COMPAQ

AlphaServer GS80/160/320

System Management Console User's Guide

Order Number: EK–GSCON–UG. A01

This manual provides information about using version 4.0 of the system management console for *Compaq AlphaServer* GS80/160/320 systems. This manual is for managers and operators of those systems.

Compaq Computer Corporation

First Printing, March 2002

FCC Notice

This equipment generates, uses, and may emit radio frequency energy. The equipment has been type tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC rules, which are designed to provide reasonable protection against such radio frequency interference.

Operation of this equipment in a residential area may cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Any modifications to this device—unless expressly approved by the manufacturer—can void the user’s authority to operate this equipment under part 15 of the FCC rules.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Compaq Computer Corporation may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods in order to maintain compliance with FCC Rules and Regulations.

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這是甲類的資訊產品，在居住的
環境中使用時，可能會造成射頻
干擾，在這種情況下，使用者會
被要求採取某些適當的對策。

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Canadian Notice

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Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms (in brackets are the equivalent international standards):

EN55022 (CISPR 22) - Electromagnetic Interference

EN50082-1 (IEC801-2, IEC801-3, IEC801-4) - Electromagnetic Immunity

EN60950 (IEC950) - Product Safety

Warning!

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Achtung!

Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten, in welchen Fällen der Benutzer für entsprechende Gegenmaßnahmen verantwortlich ist.

Attention!

Ceci est un produit de Classe A. Dans un environnement domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilisateur de prendre les mesures spécifiques appropriées.

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Preface

Intended Audience

This manual is for managers and operators of *Compaq AlphaServer* GS80/160/320 systems.

Document Structure

This manual uses a structured documentation design. Topics are organized into small sections, usually consisting of two facing pages. Most topics begin with an abstract that provides an overview of the section, followed by an illustration or example. The facing page contains descriptions, procedures, and syntax definitions.

This manual has six chapters and four appendixes:

- **Chapter 1, Getting Started with the System Management Console**, is an overview of the functions that are performed with the system management console.
- **Chapter 2, SMC Utilities**, describes the expunge, backup, and restore utilities and has directions for using them.
- **Chapter 3, ConsoleWorks**, contains information about using the application to manage the GS80/160/320 consoles.
- **Chapter 4, Compaq AlphaServer Partition Manager**, contains directions for using this application to partition the GS80/160/320 system.
- **Chapter 5, Graphical Configuration Utility**, has information about setting up and using the utility.
- **Chapter 6, Troubleshooting**, contains suggestions for basic troubleshooting.
- **Appendix A, Using the SMC Software CD**, provides the location of instructions for using this CD.

- **Appendix B, Compaq-Supplied Configuration Files for ConsoleWorks**, contains in-depth information about the ConsoleWorks configuration files.
- **Appendix C, SMC Hard Disk**, lists recommendations for use of the disk partitions and shows the directory structure.
- **Appendix D, ConsoleWorks Licenses**, contains information about licensing requirements.

Documentation Titles

Table 1 AlphaServer GS80/160/320 Documentation

Order Number	Title
QA–6GAAA–G8	AlphaServer GS80/160/320 Documentation Kit
EK–GS320–UG	*AlphaServer GS80/160/320 User's Guide*
EK–GS320–RM	*AlphaServer GS80/160/320 Firmware Reference Manual*
EK–GSPAR–RM	*AlphaServer GS80/160/320 Getting Started with Partitions*
EK–GS320–IN	*AlphaServer GS160/320 Installation Guide*
EK–GSR80–IN	*AlphaServer GS80 Installation Guide*
AG–RKSW*–BE	AlphaServer GS80/160/320 User Information CD
QA–6GAAB–G8	AlphaServer GS80/160/320 Service Documentation Kit
EK–GS320–SV	*AlphaServer GS80/160/320 Service Manual*
EK–GS320–RM	*AlphaServer GS80/160/320 Firmware Reference Manual*
AG–RKSZ*–BE	AlphaServer GS80/160/320 Service Information CD
EK–GSCON–IN	*AlphaServer GS80/160/320 System Management Console Installation Guide*
EK–GSCON–UG	*AlphaServer GS80/160/320 System Management Console User's Guide*
EK–GS320–UP	*AlphaServer GS160/320 Upgrade Manual*
EK–GSR80–UP	*AlphaServer GS80 Upgrade Manual*
EK–GS320–SP	*AlphaServer GS80/160/320 Site Preparation*
EK–GSHPG–RM	*AlphaServer GS160/320 CPU Online Addition and Removal*

Information on the Internet

Visit Compaq's *AlphaServer* site at www.compaq.com/alphaserver/site_index.html for more information about *AlphaServer* GS80/160/320 systems.

See ftp.digital.com/pub/Digital/Alpha/firmware/interim/smc/smc.html for more information about the system management console.

Chapter 1
Getting Started with the System Management Console

The system management console manages one or more GS80/160/320 systems. This manual is for V4.0 of the system management console.

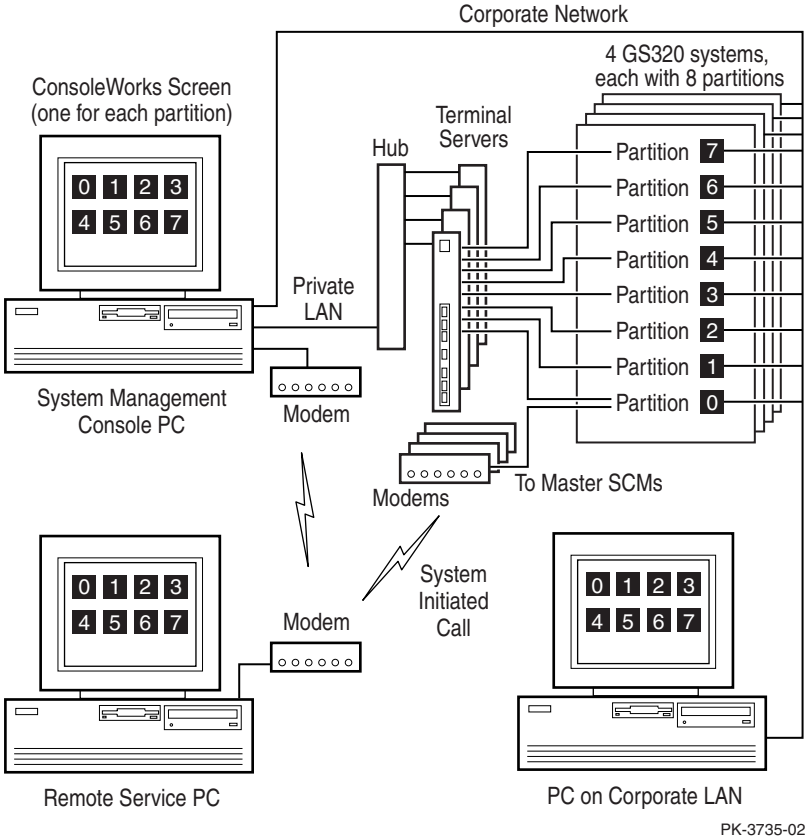
Sections in this chapter are:

- System Management Console Overview
- Logging on to the SMC
- Using the SMC Locally
- Using the SMC Remotely
- Naming Convention
- Keep in Mind

1.1 System Management Console Overview

The system management console makes it possible to operate one or more systems, some or all of which have multiple partitions, with a single console device.

Figure 1–1 System Management Console



With the system management console (SMC), one or more GS80/160/320 systems, each with a single or multiple console lines, can be managed from a single device. The SMC consists of a *Compaq Deskpro* PC, one or more DECserver 90M terminal servers, a network hub (if more than one GS80/160/320 system is managed by the SMC), and associated hardware and software. Figure 1–1 shows a typical setup.

The eight-port terminal server can connect to a maximum of eight partitions. The console for each partition can be displayed in a terminal window under ConsoleWorks.

The SMC PC contains two network interfaces. The first connects to the terminal server via a private LAN. The second connects to the corporate network, enabling remote operation of the SMC through a Web browser.

The SMC PC also has an attached modem, which can provide Compaq Services remote access to the GS80/160/320 system.

ConsoleWorks[1] provides a sophisticated console management environment for accessing the console of each partition, logging console line activity, and sending notification of console or system events. In addition to local access through the SMC, console lines can be accessed from any workstation connected to the corporate network by using a Web browser.

NOTE: *The PC that is supplied as part of the system management console is supported by Compaq only with the hardware and software configuration provided. To maintain this support, you may not add or replace any components except as provided by Compaq.*

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[1] The version of ConsoleWorks used on the SMC has been modified by the manufacturer, TECSys Development Incorporated (TDI), to comply with the *AlphaServer* Management Architecture. TDI's standard version of ConsoleWorks cannot be used as a replacement for this SMC application.

1.2 Logging on to the SMC

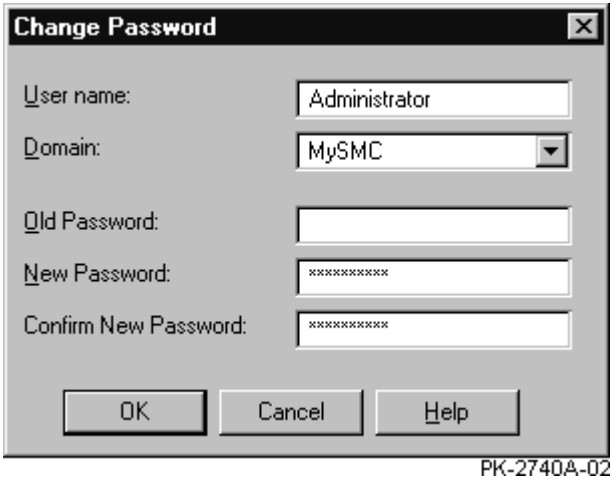
When logging on the first time, give the administrator account a password. Other accounts can be set up on the SMC system.

Figure 1-2 Windows NT Security Window

When the SMC system arrives, the administrator account has no password. You can give that account a password by following these instructions.

1. Press **Ctrl+Alt+Del**. The Windows NT Security window displays (Figure 1–2).
2. Click **Change Password...** The Change Password dialog box displays (Figure 1–3).
3. Enter the old password (in this case, the leave the field blank) and the new one, and enter the new password again to confirm it. (The passwords display as asterisks.) Click **OK**.

Figure 1-3 Change Password Dialog Box



1.3 Using the SMC Locally

Icons on the SMC desktop are used to run applications locally.

Figure 1-4 SMC Desktop

The SMC desktop has several icons that enable you to run applications and view documentation online. Table 1–1 shows the icons and describes the result of double-clicking each.

Table 1–1 SMC Desktop Icons

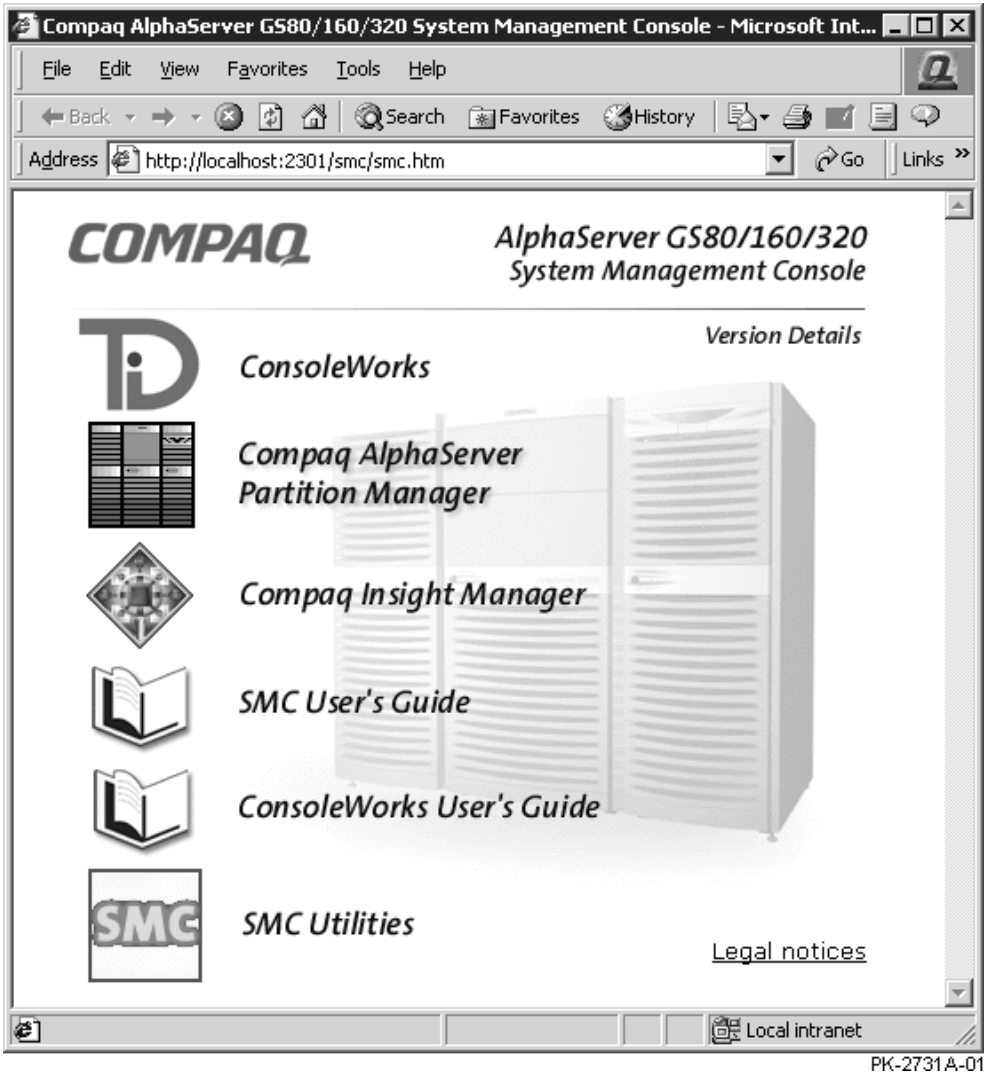
Icon	Function
	Runs ConsoleWorks, the console management application used by the SMC. See Chapter 3 for a quick reference and the *ConsoleWorks Administrator and User Guide* for more in-depth information. *NOTE: Since ConsoleWorks runs in the Internet Explorer browser, the first time you start it, the Internet Explorer Setup Wizard runs. You will need to supply connection information, including proxies if applicable.*
	Runs *Compaq AlphaServer* Partition Manager (CAPM), an application that simplifies the creation of partitions on GS80/160/320 systems. Chapter 4 describes this application.
	Contains several documents in PDF format. The Adobe Acrobat Reader, which is included on the SMC software CD, is required to view these documents.
	Displays version information for the SMC release and all software distributed on the SMC software CD.
	Opens the SMC Web page (see Section 1.4).

