



Games and Services Application Server Installation Guide

Please Read

Important

Please read this entire guide. If this guide provides installation or operation instructions, give particular attention to all safety statements included in this guide.

Notices

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Safety Precautions

Read, Retain, and Follow These Instructions

Carefully read all safety and operating instructions before operating this product. Follow all operating instructions that accompany this product. Retain the instructions for future use. Give particular attention to all safety precautions.

Warning and Caution Icons



WARNING:

Avoid personal injury and product damage! Do not proceed beyond any icon until you fully understand the indicated conditions.

The following icons alert you to important information about the safe operation of this product:



You will find this icon in the literature that accompanies this product. This icon indicates important operating or maintenance instructions.



You may find this icon affixed to this product and in this document to alert you of electrical safety hazards. On this product, this icon indicates a live terminal; the arrowhead points to the terminal device.



You may find this icon affixed to this product. This icon indicates a protective earth terminal.



You may find this icon affixed to this product. This icon indicates excessive or dangerous heat.



You may find this symbol affixed to this product and in this document. This symbol indicates an infrared laser that transmits intensity-modulated light and emits invisible laser radiation and an LED that transmits intensity-modulated light.

Heed All Warnings

Adhere to all warnings on the product and in the operating instructions.

Avoid Electric Shock

Follow the instructions in this warning.



WARNING:

To reduce risk of electric shock, perform only the instructions that are included in the operating instructions. Refer all servicing to qualified service personnel.

Servicing



WARNING:

Avoid electric shock! Opening or removing the cover may expose you to dangerous voltages.

Do not open the cover of this product and attempt service unless instructed to do so in the operating instructions. Refer all servicing to qualified personnel only.

Cleaning, Water, Moisture, Open Flame

To protect this product against damage from moisture and open flames, do the following:

- Before cleaning, unplug this product from the AC outlet. Do *not* use liquid or aerosol cleaners. Use a dry cloth for cleaning.
- Do not expose this product to moisture.
- Do not place this product on a wet surface or spill liquids on or near this product.
- Do not place or use candles or other open flames near or on this product.

Ventilation

To protect this product against damage from overheating, do the following:

- This product has openings for ventilation to protect it from overheating. To ensure product reliability, do not block or cover these openings.
- Do not open this product unless otherwise instructed to do so.
- Do not push objects through openings in the product or enclosure.

Placement

To protect this product against damage from breakage, do the following:

- Place this product close enough to a mains AC outlet to accommodate the length of the product power cord.
- Route all power supply cords so that people cannot walk on, or place objects on, or lean objects against them. This can pinch or damage the cords. Pay particular attention to cords at plugs, outlets, and the points where the cords exit the product.
- Make sure the mounting surface or rack is stable and can support the size and weight of this product.



WARNING:



Avoid personal injury and damage to this product! An unstable surface may cause this product to fall.

When moving a cart that contains this product, check for any of the following possible hazards:

- Move the cart slowly and carefully. If the cart does not move easily, this condition may indicate obstructions or cables that you may need to disconnect before moving this cart to another location.
- Avoid quick stops and starts when moving the cart.
- Check for uneven floor surfaces such as cracks or cables and cords.



WARNING:



Avoid personal injury and damage to this product! Move any appliance and cart combination with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart to overturn.

Fuse

When replacing a fuse, heed the following warnings.



WARNING:

Avoid electric shock! Always disconnect all power cables before you change a fuse.



WARNING:

Avoid product damage! Always use a fuse that has the correct type and rating. The correct type and rating are indicated on this product.

Grounding This Product (U.S.A. and Canada Only)

Safety Plugs

If this product is equipped with either a three-prong (grounding pin) safety plug or a two-prong (polarized) safety plug, do not defeat the safety purpose of the polarized or grounding-type plug. Follow these safety guidelines to properly ground this product:

- For a 3-prong plug (consists of two blades and a third grounding prong), insert the plug into a grounded mains, 3-prong outlet.

