on page 202.

12 Restart the Proxy Agent.

9 Filter Set Administration

Introduction

The Proxy Agent provides an alarm filtering feature that allows users to block the forwarding of certain alarms. Users can create sets of filtering criteria on the FILTER SET screen and then apply the filter set to all or individual systems on the MANAGED NODES screen.

The new Filter Set application allows users to create filters that the Proxy Agent applies to alarms in order to block the forwarding of certain alarms to INADS.

Users can create filtering criteria on the FILTER SET screen and then administer the filter sets to all or individual systems on the MANAGED NODES screen.

When a managed node generates an alarm, the Proxy Agent compares each criteria in the filter for a ***match*** against the alarm. If a match is *found* for any filter criteria, then the Proxy Agent does *not* forward the alarm to INADS. If match is *not* found, then the Proxy Agent *forwards* the alarm to INADS.

Filter set definition

A ***filter set*** is a group of filters that contains one or more of the four types of filtering criteria listed below:

- Pattern matching -- can include pattern files and character strings
- Alarm severity
- Day of the Week
- Time of Day

For each filter set, users can create a maximum of **12** filters that contain all or any combination of the four types of filtering criteria.

An alarm must match all four sets of criteria for a filter before the Proxy Agent blocks the alarm.

Default filter-set

When users install or upgrade to release 4.0 of the Proxy Agent, the system supplies a ***blank*** default filter set. Users can implement one of the options below to set up the system default for alarm filtering:

- Leave the default filter set blank. The system default would be that the Proxy Agent forwards alarms without filtering.

  or

- Add filtering criteria to the default filter set. The system default would be the criteria in the default filter set.

In either event, the Proxy Agent applies the default filter set to all alarms ***unless*** the user executes one of the options below for individual managed nodes:

- Selects a different filter

  or

- Selects no filer set

Users need to select one of the alarm filtering options since the Proxy Agent does ***not*** allow the default filter set to be removed.

Filter set commands

Users can administer or view the FILTER SET screen from the PROXY ADMIN menu by executing the commands listed below:

- ***add filter-set*** to create new filter sets
- ***change filter-set*** to modify existing filter sets
- ***remove filter-set*** to delete filter sets, except the *default* filter
- ***display filter-set*** to view filter sets

Pattern matching

On the FILTER SET screen, the users can enter two types of pattern matching criteria:

- Individual character strings that users enter in the field
- File names that user select from a list

File names refer to *pattern* files that contain groups of character strings. Only the system administrator should create a pattern file.

All pattern files must reside in the **/usr/g3-ma/agent/patterns** directory. The format for the pattern file contains a group character strings that the Proxy Agent matches on a per line basis. The file can contain comment lines that start with one of the characters listed below:

- Number symbol (#)
- Tab
- Space

Once the pattern file is created, users can add the file to any filter set on the FILTER SET screen.

Boolean operator

On the FILTER SET screen, users can specify the *boolean* operator "**not**" if they want the Proxy Agent to block alarms that do ***not*** match a specified pattern matching criteria.

If the boolean operator (BOOL OPER) field is ***blank***, then the Proxy Agent blocks alarms if they match one or more of the pattern matching criteria in the filter set.

Alarm severity

On the FILTER SET screen, users can block alarms based on the severity of the alarm. Users can select one or more of the alarm severity levels listed below:

Note: The abbreviated titles are ***vertically*** stacked above the ALARM SEVERITY columns.

- Major (MAJ)
- Minor (MIN)
- Warning (WRN)
- Downgraded Warning (DGW)
- Cleared Alarm Notification (CLR)
- System Restart (RST)
- Resolved (RES)

The Proxy Agent ***blocks*** alarms if they match any of the selected alarm severity criteria and the other filter criteria, if any.

Day of week

On the FILTER SET screen, users can block alarms based on the day of the week (Monday through Sunday). The Proxy Agent ***blocks*** alarms if they match any of the selected days of the week and the other filter criteria, if any.

Time of day

On the FILTER SET screen, users can block alarms that the Proxy Agent receives during a specified window of time.Users can enter the hours (based on the 24-hour clock) in the *Start* and *End* fields.

The Proxy Agent ***blocks*** alarms if they match any of the time of day criteria and the other filter criteria, if any.

Examples of Filter Sets

To better understand the workings of the new Filter Set application, this section contains two examples of a some common scenarios that users may choose to create.

The examples use two pattern files described below. All pattern files must reside in the **/usr/g3-ma/agent/patterns** directory. The lists of objects in the examples below are not intended to be complete. The lists only serve as examples of the types of objects that users can include in a pattern file.

The ***station*** pattern file contains a list of DEFINITY station maintenance object names:

ANL_LINE

ANL_BD

DIG_LINE

MET_LINE

MET_BD

The ***trunk*** pattern file contains a list of DEFINITY trunk maintenance object names:

AUX_TRK

CO_TRK

DID_TRK

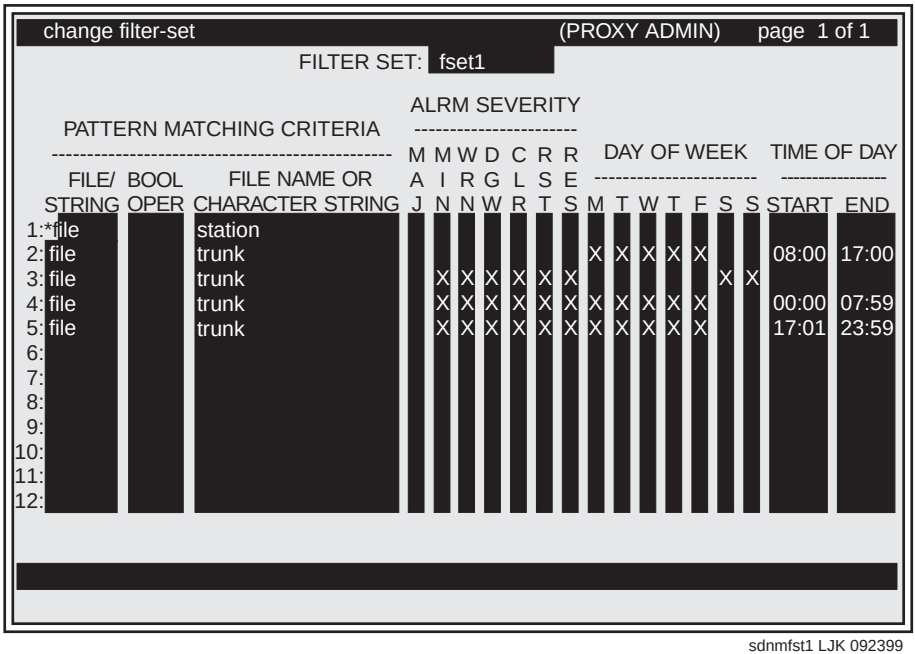
TIE_TRK

ISDN_TRK

Review of Filter Set 1

As shown in the figure below, the purpose of Filter Set 1 (fset1) is to ***block*** the forwarding of the types of alarms listed below:

- All station alarms
- All trunk alarms received during working hours
- All non-major trunk alarms received during off hours



sdnmfst1 LJK 092399

Figure 20. Example of Filter Set 1(fset1)

Explanation

Filter Set 1 consists of five filters to block the alarm streams that contain one or more of the patterns listed in the **station** pattern file and the **trunk** pattern file.

Each filter is explained below:

- Filter 1 blocks the forwarding of all **station** alarms.
- Filter 2 blocks the forwarding of all **trunk** alarms received during **working** hours. The criteria below defines the working hours for this filter:
  - The *Day of Week* criteria block alarms Monday through Friday
  - The *Time of Day* criteria block alarms between 8:00 and 17:00 hours (8:00 a.m. to 5:00 p.m.)
- Filters 3 through 5, together, block the forwarding of all **non-major trunk** alarms received during **off** hours:
  - Filter 3 blocks non-major trunk alarms on Saturday and Sunday
  - Filter 4 blocks non-major trunk alarms on Monday through Friday *before* working hours (0:00 to 07:59)
  - Filter 5 blocks non-major trunk alarms on Monday through Friday *after* working hours (17:01 through 23:59)

Review of Filter Set 2

As shown in the figure below, the purpose of Filter Set 2 (fset2) is to ***block*** the forwarding of the alarm streams listed below:

- All cleared alarm notifications
- All minor alarms that are ***not*** listed in the trunk pattern file
- All alarms from the board located in port network 3, carrier C, slot 8
- All restart notifications that do ***not*** contain the COLD1 level

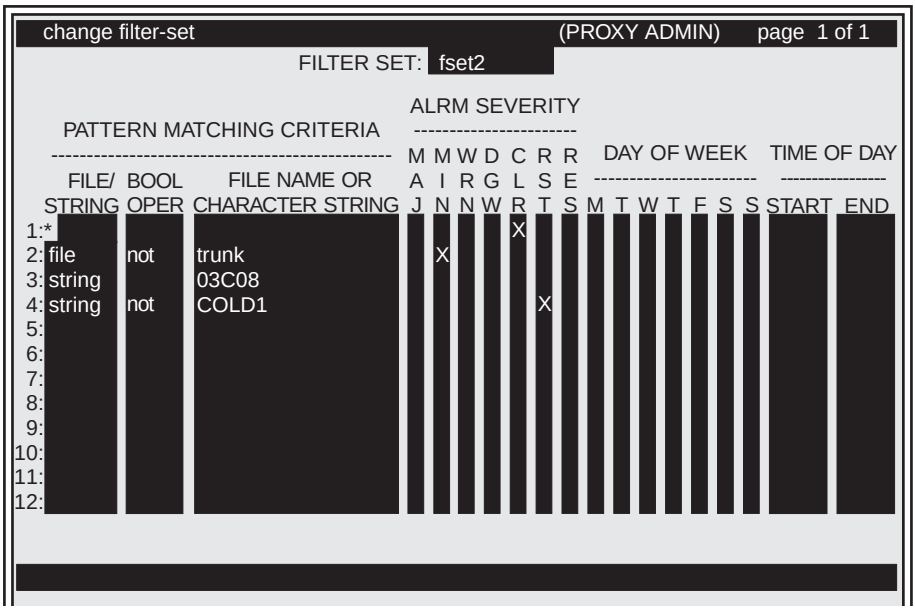


Figure 21. Example of Filter Set 2

Explanation

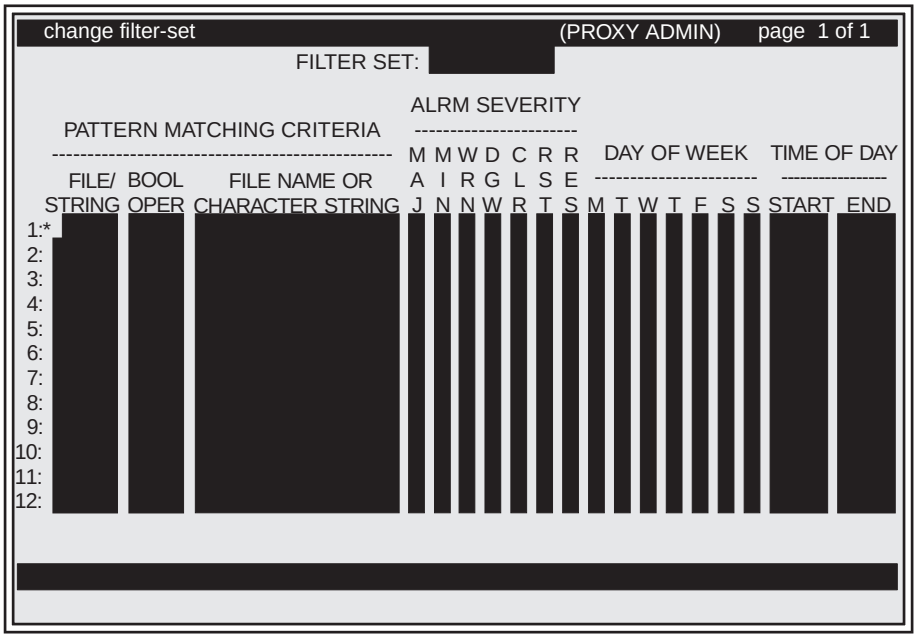
Filter Set 2 consists of four filters that contain a pattern file, two character strings, and two boolean operators. These filters target very specific conditions for blocking alarm forwarding.

Each filter is explained below:

- Filter 1 blocks alarm forwarding of all **cleared alarm notifications** (CLR) for the alarm severity criteria.
- Filter 2 blocks alarm forwarding of **non-trunk** alarms with a **minor** (MIN) alarm severity criteria.
- Filter 3 blocks alarm forwarding of all alarms from the **board** located in port network 3, carrier C, slot 8 (03C08)
- Filter 4 blocks alarm forwarding of all **restart notifications** (RST) with a alarm severity level that is **not** COLD1.

Review of the Filter Set Screen

The figure below shows the fields on the blank FILTER SET screen.



sdnmfsbl LJK 092399

Figure 22. Blank Filter Set screen

Screen layout

The FILTER SET screen contains 12 lines to allow users to enter up to 12 filters in any of the fields in the four criteria columns:

- Pattern Matching Criteria (3 fields)
- Alarm Severity (7 fields)
- Day of Week (7 fields)
- Time of Day (2 fields)

Field descriptions

The table below contains the field descriptions for the FILTER SET screen.

Table 18. Filter Set Screen

Field	Description
FILTER SET	Contains the ***name*** of the filter set. To add a new filter set, the user types the name of the filter set in this field. To change, remove, or display an existing filter set, the user presses **Ctrl-y** in the field to display the HELP list and selects a filter set name from the list. Field size: 8 characters Default: Blank
	(1 of 7)

Table 18. Filter Set Screen

Field	Description
Pattern Matching Criteria FILE/STRING	Identifies the type of pattern matching for the filter set. The HELP list (Ctrl-y) contains the valid options: **file** = a pattern file that contains a group of character strings and resides in the **/usr/g3-ma/agent/patterns** directory **string** = a character string Only the system administrator should create a *pattern* file. The format for the pattern file contains character strings that the Proxy Agent matches on a per line basis. The file can contain comment lines that start with ***one*** of the characters listed below: • Number symbol (#) • Tab • Space Field size: 6 characters Default: Blank
	(2 of 7)

Table 18. Filter Set Screen

Field	Description
Pattern Matching Criteria BOOL OPER	Identifies the boolean operator "**not**" as a pattern matching criteria. Users can specify the *boolean* operator "**not**" if they want the Proxy Agent to block alarms that do ***not*** match a specified pattern matching criteria. If the boolean operator (BOOL OPER) field is ***blank***, then the Proxy Agent blocks alarms if they match one or more of the pattern matching criteria in the filter set. The HELP list (Ctrl-y) only contains the **not** option**.** Field size: 4 characters Default: Blank
	(3 of 7)

Table 18. Filter Set Screen

Field	Description
Pattern Matching Criteria FILE NAME or CHARACTER STRING	Identifies the pattern file name or character string based on the selection in the FILE/STRING field. Users can execute ***one*** of the options (a, b, or c) below: **a** If *file* was selected in FILE/STRING field, then users must select a pattern file name from the Help list. The Help list (Ctrl-y) only contains the pattern files names that reside in the ***/usr/g3-ma/agent/patterns*** directory. **b** If *string* was selected in the FILE/STRING field, then users must type a character string in the field. **c** If *no* selection was made in the FILE/STRING field, then users must leave the field blank. Field size: 20 characters Default: Blank
	(4 of 7)

Table 18. Filter Set Screen

Field	Description
ALRM SEVERITY	Identifies the severity of the alarm filter. Users can select one or more of the days listed below. ***Note:*** The abbreviated titles are ***vertically*** stacked above the ALARM SEVERITY columns. **MAJ** = Major **MIN** = Minor **WRN** = Warning **DGW** = Downgraded Warning **CLR** = Cleared Alarm Notification **RST** = Restart Notification **RES** = Resolved Alarm Users can execute ***one*** of the options (a or b) below: **a** Type "**x**" in one or more of the fields to select the alarm severity criteria. **b** Leave the fields blank. Field size: 1 Default: Blank
	(5 of 7)

Table 18. Filter Set Screen

Field	Description
DAY OF WEEK	Identifies the day or days in the week to block alarm forwarding. Users can select one or more of the days listed below: **M** = Monday **T** = Tuesday **W** = Wednesday **T** = Thursday **F** = Friday **S** = Saturday **S** = Sunday Users can execute ***one*** of the options (a or b) below: • Type "**x**" in one or more of the fields to select the day of week criteria. • Leave the fields blank. Field size: 1 Default: Blank
	(6 of 7)

Table 18. Filter Set Screen

Field	Description
TIME OF DAY	Identifies the time window to block alarm forwarding. The Time of Day column contains the fields below: **START** field contains the time to begin alarm filtering **END** field contains the time to stop alarm filtering Users must use the 24-hour clock to enter start and end times Users can execute ***one*** of the options below: **a** Type the hours in *both* the START and END fields to select the time of day criteria. **b** Leave the fields blank. ***Note:*** Start time must be earlier than end time. Wraparound time of day is not permitted. The solution is use of two entries (i.e. 5pm - 8am is not valid, instead use: one entry 00:00 - 07:59 and a second entry 17:01 - 23:59).
	(7 of 7)

Administer the Filter Sets

This section contains the procedures to administer filter sets on the Proxy Agent.