NOTE: *You can also use the SMC Web page locally. See Section 1.4 for more information.*

1.4 Using the SMC Remotely

The SMC Web page is used to run applications remotely.

Figure 1-5 SMC Web Page



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To display the SMC Web page from a system that is networked to the SMC system, open a Web browser and enter the address **`http://name.domain:2301/smc/smc.htm`**, where *name.domain* is the fully qualified address or the IP address of the SMC system on the corporate network; press Enter. The supported browsers are Internet Explorer V5.0 or later and Netscape V4.7 or later.[2] Browsers must have Java and JavaScript enabled.

You can run these applications and view these documents from the SMC Web page:

ConsoleWorks – ConsoleWorks is the console management application used by the SMC. See Chapter 3 for a quick reference and the *ConsoleWorks Administrator and User Guide* for more in-depth information.

Compaq AlphaServer **Partition Manager** (CAPM) – CAPM simplifies the creation of partitions on the GS80/160/320 system. Chapter 4 has instructions for using this application. CAPM requires that JRE 1.3.0_01 or later be installed on the system from which it is run.

Compaq **Insight Manager** (CIM) – Insight Manager is a system management product that monitors the operations of Compaq servers, workstations, desktops, and portables.

SMC User's Guide – This link is to a PDF file of the *AlphaServer GS80/160/320 System Management Console User's Guide* (this manual). PDF files are viewed online and can be printed. Acrobat Reader 4.05c or later is required.

ConsoleWorks User's Guide – This is a link to the PDF file for the *ConsoleWorks Administrator and User Guide*.

SMC Utilities – These are utilities that enable the user to reduce the size of the ConsoleWorks default.config file and to back-up and restore the SMC settings (see Chapter 2).

Version Details – You can check the software version of all SMC applications from the SMC Web page. To do this, click the Version Details link at the upper right of the page.

[2] Netscape V6.0 running on Windows 98 is not supported.

1.5 Naming Convention

An SMC system can support multiple GS80/160/320 systems. Each system has a maximum of eight consoles. The names given to systems and consoles, along with IP numbers, are shown here.

Table 1-2 Console Names and IP Port Numbers

Console Name	IP Port	Console Name	IP Port
*_CONSOLE1	2001	*_CONSOLE5	2005
*_CONSOLE2	2002	*_CONSOLE6	2006
*_CONSOLE3	2003	*_CONSOLE7	2007
*_CONSOLE4	2004	*_CONSOLE8	2008

* = system name from Table 1–3

The number of consoles in a system depends on the system type and its configuration. A GS80 system can have a maximum of two consoles, while a GS160 system can have up to four and a GS320 system a maximum of eight. See Appendix D for information on console licenses.

Each console name is a concatenation of the system name (Table 1–3) and the console number. For example, the second console in system ASGS23 is named ASGS23_CONSOLE2. Consoles are numbered consecutively, and each corresponds to an IP port number unique within the system. The names and IP port numbers for the consoles are configured in Access Server Manager at installation. IP port numbers are used by ConsoleWorks to communicate with the consoles.

Table 1-3 System Names and IP Host Numbers

System Name	IP Host	System Name	IP Host
ASGS1	90.0.0.1	ASGS17	90.0.0.33
ASGS2	90.0.0.3	ASGS18	90.0.0.35
ASGS3	90.0.0.5	ASGS19	90.0.0.37
ASGS4	90.0.0.7	ASGS20	90.0.0.39
ASGS5	90.0.0.9	ASGS21	90.0.0.41
ASGS6	90.0.0.11	ASGS22	90.0.0.43
ASGS7	90.0.0.13	ASGS23	90.0.0.45
ASGS8	90.0.0.15	ASGS24	90.0.0.47
ASGS9	90.0.0.17	ASGS25	90.0.0.49
ASGS10	90.0.0.19	ASGS26	90.0.0.51
ASGS11	90.0.0.21	ASGS27	90.0.0.53
ASGS12	90.0.0.23	ASGS28	90.0.0.55
ASGS13	90.0.0.25	ASGS29	90.0.0.57
ASGS14	90.0.0.27	ASGS30	90.0.0.59
ASGS15	90.0.0.29	ASGS31	90.0.0.61
ASGS16	90.0.0.31	ASGS32	90.0.0.63

The SMC can support a maximum of 32 GS80/160/320 systems, which are named consecutively ASGS1 through ASGS32. Each system is connected to a terminal server, which has an IP address (called IP host in ConsoleWorks) that starts with 90.0.0 and ends with an odd number.[3] Multiply the ASGS number by two and subtract one to determine the ending number of the IP address. For example, the IP address of the terminal server connected to system ASGS14 is 90.0.0.27 (14*2 – 1 = 27).

[3] Using only odd numbers at this time leaves room for expansion.

1.6 Keep in Mind

Keep these points in mind when you use the system management console.

- An SMC may be used with one or more GS80/160/320 systems only. The license does not permit it to be connected to other equipment.
- The GS80/160/320 SCM and SRM may not have associated passwords.
- The SCM escape sequence must be the default, **<Esc><Esc>scm**.
- The SMC system requires a static IP address.
- In order for CAPM to run, ConsoleWorks services must be running. In addition, the CAPM service must be running. If CAPM is run from the SMC Web page, the Compaq SMC HMMO service must also be running. See Section 6.5 for information on checking the status of these services.

For more information on the system management console, including FAQs and tips, go to the URL ftp.digital.com/pub/Digital/Alpha/firmware/interim/smc/smc.html.

Chapter 2
SMC Utilities

The SMC expunge utility enables you to delete ConsoleWorks events and reduce the size of the default.config file outside of ConsoleWorks. Two other utilities back up and restore the SMC configuration.

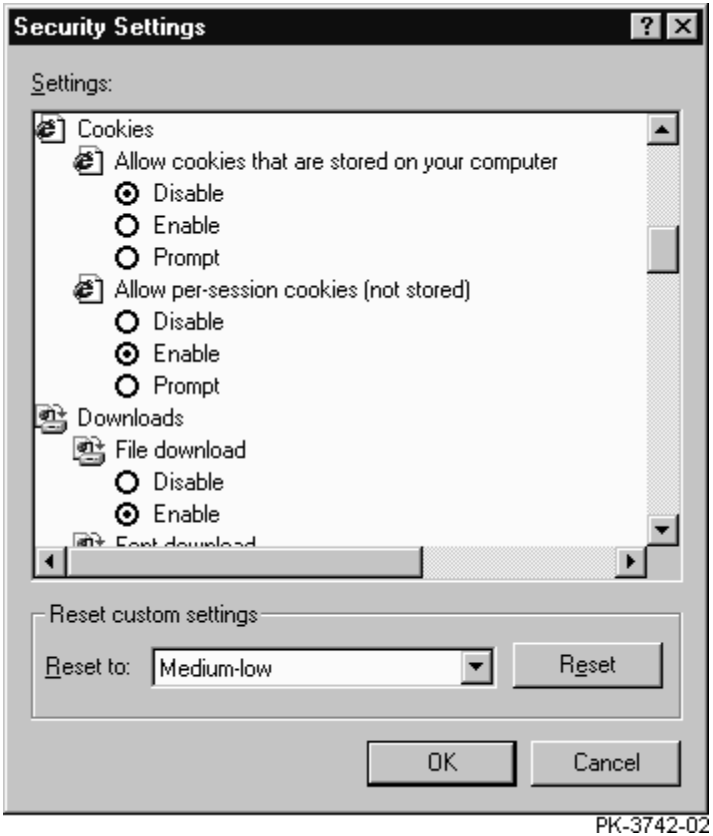
Sections in this chapter are:

- Configuring Your Browser to Run SMC Utilities
- Logging on to the SMC Utilities Page
- Expunging Events
- Backing up the Configuration
- Restoring the Configuration

2.1 Configuring Your Browser to Run SMC Utilities

Set your browser to accept cookies, at least per-session.

Figure 2–1 Internet Explorer Security Settings



Internet Explorer

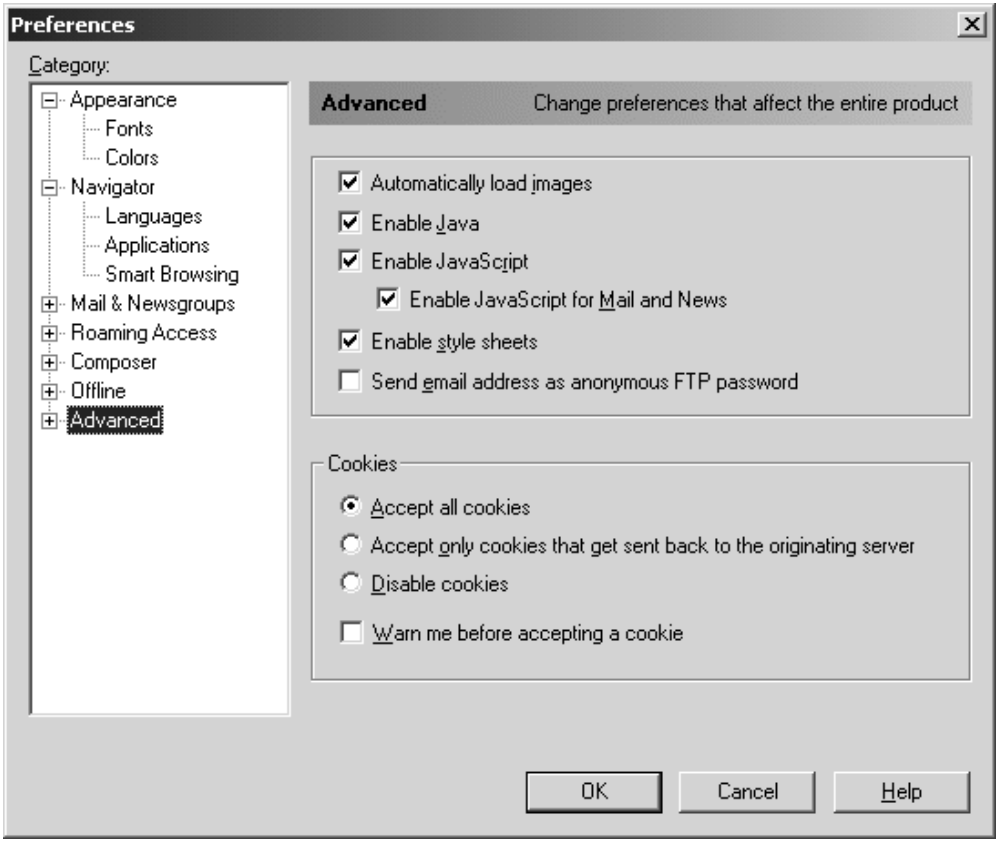
1. From the Tools menu select Internet Options… The Internet Options window opens.
2. Select the Security tab.

3. Click the Custom Level… button. The Security Settings window opens (Figure 2–1).
4. Scroll to Cookies and select Enable under Allow per-session cookies.
5. Click OK in the Security Settings window and the Internet Options window.

Netscape Navigator

1. From the Edit menu select Preferences… The Preferences window opens.
2. Select Advanced. The Advanced options display (Figure 2–2).
3. Select Accept all cookies. Click OK.

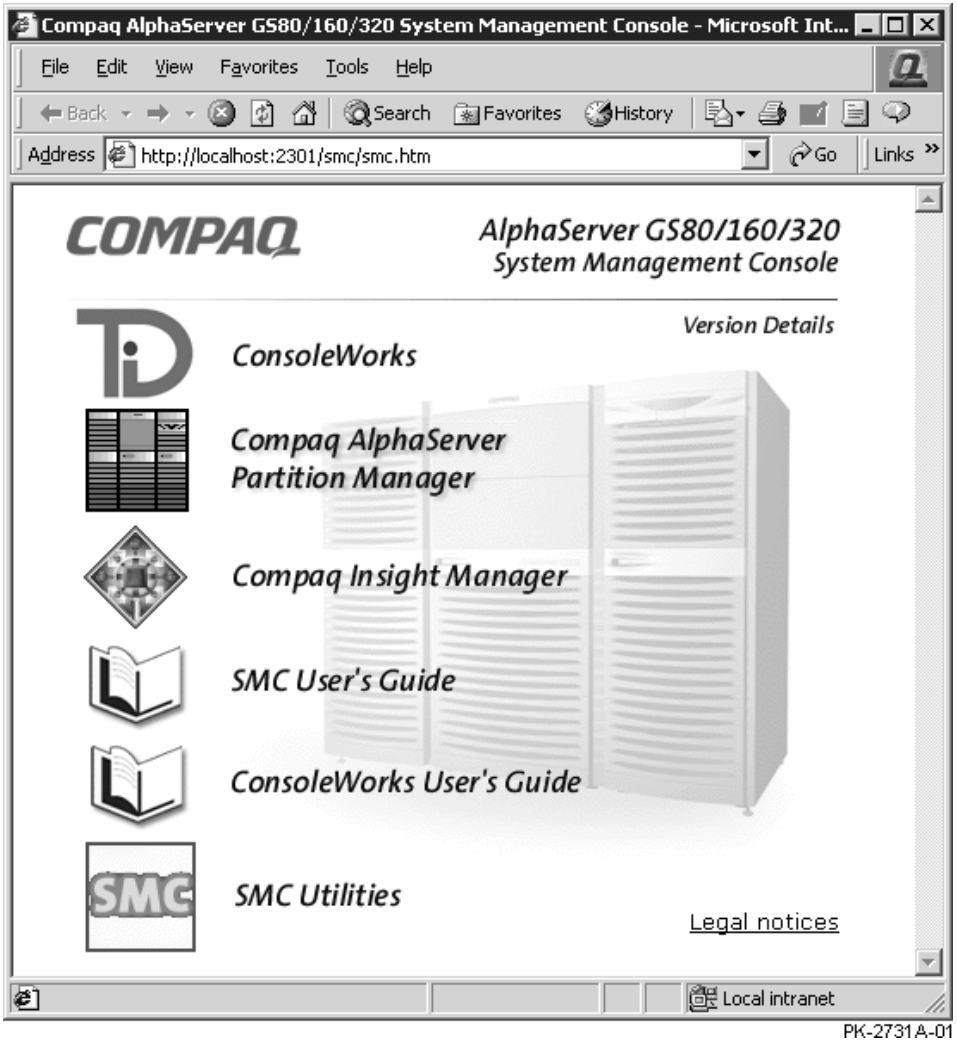
Figure 2-2 Netscape Navigator Preferences



2.2 Logging on to the SMC Utilities Page

From the SMC Web page select SMC Utilities. Log on using your NT username and password.