Note: This plug fits only one way. The grounding prong is provided for your safety. If you are unable to insert this plug fully into the outlet, contact your electrician to replace your obsolete outlet.

- For a 2-prong plug (consists of one wide blade and one narrow blade), insert the plug into a polarized mains, 2-prong outlet in which one socket is wider than the other.

Note: If you are unable to insert this plug fully into the outlet, try reversing the plug. The wide blade is provided for your safety. If the plug still fails to fit, contact an electrician to replace your obsolete outlet.

Safety Precautions

Grounding Terminal

If this product is equipped with an external grounding terminal, attach one end of an 18-gauge wire (or larger) to the grounding terminal; then, attach the other end of the wire to an earth ground, such as an equipment rack that is grounded.

20050727 Headend/Rack

About This Guide

Introduction

This guide describes the Games and Services Application Server. Refer to this guide for installing and troubleshooting your Games and Services Application Server.

Audience

This document is written for the following audiences:

- DBDS system administrators
- Cisco® Services engineers
- Call-center personnel
- System operators who are responsible for maintaining Application Server applications

Document Version

This is the second release of this guide.

1

Games and Services Application Server Hardware Installation

Introduction

This chapter describes the Games and Services Application Server and outlines the procedures required for installing the server hardware.

After installing the server into the rack, see the *Front Panel Description* (on page 10) and *Back Panel Description* (on page 12) sections to become familiar with the device.

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Overview of the Games and Services Application Server

Introduction

The Games and Services Application Server is an application server for downloading games, information services, and program guide functionality to set-tops. Availability of each game or service can be managed from the Games and Services Application Server via the BFS Carousel.

Once you have installed the Application Server in your system, you will be able to enable these applications for subscribers to use.

Games

Interactive game applications are downloaded from content providers to the application server.

Information Services

Information services such as news, weather, stock quotes, and horoscopes are provided from content providers via RSS feeds to the application server.

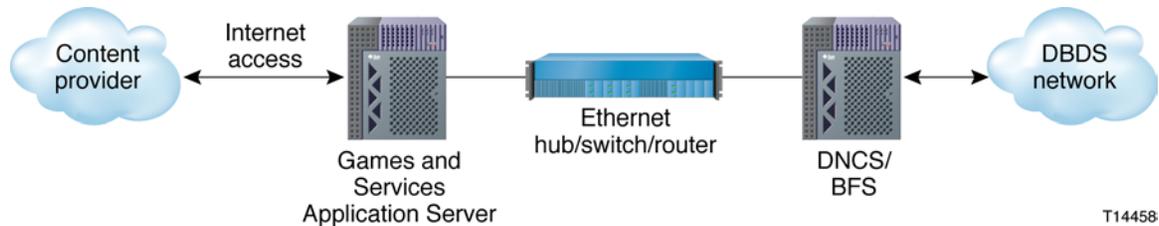
Program Guide

Navigational mechanisms for the program guide, menus, scheduling, and blocking are included in the application software.

System Overview

A typical network configuration is illustrated (below), followed by brief descriptions of the system components.

Typical Network Configuration



T14458

Component	Description
Games and Services Application Server	The Games and Services Application Server is the key storage device for a suite of On Demand services providing additional revenue opportunities to Service Providers. The Server stores games and services applications, data for the applications, and graphics for portions of the user interface that run on the Cisco set-tops. The Server interfaces with the Broadcast File System (BFS) of the DNCS to allow the applications, data, and images to be sent to the set-top over a broadcast channel. The Server can be configured to fetch data for the applications on a schedule as determined by the Service Provider. This allows, for instance, a weather application to have updated weather information every 15 minutes.
DNCS	Digital Network Control System. A centralized server located at the Digital Broadband Delivery System (DBDS) headend, its primary function is to manage digital services and service delivery to RF set-tops in the DBDS cable network. The DNCS monitors and controls DBDS network elements and provides management, provisioning, and configuration through the DBDS to RF set-tops and other compatible set-top converters, and provisions sessions on the PCG. The DNCS also hosts the PowerKEY® conditional access system (CAS) that enables secure delivery of services to set-tops and provides support for set-top applications via the BFS. The DNCS can be offloaded by the Regional Network Control Server (RNCS) which supports BFS and EAS delivery at a remote site.