Users can access the FILTER SET screen from the PROXY ADMIN menu by executing the commands listed below:

- ***add filter-set*** to create a new filter set
- ***change filter-set*** to modify an existing filter set
- ***remove filter-set*** to delete a filter set
- ***display filter-set*** to view a filter set

On the FILTER SET screen, the user names each new filter set and enters the filters in the fields for the four types criteria:

- Pattern Matching Criteria (3 fields)
- Alarm Severity (7 fields)
- Day of Week (7 fields)
- Time of Day (2 fields)

Add a New Filter Set

Complete the procedure below to create a new filter set in the Proxy Agent.

Note: To use pattern files as part of the filtering criteria, only the system administrator should create the pattern files.

1 Access the PROXY ADMIN menu.

2 Stop the Proxy Agent, if running.

3 In the command line on the PROXY ADMIN menu,

- Type **add filter-set**
- Press **ENTER**

Result: The system displays a ***blank*** FILTER SET screen.

4 In the **FILTER SET** field, type the [**name**] of the new filter set.

5 In line 1 for the **PATTERN MATCHING CRITERIA** fields, complete the appropriate options below:

FILE/STRING: Execute ***one*** of the options (a or b) below:

a Press **Ctrl-y** and select **file** or **string** from the list. Press **ENTER**.

b Leave the field blank.

BOOL OPER: Execute one of the options (a or b) below:

a Leave the field blank.

b Press **Ctrl-Y** and select **not** from the list. Press **ENTER**.

FILE NAME OR CHARACTER STRING: Execute ***one*** of the options (a, b, or c) below based on your selection in the FILE/STRING field:

a If you selected **file**, then press **Ctrl-Y** and select a **pattern file** from the list. Press **ENTER**.

b If you selected **string**, then type a [**character string**] in the field.

c If you left the field **blank**, then do not enter data in this field.

6 In line 1 for the **ALARM SEVERITY** filter, execute ***one*** of the options (a or b) below:

a Type **X** in any or all of the fields below:

MAJ = Major

MIN = Minor

WRN = Warning

DGW = Downgraded Warning

CLR = Cleared Alarm Notification

RST = Restart Notification

RES = Resolved Alarm

b Leave the fields blank.

7 In line 1 for the **DAY OF WEEK** filter, execute ***one*** of the options (a or b) below:

   a Type **X** in any or all of the fields below:

   M = Monday

   T = Tuesday

   W = Wednesday

   T = Thursday

   F = Friday

   S = Saturday

   S = Sunday

   b Leave the fields blank.

8 In line 1 for the **TIME OF DAY** filter, execute ***one*** of the options (a or b) below:

   a Use the 24-hour clock to enter time in the both of the fields below:

   START: Type the [**time**] to begin the filter

   END: Type the [**time**] to stop the filter

   b Leave the fields blank.

9 In lines 2 through 12, repeat steps 5 through 8 to add additional filters to the filter set, if appropriate.

10 Press **Ctrl-E** to submit the filter set.

   Result: The system saves the new filter set and displays the PROXY ADMIN screen.

11 **New Installation**. Complete the procedure to "Administer the Default Login" on page 218.

Change an Existing Filter Set

Complete the procedure below to change the criteria of an existing filter set.

1. Access the PROXY ADMIN menu.
2. Stop the Proxy Agent, if running.
3. In the command line on the PROXY ADMIN menu,
   - Type **change filter-set**
   - Press **ENTER**

   Result: The system displays a ***blank*** FILTER SET screen.
4. In the **FILTER SET** field,
   - Press **Ctrl-Y** and select the [**name**] of the filter set from the list
   - Press **ENTER**

   Result: The system displays the filter criteria for the selected filter-set name.
5. In line 1 for the **PATTERN MATCHING CRITERIA** fields, complete the appropriate options below:

   FILE/STRING: Execute ***one*** of the options (a or b) below:

   a Press **Ctrl-Y** and select **file** or **string** from the list. Press **ENTER**.

   b Leave the field blank.

   BOOL OPER: Execute one of the options (a or b) below:

   a Leave the field blank.

   b Press **Ctrl-Y** and select **not** from the list. Press **ENTER**.

FILE NAME OR CHARACTER STRING: Execute ***one*** of the options (a, b, or c) below based on your selection in the FILE/STRING field:

a If you selected **file**, then press **Ctrl-Y** and select a **pattern file** from the list. Press **ENTER**.

b If you selected **string**, then type a [**character string**] in the field.

c If you left the field **blank**, then do not enter data in this field.

6 In line 1 for the **ALARM SEVERITY** filter, execute ***one*** of the options (a or b) below:

a Type **X** in any or all of the fields below:

MAJ = Major

MIN = Minor

WRN = Warning

DGW = Downgraded Warning

CLR = Cleared Alarm Notification

RST = Restart Notification

RES = Resolved Alarm

b Leave the fields blank.

7 In line 1 for the **DAY OF WEEK** filter, execute ***one*** of the options (a or b) below:

   a Type **X** in any or all of the fields below:

   M = Monday
   T = Tuesday
   W = Wednesday
   T = Thursday
   F = Friday
   S = Saturday
   S = Sunday

   b Leave the fields blank.

8 In line 1 for the **TIME OF DAY** filter, execute ***one*** of the options (a or b) below:

   a Use the 24-hour clock to enter time in the both of the fields below:

   START: Type the [**time**] to begin the filter

   END: Type the [**time**] to stop the filter

   b Leave the fields blank.

9 In lines 2 through 12, repeat steps 5 through 8 to add additional filters to the filter set, if appropriate.

10 Press **Ctrl-E** to submit the changes to the filter set.

Result: The system saves the changes and displays the PROXY ADMIN screen.

11 **New Installation**. Complete the procedure to "Administer the Default Login" on page 218.

Display the Filter Set Screen

Complete the procedure below to display the FILTER SET screen. The **display** command only allows users to view the screen. Users cannot make changes to any of the fields.

Note: Users do not have to stop the Proxy Agent to execute the **display** command.

1. Access the PROXY ADMIN menu.
2. In the command line on the PROXY ADMIN menu,
   - Type **display filter-set**
   - Press **ENTER**

   Result: The system displays a blank FILTER SET screen.
3. In the **FILTER SET** field,
   - Press **Ctrl-Y** and select the [**name**] of the filter set from the list
   - Press **ENTER**
   - View the criteria for the filter set.
4. Press **Ctrl-X** to exit the screen.

   Result: The system closes FILTER SET screen and the displays the PROXY ADMIN screen.

Remove a Filter Set

The Proxy Agent allows users to delete all filter sets *except* the **default** filter set.

If users attempt to remove a filter set that has been assigned to one or more systems on the MANAGED NODES screen, then the Proxy Agent displays a window with a warning message. The message explains that if users remove the filter set, the Proxy Agent replaces this filter set with the **default** filter set for the affected the managed nodes.

If users do not want the **default** filter set to be assigned to individual managed nodes, then they can clear the default filter set in the *Filter Set Name* field on page A of the MANAGED NODES screen.

Procedure

Complete the procedure below to delete a filter set from the Proxy Agent.

1. Access the PROXY ADMIN menu.
2. Stop the Proxy Agent, if running.
3. In the command line on the PROXY ADMIN menu,
   - Type **remove filter-set**
   - Press **ENTER**

   Result: The system displays a ***blank*** FILTER SET screen.
4. In the **FILTER SET** field,
   - Press **Ctrl-Y** and select the [**name**] of the filter set to be removed
   - Press ENTER

   Result: The system displays the criteria for the selected filter set.

5 To remove the selected filter set, press **Ctrl-E**

Result: The system displays ***one*** of the options (a or b) below:

a If the filter set is ***not assigned*** to any managed node, then the system deletes the filter set and displays the PROXY ADMIN screen.

Go to step 7 below.

b If the filter set is ***assigned*** to one or more managed nodes, then system displays a window with a warning message. The message explains that the selected filter set will be replaced with the **default** filter set for the affected managed nodes. The message also contains a confirmation prompt: `Do you wish to continue`?

Go to step 6 to complete the procedure.

6 At the prompt, select ***one*** of the options (a or b) below:

a To remove the filter set, select **Yes**.

Result: The system removes the selected filter set and replaces it with the **default** filter set for the affected managed nodes. Then, the system displays the PROXY ADMIN screen.

b To cancel the remove request, select **No**.

Result: The system cancels the remove request and displays the PROXY ADMIN screen.

7 From the PROXY ADMIN menu, **start** the Proxy Agent.

8 Display the STATUS screen.

- Verify the Proxy Agent is active
- Press **Ctrl-X** to exit the screen

Result: The system closes the STATUS screen and displays the PROXY ADMIN menu.

10 Default Login Administration

Introduction

The DEFAULT LOGIN screen allows users to enter a system-wide ***default*** login and password or Access Security Gateway (ASG) key for DEFINITY systems. The system automatically displays the login and allows the user to modify the password on page F of the MANAGED NODES screen. This feature reduces the time to administer large numbers of new DEFINITYs on the Proxy Agent. With this feature, users do ***not*** have to manually connect to the system on the COMMUNICATION MANAGER screen and save the login data.

The DEFAULT LOGIN screen allows users to enter a system-wide ***default*** login and password or Access Security Gateway (ASG) key for DEFINITY systems. The Proxy Agent automatically displays the login and allows the user to modify the password on page F of the MANAGED NODES screen.

This feature reduces the time to administer large numbers of new DEFINITYs on the Proxy Agent. With this feature, users do ***not*** have to ***manually*** connect to the system on the COMMUNICATION MANAGER screen and save the login data.

Users can change the default login data for individual DEFINITYs on page F of the MANAGED NODES screen.

SECURITY ALERT:

When users enter the data in the Password/ASG Key field, the characters that appear are periods. The periods only appear in the field during the time that the user is entering the password or ASG key. When users return to the screen, the system displays only the data in the Login field. For security reasons, the Proxy Agent stores the password or ASG key but leaves the Password/ASG Key field blank.

ASG login

For DEFINITY systems that are protected by the ASG system, the Proxy Agent uses the default ASG Key to automatically generate a response to a challenge when connecting automatically to a DEFINITY system.

The procedure to "Connect to DEFINITY Systems with ASG" on page 272 contains the steps to ***manually*** enter the response and challenge to login to an ASG-protected DEFINITY system.

Review of the Default Login Screen

The figure below shows the fields on the DEFAULT LOGIN screen.

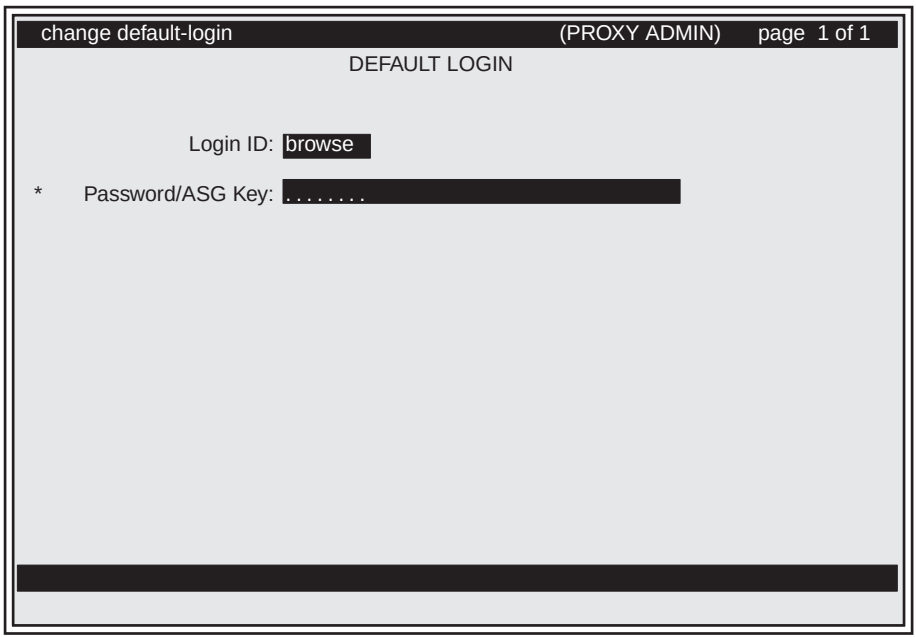


Figure 23. Default Login screen

Field descriptions The table below contains the field descriptions for the DEFAULT LOGIN screen.

Table 19. Default Login Screen

Field	Description
Login ID	Identifies the **login name** for the DEFINITY system. The Proxy Agent displays the login ID on this screen and on page F of the MANAGED NODES screen when users administer new DEFINITYs on the Proxy Agent. Field size: 20 characters Validation: None Default: Blank
	(1 of 2)

Table 19. Default Login Screen

Field	Description
Password/ASG Key	Displays periods while entering the password or ASG key in this field for the **default** password or ASG key to access all DEFINITYs administered on the Proxy Agent. The Proxy Agent saves the default password or ASG key but leaves the fields blank on the DEFAULT LOGIN screen. On page F of the MANAGED NODES screen, the Proxy Agent displays periods in the field. For DEFINITY systems that are protected by the Access Security Gateway (ASG) system, the Proxy Agent uses the default ASG Key to automatically generate a response to a challenge when connecting automatically to a DEFINITY system. Field size: 20 characters Validation: None Default: Blank
	(2 of 2)

Administer the Default Login

This section contains the procedure to administer the ***default*** login and password or ASG key on the DEFAULT LOGIN screen.

Required materials

Users need the following information and materials:

- DEFINITY login name
- DEFINITY password or ASG secret key

SECURITY ALERT:

For security reasons, the PA001 form does NOT contain the password or ASG secret key for the DEFINITY systems.

Procedure

Complete the following steps to administer login data for new DEFINITY systems.

1. Access the PROXY ADMIN menu.
2. Stop the Proxy Agent, if running.
3. In the command line on the PROXY ADMIN menu,
   - Type **change default-login**
   - Press **ENTER**

   Result: The system displays the DEFAULT LOGIN screen.
4. In the *Login ID* field, type [**default login] used** when adding new DEFINITY systems to the Managed Node screen.
5. In the *Password/ASG Key* field, type the [**password** or **ASG secret key**] used when adding new DEFINITY systems to the Managed Node screen.

6 Press **Ctrl-E** to submit the changes.

Result: The system saves the changes and displays the PROXY ADMIN menu.

7 **New Installation**. Complete the procedure to "Administer the Managed Nodes" on page 248.

8 Restart the Proxy Agent.

11 Managed Nodes Administration

Introduction

The MANAGED NODES screens contain the individual settings and options for each supported system that users administer on the Proxy Agent. Generally, users administer all management tasks from the MANAGED NODES screen.

The MANAGED NODES screen contains the individual values for each managed node administered on the Proxy Agent.

Users access the MANAGED NODES screen to execute the tasks listed below:

- Add new managed nodes to the Proxy Agent
- Change data for existing managed nodes
- Set the “forward alarms” option for managed nodes
- Select a filter set for individual managed nodes
- Select the Proxy Agent connection type and “start state” for individual managed nodes
- Change the submap type for individual managed nodes
- Change the system parameters of communication devices for individual managed nodes
- Reset the statistics counter for the Proxy Agent
- Select login ID and password/ASG key for new DEFINITYs administered on the Proxy Agent

Default parameters

The Proxy Agent automatically loads the system-wide ***default*** parameters in the applications listed below:

- DEFAULT LOGIN
- FILTER SET
- ALARM DEVICES
- DEFAULT LOCATION
- CHANGE HARDWARE

When users add new managed nodes, the system displays the default parameters in the fields on the MANAGED NODES screens.

Users can change the parameters on the MANAGED NODES screen for individual managed nodes. The changes ***override*** the system default values only for the specific managed node.

SNMP polling

During the installation of the Proxy Agent, users have the option to enable or disable SNMP polling:

- If users ***enable*** SNMP polling, then the Proxy Agent only supports ***150*** managed nodes.
- If users ***disable*** SNMP polling, then the Proxy Agent can support up to ***600*** managed nodes.

To change these options ***after*** the Proxy Agent has been installed, users must reinstall the Proxy Agent software and change the options at the appropriate prompts in the installation script.

Static and Dynamic connections

The Proxy Agent supports both ***static*** and ***dynamic*** connections. A Proxy Agent supports only 30 ***active*** connections at a given time. The 30 active connections can be any combination of both static and dynamic connections.

However, if users administer 30 ***static*** connections, then the Proxy Agent will not allow the user to add any more managed devices, regardless of the connection type.

The following are examples of scenarios for assigning static and dynamic connections:

- If users assign 25 **static** connections, the system allows them to add 125 managed devices with **dynamic** connections. This frees 5 ports to connect to the 125 managed nodes with dynamic connections.
- If users assign 10 **static** connections, then the system allows them to add 140 managed devices with **dynamic** connections. This frees 20 ports to connect to 140 managed devices with dynamic connections.

Avaya ***recommends*** that if users collect hourly data on certain DEFINITY systems, then they should only administer **30** static connections to each Proxy Agent. This will ensure continuous and accurate data collection for those systems.

Users can resolve these limitations by adding additional Proxy Agents and then spreading the static connections across the Proxy Agents.

Review of the Managed Nodes Screen

The MANAGED NODES screen is similar to a spreadsheet. The screen contains 40 pages, with 15 lines per page. The lines on each page are consecutively numbered 1 to 600 to identify each managed node that is connected to a specific Proxy Agent.