Figure 2-3 SMC Web Page

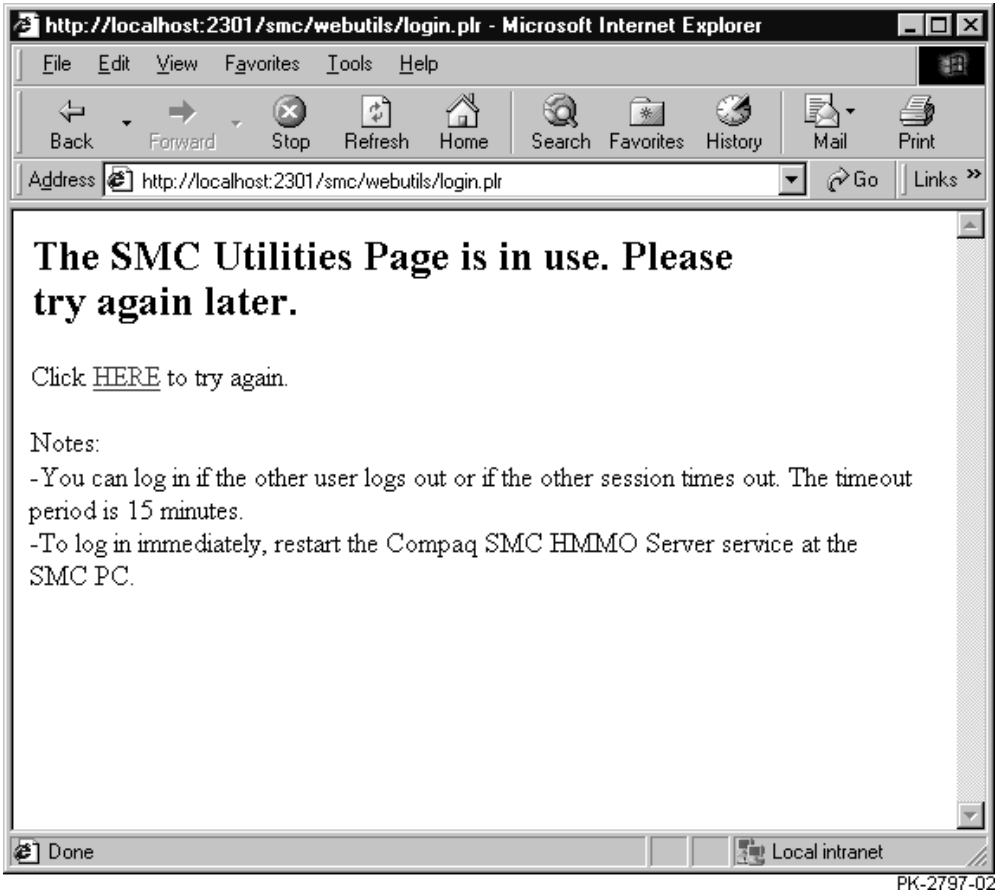


Click the SMC Utilities icon on the SMC Web page. The SMC Utilities login page displays (Figure 2–4). Log in using the Windows NT username and password of a valid account on the SMC system.

Continued on page 2-7

Figure 2-4 SMC Utilities Login Page

Figure 2-5 SMC Utilities in Use



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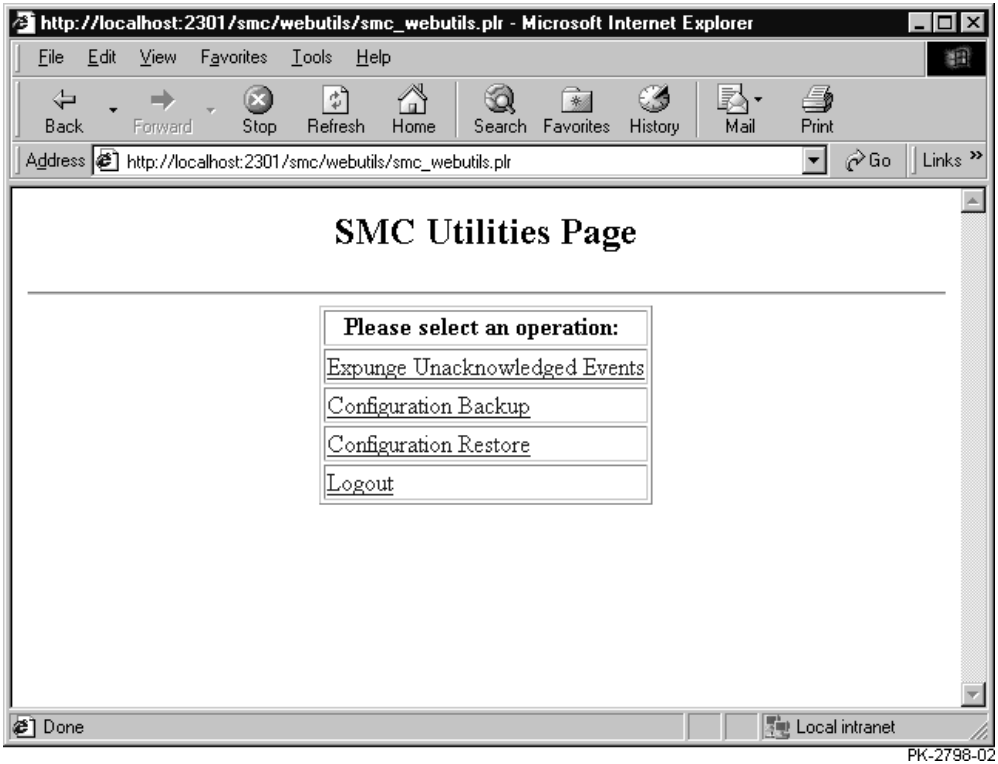
If the SMC Utilities Page is already in use, the message shown in Figure 2–5 displays. You can wait for the current session to be logged off or to time out, or you can close all Internet Explorer windows, restart the Compaq SMC HMMO Server service (refer to Section 6.5), restart Internet Explorer, and select the SMC Utilities link.

When the login is successful, the utility selection page displays (Figure 2–6). Select the utility you want to run, or log out from this page. Descriptions of these utilities are in the sections that follow.

Figure 2-6 SMC Utility Selection



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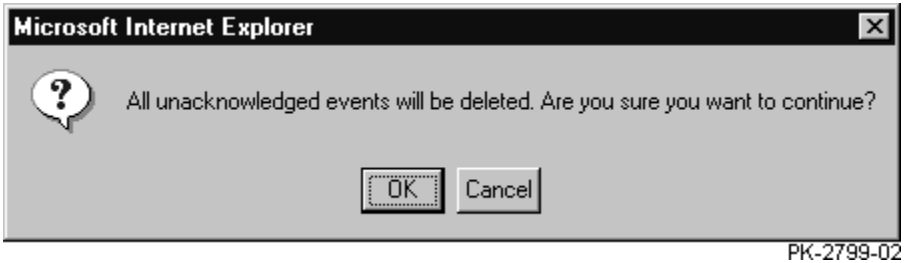
2.3 Expunging Events

From the SMC Utilities selection page, select the *Expunge Unacknowledged Events* link.

Figure 2-7 Expunge Confirmation



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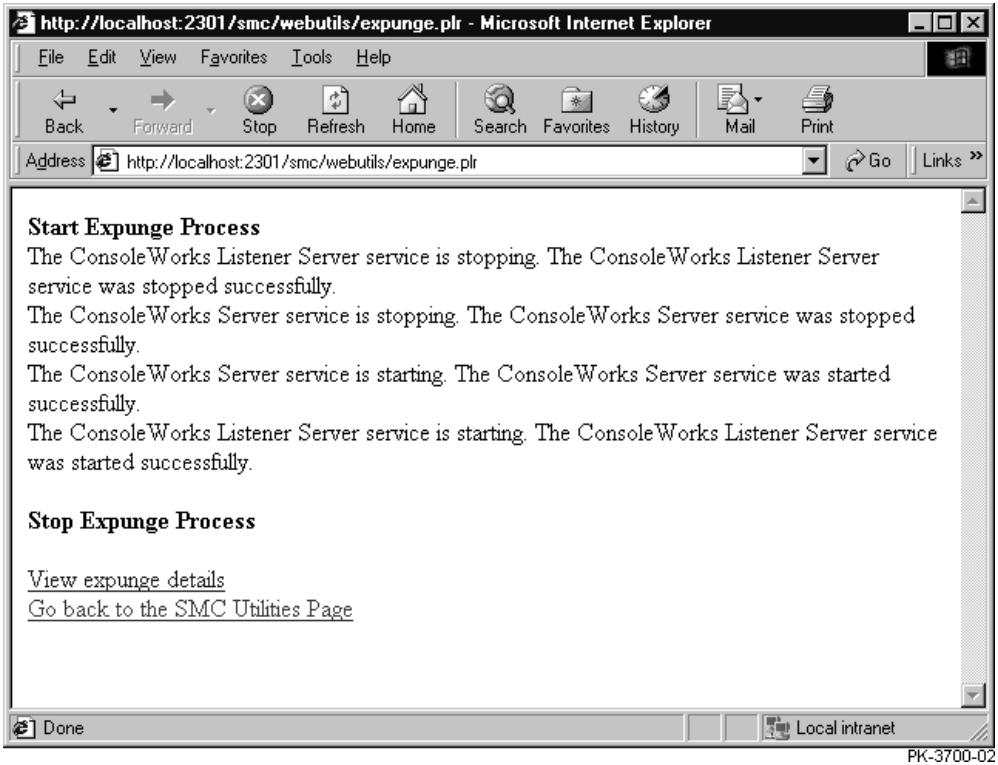
Events can be expunged from within ConsoleWorks (see Section 3.4.6), but if too many unacknowledged events are allowed to build up, ConsoleWorks takes an excessive amount of time to start. If that happens, use this utility to expunge events.

1. Click the *Expunge Unacknowledged Events* link on the selection page (Figure 2–6). The expunge confirmation displays (Figure 2–7).
2. Click OK to continue. The progress of the utility displays (Figure 2–8). It is finished when the line *Stop Expunge Process* prints.
3. Click the link *Go back to the SMC Utilities Page* to return to the top page and log out.

Figure 2-8 Expunge Progress



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2.4 Backing up the Configuration

From the SMC Utilities selection page select *Configuration Backup*.