Component	Description
BFS	<p>Broadcast File System. A software module within the DBDS that is the primary means of communication between the DNCS and Digital Home Communications Terminals (DHCTs). Using a data carousel mechanism, the BFS stores files associated with applications that are installed and registered on the DNCS or the application server. These files are then transmitted frequently to DHCTs.</p> <p>Although many applications are pre-installed on the DNCS or application server, additional data sources (Cisco or third-party) associated with applications can be added to or deleted from the BFS data carousel as needed.</p>

The Games and Services Application Server Hardware

Introduction

The Games and Services Application Server is a rack-mounted server designed to work seamlessly within a number of different architectures.

We occasionally update the Games and Services Application Server hardware to take advantage of newer technologies as they become available. This guide presents examples based on a typical server configuration.

Refer to the hardware installation guide provided with your Games and Services Application Server server for specifics on how to physically install the server and for safety recommendations regarding server placement and cooling requirements.

Before beginning your installation, read the *Safety Precautions* (on page v) at the beginning of this document. Pay particular attention to the **Placement** topic in the *Safety Precautions* section.

Site Requirements

Your site must meet the following requirements before you proceed with the installation:

- The hardware must be installed in a standard four-post rack. See *Rack Mounting* (on page 6) in the next section for the rack requirements.
- Approved power sources:
 - North American - 90 to 120V AC (continuous)
 - International - 220 to 240V AC (continuous)
- Racking and environment temperature: Inside rack temperature must be maintained at between 0° and +50°C (32° and 122°F)

Rack Mounting

Installing the Games and Services Application Server in the Rack

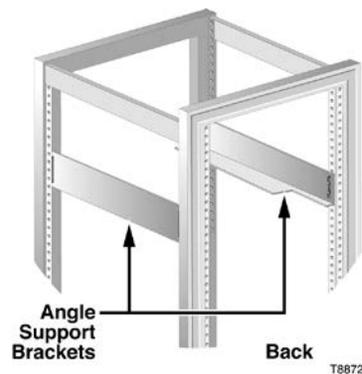
Follow these steps to install the Games and Services Application Server in the rack using the angle support brackets.



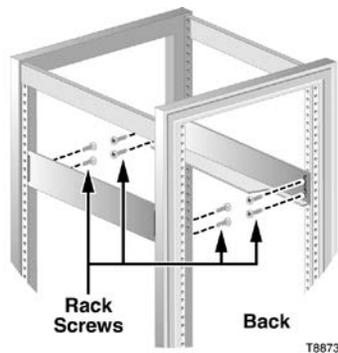
CAUTION:

Avoid personal injury and damage to this product! Be sure to support the server from underneath until it is securely positioned in the rack. Failure to do so could result in the server falling to the floor. The server could be damaged and you could be injured as a result.

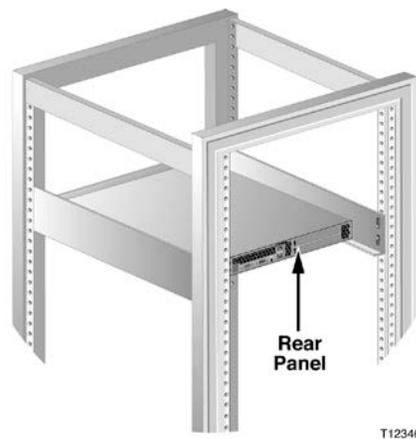
- 1 Make sure that the site requirements are met as outlined in the previous section.
- 2 Determine the approximate position in the equipment rack where you want the bottom of the Games and Services Application Server to be located. Then, position the angle support brackets in the rack. The cut-outs in the brackets must face toward the back of the rack as shown in the following illustration.