The example below shows the line numbers on the pages:

- Page 1 contains numbered lines 1 through 15
- Page 2 contains numbered lines 16 through 30, *etc*.

In addition, each of the 40 pages contains 5 subpages (a through e). The subpages contain fields to administer each managed node.

The example below shows the page number for subpages (1 through 40):

- Page 1 subpages are numbered: 1a/40, 1b/40, 1c/40, 1d/40, 1e/40
- Page 2 subpages are numbered: 2a/40, 2b/40, 2c/40, 2d/40, 2e/40, *etc*.

Review of the Fields on Page A

The figure below shows page **A** of the MANAGED NODES screen. Page **A** contains the basic fields to administer managed nodes and the Proxy Agent.

*Figure 24. Page **A** of the MANAGED NODES screen*

Page A field descriptions

The table below contains the field descriptions for page **A** of the MANAGED NODES screen.

Table 20. Page A of the Managed Nodes screen

Field	Description
NODE NAME	Identifies the name of the system that users administer on Proxy Agent as a managed node. The node name occupies the same line number on each of the five (5) lettered pages. Avaya recommends that you use all lower-case letters to define the Node Name. The node name on the Proxy Agent must ***match*** the managed node name on the Network Management System (NMS). Users can ***change*** the node name without having to re-enter data in the other fields. If users ***delete*** the NODE NAME field, the system automatically clears the data from all fields in the numbered row on each of the 5 lettered subpages. Field size: 9 characters. Required field.
	(1 of 7)

Table 20. Page A of the Managed Nodes screen

Field	Description
NODE TYPE	Identifies the type of managed node that is associated with a specific Proxy Agent. The HELP list (**Ctrl-Y**) contains the valid options below: **ECS** (default) = DEFINITY release 5 and later **G3** = DEFINITY G3V4 **DEFONE** = DEFINITY One **IP600** = IP600 **MCU** = Multipoint Conferencing Unit *** DAUDIX** = DEFINITY AUDIX *** IAUDIX** = Intuity AUDIX *** INTRCHG** = Intuity Interchange *** CMS** = Call Management System *** CNVRSNT** = CONVERSANT ***** If users select one of these systems, the screen does ***not*** display the following fields: Reset Count; Start State; Start Type; or Dynamic Timeout.
	(2 of 7)

Table 20. Page A of the Managed Nodes screen

Field	Description
FORWARD ALARMS	Indicates the alarm forwarding feature is on or off for the individual managed nodes. The HELP list (**Ctrl-Y**) contains the valid options below: **Y** = (yes) alarm forwarding is on **N** = (no) alarm forwarding is off The ***default*** values differ for type of managed nodes: **Y** = default for G3, MCU, DAUDIX, IAUDIX, INTRCHG, CMS, and CNVRSNT **N** = default for ECS, IP600, and DEFINITY One ***Note:*** If users turn on the FORWARD ALARM option, they should verify that the ALARM DEVICES screen is administered to receive alarms from managed nodes and to forward alarms to INADS. Forwarding is subject to filtering as defined in filter set field.
PRODUCT ID FOR ALARMS	Identifies the product identification (ID) number of the managed node. Size: 10 characters Required field.
	(3 of 7)

Table 20. Page A of the Managed Nodes screen

Field	Description
FILTER SET NAME (IF REQ)	Identifies the ***name*** of the filter set that the Proxy Agent applies to alarms received from the managed node. The Proxy Agent assigns the **default** filter set to new managed nodes. To activate the filter set features, users must administer the screens described below: • Users must administer the alarm source and alarm destination fields on the ALARM DEVICES screen. Refer to "Administer the Alarm Device" on page 181. • Users can add, change, or remove filters on the FILTER SET screen. For new installations, the **default** filter set is ***blank***. Users can add filtering criteria to the default filter set or leave it blank. Refer to "Administer the Filter Sets" on page 202. • Users must also select "**Y**" (yes) in the FORWARD ALARM field on the page A of the MANAGED NODES screen. Refer to procedures to "Administer the Managed Nodes" on page 248. Size: 10 characters Default: "**default**" is the name of the default filter set.
	(4 of 7)

Table 20. Page A of the Managed Nodes screen

Field	Description
START TYPE	Identifies the type of connection between the Proxy Agent and a managed node. The HELP list (**Ctrl-Y**) contains the valid options below: **static** (default) **dynamic** (see DYNAMIC TIMEOUT field) A ***static*** connection maintains a continuous link for 24 hours per day, 7 days per week. Select static connections to monitor critical managed nodes. A ***dynamic*** connection maintains a ***temporary*** link with the managed node on an as-needed basis. Select dynamic connections to monitor less critical managed nodes. A dynamic connection stays up as long as the Proxy Agent is actively processing SNMP requests and then times-out after a specified period. The Network Management System (NMS) does ***not*** poll for health data if a dynamic connection is assigned to a managed node.
	(5 of 7)

Table 20. Page A of the Managed Nodes screen

Field	Description
START STATE	Identifies the connection state of the Proxy Agent at the time the user starts the Proxy Agent. The HELP list (**Ctrl-Y**) contains the valid options below: • **init** = initiates the connection types as defined below: – Starts the ***static*** connection to the managed node – Places the ***dynamic*** connection in an idle state to be initiated by minor or major alarms from the managed node • **off** = (default) indicates that the connections are turned off The Proxy Agent only supports **30** active connections at a given time. The 30 active connections can be a combination of static and dynamic connections. The valid start states are: • **static init** or **static off** • **dynamic init** or **dynamic off**
	(6 of 7)

Table 20. Page A of the Managed Nodes screen

Field	Description
DYNAMIC TIMEOUT	Identifies the number of minutes that a ***dynamic*** connection can be inactive before the Proxy Agent drops the connection to a managed node. The HELP list (**Ctrl-Y**) contains the valid ***minute*** below: **5** (default) **15** **30** **60** **120**
RESET COUNT	Allows users to reset the status counters to zero. While the Proxy Agent is running, the counters track the number of attempts, connections, requests, responses, and errors that occur. The Proxy Agent updates the numbers from the counters on the STATUS screen. The HELP list (**Ctrl-Y**) contains the valid options below: **N** = no (default) -- do not reset counters **Y** = yes to reset the status counters to zero
	(7 of 7)

Review of the Fields on Page B

The figure below shows page **B** of the MANAGED NODES screen. Page **B** contains the fields to administer the transmission options for the communication devices that connect the Proxy Agent to each managed node.

Note: It is recommended that the values of these fields remain at their default values, unless a Avaya representative instructs you to change their value(s).

WARNING:
All active IP connections (emulation or cut-through) are dropped when you save changes to the MANAGED NODES screen.

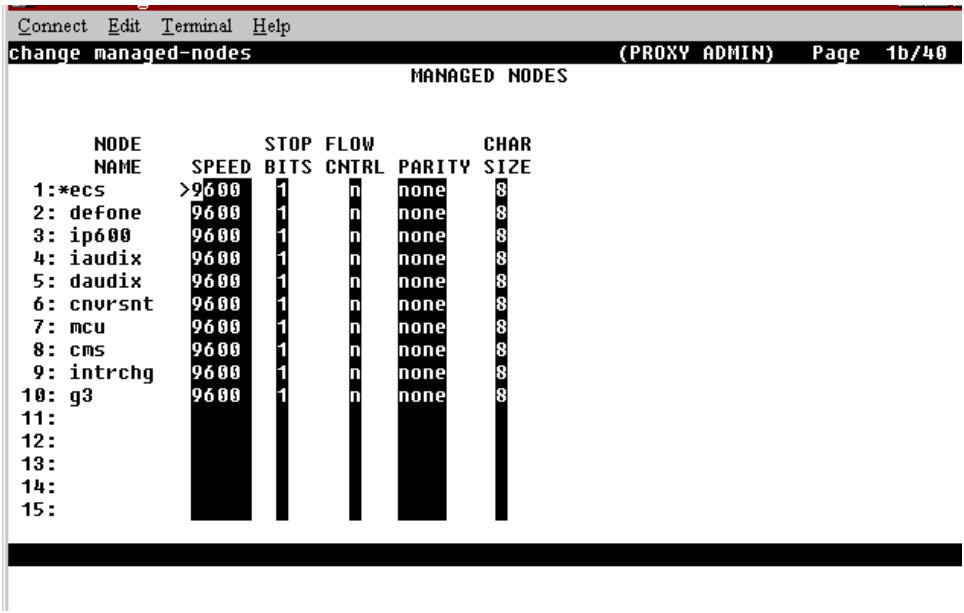


*Figure 25. Page **B** of the MANAGED NODES screen*

Page B field descriptions

The table below contains the field descriptions for page **B** of the MANAGED NODES screen.

Table 21. Page B of the Managed Nodes screen

Field	Description
NODE NAME	Identifies the name of the managed node. The node name occupies the same line number on each of the lettered pages.
SPEED	Identifies the **baud rate** for the communication device that connects the Proxy Agent to each managed node. The HELP list (**Ctrl-Y**) contains the valid options below: **9600** (default) **4800** **2400** **1200**
STOP BITS	Identifies the **stop bit** setting on the communication device. The HELP list (**Ctrl-Y**) contains the valid options below: **1** (default) **2**
	(1 of 2)

Table 21. Page B of the Managed Nodes screen

Field	Description
FLOW CNTRL	Identifies the **flow control** setting on the communication device. The HELP list (**Ctrl-Y**) contains the valid options below: **n** (no) (default) -- Turn-off **y** (yes) -- Turn-on
PARITY	Identifies the **parity** setting on the communication device. The HELP list (**Ctrl-Y**) contains the valid options below: **none** (default) **odd** **even**
CHAR SIZE	Identifies the **character size** setting on the communication device. The HELP list (**Ctrl-Y**) contains the valid options below: **8** (default) **7**
	(2 of 2)

Review of the Fields on Page C

The figure below shows page **C** of the MANAGED NODES *screen*. Page **C** contains the submap type and location of the ***individual*** managed nodes.

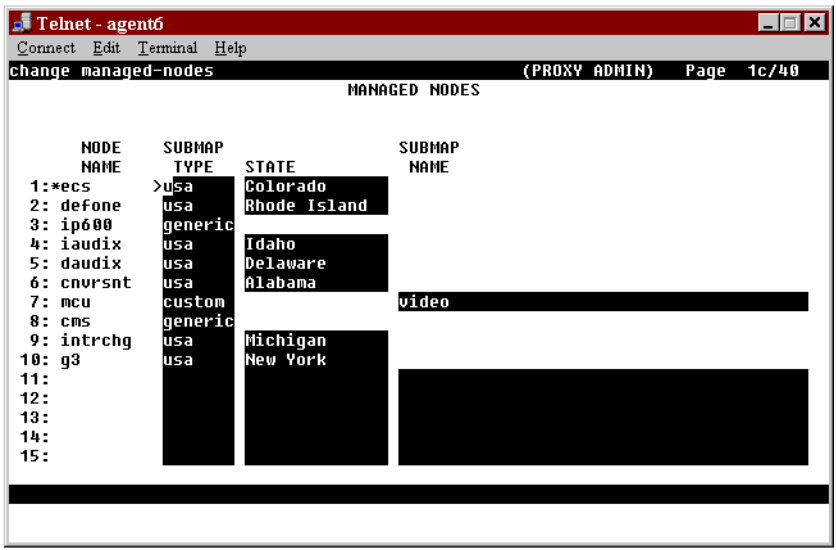


*Figure 26. Page **C** of the MANAGED NODES screen*

Page C field descriptions

The table below contains the field descriptions for Page **C** of the MANAGED NODES screen.

Table 22. Page C of the Managed Nodes screen

Field	Description
NODE NAME	Identifies the name of the managed node. The node name occupies the same line number on each of the lettered pages.
SUBMAP TYPE	Identifies the type of location map to display on the Network Management System (NMS). The HELP list (**Ctrl-Y**) contains the valid options below: **generic** (default) **usa** (see associated STATE field) **custom** (see associated SUBMAP NAME field) Field size: 7 characters
	(1 of 2)

Table 22. Page C of the Managed Nodes screen

Field	Description
STATE	Identifies the name of the ***state*** where a managed node is located on the USA map. The STATE field only displays if the user selects the **usa** option in the SUBMAP TYPE field. The HELP list (**Ctrl-Y**) contains the valid options for this field which include all **50** states. The default option is set on the DEFAULT LOCATION screen. Users can change the *State* name for individual managed nodes Field size: 14 characters
SUBMAP NAME	Identifies the name of the ***custom location*** submap for individual managed nodes. The SUBMAP NAME field only displays if the user selects the **custom** option in the SUBMAP TYPE field. Field size: **40** characters. The system accepts any name that users type the in the SUBMAP NAME field.
	(2 of 2)

Review of the Fields on Pages D and E

Pages **D** and **E** of the MANAGED NODES screen contain the same fields to administer the dialing orders and dial strings that the Proxy Agent uses to connect with each managed node.

The figure below shows page **D** of the MANAGED NODES screen.

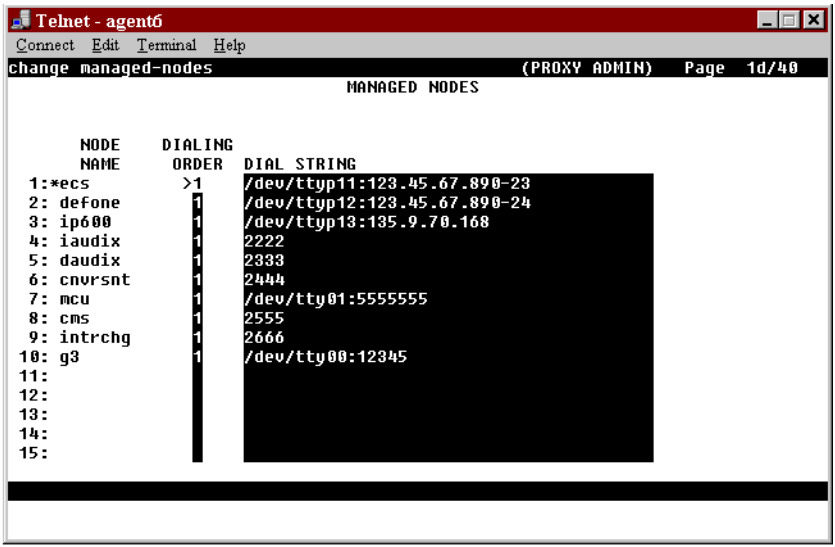


*Figure 27. Page **D** of the MANAGED NODES screen*

The figure below shows page **E** of the MANAGED NODES screen.

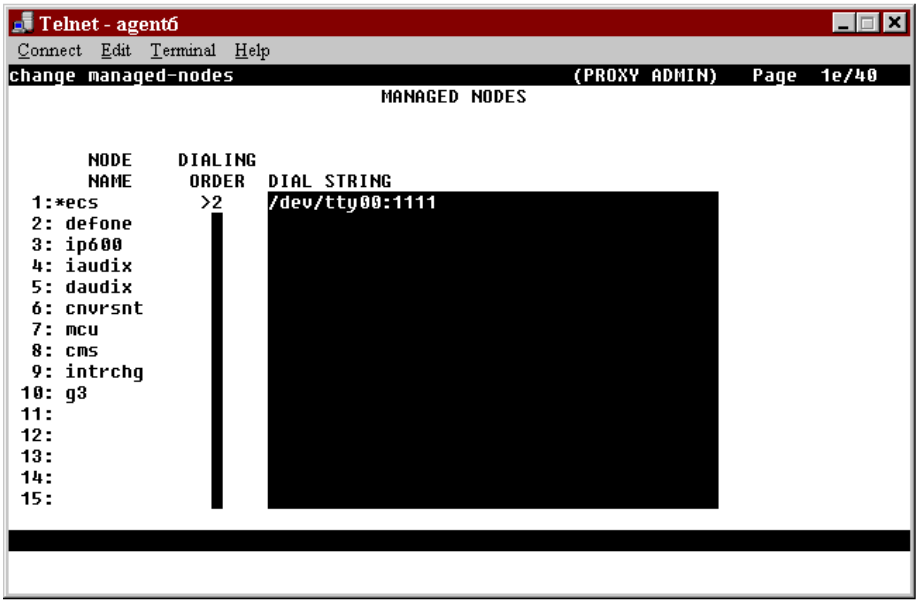


*Figure 28. Page **E** of the MANAGED NODES screen*

Pages D and E field descriptions

The table below contains the field description for pages **D** and **E** of the MANAGED NODES screen.