Figure 2-9 Backup Confirmation

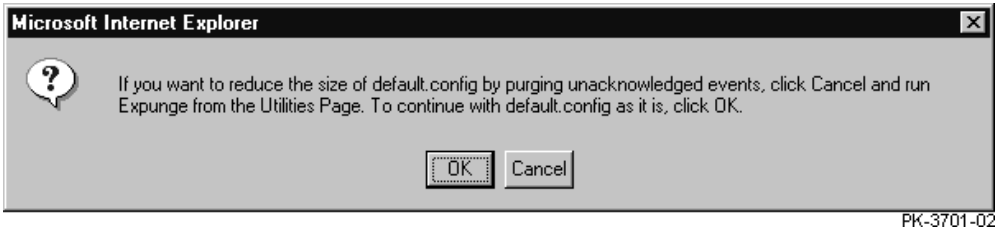
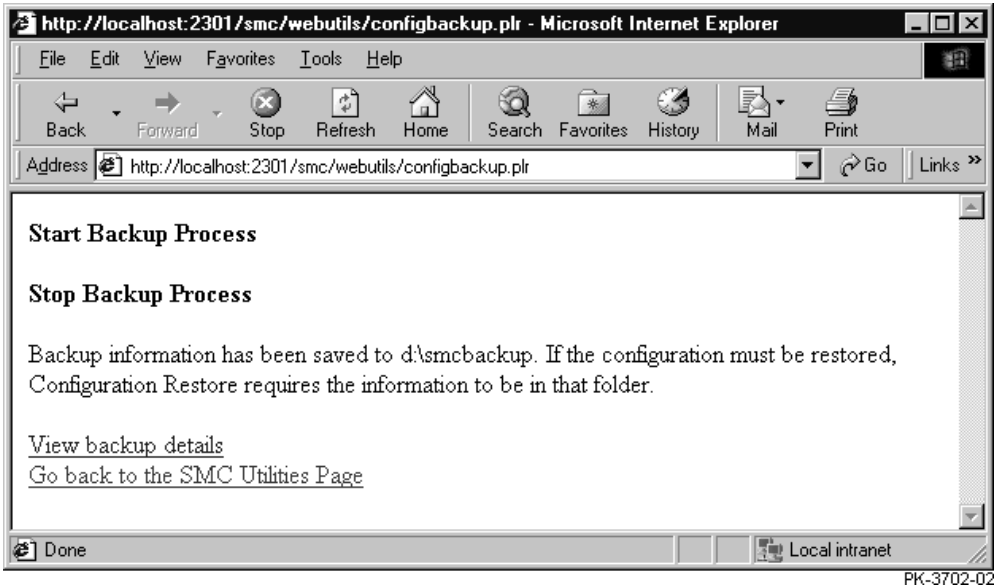


Figure 2–10 Backup Progress



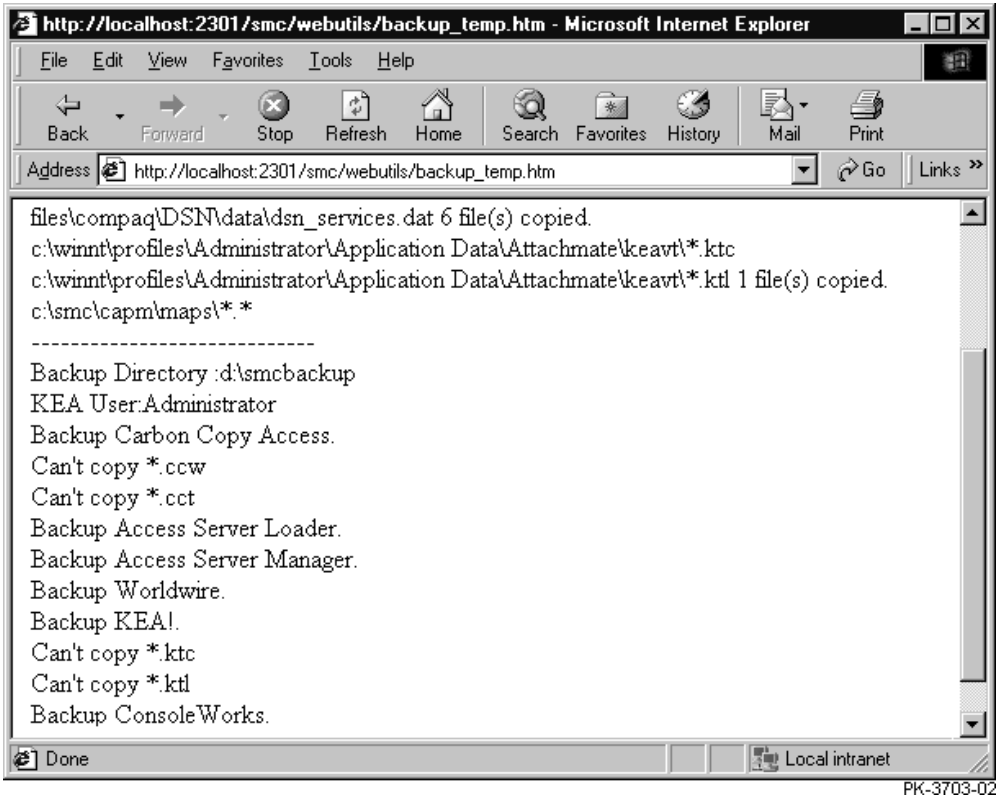
The backup utility enables you to save the user settings of the SMC software.

1. Click the *Configuration Backup* link on the selection page (Figure 2–6). The backup confirmation displays (Figure 2–9).

2. Click OK to continue. The progress of the utility displays (Figure 2–10). It is finished when the line *Stop Backup Process* prints.
3. To see what has been backed up, click the link *View backup details*. The display is similar to Figure 2–11. Note that the entries under the lines *Backup Carbon Copy Access* and *Backup KEA!* indicate that no files are available to be copied. This is normal if a utility has not been used.

   Use the browser's Back button to return to the previous page.
4. In Windows Explorer, copy the folder d:\smcbackup to a Zip disk, or compress it using Winzip and copy it to a floppy disk.
5. Click the link *Go back to the SMC Utilities Page* to return to the top page and log out.

Figure 2–11 Backup Details



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2.5 Restoring the Configuration

From the SMC Utilities selection page select *Configuration Restore*.

Figure 2–12 Restore Confirmation

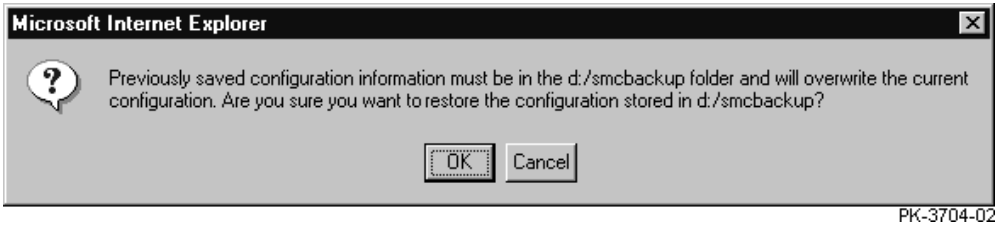

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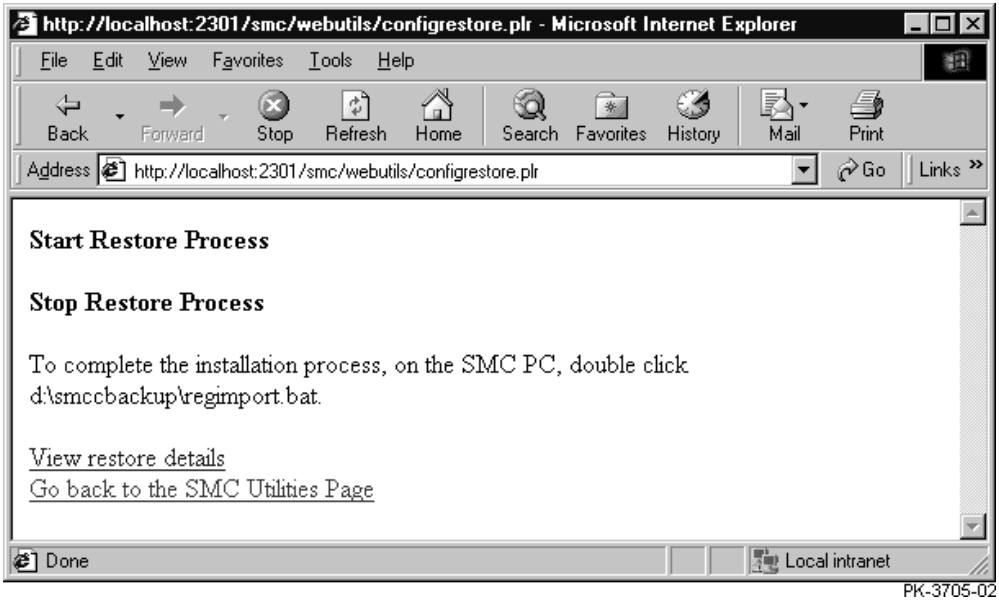
Figure 2–13 Restore Progress



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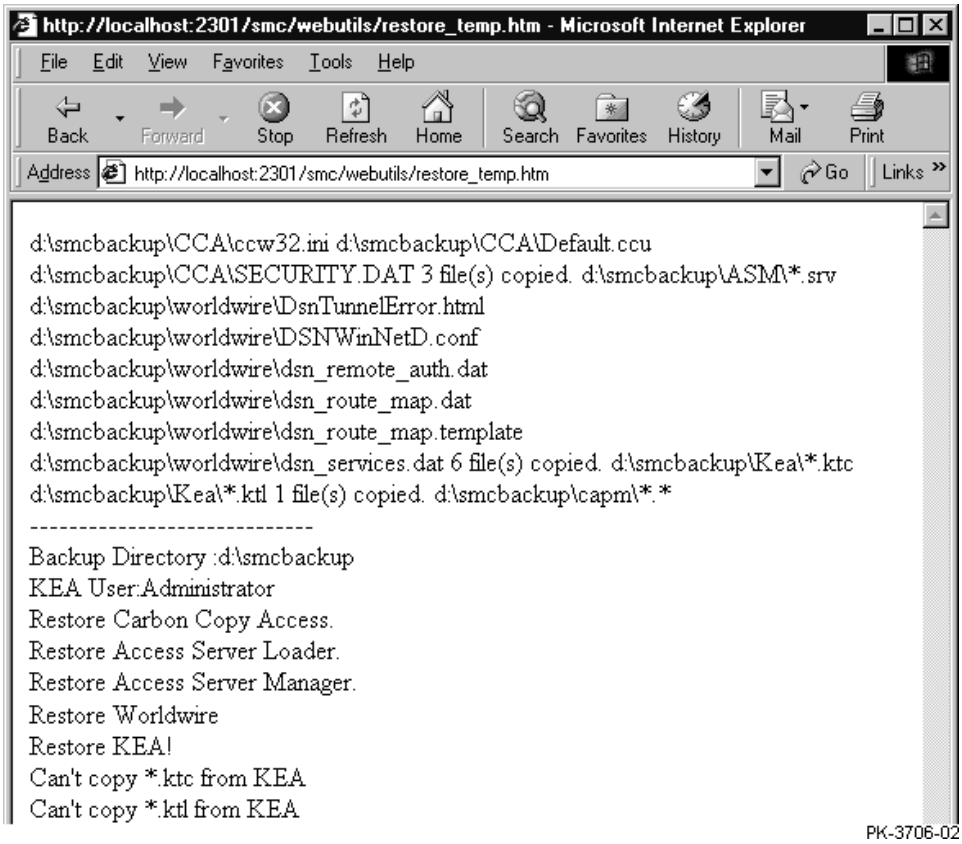
The restore utility restores the configuration that was backed up in Section 2.4. The utility requires that configuration information be in d:\smcbackup.

1. If the folder d:\smcbackup is on a removable disk, copy it to the D drive.

2. Click the *Configuration Restore* link on the selection page (Figure 2–6). The restore confirmation displays (Figure 2–12).
3. Click OK to continue. The progress of the utility displays (Figure 2–13). It is finished when the line *Stop Restore Process* prints.
4. To see what has been restored, click the link *View restore details*. The display is similar to Figure 2–14. Note that the entries under the line *Backup KEA!* indicate that no files are available to be copied. This is normal if a utility has not been used.

   Use the browser's Back button to return to the previous page.
5. Click the link *Go back to the SMC Utilities Page* to return to the top page and log out.

Figure 2–14 Restore Details



Chapter 3
ConsoleWorks

ConsoleWorks is a Web-based application that enables communication with, and monitors and logs output from, the GS80/160/320 consoles.

This chapter provides a quick reference for the procedures most commonly performed on a GS80/160/320 system management console (SMC). For more information about ConsoleWorks, see the *ConsoleWorks Administration / User Guide.* (You can open this manual from the SMC Documentation desktop folder on the SMC system or from the link on the SMC Web page.)

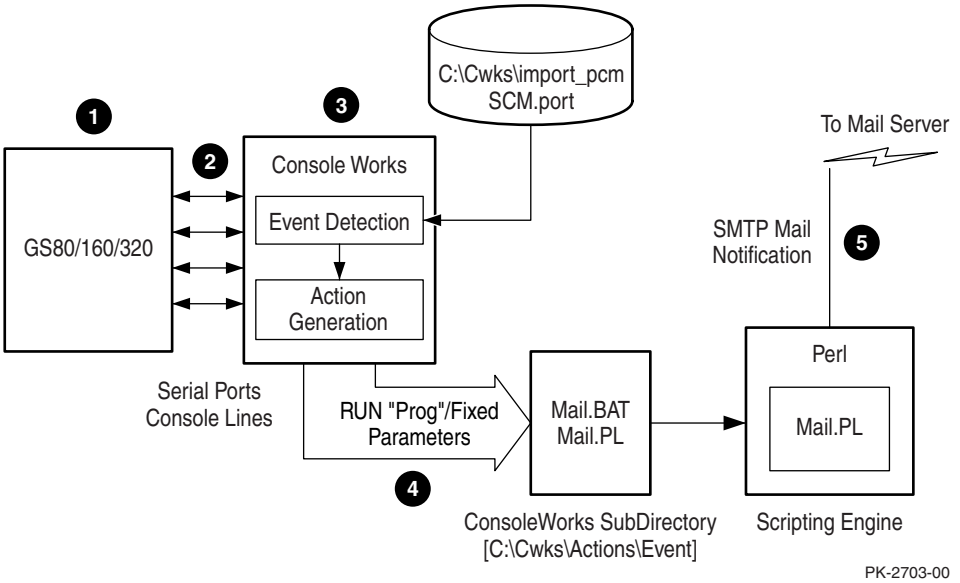
Sections in this chapter are:

- Overview
  - Starting ConsoleWorks
  - ConsoleWorks Screen
- Communicating with a GS80/160/320 Console
  - Using the ConsoleWorks Telnet Listener Utility
  - Using a ConsoleWorks Terminal Emulator Window
  - Using KEA! with ConsoleWorks
- Managing Consoles
  - Loading Certificate Authority
  - Deleting a Console
  - Adding a Console
  - Renaming a Console
  - Giving a Console an Alias
  - Adding a Console Group
  - Deleting a Console Group
  - Removing a Console from or Adding One to an Existing Group
- Managing Events and Actions
  - Importing and Using Compaq-Supplied Events
  - Enabling an Action
  - Adding an Event
  - Adding a Scan
  - Acknowledging and Purging Events
  - Expunging Events
- Managing Users
  - Adding a User
  - Communicating with Another User
  - Changing a User Password
  - Resetting the console_manager Password
  - Adding a Profile
  - Modifying a Profile
- Managing ConsoleWorks Log Files
  - Viewing a Log File
  - Deleting Log Files
  - Mailing a Log File

3.1 Overview

ConsoleWorks is a Web-based application that monitors console output and provides console management functions. Compaq provides a script that customizes ConsoleWorks for the system management console and GS80/160/320 environment.