- 3 Attach the angle support brackets to the equipment rack using rack screws or other mounting hardware that came with your rack.



- 4 Slide the Games and Services Application Server into the equipment rack and onto the angle support brackets from the front of the rack until the front panel mounting flanges on the Games and Services Application Server are flush with the front mounting rails of the rack.



- 5 While holding the Games and Services Application Server in this position, make sure that the bottom of the unit is supported by the angle support brackets on both sides along the entire depth of the Games and Services Application Server chassis.
- 6 Check that the Games and Services Application Server front panel thumbscrews on both sides align with the proper mounting holes on the equipment rack.

If the thumbscrews...

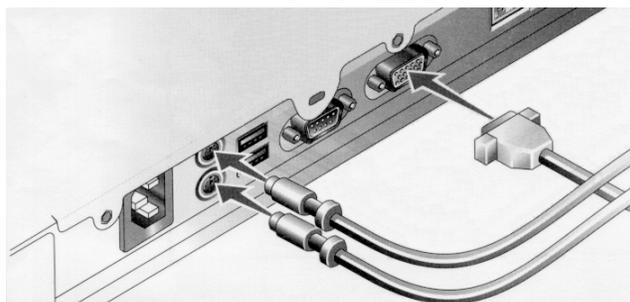
THEN...

align with holes in the rack

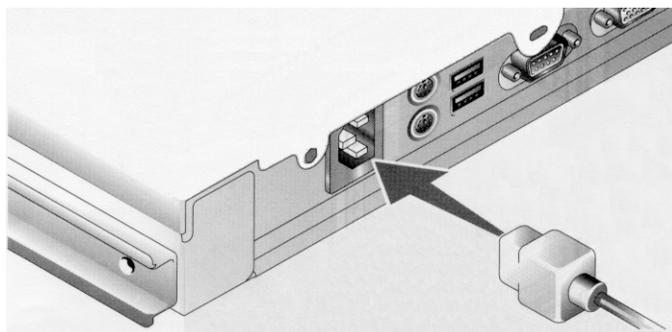
carefully remove the Games and Services Application Server from the rack and go to step 7.

do not align with holes in the rack carefully remove the Games and Services Application Server from the rack and repeat steps 4 and 5 until the thumbscrews align correctly, and the weight of the Games and Services Application Server is fully supported by the angle support brackets along both sides of the Games and Services Application Server.

- 7 Securely tighten the rack screws (or other mounting hardware) that hold the angle support brackets in the rack.
- 8 Re-insert the Games and Services Application Server into the equipment rack and onto the angle support brackets from the front of the rack until the front panel mounting flanges of the Games and Services Application Server are flush with the front mounting rails of the rack.
- 9 Tighten the two thumbscrews to secure the server in the rack.
Important: Verify that the weight of the server is still supported by the angle support brackets on both sides. If not, go back to step 5.
- 10 If you plan to use the keyboard, mouse, and monitor, attach them to their respective rear panel connectors.



- 11 Connect the input power cord to the rear panel.



- 12 Attach the front panel bezel if it is available and if you plan to use it.

Additional Games and Services Application Server Requirements

To install and configure the Games and Services Application Server software, the Application Server must have a standard keyboard and monitor connected to it.

Removing the Games and Services Application Server from the Rack

Follow these steps to remove the Games and Services Application Server from the rack.



CAUTION:

Avoid personal injury and damage to this product! Be sure to support the server from underneath while removing it from the rack. Failure to do so could result in the server falling to the floor. The server could be damaged and you could be injured as a result.

Note: You do not need to remove the optional front bezel to install or remove the system from the rack.