Table 23. Pages D and E of the Managed Nodes screen

Field	Description
NODE NAME	Identifies the name of the managed node. The node name occupies the same line number on each of the lettered pages.
	(1 of 4)

Table 23. Pages D and E of the Managed Nodes screen

Field	Description
DIALING ORDER	Specifies which dial string the Proxy Agent will use to connect to a managed node. The Proxy Agent will always use the number **1** dial string first. If the number **1** dial string is busy or out-of-order, then the Proxy Agent will use the number **2** dial string, ***if*** number **2** exists. For example, use Dialing Order 1 for Dial String /dev/ttyp20:135.9.142.50 (for SNMP) and use Dialing Order 2 for Dial String /dev/ttyp120:135.9.142.50 (for cut-through). The HELP list (**Ctrl-Y**) contains the valid options below: **1** -- **required** field (default) **2** -- optional field Generally, users designate page **D** as the number **1** dialing order and page **E** as the number **2** dialing order. If users enter two dial strings, they can change the dialing orders between the subpages **D** and **E**. One of the dial strings ***must*** contain the number **1** in the DIALING ORDER column.
	(2 of 4)

Table 23. Pages D and E of the Managed Nodes screen

Field	Description
DIAL STRING	Specifies the dial string that the Proxy Agent uses to connect to a managed node. A dial string can be an extension number, the telephone number, or the area code and telephone number. The following are ***examples*** of valid dial strings: • Dial string can be a combination of the area code, phone number, and extension. Examples: 3035551212; 5551212; or 1212 • Device path (/dev/tty001) • Device path and dial string (/dev/tty001:3035551212) Device path and IP address ((port number is optional) (/dev/ttyp20:135.9.142.50)
	(3 of 4)

Table 23. Pages D and E of the Managed Nodes screen

Field	Description
DIAL STRING (continued)	Required field for the number **1** dialing order for the ***primary*** dial string. Required field for the number **2** dialing order only **if** users entered a 2 in the DIALING ORDER field for the ***secondary*** dial string. The system recognizes an IP connection as a device even though no physical device exists. Use a psuedo-device address for an IP connection. For example, to connect to a DEFINITY One at IP address 135.9.142.50 using psuedo-device/dev/ttyp10, enter /dev/ttyp/10:135.9.142.50-23. The default port number for a TCP telnet connection is 23.
	(4 of 4)

Review of the Fields on Page F

The figure below shows page **F** of the MANAGED NODES *screen*. Page **F** contains the **default** login ID for DEFINITY systems from the DEFAULT LOGIN screen. The system does not display the password or ASG key entered on the DEFAULT LOGIN screen.

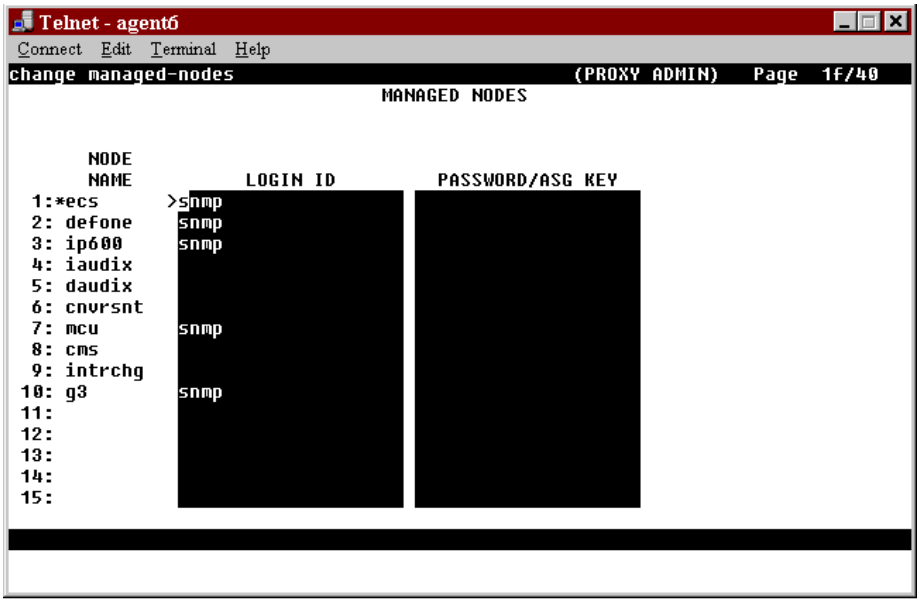


*Figure 29. Page **F** of Managed Nodes screen*

Page F field descriptions

The table below contains the field descriptions for Page F of the MANAGED NODES screen.

Table 24. Page F of the Managed Nodes screen

Field	Description
NODE NAME	Identifies the name of the managed node. The node name occupies the same line number on each of the lettered pages.
Login ID	Identifies the **login name** for the DEFINITY system. The Proxy Agent displays the login ID data for DEFINITY systems. The feature reduces the time to administer large numbers of new DEFINITYs on the Proxy Agent. With this feature, users do ***not*** have to ***manually*** connect to the system on the COMMUNICATION MANAGER screen and save the login data. To override the ***default*** login ID from the DEFAULT LOGIN screen, users can change the login ID for individual DEFINITY systems on page F. Field size: 20 characters Validation: None Default: Blank
	(1 of 2)

Table 24. Page F of the Managed Nodes screen

Field	Description
Password/ASG Key	Displays ***periods*** in field as the password or ASG key is entered. The Proxy Agent saves the default password or ASG key that users administered on the DEFAULT LOGIN screen. For security reasons, the Proxy Agent displays periods in the field on the MANAGED NODES screen. For DEFINITY systems that are protected by the Access Security Gateway (ASG) system, the Proxy Agent automatically generates the *response* to the *challenge* when users administer new DEFINITYs on the Proxy Agent. To override the ***default*** password or ASG Key from the DEFAULT LOGIN screen, users can change the password or ASG secret key for individual DEFINITY systems on page F. Field size: 20 characters Validation: None Default: Blank
	(2 of 2)

Administer the Managed Nodes

The MANAGED NODES screen provides an overview of the configuration for each managed node that users administer on the Proxy Agent.

This section contains the procedures to:

- Add new managed nodes to the Proxy Agent and save the login data
- Change data for individual managed nodes
- Delete existing managed nodes

Procedure

The procedures below contain the steps to add or change managed nodes and one step to delete a managed node.

WARNING:
All active IP connections (emulation or cut-through) are dropped when you save changes to the MANAGED NODES screen. Avaya recommends that you do not make manual changes to the dpanetd configuration file.

The examples in the procedure below show ***default*** values in the fields.

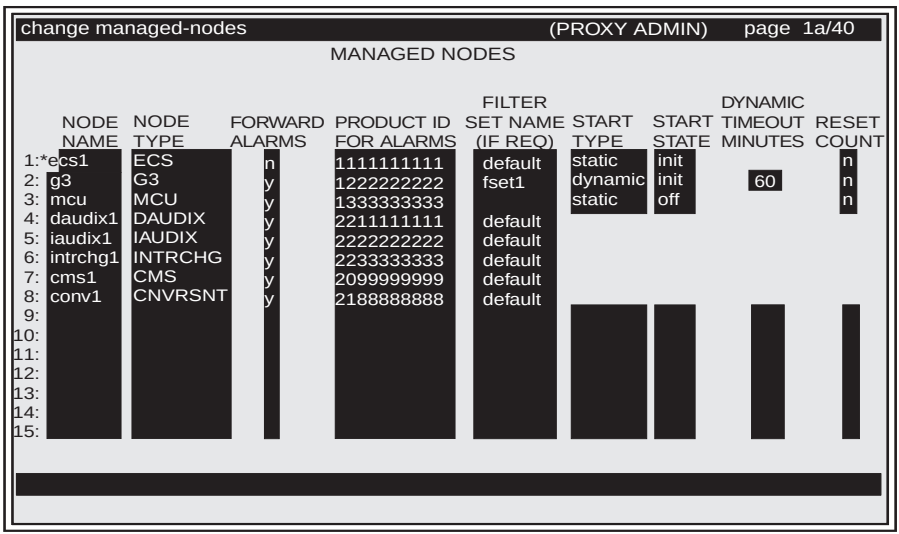
Note: To complete the fields, refer to the **Managed Nodes** section of the PA001 form.

1. Access the PROXY ADMIN menu.
2. Stop the Proxy Agent, if running.

3 In the command line on the PROXY ADMIN menu,

- Type **change managed-nodes**
- Press **ENTER**

Result: The system displays the page **A** of the MANAGED NODES screen.



sdnmmgna LJK 092299

4 On page **A**, access the appropriate page number (1 through 40). In the NODE NAME column, execute one of the options below:

- To ***add*** a new managed node: Go to the next blank line and follow the steps below.
- To ***change*** a managed node: Go to the line number for that managed node. Then, go to the fields to be changed and make the appropriate changes on each subpage.
- To ***delete*** an existing managed node: Go to the line number for that managed node. Press the **SPACE BAR.** The system deletes the managed node and clears the fields on all subpages for that line.

5 On page **A**, go to the first ***blank*** line and complete the fields below to add a new managed node. The fields contain the default settings.

NODE NAME: Type the [**system name**]

NODE TYPE: **ECS** (default).

FORWARD ALARMS: **n** (default for ECS, IP600, and DEFINITY One); **y** (default for all other node types)

PRODUCT ID FOR ALARMS: Type the [**product/alarm ID**] for the node type

FILTER SET NAME: **default** -- Execute one of the options (a or b) below:

a To select a different filter name, press **Ctrl-Y** to display the options list; highlight a filter name; and press **ENTER**

b To clear the field of any filter name, press the **SPACE BAR**

START TYPE: **static** (default)

START STATE: **off** (default) -- Press **Ctrl-Y** and select **init** (initiate)

DYNAMIC TIMEOUT MINUTES: **5** (default) -- Press **Ctrl-Y** to select an option from the list, if appropriate. If you select **static**, the field is blanked out.

RESET COUNT: **n** (default) -- Type **y** to reset, if necessary

Press **ENTER** to display page B.

Result: The system displays page **B** as shown in the example below.

```
change managed-nodes                          (PROXY ADMIN)     page  1b/40
                                MANAGED NODES

      NODE                        STOP  FLOW                    CHAR
      NAME          SPEED         BITS  CNTRL  PARITY          SIZE
 1:*ecs1            >9600         1     n      none            8
 2: g3              9600          1     n      none            8
 3: mcu             9600          1     n      none            8
 4: daudix1         9600          1     n      none            8
 5: iaudix1         9600          1     n      none            8
 6: intrchg1        9600          1     n      none            8
 7: cms1
 8: conv1
 9:
10:
11:
12:
13:
14:
15:
```

sdnmmgnb LJK 092299

6 On page **B**, change the values of the communication devices for individual managed nodes, ***if*** necessary.

`NODE NAME`: (carried over to each page)

`SPEED`: **9600** (check the PA001 form)

`STOP BITS`: **1**

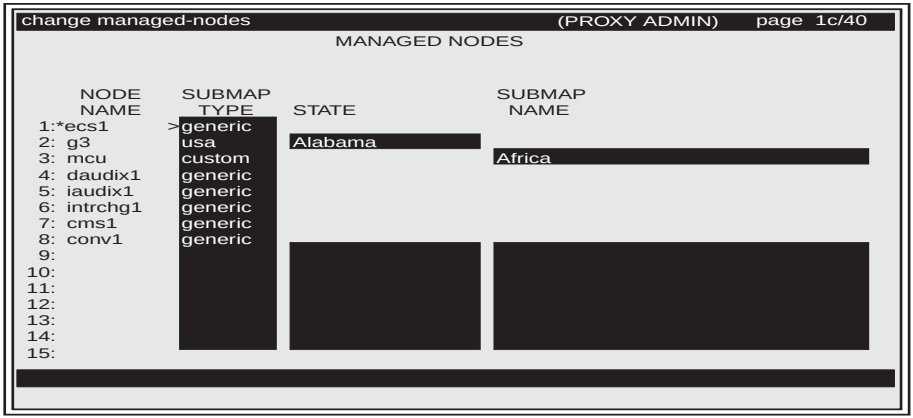
`FLOW CNTRL`: **n**

`PARITY`: **none**

`CHAR SIZE`: **8**

Press **ENTER** to display page **C**.

Result: The system displays page **C** of the Managed Nodes screen.



7 On page **C**, change the location for each managed node, where appropriate.

Generic location

SUBMAP TYPE: **generic** (default)

USA location

SUBMAP TYPE: **usa**

STATE: **Alabama** (default) Press **Ctrl-Y** to select a state from the list

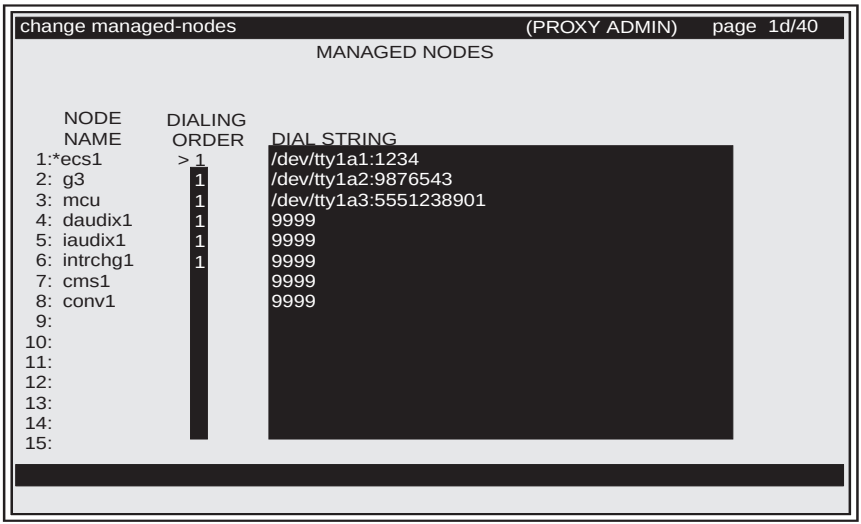
Custom location

SUBMAP TYPE: **custom**

SUBMAP NAME: Type the [**location name**]

Press **ENTER** to display page D.

Result: The system displays page **D** as shown in the example below.



sdnmmgnd LJK 092399

8 On page **D**, complete the fields for the ***primary*** communication device. The Proxy Agent uses this device to connect to the managed node.

`NODE NAME`: (carried over to each page)

`DIALING ORDER`: **1**

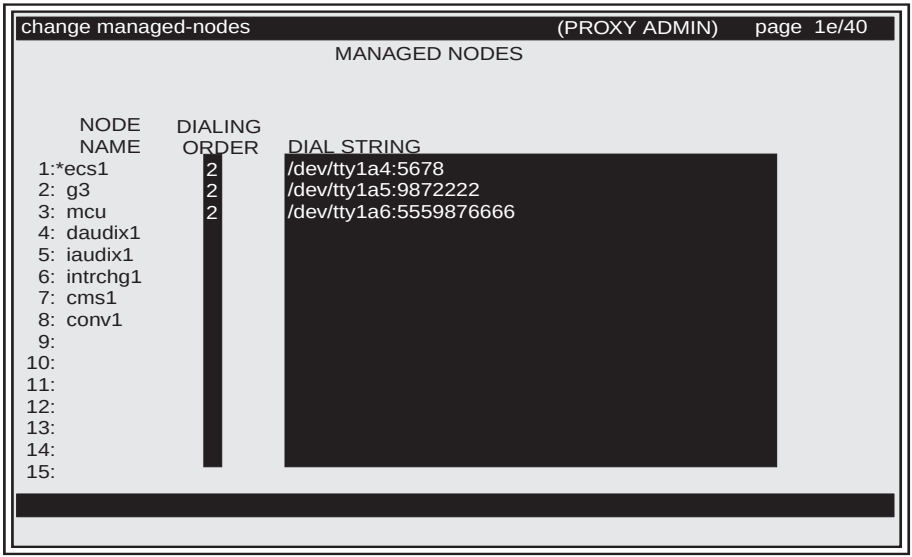
– Use this field to allow cut-through emulation to the systems when the Proxy Agent is active.

Enter 1 (default) for the Dial String used by the Proxy Agent SNMP. Enter 2 to identify a different pseudo-device for the connection application for the cut-through. The dial strings (devices) for Dialing Order entries 1 and 2 must be different.

`DIAL STRING`: Type the [**dial string**] for the ***primary*** device. Go to the PA001 form and refer to the Dial String 1 field on the *Managed Nodes* section.

Press **ENTER** to display page E.

Result: The system displays page **E** as shown in the example below.



sdnmmgne LJK 092399

9 **OPTIONAL**. On page **E**, complete the fields for a ***secondary*** communication device. The Proxy Agent uses this device if the first device is not available.

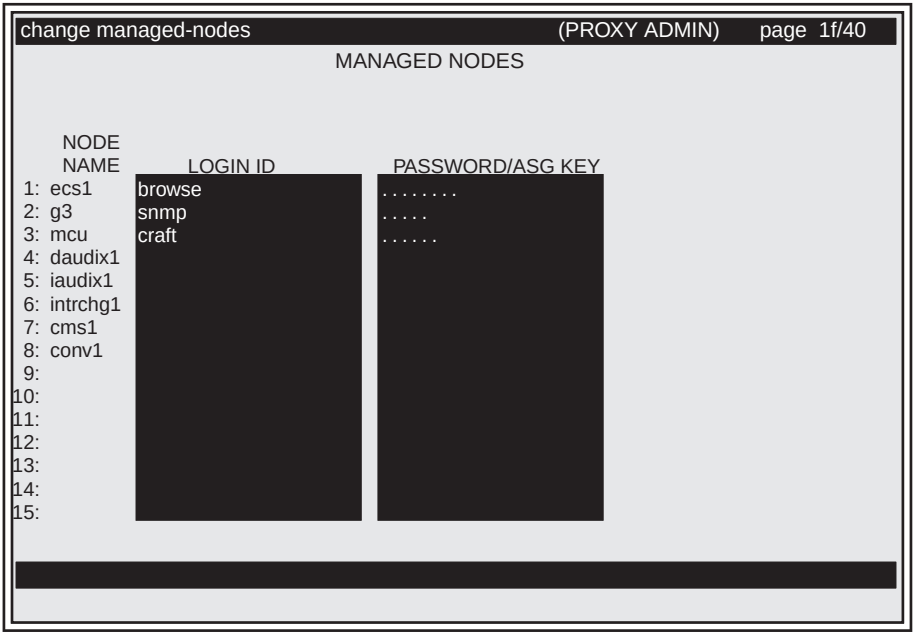
`NODE NAME`: (carried over to each page)

`DIALING ORDER`: Type **2** in the field

`DIAL STRING`: Type the [**dial string**] for the ***secondary*** device. Go to the PA001 form, and refer to the Optional. Dial String 2 field on the *Managed Nodes* section.