Figure 3–1 ConsoleWorks Application and Script



ConsoleWorks is a Web-based application that manages consoles in a GS80/160/320 system. A console can be a partition or the entire system if it is not partitioned. The SMC system administrator determines the consoles to which a user has access and the level of that access. The level of access is indicated by a profile; each user is associated with one or more profiles.

ConsoleWorks provides access to each console directly from the SMC. In addition, KEA! can be used with ConsoleWorks to display console activity. Alternatively, you can use a supported Web browser to access each console remotely from a workstation connected to the private LAN or to the corporate network. The output from each console is logged to a file for future viewing.

ConsoleWorks monitors console output for events, which are text strings in a console's SCM or SRM output. Each event is part of one or more scans, or collection of events. A scan, in turn, is associated with one or more consoles.

Compaq has customized the ConsoleWorks application used in the SMC to monitor for particular events and to send mail to user-specified recipients when those events occur. The diagram in Figure 3–1 shows the actions that take place when ConsoleWorks recognizes an event; callouts are described here:

❶ The GS80/160/320 system generates a console alert. (This does not include operating system alerts.)

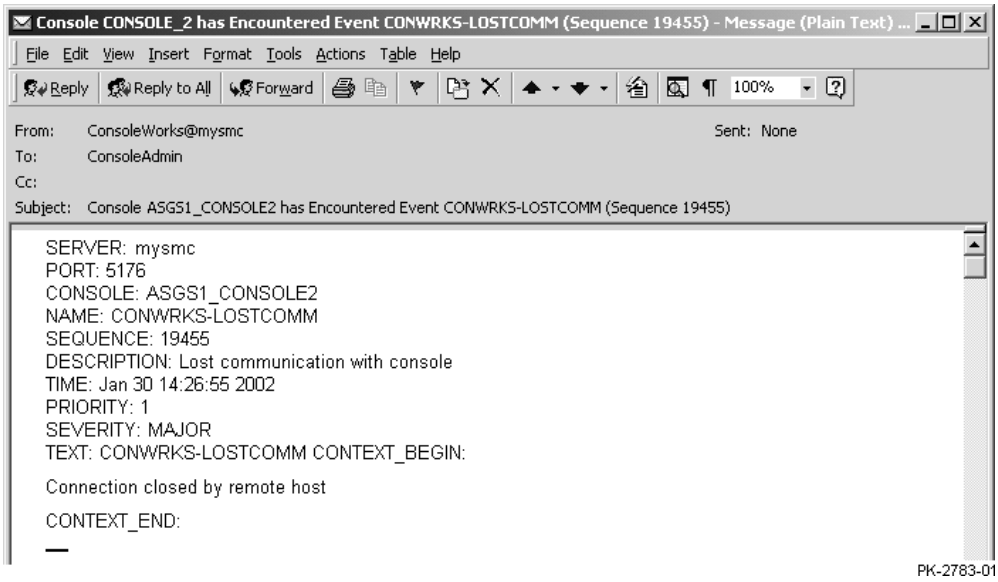
❷ As with all console activity, the alert travels through the GS80/160/320 serial port and over the console line to the SMC.

❸ ConsoleWorks monitors all activity on the console line. It detects an event based on information in the file SCM.PORT and generates an action.

❹ The action taken by ConsoleWorks is to run the file MAIL.BAT, which in turn runs MAIL.PL.

❺ The scripting agent interprets MAIL.PL and sends SMTP mail to the mail server, which delivers it to the specified recipient. Figure 3–2 shows a representative mail message.

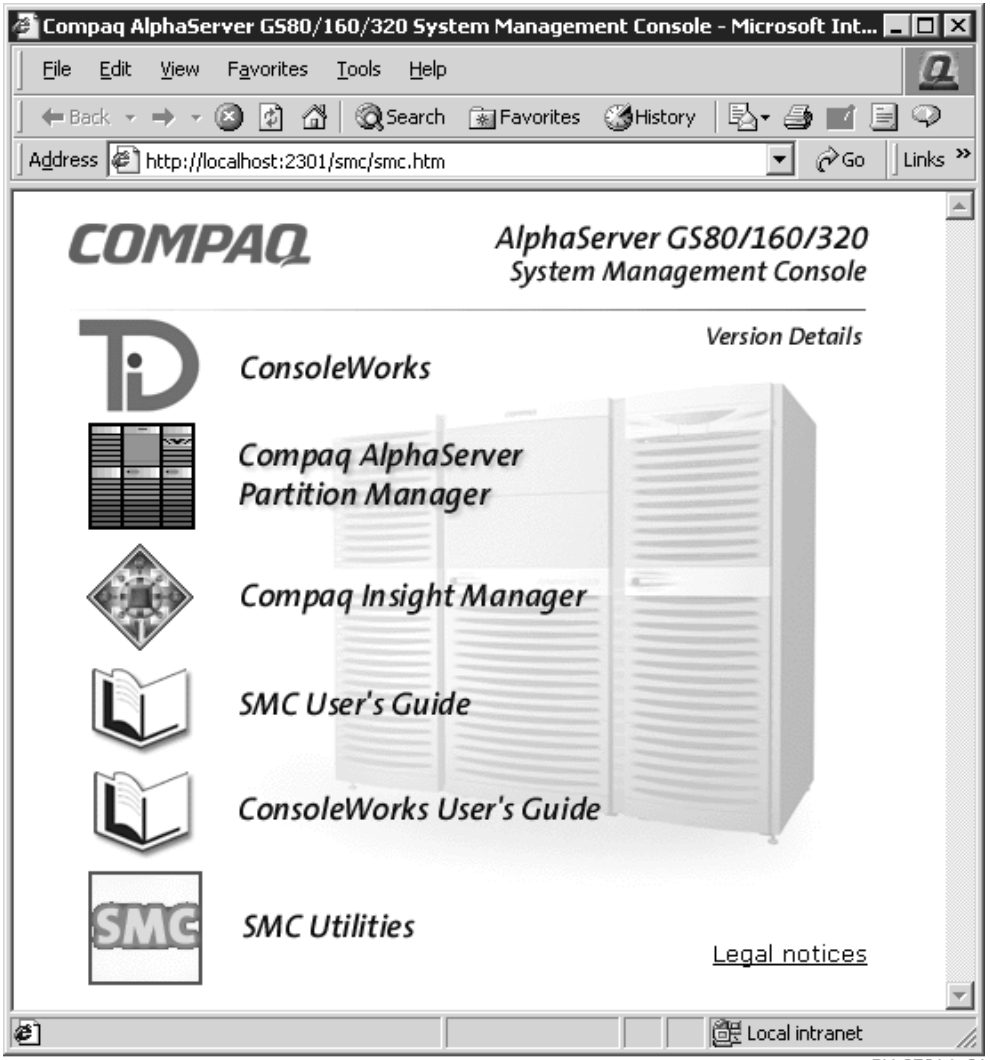
Figure 3-2 Mail Message from ConsoleWorks



3.1.1 Starting ConsoleWorks

Start ConsoleWorks from the desktop icon or from the SMC Web page.

Figure 3-3 SMC Web Page



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You can run ConsoleWorks from the SMC system or from a workstation networked to the SMC system.

- To run ConsoleWorks from the SMC system, double-click the ConsoleWorks desktop icon:

  

- To run ConsoleWorks from a workstation networked to the SMC system, click the icon on the SMC Web page (Figure 3–3). To display the SMC Web page, enter this in the browser Address box: **`http://`*`name.domain`*`:2301/smc/smc.htm`**, where *name.domain* is the fully qualified address or the IP address of the SMC on the corporate network; press Enter.

Logging on to ConsoleWorks

When you start ConsoleWorks, a logon screen opens. The first time you log on, use these defaults:

Username: **`console_manager`**

Password: **`setup`**

Section 3.5.1 has instructions for creating other user accounts.

NOTE: *The ConsoleWorks usernames and passwords, along with the user privileges, differ from those used for Windows NT. All ConsoleWorks user information must be explicitly set in ConsoleWorks; it does not propagate from Windows NT.*

While the console_manager password is set to the default, logging on to any account causes a message to display asking you to change that password.

3.1.2 ConsoleWorks Screen

The ConsoleWorks screen is divided into three sections: left navigation panel, main data panel, and lower navigation panel.

Figure 3-4 ConsoleWorks Screen

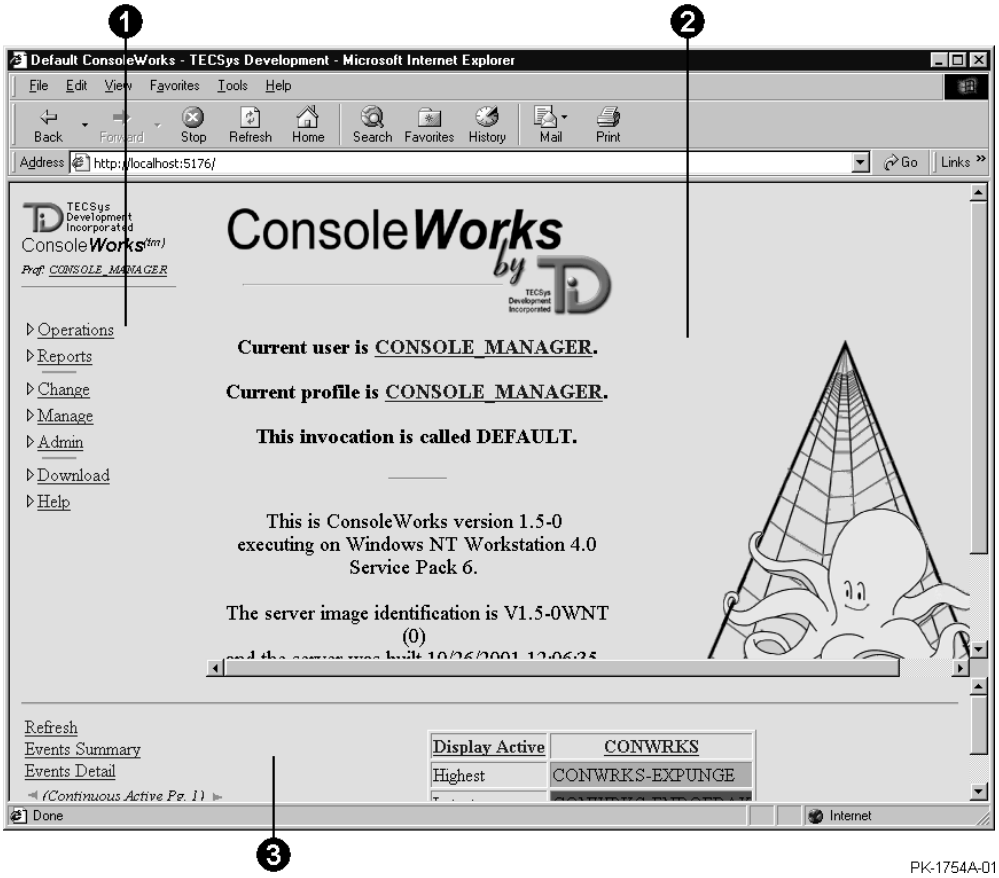

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Figure 3–4 shows the screen that opens after you log in to ConsoleWorks. The three parts of the screen are described below.

❶ **Left navigation panel** – This panel lists menu links, and each menu link lists selection links:

- Menu links (Operations, Reports, Change, Manage, Admin, Download, and Help). Clicking any of these links causes the display of a list of related selection links.
- Selection links. This list changes depending on which menu link is chosen. Clicking on most of these links causes the display of new information in the main data panel, but a few result in the display of a new popup window.

❷ **Main data panel** – Most configuration information and data display in this panel.

❸ **Lower navigation panel** – On the left are links, status, and the mailbox icon; on the right is the ConsoleWorks status display table.

3.2 Communicating with a GS80/160/320 Console

There are three methods for communicating with consoles.

Table 3–1 Communication Methods

Method	Steps
ConsoleWorks Telnet Listener utility	In a Command Prompt (MS-DOS) window type: `configure_telnet_listener` ***m n*** `telnet` ***host_name port_number***
ConsoleWorks terminal emulator window	Click the icon next to the console name on the Show Consoles screen.
KEA! or other terminal emulator	Follow the ConsoleWorks setup instructions in Section 3.2.3, then start the terminal emulator program.

One of the primary functions of ConsoleWorks on the SMC is to enable communication with consoles on a GS80/160/320 system.

You can communicate with a GS80/160/320 console via ConsoleWorks in three ways:

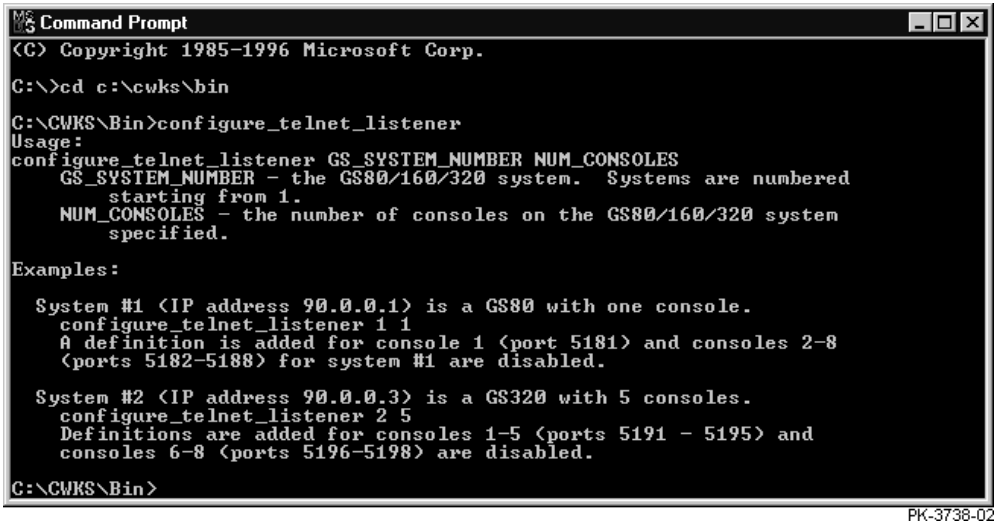
- ConsoleWorks Telnet Listener utility
- ConsoleWorks terminal emulator window
- KEA! or other terminal emulator program

The sections that follow give instructions for setting up and using each of these methods.