- 1 Turn off the system and attached peripherals.
- 2 Disconnect the system from the electrical power.
- 3 Disengage both thumbscrews from the front panel of the chassis.
- 4 Carefully pull the system forward and out of the rack.

Front Panel Description

Introduction

The Games and Services Application Server is a rack-mounted unit. The front panel is shown below (without the front bezel - image may vary from actual product and specification).

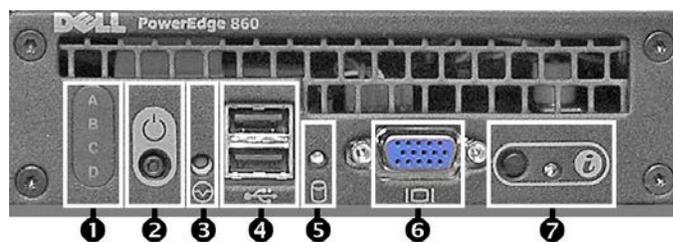


The following illustration shows the front panel with the bezel installed.



Front Panel Connectors and Controls

The Games and Services Application Server front panel connectors and controls are shown below (image may vary from actual product and specification).



The following table describes front panel connectors and controls from left to right.

Component	Description
1. Diagnostic Indicator	The four diagnostics indicators display error codes during system startup*
2. Power Button	On/Off button
3. Restart Switch	System restart
4. USB 2.0 Connectors (2)	Peripheral equipment connections
5. Hard Drive Activity LED	Hard drive access indication
6. Video Connector	Monitor connection
7. System Identification Indicator	System ID light. Push to illuminate light on both front and rear panels

*For details about system diagnostics refer to the online document, *Dell™ PowerEdge™ R200 Systems Hardware Owner's Manual*, which is located at:
<http://support.dell.com/support/edocs/systems/per200/en/PDF/NM176MR.pdf>

Back Panel Description

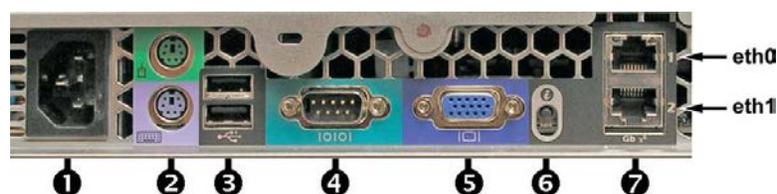
Introduction

The Games and Services Application Server is a rack-mounted unit. The back panel is shown below (image may vary from actual product and specification).



Back Panel Connectors

The Games and Services Application Server back panel connectors are shown below (image may vary from actual product and specification).



The following table describes the back panel connectors from left to right.

Component	Description
1. Power Connector	AC power cord connection
2. PS/2 Connectors (2)	Keyboard and mouse connections
3. USB 2.0 Connectors (2)	Peripheral device connection
4. Serial Port Connector	Serial I/O connection
5. Video Connector	Monitor connection
6. System Identification Indicator	System ID light. Push to illuminate light on both front and rear panels
7. Ethernet Connectors (2)	Network connections: 1 = eth0 2 = eth1

Connect the Ethernet Port for DNCS Control

Purpose

In order to operate properly, the Games and Services Application Server must be connected to the DNCS control network. This connection allows operators and system administrators to use the DNCS to perform software downloads, provision the Application Server, set up sessions, monitor alarms, and check system performance. The unit cannot operate autonomously without this connection.

Connecting the Ethernet Port for DNCS Control

Important: Make certain to allow enough cable length to be able to slide the Application Server out of the rack for repairs. Sufficient cable length allows you to make some repairs without powering off the unit and disrupting services to customers.

Follow these steps to connect the Application Server to the Ethernet network.

- 1 Connect the ETHA port on DNCS directly to the control network hub, switch, or router.
- 2 Connect the 10/100BASE-T port on the Application Server to the Ethernet hub, switch, or router, using Ethernet 10/100BASE-T wiring with RJ-45 connectors.
Note: Use a screened or shielded cable, CAT-5 or better.
- 3 Go to *Connect the Ethernet Port for Internet Access* (on page 14).