Press **Ctrl-N** to display page F.

Result: The system displays page F as shown in the example below.



sdnmmann LJK 092399

10 The fields on page F contain the default login data from the DEFAULT LOGIN screen for new DEFINITY systems, as show in the example below.

`NODE NAME`: (carried over to each page)

LOGIN ID: [**system name**] for the new DEFINITY system

PASSWORD/ASG KEY: [**.....**] periods are displayed as the password or ASG secret key is entered.

11 Press **Ctrl-E** to submit the data.

Result: The system saves the data and displays the PROXY ADMIN menu.

12 From the PROXY ADMIN menu, **start** the Proxy Agent.

13 Display the STATUS screen.

- Verify the Proxy Agent is active
- Press **Ctrl-X** to exit the screen

Result: The system closes the STATUS screen. Then, displays the PROXY ADMIN menu.

12 Communication Application

Introduction

The Communication application allows manual connection of the Proxy Agent to managed nodes to troubleshoot connection problems. procedures to manually connect and disconnect the Proxy Agent to and from the managed nodes. The procedures contain the login prompts to access managed nodes and DEFINITY systems that are protected by the Access Security Gateway (ASG) software.

The purpose of the **Communication** application is to execute the specific tasks listed below:

- To troubleshoot connections between the Proxy Agent and managed nodes.
- To connect to one or two managed nodes ***before*** starting an administration session from the EMULATION screen.

In all other instances, users access the MANAGED NODES screen to initiate the Proxy Agent connection with individual managed nodes.

Connection procedures

This chapter contains two types of connection procedures to manually log in to the managed nodes.

- "Connect to Managed Nodes" on page 266
- "Connect to DEFINITY Systems with ASG" on page 272

The login prompts display in separate popup windows on the COMMUNICATION MANAGER screen.

Saving login data

Users should administer the DEFAULT LOGIN screen to save the login data for ***new*** DEFINITY systems. Refer to the procedure to "Administer the Default Login" on page 218,

When users administer new DEFINITY systems, the Proxy Agent displays the default login data on page F of the MANAGED NODES screen. Users do ***not*** have to complete the procedures on the COMMUNICATION MANAGER screen to save new login data.

At the COMMUNICATION MANAGER screen, generally users should ***not*** save the login data unless the system prompts them to enter a new password. The prompt to resave login data displays if the “password aging” feature is enabled on the managed node. The system permanently stores the login data until users change and save login data at a later time.

Emulation sessions

The EMULATION application allows users to directly connect with ***one*** managed node and conduct an administration session on the system. Therefore, users do ***not*** need to execute the connection procedures in this chapter. Refer to "Connect to Two Managed Nodes" on page 290.

Users can connect to ***two*** managed nodes before starting an administration session from the EMULATION application. The EMULATION application allows users to start and quit a session with the managed nodes ***without*** dropping the connections.

To conduct an emulation session with two managed nodes connections, users must execute the procedures in the order listed below:

- Access the COMMUNICATION MANAGER screen and connect the two managed nodes. Do ***not*** save the login data. Refer to the appropriate procedure below:
  - "Connect to Managed Nodes" on page 266
  - "Connect to DEFINITY Systems with ASG" on page 272
- Access the EMULATION application and conduct the administration session. Refer to "Connect to Two Managed Nodes" on page 290.
- Access the COMMUNICATION MANAGER screen and disconnect the managed nodes at the ***end*** of the administration session. Refer to "Disconnect from Managed Nodes" on page 284.

Review of the Communication Manager Screen

The figure below shows the COMMUNICATION MANAGER screen with the two connections fields.

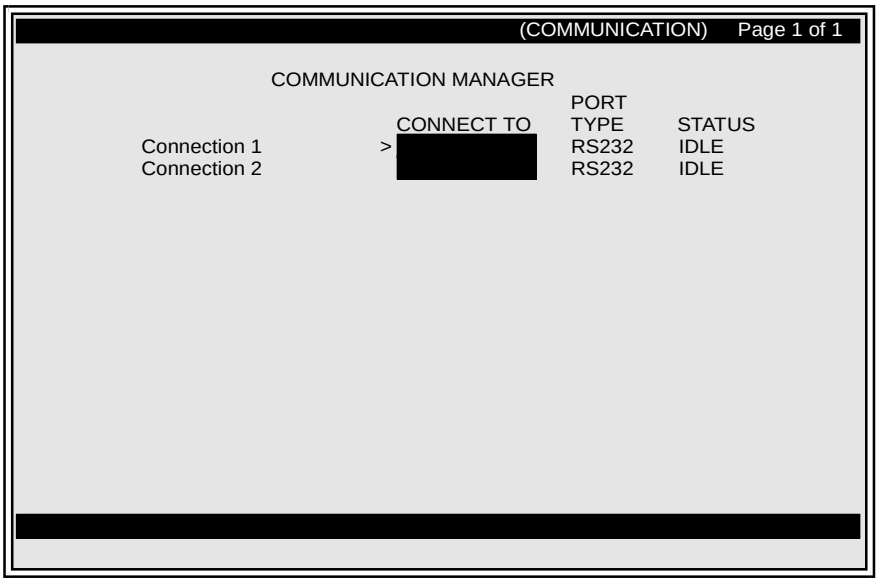


Figure 30. Communication Manager screen

Field descriptions The table below contains the descriptions for the fields on the COMMUNICATION MANAGER screen.

Table 25. Communication Manager screen

Field	Description
CONNECT TO Fields	
Connection 1	Contains the ***first*** managed node that is currently connected to the Proxy Agent. The field is **blank** if a managed node is NOT currently connected. The Help list (**Ctrl-Y**) contains the valid options for this field: • List of all **managed nodes** administered on the Proxy Agent • The **disconnect** command if a managed node is currently connected. The disconnect command does not appear on the list if the field is blank.
	(1 of 2)

Table 25. Communication Manager screen

Field	Description
Connection 2	Contains the ***second*** managed node that is currently connected to the Proxy Agent. The field is **blank** if a second managed node is ***not*** currently connected. The Help list (**Ctrl-Y**) contains the valid options for this field: • List of all **managed nodes** administered on the Proxy Agent • The **disconnect** command if a managed node is currently connected. The disconnect command does not appear on the list if the field is blank.
PORT TYPE	Identifies the type of communication port the Proxy Agent uses to connect to the managed node. This is a ***view-only*** field.
STATUS	Identifies the current state of the Proxy Agent connection to a managed node. The valid options for the STATUS states include: **IDLE** -- A dynamic connection is ***not*** connected **CONNECTED** -- A managed node is connected This is a ***view-only*** field.
	(2 of 2)

Connect to Managed Nodes

This section contains the procedure to ***manually*** login to one or two managed nodes and execute the tasks below:

- To troubleshoot connections between the Proxy Agent and managed nodes.
- To connect to two managed nodes ***before*** starting an administration session from the EMULATION screen.

Required materials

Users must know the information listed below to complete the procedure:

- Login name for each managed node
- Password to access the each managed node

Procedure

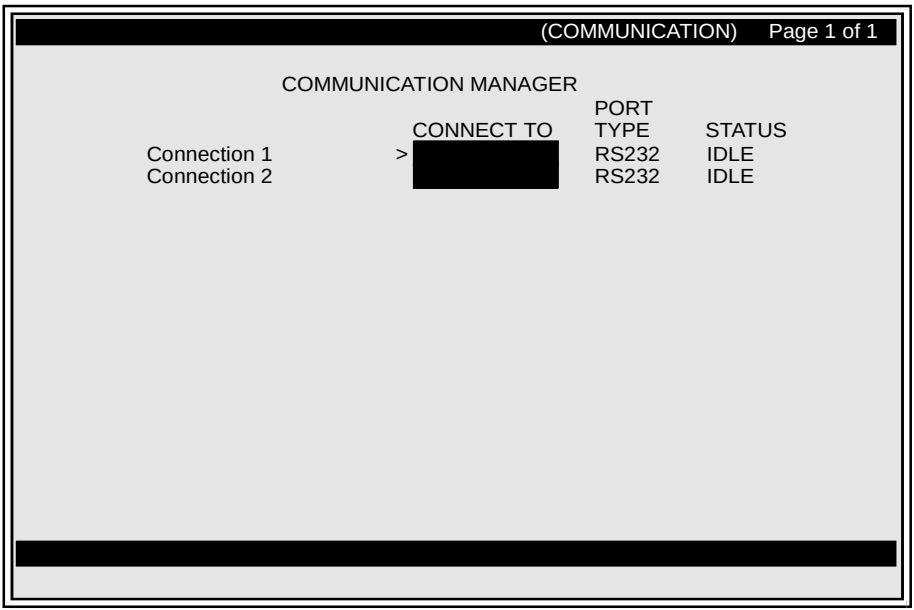
Complete the procedure below to ***manually*** login to managed nodes.

1 Access the Proxy Agent MAIN MENU.

In the command line,

- Type **communication**
- Press **ENTER**

Result: The system displays the COMMUNICATION MANAGER screen, as shown in the example below.



sdnmcomm LJK 040798

2 In the *Connection 1* field, execute ***one*** of the options (a or b) below:

a If the field is **blank**, connect the ***first*** managed node:

- Press **Ctrl-Y** to display the Help list
- Select a [**managed node**] from the list
- Press **ENTER**

b If the field contains a connection that you want to change, then disconnect the managed node and select a different managed node:

- Press **Ctrl-Y** to display the Help list
- Select **disconnect** to *drop* the current connection
- Press **ENTER**
- Press **Ctrl-Y** again
- Select a different [**managed node name**] for the ***first*** connection
- Press **ENTER**

Result: The system displays the node name in the *Connection 1* field.

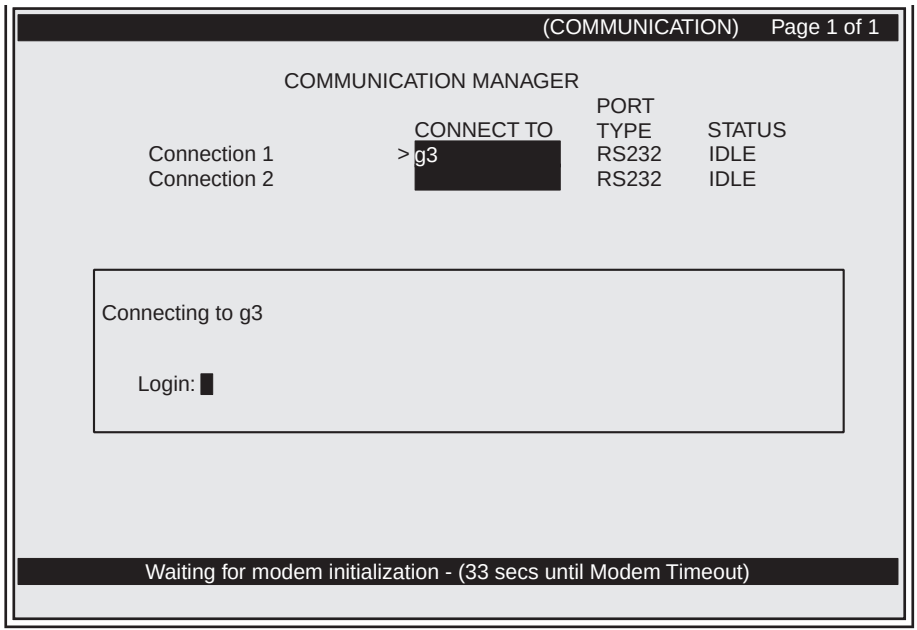
3 **Optional**. In the *Connection 2* field, execute ***one*** of the options (a or b) in step 2 above to connect to a ***second*** managed node:

Result: The system displays the node name in the *Connection 2* field.

Note: If users select a second node name in the Connection 2 field, the system displays the login windows for each of the selected node names. Users must repeat steps 4 through 8 below for the second connection.

4 Press **Ctrl-E** to submit the changes.

Result: The system saves the changes and displays the *login* window below for the node name selected in the *Connection 1* field.

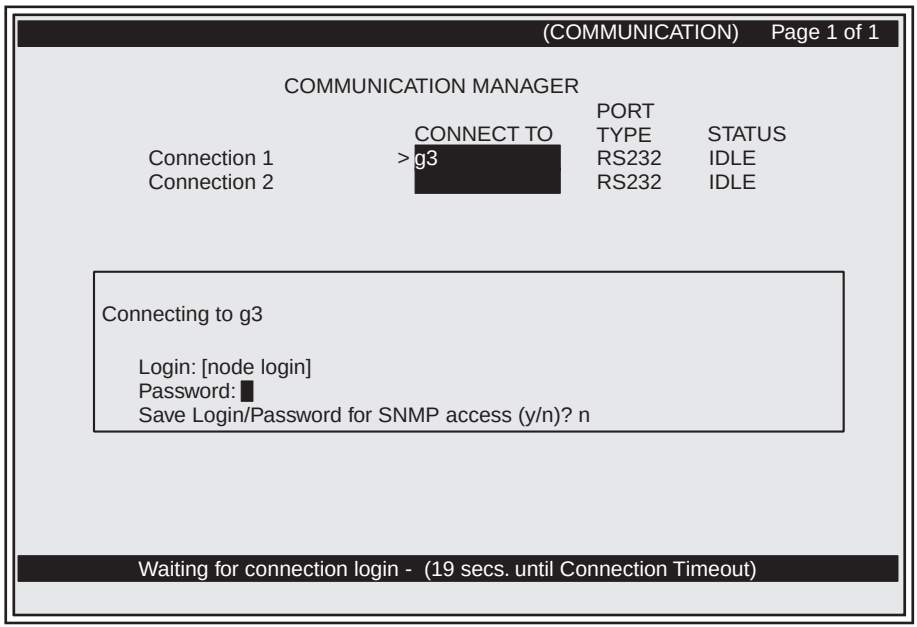


sdnmlogn LJK 092399

5 In the *Login* field,

- Type the [**managed node login**]
- Press **ENTER**

Result: The system displays the *password* window below.



sdnmpass LJK 092399

6 In the *Password* field,

- Type the [**managed node password**]
- Press **ENTER**

Result: The system displays the prompt: `Save Login/Password for SNMP access (y/n)? n`

7 Execute ***one*** of the options (a or b) below:

a To save ***new*** login data the first time,

– Press **Y** (yes)

– Press **ENTER**

b To connect to two managed nodes for an administration session, do **NOT** save the login data if the data has been previously saved:

– Press **ENTER** to select **N** (no)

Result: The system displays the message: `Negotiating protocol communication`

Then, the system displays the Proxy Agent MAIN MENU that contains the confirmation message: `Connected To [managed node]`

8 At the completion of the task, complete the procedure to "Disconnect from Managed Nodes" on page 284.

Connect to DEFINITY Systems with ASG

This section contains the procedure to manually connect to DEFINITY systems that are protected by Access Security Gateway (ASG) and execute these tasks:

- To troubleshoot connections between the Proxy Agent and managed nodes.
- To connect to two managed nodes ***before*** starting an administration session from the EMULATION screen.

The ASG login procedure includes the tasks below:

- The user enters a login and optionally saves the ASG ***secret key*** at the prompts on the screen. The secret key is a 20-character octal string.
- The system responds with a numeric ***challenge*** that contains a 7-digit number.
- To generate a ***response*** to the challenge, the user enters the secret key, challenge, and other required data into a hand-held ASG device. The device generates a 7-digit numeric response to the system challenge.
- The user enters the numeric response in the field to gain access to the DEFINITY system.

Required materials

Users must know the following information and have the ASG device to complete the ASG login procedure:

- Login name for the DEFINITY system
- ASG secret key to access the DEFINITY system
- Challenge from the DEFINITY system
- Hand-held ASG device to generate a response to the challenge from the DEFINITY system

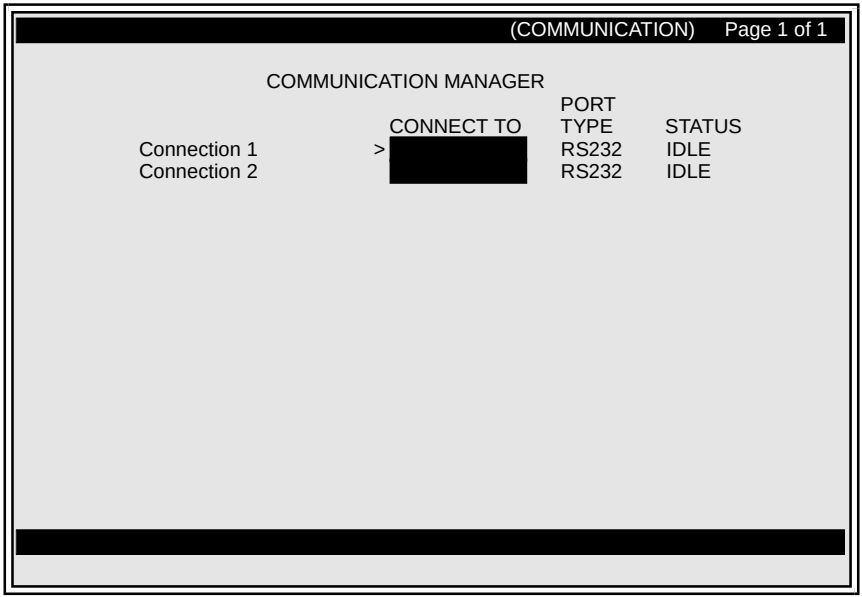
ASG Procedure

Complete the following procedure to manually login to ASG-protected DEFINITY systems.