3.2.1 Using the ConsoleWorks Telnet Listener Utility

In a Command Prompt window configure the telnet listener and start a telnet session.

Figure 3-5 Configuring the Telnet Listener Utility



1. Open a Command Prompt window by double-clicking the MSDOS Command desktop icon.
2. In the Command Prompt window enter the following (shown here in bold); press the Enter key at the end of each line:

   `C:\>` **`cd c:\cwks\bin`**

   `C:\CWKS\Bin>` **`configure_telnet_listener`** ***`m n`***

   where *m* is the system number (1 to 32) of the GS80/160/320 system, and *n* is the number of consoles (1 to 8) you want to enable. Entering a number that is less than the number of consoles in the system enables the first *n* consoles. For example, if the system has six consoles and you enter the number 5 for *n*, consoles 1 through 5 are enabled.

   Entering the command without the arguments displays the help text shown in Figure 3–5.
3. Start a telnet session by entering:

   `C:\CWKS\Bin>` **`telnet`** ***`host_name port_number`***

   where *host_name* is the fully qualified address or the IP address of the SMC on the corporate network, and *port_number* is the port number of the console to which you want to connect (see Table 3–2 on the next page).
4. When prompted for a username and password, enter those of a valid ConsoleWorks account.

NOTE: *By using the port number 5180 in the above command you can connect directly to ConsoleWorks and use its command line interface. This is an alternative to ConsoleWorks Terminal (CWTerm). For more information on the command line interface, see the CWTerm User Guide in the SMC documentation desktop folder on the SMC system. The CWTerm program can be found in c:\cwks\bin\cwterm.exe.*

Table 3-2 Telnet Listener Port Numbers

System Number	Console Number							
	1	2	3	4	5	6	7	8
1	5181	5182	5183	5184	5185	5186	5187	5188
2	5191	5192	5193	5194	5195	5196	5197	5198
3	5201	5202	5203	5204	5205	5206	5207	5208
4	5211	5212	5213	5214	5215	5216	5217	5218
5	5221	5222	5223	5224	5225	5226	5227	5228
6	5231	5232	5233	5234	5235	5236	5237	5238
7	5241	5242	5243	5244	5245	5246	5247	5248
8	5251	5252	5253	5254	5255	5256	5257	5258
9	5261	5262	5263	5264	5265	5266	5267	5268
10	5271	5272	5273	5274	5275	5276	5277	5278
11	5281	5282	5283	5284	5285	5286	5287	5288
12	5291	5292	5293	5294	5295	5296	5297	5298
13	5301	5302	5303	5304	5305	5306	5307	5308
14	5311	5312	5313	5314	5315	5316	5317	5318
15	5321	5322	5323	5324	5325	5326	5327	5328
16	5331	5332	5333	5334	5335	5336	5337	5338
17	5341	5342	5343	5344	5345	5346	5347	5348
18	5351	5352	5353	5354	5355	5356	5357	5358
19	5361	5362	5363	5364	5365	5366	5367	5368
20	5371	5372	5373	5374	5375	5376	5377	5378
21	5381	5382	5383	5384	5385	5386	5387	5388
22	5391	5392	5393	5394	5395	5396	5397	5398
23	5401	5402	5403	5404	5405	5406	5407	5408

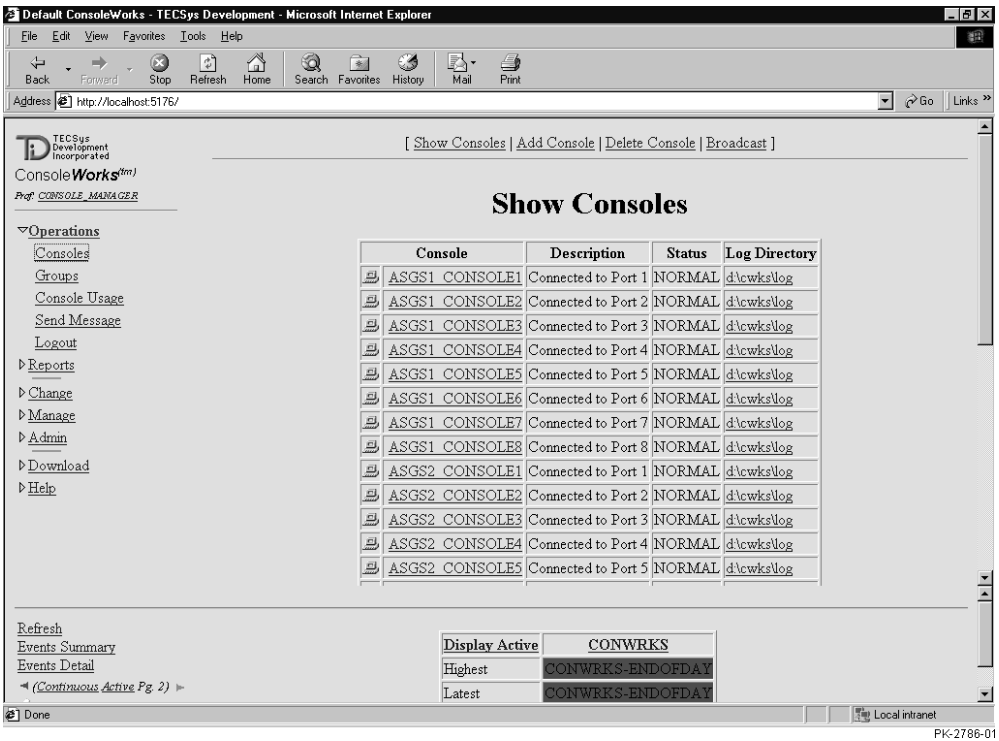
Table 3-2 Telnet Listener Port Numbers (Continued)

System Number	Console Number							
	1	2	3	4	5	6	7	8
24	5411	5412	5413	5414	5415	5416	5417	5418
25	5421	5422	5423	5424	5425	5426	5427	5428
26	5431	5432	5433	5434	5435	5436	5437	5438
27	5441	5442	5443	5444	5445	5446	5447	5448
28	5451	5452	5453	5454	5455	5456	5457	5458
29	5461	5462	5463	5464	5465	5466	5467	5468
30	5471	5472	5473	5474	5475	5476	5477	5478
31	5481	5482	5483	5484	5485	5486	5487	5488
32	5491	5492	5493	5494	5495	5496	5497	5498

3.2.2 Using a ConsoleWorks Terminal Emulator Window

Click the icon next to the console name in the Show Consoles screen, or click the Connect link at the top of the *console_name* Configuration screen.

Figure 3-6 Show Consoles Screen



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ConsoleWorks has a built-in terminal emulator function. To use it to connect to a specific console, do one of the following:

- Go to the Show Consoles screen (in the left navigation panel select Operations, then Consoles; see Figure 3–6) and click the icon to the left of the console name (see Table 3–3 for the meanings of these icons), or
- Go to the *console_name* Configuration screen (Figure 3–7) for the console (from the Show Consoles screen click the link for the console) and click the Connect link at the top of the screen.

When prompted for a username and password, enter those of a valid ConsoleWorks account.

Continued on page 3-17

Figure 3-7 *console_name* Configuration Screen

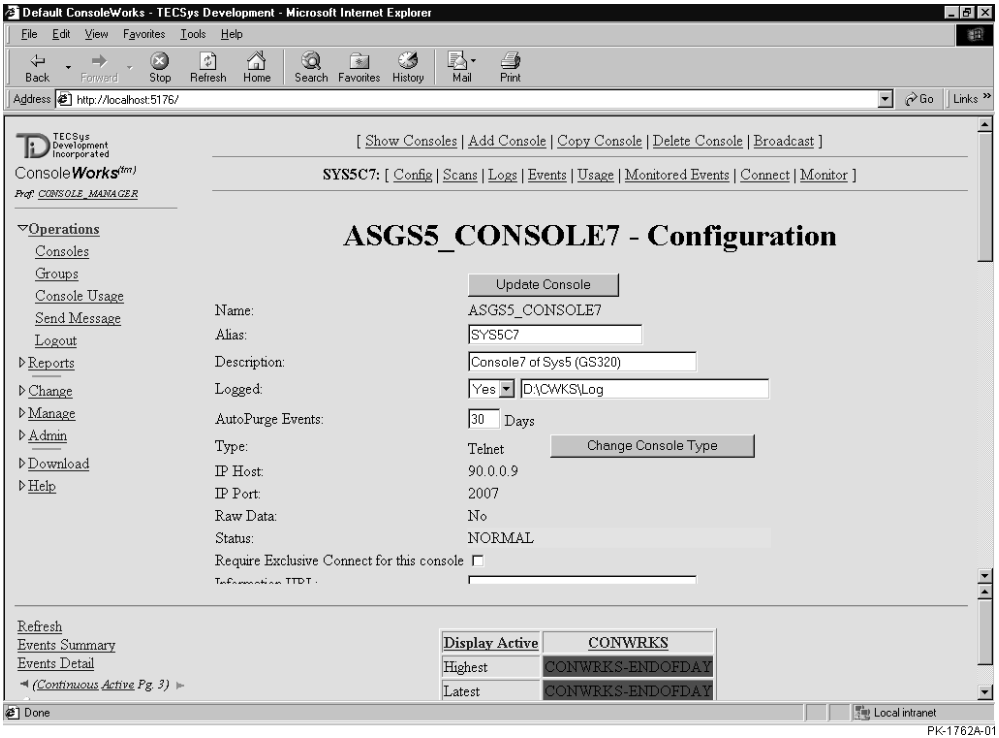

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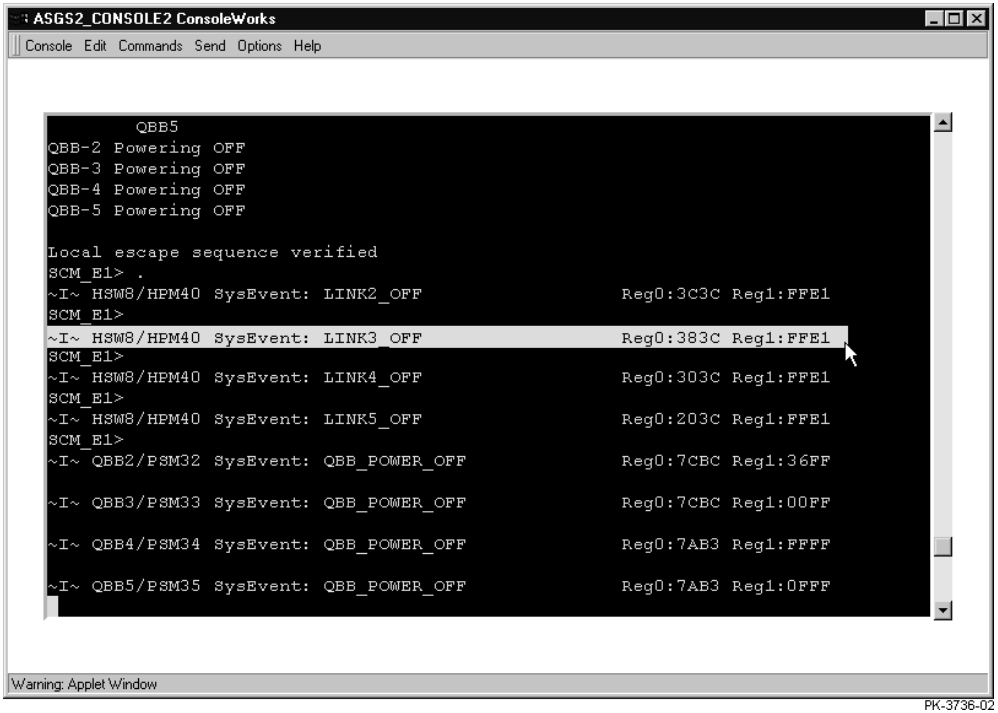
Table 3-3 ConsoleWorks Console Icons

Icon	Name	Meaning
	Connect	The console has a read and write connection.
	Monitor	The console is read only.
	Active connect	The console has a read and write connection, and another user is connected to it. (The icon is shaded green.)
	Locked	The console has been locked by another user.
	Sick dude	The console has lost its connection.
	Information	An information URL, defined in the console configuration screen, is associated with the console.
	Disabled	The console has been disabled by a user.

You can copy text from a ConsoleWorks terminal emulator window and paste it into another application. That this feature exists is not apparent, however, since the window has no Copy command. Do the following to copy and paste from a ConsoleWorks terminal emulator window:

1. Open the window you want to paste the text into, and click to place the cursor at the point where the text will be pasted.
2. In the ConsoleWorks terminal emulator window, click and drag over the text to be copied (Figure 3–8). Do not release the mouse button.
3. While keeping the mouse button depressed, press Ctrl+Shift+C to place the text in the buffer. Release the mouse button.
4. In the window where the text will be pasted, select Paste from the Edit menu. The text is pasted at the location selected in step 1.