Connect the Ethernet Port for Internet Access

Purpose

In order to support Games and Services and other third-party applications, the Application Server must be connected to the Internet. This connection allows Application Server to perform software downloads of games and services.

Connecting the Ethernet Port for DNCS Control

Important: Make certain to allow enough cable length to be able to slide the Application Server out of the rack for repairs. Sufficient cable length allows you to make some repairs without powering off the unit and disrupting services to customers.

Follow these steps to connect the Application Server to the Internet.

- 1 Connect the ETH2 port on the Application Server directly to the Internet access port.
- 2 Go to *System Setup* (on page 15).

System Setup

Once you have mounted and connected the Games and Services Application Server into the network, you need to set up the Games and Services Application Server with the peripherals necessary for initial launch and power connection.

Note: The keyboard, video and mouse are only required for initial setup.

- 1 Connect a monitor using the VGA connection.
- 2 Connect a USB or PS/2 keyboard and mouse to the rear of the server.
- 3 Attach the power cord to the rear of the server and to (North American) 120 V/60 Hz electrical power or (International) 220 V/50 Hz electrical power.

2

Configuring the Application Server Interfaces

Introduction

The Application Server ships with the operating system and application software pre-installed.

This chapter provides instructions to configure your Application Server server with the applicable network interfaces.

Note: If the operating system does not launch upon initial startup, go to *Install the Platform Software* (on page 26) in the *Troubleshooting* chapter.

In This Chapter

- Configure the Ethernet Ports..... 18
- What's Next?..... 20

Configure the Ethernet Ports

Before You Begin

Obtain the following network information from the network administrator for your system network interfaces and record it in the space provided. You will need this information to complete the procedures in this chapter.

Application Server Network IP Address:	_____
Application Server Netmask IP Address:	_____
Application Server Gateway IP Address:	_____
Internet Access Network IP Address:	_____
Internet Access Netmask IP Address:	_____
Internet Access Gateway IP Address:	_____
Domain Name System (DNS) IP Address:	_____
DNCS Network IP Address:	_____
DNCS Netmask IP Address:	_____
DNCS Gateway IP Address:	_____

Configure the DNCS Connection

Complete the following steps to configure the Application Server to DNCS Ethernet port connection.

- 1 Power on the Application Server. The system prompts you to enter a login ID.
- 2 Type **root** and press **Enter**. The system prompts you to enter a password.
- 3 Type **generic** and press **Enter**.
- 4 Type **vi** to open a text editor.
- 5 Type **/etc/sysconfig/network-scripts/ifcfg-eth0** and press **Enter**.
- 6 Update the following parameters with the corresponding value you recorded in the previous section.
 - **IPADDR**
 - **NETMASK**
 - **GATEWAY**
- 7 Type **:wq** and press **Enter** to save and close the file.

Configure the Internet Access Connection

Complete the following steps to configure the Application Server-to-Internet Ethernet port connection.

Note: The eth1 port on the Application Server will be connected to the public network to support Internet downloads. The customer site network administrator is responsible for securing the network using a firewall and intrusion detection system (IDS).

- 1 Type `/etc/sysconfig/network-scripts/ifcfg-eth1` and press **Enter**.
- 2 Update the following parameters with the corresponding value you recorded in the previous section.
 - `IPADDR=<Internet Access Network IP Address>`
 - `NETMASK=<Internet Access Netmask IP Address>`
 - `GATEWAY=<Internet Access Gateway IP Address>`
- 3 Type `:wq` and press **Enter** to save and close the file.

Configure the Domain Name Server

Complete the following steps to configure the Domain Name System (DNS) that will be used to translate domain names into IP addresses.