1 Access the Proxy Agent MAIN MENU. In the command line,

- Type **communication**
- Press **ENTER**

Result: The system displays the COMMUNICATION MANAGER screen:



sdnmcomm LJK 040798

2 In the *Connection 1* field, execute ***one*** of the options (a or b) below:

a If the field is **blank**, connect the ***first*** managed node:

- Press **Ctrl-Y** to display the Help list
- Select a [**managed node**] from the list
- Press **ENTER**

b If the field contains a connection that you want to change, then disconnect the managed node and select a different managed node:

- Press **Ctrl-Y** to display the Help list
- Select **disconnect** to drop the current connection
- Press **ENTER**
- Press **Ctrl-Y** again
- Select a different [**managed node name**] for the first connection
- Press **ENTER**

Result: The system displays the selected node name in the *Connection 1* field.

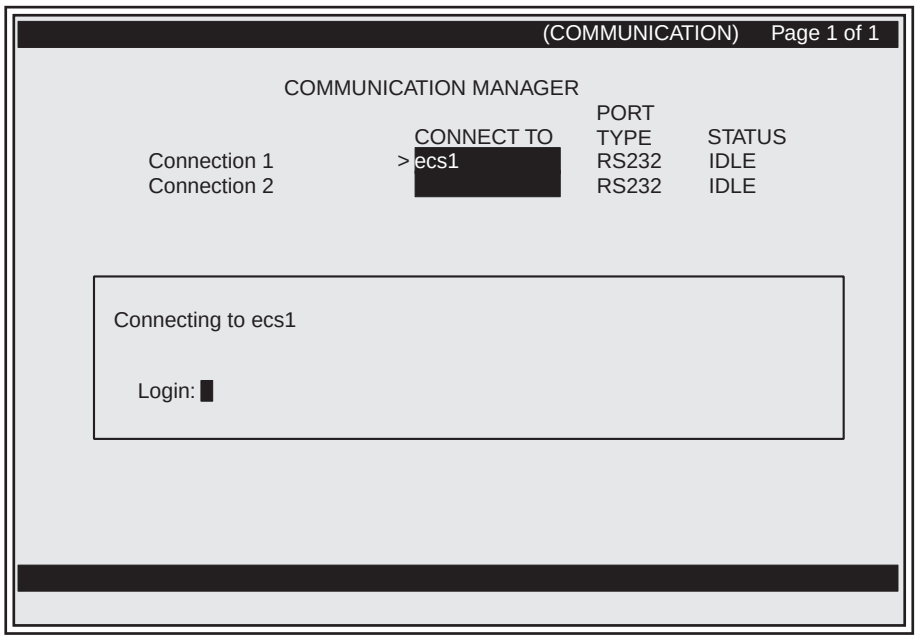
3 **Optional**. In the *Connection 2* field, execute ***one*** of the options (a or b) in step 2 above to connect to a second managed node:

Result: The system displays the selected node name in the *Connection 2* field.

Note: If users selected a second node name in the Connection 2 field, the system displays the ASG login windows for each of the selected node names. Users must repeat steps 4 through 10 below for the second connection.

4 Press **Ctrl-E** to submit the changes.

Result: The system saves the changes and displays the *login* window below for the node name selected in the *Connection 1* field.



sdnmasgl LJK 092399

5 In the *Login* field,

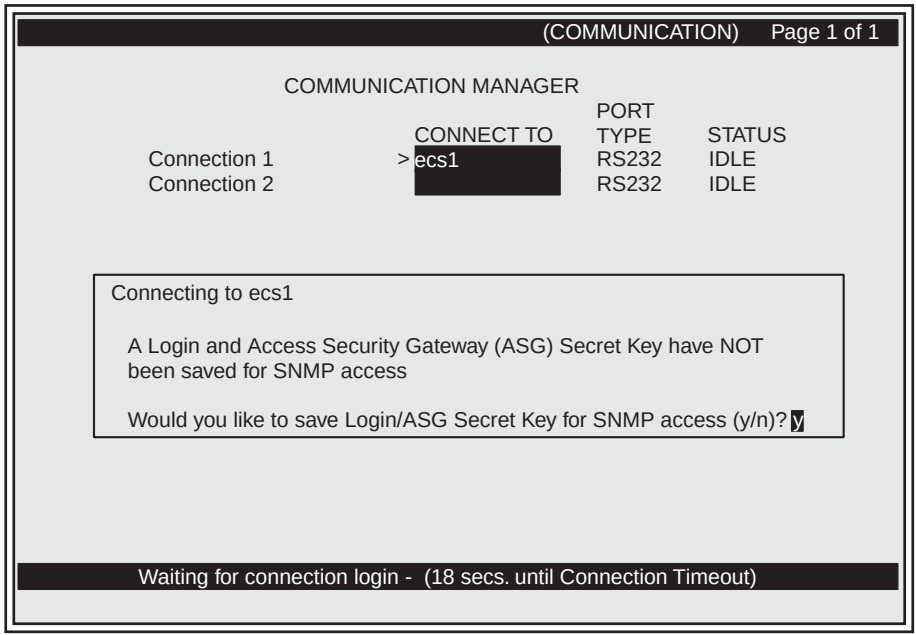
- Type the [**managed node login**]
- Press **ENTER**

Result: The system displays the one of two windows depending on whether or not the login and secret key have been saved. Execute one of the options (a or b) listed below:

a To save the login and secret key for ***new*** managed nodes, go to step 6.

b To ***not*** save the login and secret key for managed nodes, go to step 7.

6 Save the Login. If the login and ASG secret key have **NOT** been saved, the system displays a window with the prompt:



sdnmasgs LJK 092399

To save the login data, execute the steps (a through d) below:

a At the prompt, type **Y** (yes) and press **ENTER**

Result: The system displays a window with the first prompt: `Access Security Gateway (ASG) Secret Key:`

b At the prompt, type the [**secret key**] and press **ENTER**

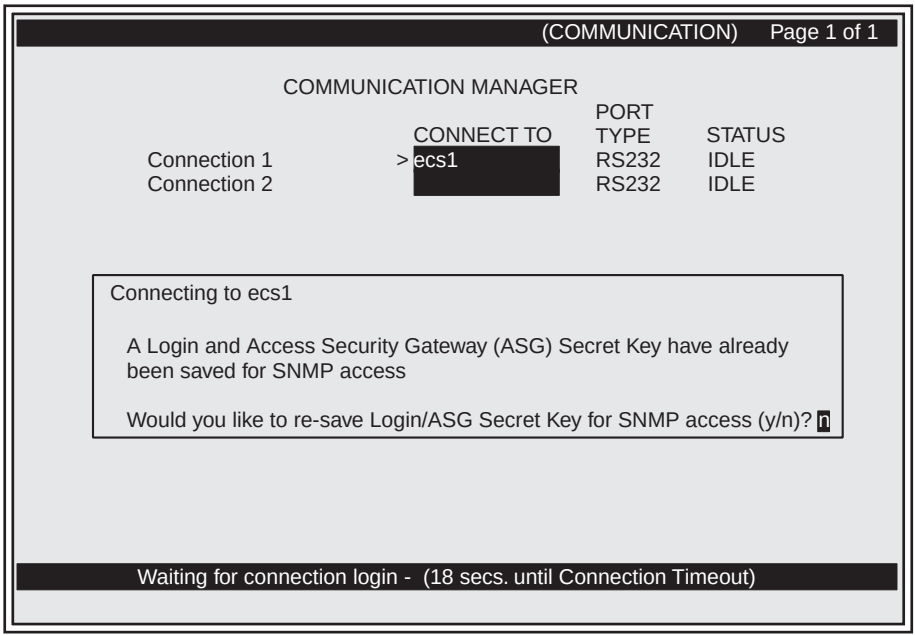
Result: The system displays a second prompt: `Save Login & ASG Secret Key for SNMP access (y/n)?`

c At the prompt, type **Y** (yes) and press **ENTER**

Result: The system displays the window with the numeric challenge: `Challenge:` XXX-XXXX

d Go to step 8 to complete the remaining steps in the procedure.

7 **Do NOT Save the Login**. If the login and ASG secret key have previously been saved, the system displays a window with the prompt below:



sdnmasgn LJK 092399

To connect to a managed node without saving the ASG and secret key for an emulation session, execute the steps (a and b) below:

a At the prompt, type **N** (no) and press **ENTER**

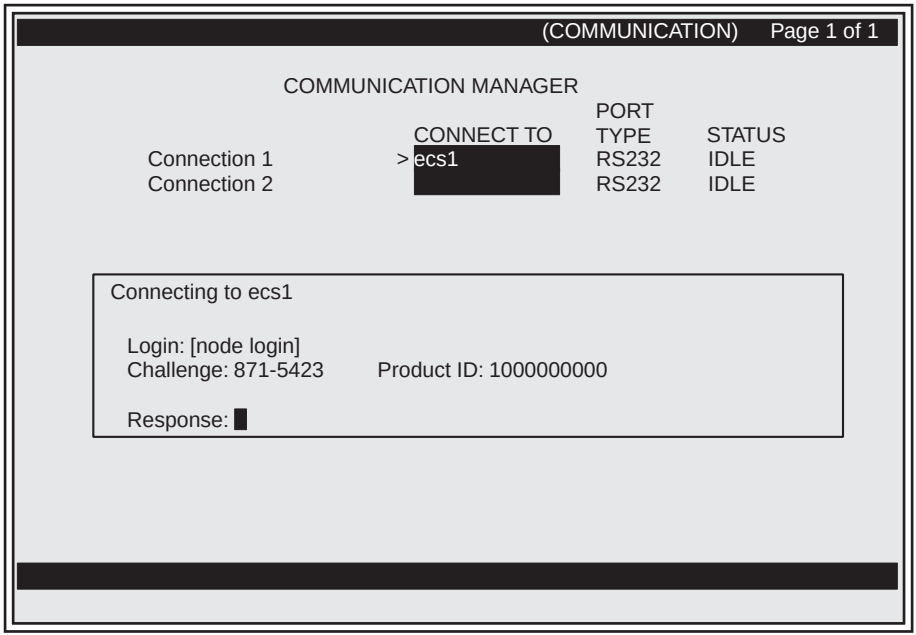
Result: The system displays the window with the numeric challenge: `Challenge:` XXX-XXXX

b Go to step 8 to complete the remaining steps in the procedure.

8 **ASG Device**. Access the hand-held ASG device and enter the required data in the device (secret key, challenge, etc.).

Result: The ASG device displays a 7-digit numeric response.

9 **Response to the Challenge**. In the `Response` field on the window shown below, execute the steps below:



sdnmasgr LJK 092399

- Type [**response number**] from the ASG device
- Press **ENTER**

Result: The system displays the message: `Negotiating protocol communication`

Then, the system displays the Proxy Agent MAIN MENU that contains the confirmation message:

`Connected To [managed node]`

10 At the completion of the task, complete the procedure to "Disconnect from Managed Nodes" on page 284.

Disconnect from Managed Nodes

Complete the procedure below to manually disconnect the managed nodes.

1. Access the Proxy Agent MAIN MENU.

   In the command line,

   - Type **communication**
   - Press **ENTER**

   Result: The system displays the COMMUNICATION MANAGER screen.

2. In the *Connection 1* field,

   - Press **Ctrl-Y** to select the Help list
   - Select **disconnect**
   - Press **ENTER**

3. **Optional**. In the *Connection 2* field,

   - Press **Ctrl-Y** to select the Help list
   - Select **disconnect**
   - Press **ENTER**

4. Press **Ctrl-E** to submit the changes.

   Result: The system drops the connections and displays the Proxy Agent MAIN MENU.

13 Emulation Application

Introduction

The Emulation application provides communication access to a managed node for real-time administration. procedures to establish an emulation session from the Proxy Agent with one or two managed nodes.

The **Emulation** application provides direct communication with one or two managed nodes for real-time administration.

Users can access all commands and screens that are available from the G3 management terminal.

For DEFINITY systems, the emulation application adds the following features:

- Reliable communications using a protocol
- Pop-up help
- Direct page selection
- Color

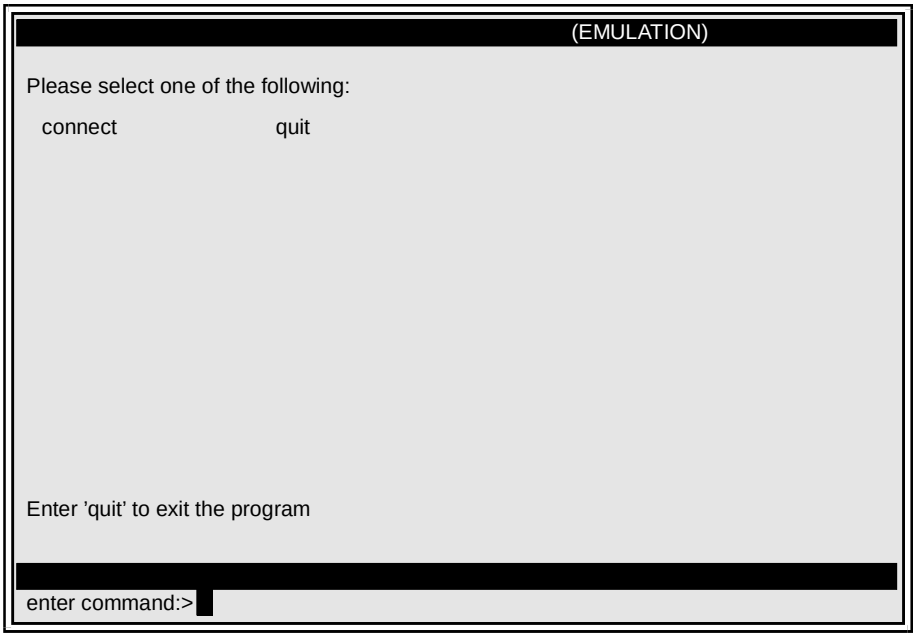
CAUTION:
If the Proxy Agent is active on the switch, you must have multiple communication devices to use emulation cut-through.

See also

Refer to Chapter 12, "Communication Application" for procedures to connect two managed nodes ***before*** an emulation session and to disconnect the two managed nodes at the ***end*** of a session.

Review the Emulation Screen

The following figure shows the two commands available on the EMULATION screen:



sdnmemu LJK 040798

Figure 31. Emulation screen

Conduct an Emulation Session

The **Emulation** application allows users to establish a direct connection with ***one*** managed node during an emulation session.

Users do ***not*** need to connect a managed node on the COMMUNICATION MANAGER screen before they begin the emulation session with one managed node.

To connect to ***two*** managed nodes during an emulation session, refer to the "Connect to Two Managed Nodes" on page 290.

The commands that are available on the G3 management terminal are also available on the Proxy Agent emulation application.

Connect to One Managed Node

Complete the following procedure to establish an emulation session with ***one*** managed node.

1. Access the Proxy Agent MAIN MENU.

   In the command line,

   - Type **emulation**
   - Press **ENTER**

   Result: The system accesses the EMULATION application.

2. In the command line,

   - Type **connect** [**managed node**]
   - Press **ENTER**

   Result: The system displays one (a or b) of the following results:

   a If the managed node is **not** connected, then the system displays the *login* window. Execute the steps 3 and 4 to log in.

   b If the managed node is **connected**, then the system displays the MAIN MENU for the managed node. Go to step 5.

3. In the *Login* field,

   - Type the [**managed node login**]
   - Press **ENTER**

4 In the *Password* field,

- Type the [**managed node password**]
- Press **ENTER**

Result: The system displays the prompt: `Save Login/Password for SNMP access (y/n)? n`

5 Press **ENTER** to select no.

Result: The system displays the message: `Negotiating protocol communication`

Then, displays the MAIN MENU for the managed node.

6 Conduct an administration session on the managed node. The commands that you can normally use with the login you selected will be available to you during this session.

7 To end the emulation session,

- Type **quit**
- Press **ENTER**

Result: The system exits the Emulation screen. Then, the system displays the Proxy Agent MAIN MENU.

Connect to Two Managed Nodes

To conduct an emulation session with ***two*** connections, complete the following procedures:

- Access the COMMUNICATION MANAGER screen to connect two managed nodes. Do ***not*** save the login data.
- Access the EMULATION screen to conduct the administration session with both managed nodes.
- Access the COMMUNICATION MANAGER to disconnect the two managed nodes.

Procedure

Complete the following procedure to establish ***two*** connections for an emulation session.