Figure 3-8 ConsoleWorks Terminal Emulator Window



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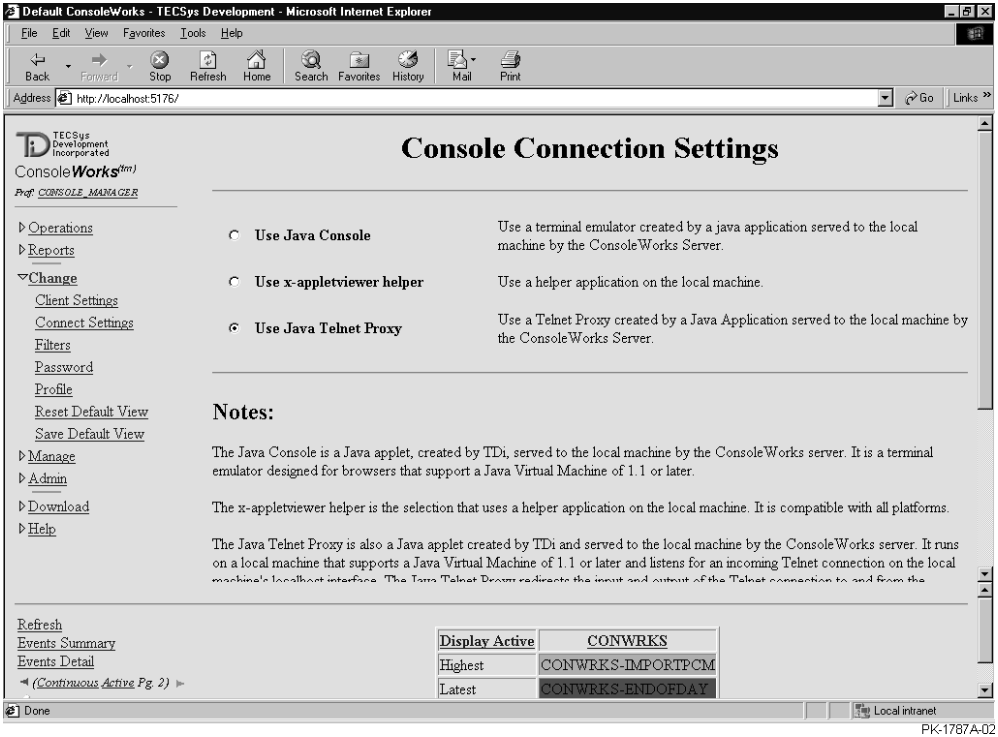
3.2.3 Using KEA! with ConsoleWorks

Select Change|Connect Settings in the left navigation panel. Then select the option button labeled Use Java Telnet Proxy. Select Operations|Consoles in the left navigation panel, then select the console from the list. Use the desktop icon to open KEA! and create a new session.

Privileges required: Admin –none; Console –none

Figure 3-9 Console Connections Settings Screen



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A terminal emulator can be used with ConsoleWorks. Directions for using KEA! are given here because it is distributed with the SMC software, but another terminal emulator program may be used.

1. In the left navigation panel of ConsoleWorks select Change. From the selection links select Connect Settings. The Console Connection Settings screen opens (Figure 3–9). Select the Use Java Telnet Proxy option button. The change takes effect immediately.
2. In the left navigation panel select Operations. From the selection links select Consoles. The Show Consoles screen opens.
3. Select the console to which you want to connect KEA!. The *console_name* Configuration screen opens. Note the IP host and IP port numbers for the console (Figure 3–10).

Continued on page 3-21

Figure 3–10 *console_name* Configuration Screen

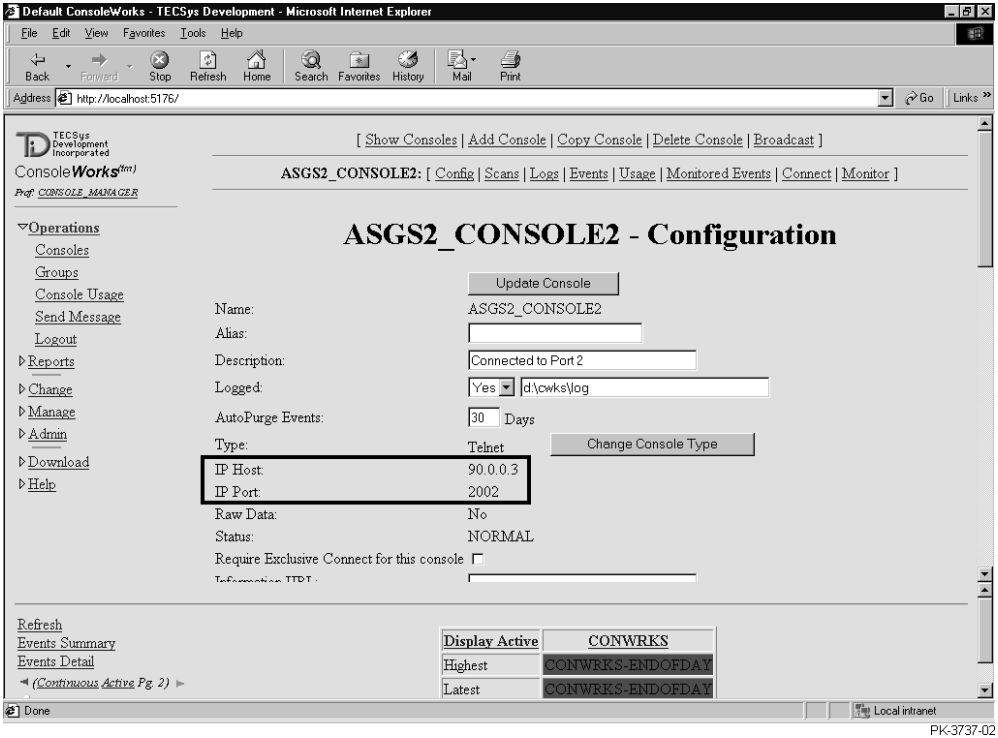

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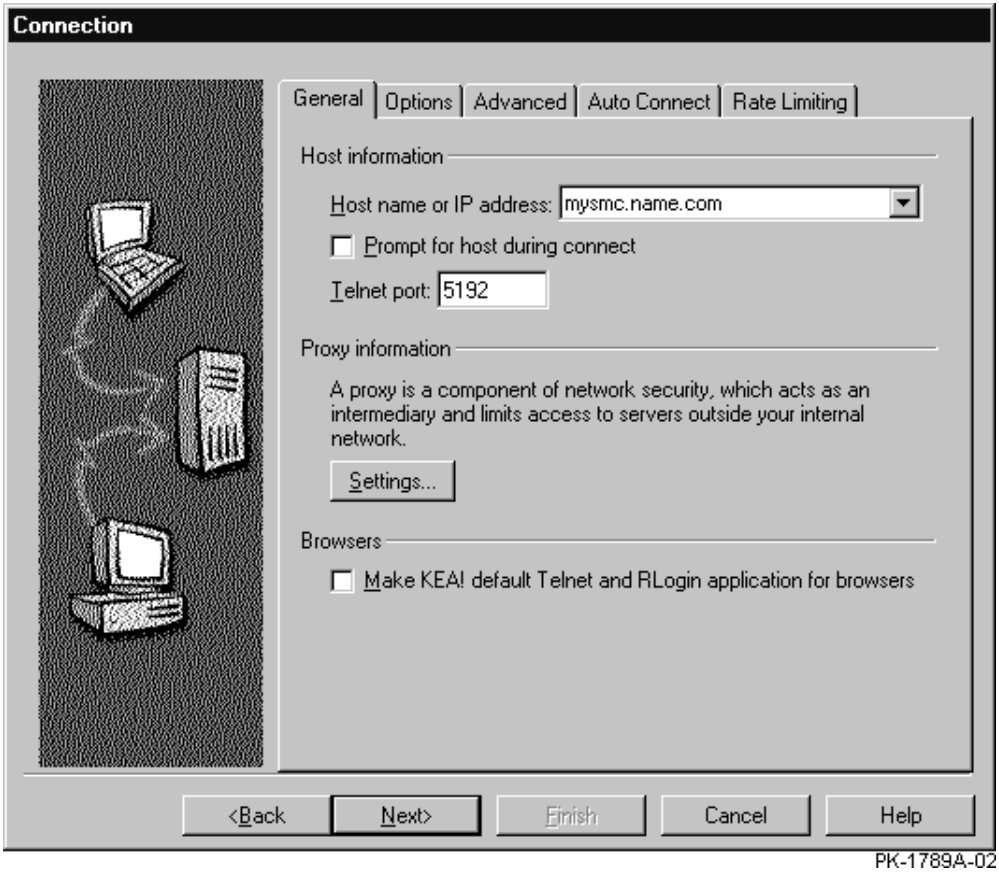
Figure 3–11 KEA! Connection Window



4. Double-click the KEA! desktop icon to open KEA!. In the connection wizard do the following:
   a. Select Serial. Click Next.
   b. Select Telnet. Click Next.
   c. Enter the host name or IP address (*not* the IP host number) of the GS80/160/320 system and the telnet port number of the console (Figure 3–11). See Table 3–4 for the telnet port number, which is at the intersection of the IP host and IP port numbers that you noted in step 3. Click Next.
   d. Select a terminal type. Click Next.
   e. Select a file transfer protocol. Click Next.
   f. Click Finish. The KEA! window opens.
5. When prompted for a username and password, enter those of a valid ConsoleWorks account.

Table 3-4 Telnet Ports

	IP Port							
IP Host	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
90.0.0.1	5181	5182	5183	5184	5185	5186	5187	5188
90.0.0.3	5191	5192	5193	5194	5195	5196	5197	5198
90.0.0.5	5201	5202	5203	5204	5205	5206	5207	5208
90.0.0.7	5211	5212	5213	5214	5215	5216	5217	5218
90.0.0.9	5221	5222	5223	5224	5225	5226	5227	5228
90.0.0.11	5231	5232	5233	5234	5235	5236	5237	5238
90.0.0.13	5241	5242	5243	5244	5245	5246	5247	5248
90.0.0.15	5251	5252	5253	5254	5255	5256	5257	5258
90.0.0.17	5261	5262	5263	5264	5265	5266	5267	5268
90.0.0.19	5271	5272	5273	5274	5275	5276	5277	5278
90.0.0.21	5281	5282	5283	5284	5285	5286	5287	5288
90.0.0.23	5291	5292	5293	5294	5295	5296	5297	5298
90.0.0.25	5301	5302	5303	5304	5305	5306	5307	5308
90.0.0.27	5311	5312	5313	5314	5315	5316	5317	5318
90.0.0.29	5321	5322	5323	5324	5325	5326	5327	5328
90.0.0.31	5331	5332	5333	5334	5335	5336	5337	5338
90.0.0.33	5341	5342	5343	5344	5345	5346	5347	5348
90.0.0.35	5351	5352	5353	5354	5355	5356	5357	5358
90.0.0.37	5361	5362	5363	5364	5365	5366	5367	5368
90.0.0.39	5371	5372	5373	5374	5375	5376	5377	5378
90.0.0.41	5381	5382	5383	5384	5385	5386	5387	5388
90.0.0.43	5391	5392	5393	5394	5395	5396	5397	5398
90.0.0.45	5401	5402	5403	5404	5405	5406	5407	5408

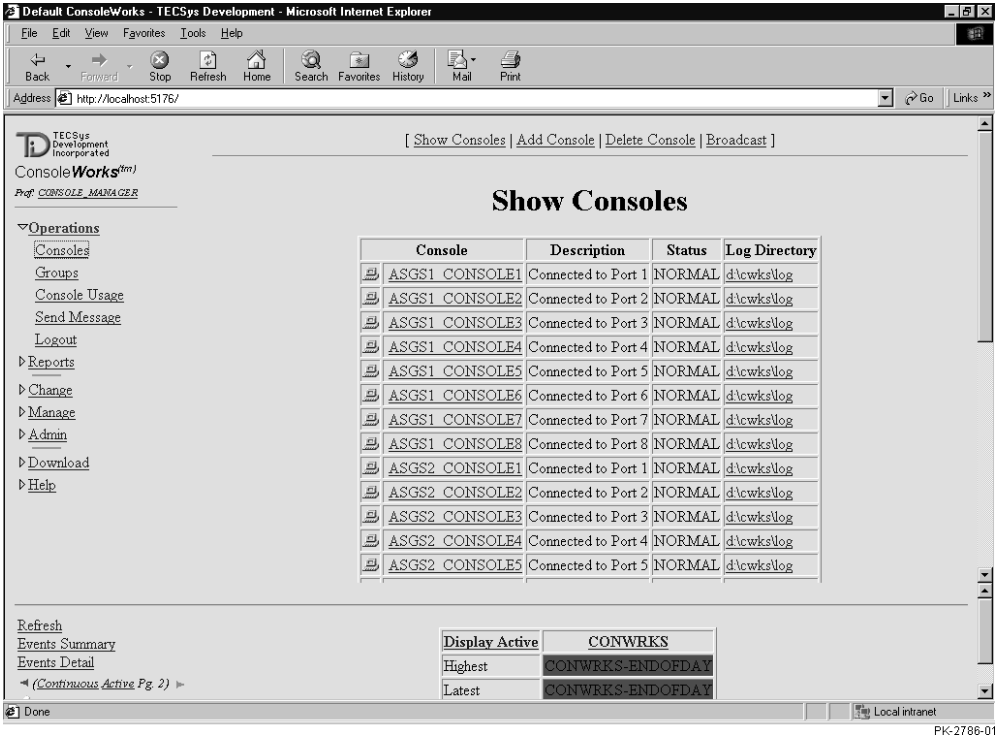
Table 3-4 Telnet Ports (Continued)

	IP Port							
IP Host	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
90.0.0.47	5411	5412	5413	5414	5415	5416	5417	5418
90.0.0.49	5421	5422	5423	5424	5425	5426	5427	5428
90.0.0.51	5431	5432	5433	5434	5435	5436	5437	5438
90.0.0.53	5441	5442	5443	5444	5445	5446	5447	5448
90.0.0.55	5451	5452	5453	5454	5455	5456	5457	5458
90.0.0.57	5461	5462	5463	5464	5465	5466	5467	5468
90.0.0.59	5471	5472	5473	5474	5475	5476	5477	5478
90.0.0.61	5481	5482	5483	5484	5485	5486	5487	5488
90.0.0.63	5491	5492	5493	5494	5495	5496	5497	5498

3.3 Managing Consoles

ConsoleWorks provides access to each console line in a GS80/160/320 system.