- 1 Type `/etc/resolv.conf` and press **Enter**.
- 2 Create a new file named `S96routeadd`.
- 3 Type the following command line:

```
/sbin/route add -net <dncs network> netmask <dncs netmask> gw  
<application server gateway>
```

Note: Replace the variables indicated within the <> symbols with the information obtained earlier in this chapter.

- 4 Press **Enter** to execute the command.
- 5 Type `:wq` and press **Enter** to save and close the file.

Reboot the Server

Type `shutdown -y -g0 -i6` and press **Enter** to gracefully reboot the Application Server. The **platform login:** prompt appears.

What's Next?

The Games and Services Application Server operates in a DBDS network and is managed by the DNCS.

The Application Server is compatible with DNCS Software Version i4.2.2.3. Refer to *Configuring the PowerKEY DVB System for System Release i4.2.2* (part number 4017650 Rev B) to upgrade the DNCS and for information to configure the BFS to support games and services.

When you have completed the DNCS upgrade and configured the BFS to support games and services, continue with *Start the Games and Services Application Server* (on page 21).

3

Start the Games and Services Application Server

Introduction

This chapter includes procedures to start the web server, align Source IDs with the DNCS, and initiate scripts and cronjobs necessary for the Games and Services Application Server to operate properly.

Note: Perform the procedures in this chapter after you have completed configuring the Ethernet ports and set up the BFS to support the Games and Services Application Server.

In This Chapter

- Start the Web Server 22
- Change the Source IDs 23
- Initiate Scripts and cronjobs 24

Start the Web Server

Complete the following steps to start the web server.

- 1 If necessary, log in as root.
- 2 Navigate to the `apache-tomcat-5.5.27` directory.
- 3 Type `cd bin` and press **Enter**.
- 4 Type `./startup.sh` and press **Enter**. The system launches the web server.

Change the Source IDs

Change the Source IDs for the bfsSettings.ini File

Complete the following steps to align the Source IDs in the DNCS for BFS Sources with the Source IDs in the bfsSettings.ini file of the Application Server.

- 1 Launch the DNCS Admin Console and navigate to the BFS Sources as follows:
 - a From the console, click **Application Interface Modules**.
 - b Click **BFS Admin**.
 - c Click **Sources Tab**.
- 2 If necessary, from the Application Server, log into the server as root.
- 3 Type `cd /opt/GoDB/GoDBAppServer/App` and press **Enter**.
- 4 Type `vi bfsSettings.ini` and press **Enter**.
- 5 Modify the values for following parameters to match the associated Source IDs in the DNCS:
 - **GoDBSID**
 - **GoDBAppSID**
 - **GoDBSrvsSID**
- 6 Press the **Esc** key, then type `:wq` and press **Enter** to save the file.
- 7 Type `cd ..` and press **Enter** to end the xterm session.

Initiate Scripts and cronjobs

Run the bfsconfig.sh Script

Complete the following steps to run the bfsconfig.sh script.

- 1 If necessary, open an xterm window on the Application Server and log in as root.
- 2 Navigate to the /opt/GoDB/GoDBAppServer directory.
- 3 Type **/bfsconfig.sh** and press **Enter**.

Start cronjobs

Complete the following steps to manually start cronjobs on the Games and Services Application Server.

- 1 Log in as root.
- 2 Type **crontab -u godb /opt/GoDB/GoDBAppServer/ini/crontab.ini** and press **Enter**.
- 3 Type **crontab -u godb -l** and press **Enter** to verify the cronjobs are running.

4

Troubleshooting and Common Tasks

Introduction

This chapter provides recommended solutions for troubleshooting installation-related problems and performing common tasks associated with maintenance or monitoring.