1. Access the Proxy Agent MAIN MENU. In the command line,
   - Type **communication**
   - Press **ENTER**

   Result: The system displays the COMMUNICATION MANAGER screen.
2. In the connection fields, connect two managed nodes for the emulation session. Do not save the login data. Refer to the appropriate procedure:
   - "Connect to Managed Nodes" on page 266
   - "Connect to DEFINITY Systems with ASG" on page 272

   Result: The system saves the data and displays the Proxy Agent MAIN MENU.

3 In the command line on the Proxy Agent MAIN MENU,

- Type **emulation**
- Press **ENTER**

Result: The system displays the EMULATION menu.

4 To establish the connection with the ***first*** managed node,

- Type **connect** [**managed node**]
- Press **ENTER**

Result: The system displays the system MAIN MENU for the ***first*** managed node.

5 Conduct an administration session on the ***first*** managed node. The commands that you can normally use with the login you selected will be available to you during this session.

6 To end the emulation session with the ***first*** managed node,

- Type **quit**
- Press **ENTER**

Result: The system exits the emulation session with the ***first*** managed node. Then, displays the EMULATION menu.

7 To establish the connection with the ***second*** managed node,

- Type **connect** [**managed node**]
- Press **ENTER**

Result: The system displays the system MAIN MENU for the ***second*** managed node.

8 Conduct an administration session on the ***second*** managed node.All G3 switch commands are available during the emulation session.

9 To end the emulation session with the ***second*** managed node,

- Type **quit**
- Press **ENTER**

Result: The system exits the emulation session with the ***second*** managed node. Then, displays the EMULATION menu

Note: Users can move back and forth between the connections from the EMULATION menu.

10 To end the emulation session with ***both*** connections,

- Type **quit**
- Press **ENTER**

Result: The system exits the EMULATION menu. Then, the system displays the Proxy Agent MAIN MENU.

11 In the command line on the Proxy Agent MAIN MENU,

- Type **communication**
- Press **ENTER**

Result: The system displays the COMMUNICATION MANAGER screen.

12 On the COMMUNICATION MANAGER screen, disconnect the two managed nodes. Refer to "Disconnect from Managed Nodes" on page 284.

14 Configuration Application

Introduction

Use the Configuration application to administer the system-wide default parameters for the communication devices and configuration options for the monitor and screen elements. procedures to administer two configuration screens:

- The CHANGE HARDWARE screen contains the software versions for UnixWare and Proxy Agent and the system-wide default parameters for the serial ports.

The CHANGE USER-INTERFACE screen contains the configuration options for the monitoThe I/O Setup application, which is accessible from the UnixWare desktop, allows system administrators (root users) to edit the Devices file and the Dialers file. This is not part of DEFINITY Proxy Agent.

- Chapter 15, "I/O Setup Application" contains the default dial strings and the procedures to edit the Devices and the Dialers files.r and screen elements.

The purpose of the **Configuration** application is to administer the system-wide, default parameters on the two configuration screens that are described below.

Change Hardware screen

The CHANGE HARDWARE screen contains two types of information:

- Software release and versions of the UNIX operating system and the Proxy Agent that are currently installed on the Proxy Agent computer
- Default parameters for the serial ports

Change User-Interface screens

The CHANGE USER-INTERFACE screens contains four pages of configuration and color options.

Page 1 contains the ***configuration*** options to:

- Set the color options on the monitor
- Turn on or turn off the audible beep tone

Typically, the configuration options on page 1 are the only options that users may want to change.

Pages 2 through 4 contain the options to ***customize*** the colors for the elements listed below:

- Screen elements
- Activity Area elements
- Popup Display Window elements

Installation process

During the installation process, the installation script updates the software versions on the CHANGE HARDWARE screen.

The Configuration application contains the system-wide, default parameters for both of the CHANGE HARDWARE screen and the CHANGE USER_INTERFACE screen.

Generally, users will ***not*** need to change the default settings on either of the Configuration screens.

Administer the Change Hardware Screen

The CHANGE HARDWARE screen contains two types of information:

- Software versions for the UNIX operating system and the Proxy Agent software that are currently installed on the Proxy Agent computer
- Default parameters for the serial ports

Avaya ***recommends*** that users do ***not*** change the default settings for the serial ports on the CHANGE HARDWARE screen. These settings work well with most communication devices.

However, users can change the parameters for ***individual*** managed nodes on the page **B** of the MANAGED NODES screen. The new settings will override the system-wide parameters and become the custom settings for the individual managed node.

PA001 form

The Managed Nodes section of the PA001 form should contain the speed setting for serial port that the Proxy Agent uses to connect to individual managed nodes.

Review the Change Hardware Screen

In the figure below, the "**xx**" in the *Proxy Agent Version* field refers to the load number of the software, which may vary for the current release.

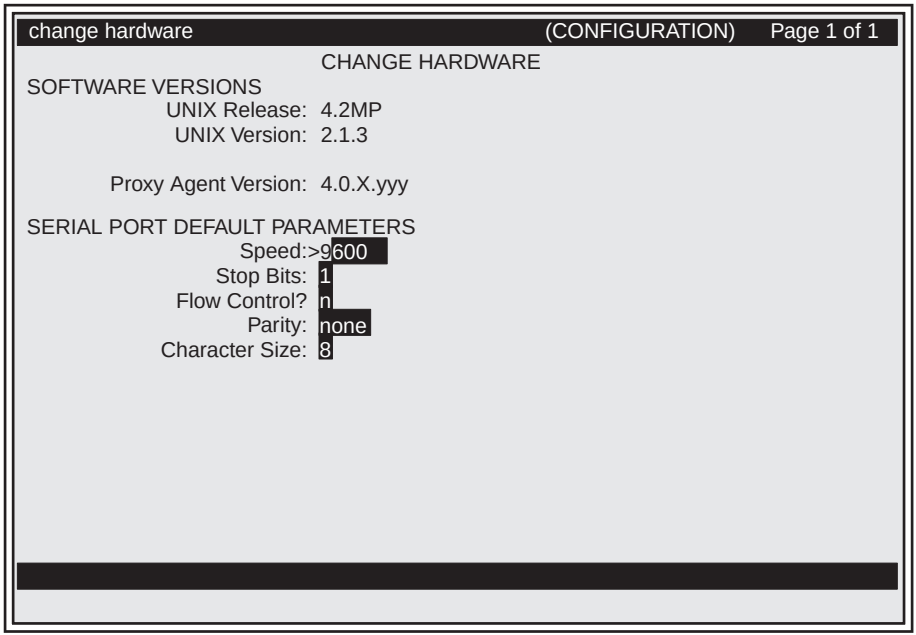


Figure 32. Change Hardware screen

Field descriptions

The table below contains descriptions of the fields on the CHANGE HARDWARE screen. The screen contains the two sections listed below:

- Software Versions (view-only)
- Serial Port Default Parameters

Table 26. Change Hardware screen

Field	Description
SOFTWARE VERSION (view-only)	
UNIX Release	Identifies the **release number** of the UnixWare operating system that is currently installed on the Proxy Agent computer. This is a ***view-only*** field.
UNIX Version	Identifies the **version number** of the UnixWare operating system that is currently installed on the Proxy Agent computer. This is a ***view-only*** field.
Proxy Agent Version	Identifies the **version number** of the Proxy Agent software that is currently installed on the Proxy Agent computer. This is a ***view-only*** field.
	(1 of 3)

Table 26. Change Hardware screen

Field	Description
SERIAL PORT DEFAULT PARAMETERS	
Speed	Sets the **baud rate** for the modem that connects the Proxy Agent to the managed node. The HELP list (**Ctrl-Y**) contains the valid options for this field: **9600** (default) **4800** **2400** **1200**
Stop Bits	Sets the **stop bit** parameter on the modem. The HELP list (**Ctrl-Y**) contains the valid options for this field: **1** (default) **2**
	(2 of 3)

Table 26. Change Hardware screen

Field	Description
Flow Control	Turns-off or turns-on the **flow control** parameter on the modem. The HELP list (**Ctrl-Y**) contains the valid options for this field: **n** (no) (default) -- Turn off **y** (yes) -- Turn on
Parity	Sets the **parity** parameter on the modem. The HELP list (**Ctrl-Y**) contains the valid options for this field: **none** (default) **odd** **even**
Character Size	Sets the **character size** parameter on the modem. The HELP list (**Ctrl-Y**) contains the valid options for this field: **8** (default) **7**
	(3 of 3)

Administer the Change Hardware Options

Complete the procedure below to access the CHANGE HARDWARE screen.

Generally, users will ***not*** change the system-wide, default parameters for the serial port on the CHANGE HARDWARE screen.

Note: Users can make changes to the parameters for individual managed nodes on page **B** of the MANAGED NODES screen. The changes made on the MANAGED NODES will ***override*** the system-wide parameters on the CHANGE HARDWARE screen.

Procedure

1 Access the Proxy Agent MAIN MENU. In the command line,

- Type **configuration**
- Press **ENTER**

Result: The system accesses the *Configuration* application. Then, displays a blank command line on the Proxy Agent MAIN MENU.

2 In the command line on the Proxy Agent MAIN MENU:

- Type **change hardware**
- Press **ENTER**

Result: The system displays the CHANGE HARDWARE screen.

3 In the SOFTWARE VERSION column, verify the release numbers for the UnixWare and the Proxy Agent software. The fields are **view-only**. Users cannot change the data.

4 The data in the SERIAL PORT DEFAULT PARAMETERS fields contain the system-wide, default parameters shown below:

`Speed`: **9600**

`Stop Bits`: **1**

`Flow Control`: **n** (no)

`Parity`: **none**

`Character Size`: **8**

To **change** the default system parameters, which is **NOT** recommended:

- Press **Ctrl-Y** in each field to display the Help list
- Select a **new** value from the list
- Press **ENTER** to change the value

5 Execute ***one*** of the options (a or b) below:

a If users made any changes, press **Ctrl-E** to save the changes and exit the CHANGE HARDWARE screen.

b If users do ***not*** make any changes, press **Ctrl-X** to exit the CHANGE HARDWARE screen.

Result: The system exits the screen and displays the Proxy Agent MAIN MENU.

Administer the Change User-Interface Screen

The CHANGE USER-INTERFACE screen contains four (4) pages of configuration options.

Page 1 contains the ***configuration*** options to:

- Set the color options of the monitor
- Turn-on or turn-off the audible beep tone

Pages 2 through 4 contain the fields to ***customize*** the colors of the elements listed below:

- Screen elements on page 2
- Activity Area elements on page 3
- Popup Display Window elements on page 4

Users can experiment with various color combinations and immediately view the results of your changes in the sample screens that appears on pages 2 through 4.

Review the Change User-Interface Screen

The figures in this section show default settings on the four pages of the CHANGE USER-INTERFACE screens.

Page 1

The figure below shows the configuration options on page 1 of the CHANGE USER-INTERFACE screens.

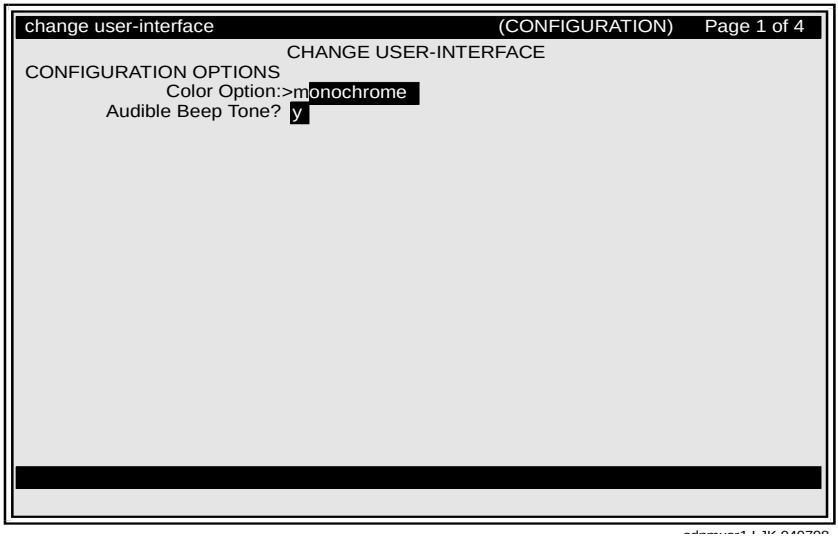


Figure 33. Page 1, Configuration Options

Page 1 field descriptions

The table below contains the field descriptions for configuration options on page 1 of the CHANGE USER-INTERFACE screens.

Table 27. Configuration options

Field	Description
CONFIGURATION OPTIONS (page 1)	
Color Option	Sets the colors for the monitor. The Help list (**Ctrl-y**) contains the valid options for the field: **default --** for color monitors **monochrome** -- default for black-and-white monitors **customize** -- change color of screen elements (see pages 2 through 4 below)
Audible Beep Tone?	Sets the beep tone to ON or OFF. The Help list (**Ctrl-y**) contains the valid options for the field: **y** (yes) -- Turns ON the beep tone (default) **n** (n) -- Turns OFF the beep tone

Page 2

The figure below shows the screen element colors on page 2 of the CHANGE USER-INTERFACE screens.

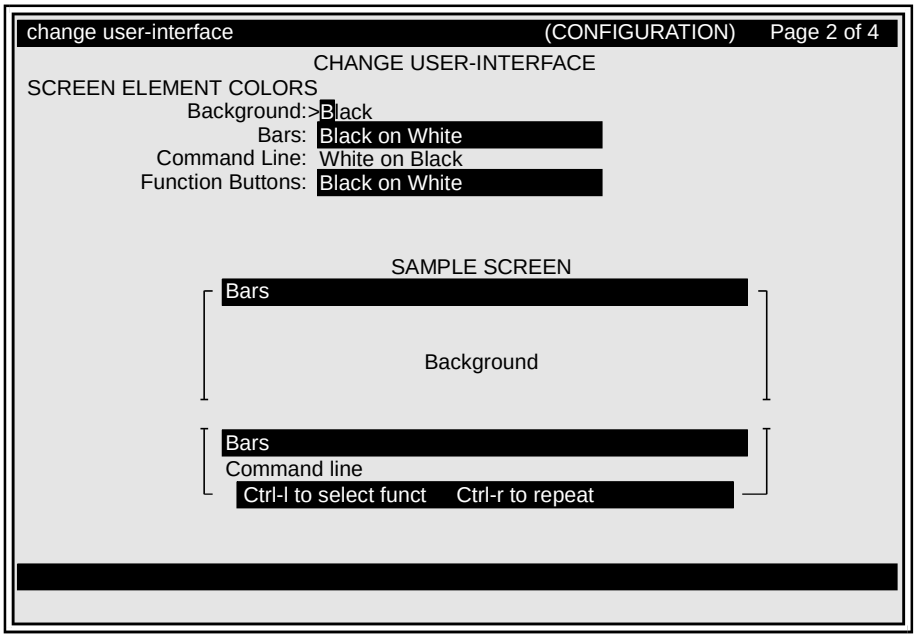
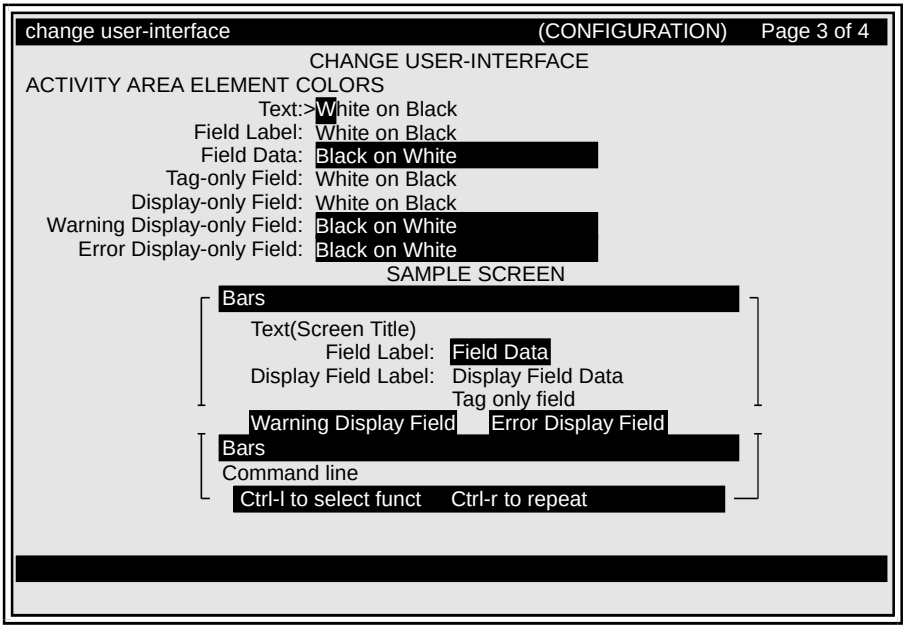


Figure 34. Page 2, Screen Element Colors

Page 3

The figure below shows the activity area element colors on page 3 of the CHANGE USER-INTERFACE screens.



sdnmusr3 LJK 040798

Figure 35. Page 3, Activity Area Element Colors

Page 4

The figure below shows the popup display window element colors on page 4 of the CHANGE USER-INTERFACE screen.

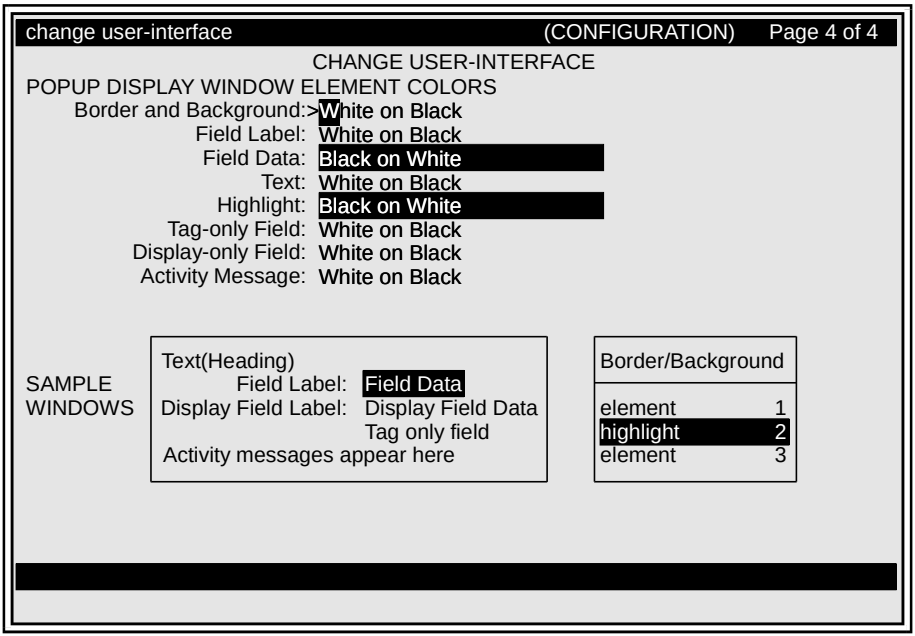


Figure 36. Page 4, Popup Display Window Element Colors

Administer the Change User-Interface Options

Complete the procedure below to change the system-wide, default parameters for the configuration and color options.

Note: For color monitors, users must set the TERM variable to **color or default** so that Proxy Agent screens will be in color.

1 Access the Proxy Agent MAIN MENU. In the command line:

- Type **configuration**
- Press **ENTER**

Result: The system accesses the Configuration application. Then, displays a blank command line on the Proxy Agent MAIN MENU.

2 In the command line on the Proxy Agent MAIN MENU:

- Type, **change user-interface**
- Press **ENTER**

Result: The system displays page 1 of the CHANGE USER-INTERFACE screen.

3 In the *Color Option* field on page 1,

- Press **Ctrl-Y** to display the Help list
- Select one of the options below:

  default (for color monitors)

  monochrome (default for black- and-white monitors)

  customize

- Press **ENTER** to change the option

4 In the *Audible Beep Tone?* field on page 1,

- Press **Ctrl-Y** to display the Help list.
- Select one of the options below:
  - **Y** (yes) to turn-on the beep tone (default)
  - **N** (no) to turn-off the beep tone
- Press **ENTER** to change the option

5 **Optional**. Complete the steps below to customize the colors of the screen elements on pages 2 through 4,

- Press **Ctrl-Y** to in each field to display the Help list
- Select an option
- Press **ENTER** to change the option
- Press **Ctrl-D** to access the next page

6 Execute ***one*** of the options (a or b) below:

a If users made any changes, press **Ctrl-E** to save the changes and exit the CHANGE USER-INTERFACE screen.

b If users do ***not*** want to make any changes, press **Ctrl-X** to exit the CHANGE USER- INTERFACE screen.

Result: The system exits the screen and displays the Proxy Agent MAIN MENU.

15 I/O Setup Application

Introduction

The **I/O Setup** application provides direct access to the Devices file and the Dialers file:

- The ***Devices*** file contains the ***tty port settings*** for the communication devices that connect the Proxy Agent to the managed nodes.
- The ***Dialers*** file contains the device name and ***dial strings*** that the Proxy Agent uses to dial into the managed node.

CAUTION:

Avaya recommends that users do ***not*** change the settings in the Devices file unless their business needs require modification of the file. Only the system administrator or root user should edit the Devices and Dialers files.

Installation process

During the installation process, the installation script updates the Devices file and the Dialers file with default parameters for this release.

Access the IO_Setup Folder

The DEFINITY Proxy Agent installation process configures and adds the Devices file and the Dialers file. Generally, there is no need to access these files. However, if necessary, system administrators and root users can edit the **Devices** file and the **Dialers** file from the **IO_Setup folder** on the UnixWare Desktop.

Root users can also edit these files from the UNIX shell.

CAUTION:
Avaya recommends that users do ***not*** change the settings in the Devices file unless their business needs require modification of the file. Only the system administrator or root user should edit the Devices and Dialers files.

Procedure

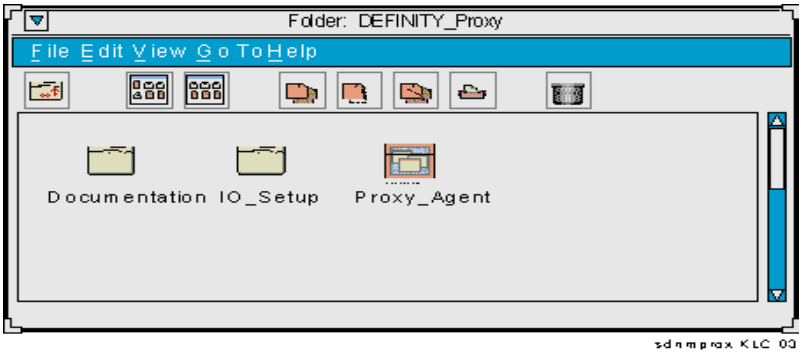
Complete the procedure below to access IO_Setup folder on the Desktop.

1. Log in as a ***root*** user and access the UnixWare Desktop.

   Result: The system displays the *Desktop*.

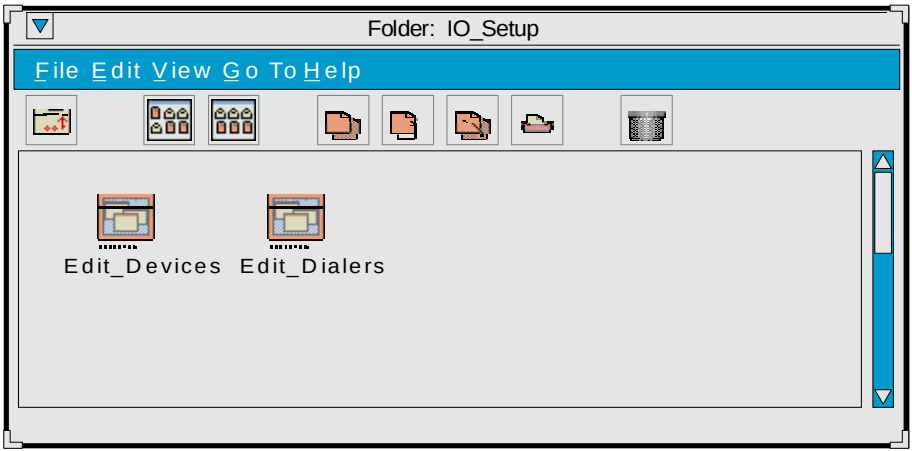
2. Click the **DEFINITY_Proxy** icon.

   Result: The system displays the *DEFINITY_Proxy* folder.


Folder: DEFINITY_Proxy
File Edit View Go To Help
Documentation
IO_Setup
Proxy_Agent
sdnmprox KLC 03

3 Click the **IO_Setup** icon.

Result: The system IO_Setup folder below:



sdnmsetu KLC 03

4 Double-click either the **Edit_Devices** icon or the **Edit_Dialers** icon.

Result: The system displays a window and prompt for your root password.

CAUTION:

Avaya recommends that users do ***not*** change the settings in the Devices file unless their business needs require modification of the file. Only the system administrator or root user should edit the Devices and Dialers files.

5 At the *Password* field,

- Enter your [**root password**]
- Press **ENTER**

Result: The system displays the selected file.

6 For special instructions to edit the Devices file or the Dialers file, refer to Chapter 15, "I/O Setup Application".

7 To exit file from the Menu Bar, select **File > Exit.**

Result: The system displays the DEFINITY_Proxy folder.

Devices File

The ***Devices*** file contains the updated ***tty port settings*** for the communication devices that are described below.

The Avaya-certified ***alarm receiver*** devices include the following types:

- AT&T 2224CEO
- AT&T 3710 Dataport
- AT&T 3715 Dataport Express
- U.S. Robotics Sportster 33.6
- US Robotics Sportster 56K
- Paradyne Compusphere 3820

The Avaya-certified ***alarm sender*** devices include the following types:

- AT&T 3710 Dataport
- AT&T 3715 Dataport Express
- U.S. Robotics Sportster 33.6
- US Robotics Sportster 56K

Note: Avaya does ***not*** certify the AT&T 2224CEO as an ***alarm sender*** device for Proxy Agent to forward alarms to INADS.

CAUTION:
Avaya recommends that users do ***not*** change the settings in the Devices file unless their business needs require modification of the file.

Dialers File

This section contains the contents of the Dialers file and the procedure to edit the dial strings.

Devices and Dial Strings

The information below is an excerpt from the Dialers file that contains the list of the Avaya-certified devices and the dial string for each device function.

##

Start DG3PA DIAL STRINGS: (DONT MODIFY THIS LINE)

This section is maintained by the DEFINITY G3 Proxy Agent Installation scripts. Any changes manually made to this section may be lost on upgrades.

PA prefix is for Proxy Agent switch/ecs access

PAD prefix is for Proxy Agent switch/ecs access with Terminal Servers that fail to drop DTR correctly during a disconnect

AS prefix is for Proxy Agent Alarm Sending/Forwarding

AR prefix is for Proxy Agent Alarm Reception modem options

RM prefix is for Avaya TSC/ITAC Remote Maintenance Modem options

16 Maintenance and Troubleshooting

Introduction

contains utilities and logs to allow the system administrator to maintain the Proxy Agent and troubleshoot problems with alarms, traps, and system errors.

The chapter also contains an example of a Test Trap script to test an event configuration on the Network Management System (NMS).

The Proxy Agent contains several maintenance and troubleshooting options that only the **system administrator** or root user should execute to manage the Proxy Agent.

These options include tasks listed below:

- Add new devices to the Proxy Agent ***after*** the Proxy Agent has been installed
- Change settings for SNMP access ***after*** the Proxy Agent has been installed
- View alarm and error logs to ***troubleshoot*** the receiving and forwarding of alarms
- Use the ***alarm testing tools*** to simulate alarm and trap reception on the Proxy Agent and test the event configuration on the Network Management System (NMS)

Add New Devices

The system administrator or root user can add new communications devices to the Proxy Agent from the **/usr/bin/dpa_portadm** file.

System administrators must access the file and respond to the prompts. The prompts are identical to the prompts in the installation script for the function and the device type.

For more information, refer to the sections listed below:

- "Function Prompt" on page 91.
- "Device Type Prompt" on page 93.
- "Serial I/O Subsystem" on page 95.
- "Upgrading from DPA 3.0 and Later" on page 107.

Change Settings for SNMP Access

The system administrator or root user must ***reinstall*** the Proxy Agent in order to change settings for SNMP access.

Refer to the procedure to "Upgrading from DPA 3.0 and Later" on page 107. It is not necessary to remove the Proxy Agent.

At the installation prompts listed below, change the ***current setting*** for:

- SNMP Polling
- SNMP Traps, ***if*** SNMP Polling is disabled
- SNMP Set Capability

For more information about the SNMP prompts, refer to the sections below:

- "SNMP Polling Prompt" on page 90
- "SNMP Traps Prompt" on page 90
- "SNMP Set Capability Prompt" on page 91

TSC service

The Technical Services Center (TSC) can change the settings for the SNMP access prompts without reinstalling the Proxy Agent.

The TSC will ***bill*** the customer for this service on a time and materials basis.

View Alarm and Error Logs

The Proxy Agent maintains a number of alarm and error logs in the **agent** directory. System administrators can view the logs to troubleshoot problems with receiving and forwarding alarms.

To access the logs, edit the directories in the table below.

Table 28. Alarm and error logs

Log	Directory
Event log for alarm ***receiver*** device	/usr/g3-ma/agent/logs/alarmlog
Error log for alarm ***receiver*** device	/usr/g3-ma/agent/logs/errorlog
Alarms scheduled to be sent to INADS or other destinations	/usr/g3-ma/agent/alarms/alrms_rcvd.log
Alarms successfully sent to INADS or other destinations	/usr/g3-ma/agent/alarms/alrms_sent.log
Error log for alarm ***sender*** device	/usr/g3-ma/agent/alarms/alarms.log

Use Alarm Testing Tools

The Proxy Agent contains a set of Trap Test tools. System administrators can use these tools to:

- Simulate the alarm reception on the Proxy Agent and
- Test the trap reception and event configuration on the Network Management System (NMS)

The Proxy Agent contains a script for each product type. All scripts reside in the **/usr/g3-ma/bin** directory.

Trap Test scripts

The table below contains the command and function for the trap tests scripts:

Table 29. Trap Test Scripts

Command	Function
TrapTest	DEFINITY and MCU traps
CMSTrapTest	Call Management System (CMS) traps
ADXTrapTest	DEFINITY AUDIX traps
IADTrapTest	Intuity AUDIX traps
INTTrapTest	Intuity Interchange traps
CVSTrapTest	CONVERSANT traps

Procedure

The procedure below uses the DEFINITY TrapTest tool as an example of the format for the alarm testing tools. For other products, the script for the TrapTest tool is slightly different.

Note: For the tools to work, the Proxy Agent must be running and the ALARM DEVICES and MANAGED NODES screens must be properly administered.

1 At the UNIX shell, log in to the root (/) directory.

2 Access a test script. The steps below show an example of a TrapTest script:

- Type **/usr/g3-ma/bin/TrapTest**
- Press **ENTER**

Result: The system opens the file and displays the script for the selected trap test, as shown in the example below. The fields may contain the data from the previous test.

```
DEFINITY Proxy Agent Alarm Trap Test Tool

Current DEFINITY Node Name: NewYork
Current DEFINITY Alarm ID: 1111111111

0) Alarm Clear Trap [alarmClear:0]
2) Major Alarm Trap [alarmMajor:2]
3) Minor Alarm Trap [alarmMinor:3]
5) Major External Alarm Trap [extalarmMajor:5]
6) Minor External Alarm Trap [extalarmMinor:6]
7) TSC Dispatch Alarm Trap [alarmDispatch:7]
8) TSC Close Alarm Trap [alarmClose:8]
9) Restart Notification Trap [alarmRestart:9]
```

```
C) Change DEFINITY alarming from
H) Help
Q) Quit

Send which trap?:
```

3 **Select the Change Option**. To change to a different DEFINITY node name, go to the field: `Send which trap?`:

- Type **C** (change)
- Press **ENTER**

Result: The system displays the message:

```
Changing DEFINITY that the Alarms will be coming
from... You must set the Node Name and the Alarm ID for
the DEFINITY you wish alarms to be associated with.
The Name and ID must match those specified in the
managed node form of the Proxy Agent for the switch you
wish to send traps for.

Enter new DEFINITY Node Name:
Enter new DEFINITY Alarm ID:
```

4 **Enter a New Node Name**. As shown in the example below, type a new node name and the alarm ID for a DEFINITY system. Press **ENTER** after each entry:

```
Enter new DEFINITY Node Name: jupiter
Enter new DEFINITY Alarm ID: 1222222222
```

Result: The system displays the new node name and alarm ID in the fields and displays the prompt to select a trap test, as shown below.

```
DEFINITY Proxy Agent Alarm Trap Test Tool

Current DEFINITY Node Name: jupiter
Current DEFINITY Alarm ID: 1222222222

0) Alarm Clear Trap [alarmClear:0]
2) Major Alarm Trap [alarmMajor:2]
3) Minor Alarm Trap [alarmMinor:3]
5) Major External Alarm Trap [extalarmMajor:5]
6) Minor External Alarm Trap [extalarmMinor:6]
7) TSC Dispatch Alarm Trap [alarmDispatch:7]
8) TSC Close Alarm Trap [alarmClose:8]
9) Restart Notification Trap [alarmRestart:9]
C) Change DEFINITY alarming from
H) Help
Q) Quit

Send which trap?:
```

5 **Select a trap option**. As shown in the example below, type a number (0-9) to select a trap test and press **ENTER**.

```
Send which trap?: 5
```

Result: The system displays the message and the fields shown in the example in the next step.

6 **Execute the trap test**. Users can enter ***any*** data in the in the free-form fields. The system does not validate the fields. As shown in the example below, type data in each field and press **ENTER** after each entry:

```
Enter alarm trap information for External trap
MIB oid names are show in brackets
Switch [g3clientExternalName]: jupiter
Proxy Agent Sequence Number [g3alarmsAlarmNumber]:
0000000012
Switch Port Location [g3alarmsPort]: 01C1201
On-Board Alarm Flag [g3alarmsOnBrd]: Y
External Device Alt. Name [g3extdevAltName]: ENVUPS1
External Device Description [g3extdevDescription]:
PROXY AGENT UPS
External Device ID [g3extdevID]: 2001
External Device Building [g3extdevBuilding]: Building 30
External Device Address [g3extdevAddress]: 1234 Main St
```

Result: The system displays the message: `Alarm Trap Emulation Successful`

Then, the system displays the UNIX prompt.

7 Access the NMS to view the results of the test. Repeat this procedure to execute other trap tests.

Index