In This Chapter

- Installation-Related Problems 26
- Shut Down the Server 28
- Manage cronjobs 29

Installation-Related Problems

Introduction

Problem Description	Recommended Solution
Upon initial power up, the server does not launch the operating system.	Install the operating system platform software. Refer to <i>Install the Platform Software</i> (on page 26).
If the Application Server ever becomes corrupted or otherwise inoperable, you must re-install both the operating system platform software and the application software, in that order.	Install the operating system platform software. Refer to <i>Install the Platform Software</i> (on page 26). Then, proceed with <i>Install the Application Software</i> (on page 26).

Install the Platform Software

Complete the steps below to install the Application Server platform software for the first time.

- 1 Power on the Application Server and insert the Cisco Platform Installation CD.
- 2 From the boot prompt, type **godb** and press **Enter**. Upon successful completion of the OS installation, the platform CD is ejected automatically followed by an automatic reboot of the server.
- 3 When prompted for login ID, type **root** and press **Enter** to log into the server.
- 4 When prompted for password, type **generic** and press **Enter**. Upon successful login, the server is ready for the network interfaces to be configured.

Install the Application Software

Complete the following steps to install the application software.

- 1 Locate the application software version from the CD label and record it:
_____.
- 2 Power on the Application Server.
- 3 When prompted for login ID, type **root** and press **Enter** to log into the server.
- 4 When prompted for password, type **generic** and press **Enter**.
- 5 Insert the Games and Services Application Installation CD.
- 6 Did the system automatically mount the CD?
 - a If **yes**, skip to step 7.
 - b If **no**, type **mount /dev/cdrom /mnt** and press **Enter**.
- 7 Type **cd /mnt** and press **Enter**.

- 8 Is the rpm file is available?
 - a If **yes**, skip to step 9.
 - b If **no**, then complete the following steps to copy the rpm to a directory:
 - i Type **cp GoDBApps-1.02.7.i386rpm/home/godb** and press **Enter**.
 - ii Type **cd /home/godb** and press **Enter**.
 - iii Continue with step 9.
- 9 Type the following command line:

```
rpm -i GoDBApps.1.0-x.x.i386.rpm
```

Note: Replace the x values above with the application software version you are installing (recorded in step 1).

Example: If the application software version is 2.7, type

```
rpm -i GoDBApps.1.0-2.7.i386.rpm
```

- 10 Press **Enter**. Upon successful completion of the application installation, the application CD is ejected automatically followed by an automatic reboot of the server.

Note: If the system does not eject the CD automatically, type **cd /** and press **Enter**. Then, type **umount /mnt** and press **Enter**.
- 11 Remove the CD and store in a secure location.

Shut Down the Server

Graceful Shutdown with cronjobs Running

Execute the following command to shut down the Games and Services Application Server without stopping the cronjobs.

Type **shutdown -y g0 -i6** and press **Enter**.

Graceful Shutdown with cronjobs Stopped

Complete the following steps to stop the cronjobs; then perform a graceful shut down of the Games and Services Application Server.

- 1 Type **crontab -u godb -r** and press **Enter** to stop the cronjobs.
- 2 Type **shutdown -y g0 -i6** and press **Enter** to gracefully shut down the server.

Manage cronjobs

Verify cronjobs are Running

To verify the cronjobs are running, login in as root and then, type **crontab -u godb -l** and press **Enter**.

Stop cronjobs

Complete the steps below to stop cronjobs.

- 1 Log in as root.
- 2 Type **crontab -u godb -r** and press **Enter** to stop cronjobs.
- 3 Type **crontab -u godb -l** and press **Enter** to verify the cronjobs have stopped.

Start cronjobs

Complete the following steps to manually start cronjobs on the Games and Services Application Server.

- 1 Log in as root.
- 2 Type **crontab -u godb /opt/GoDB/GoDBAppServer/ini/crontab.ini** and press **Enter**.
- 3 Type **crontab -u godb -l** and press **Enter** to verify the cronjobs are running.

5

Customer Information

If You Have Questions

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.

Access your company's extranet site to view or order additional technical publications. For accessing instructions, contact the representative who handles your account. Check your extranet site often as the information is updated frequently.



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