Figure 3–12 Show Consoles Screen



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ConsoleWorks is used to manage the console lines in a GS80/160/320 system.

To find information about a console line, start by clicking Operations, and then the Consoles link in the left navigation panel of any ConsoleWorks screen. This opens the Show Consoles screen (Figure 3–12). From there you can view a console line's activity or its configuration, delete a console (Section 3.3.2) or add one (Section 3.3.3).

NOTE: *When you open a console, a security warning displays. By loading the certificate authority (Section 3.3.1), you can limit this warning to once.*

Viewing a Console's Activity

Use one of the three methods described in Section 3.2 to communicate with a console and view its activity.

Viewing a Console's Configuration

Click the console name link on the Show Consoles screen to display the *console_name* Configuration screen.

3.3.1 Loading Certificate Authority

The Java applet used in ConsoleWorks warns of a potential security violation on the SMC PC. By loading the certificate authority, which is on the C drive with the application, you agree that content from TECSys Development, Inc. can be trusted.

Privileges required: Admin –none; Console –none

Figure 3-13 Security Warning

PK-2738-00

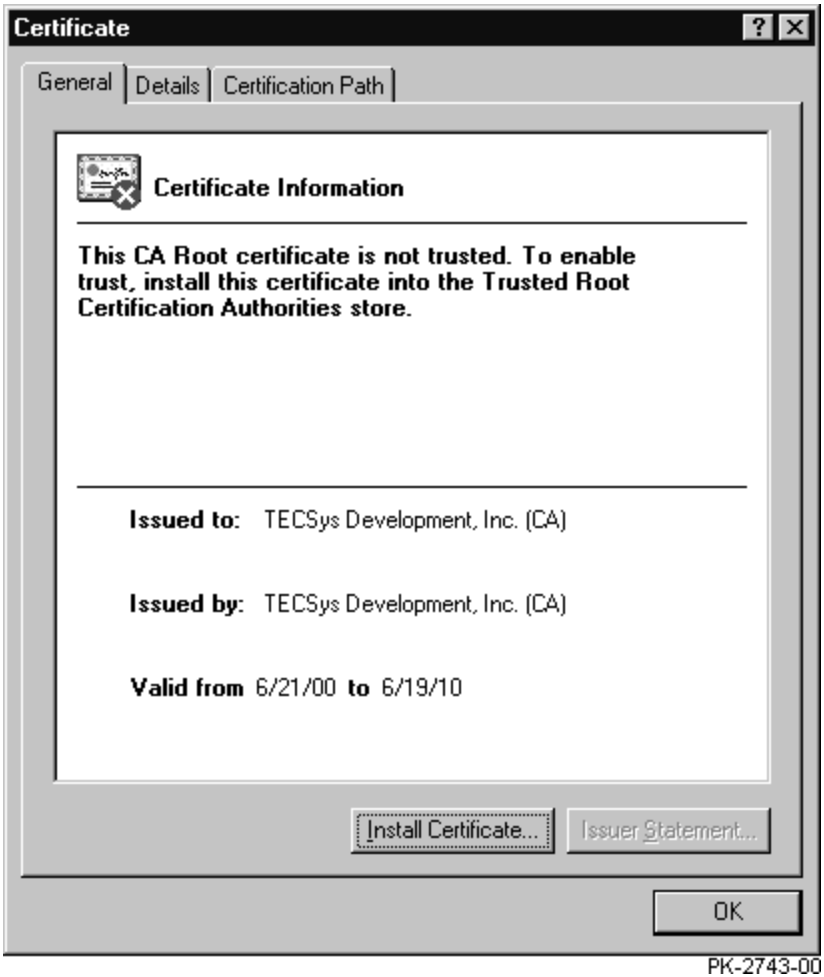
When you open a console, a security warning displays (Figure 3–13). To prevent repeated display of this warning, load the TDI security certificate.

1. In the left navigation panel of any ConsoleWorks screen, select Download.
2. From the selection links at the bottom of the left navigation panel, select TDI Certificate. The File Download dialog box opens (Figure 3–14).
3. Select the option button labeled *Open this file from its current location* and click OK.

Continued on page 3-29

Figure 3–14 File Download Dialog Box

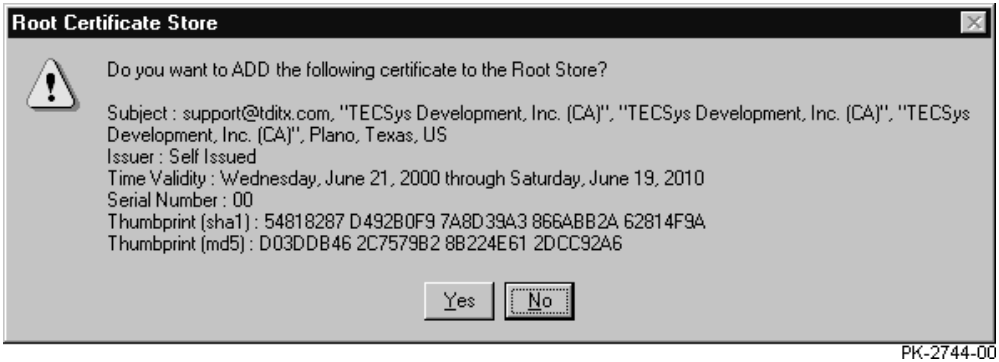
Figure 3–15 TDI Certificate



PK-2743-00

4. The certificate displays (Figure 3–15). Click Install Certificate….
5. The Certificate Manager Import Wizard opens. Follow the instructions in the wizard and accept the defaults. At the end click Finish.
6. The Root Certificate Store window opens (Figure 3–16). Click Yes.
7. The certificate displays again. Click OK.

Figure 3–16 Root Certificate Store Window



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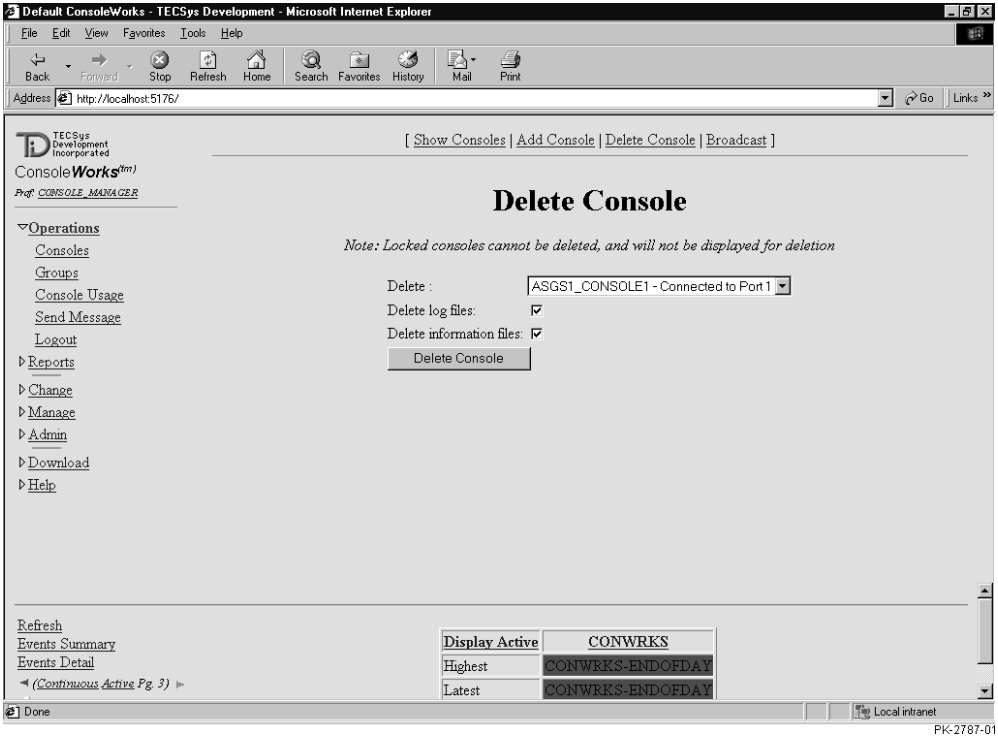
3.3.2 Deleting a Console

Select Operations|Consoles in the left navigation panel, then Delete Console at the top of the screen.

Privileges required: Admin –R W C; Console –none

Figure 3–17 Delete Console Screen

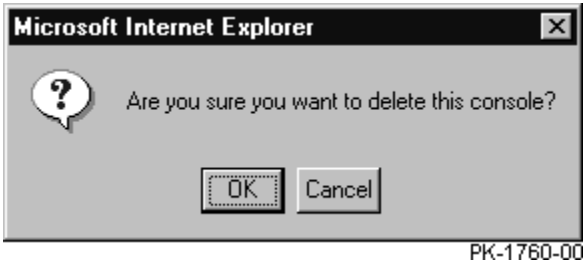


NOTE: *Be sure you want to delete the console, since you cannot undo this operation. If you accidentally delete a console, use the Add Console function (Section 3.3.3) to reconfigure it.*

When a physical console line (between a standard I/O module and the terminal server) is removed, do the following to remove it from the software configuration:

1. Remove the console from the system group (see Section 3.3.8).
2. In the left navigation panel select Operations. From the selection links select Consoles. The Show Consoles screen opens.
3. At the top of the Show Consoles screen select Delete Console. The Delete Console screen opens (Figure 3–17).
4. From the Delete dropdown menu select the console to be deleted.
5. Determine if the log files and information files for the console will be deleted. To delete them, select the checkboxes labeled *Delete logfiles* and *Delete information files*.
6. Click the Delete Console button. A verification message displays (Figure 3–18).
7. Click OK to delete the console. The Show Consoles screen opens; the deleted console is no longer listed.
8. Run the Console Group Validator utility. See Chapter 11 of the *System Management Console Installation Guide*.

Figure 3–18 Delete Console Verification Message

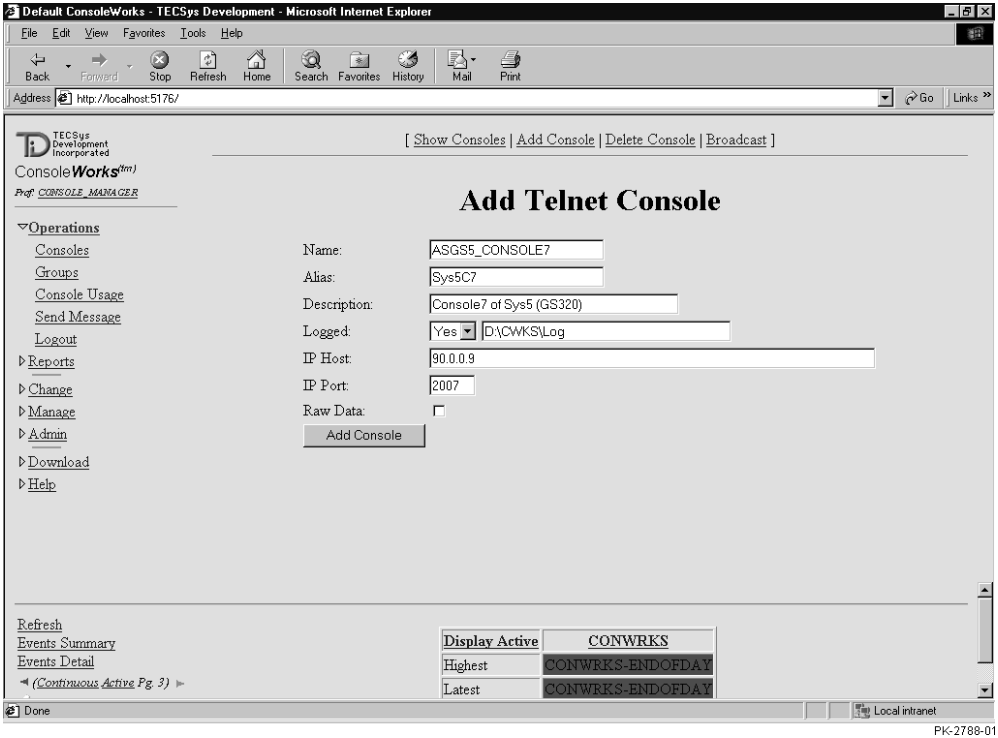


3.3.3 Adding a Console

Select Operations|Consoles in the left navigation panel, then Add Console at the top of the screen. The type is telnet.

Privileges required: Admin –R W C; Console –none

Figure 3–19 Add Telnet Console Screen



PK-2788-01

1. In the left navigation panel select Operations. From the selection links select Consoles. The Show Consoles screen opens.

NOTE: *The maximum number of consoles that can exist on an SMC is set by the ConsoleWorks license. If the Show Consoles screen lists the maximum number of consoles (not including the ConsoleWorks internal console, CONWRKS), do not attempt to add another. Instead, you must delete a console before adding one or add a license for more consoles. (See Appendix D for license information.)*

---

2. At the top of the Show Consoles screen select Add Console. The Add Console screen opens.
3. From the Type dropdown menu select Telnet. Click the Add Console button. The Add Telnet Console screen opens (Figure 3–19).
4. Enter the information requested for the console:
   a. Enter a name and a description for the console. The console name must be unique. (Table 1–2 lists the names given to consoles at installation.)
   b. Enter an alias. See Section 3.3.5 for information about console aliases.
   c. Select Yes in the Logged list box. In the block to the right of the list box enter **D:\Cwks\Log**.
   d. Enter the IP host number in the block. (This is the IP address of the GS80/160/320 system's terminal server.) See Table 1–3 for the IP host number for each system.
   e. In the IP port block enter a number between 2001 and 2008; the last digit is the terminal server port to which the console is attached. This number must be unique for each console in a system. See Table 1–2.
   f. Do not select the Raw Data checkbox.

Continued on page 3-35

Figure 3-20 *console_name* Configuration Screen

PK-1762A-01

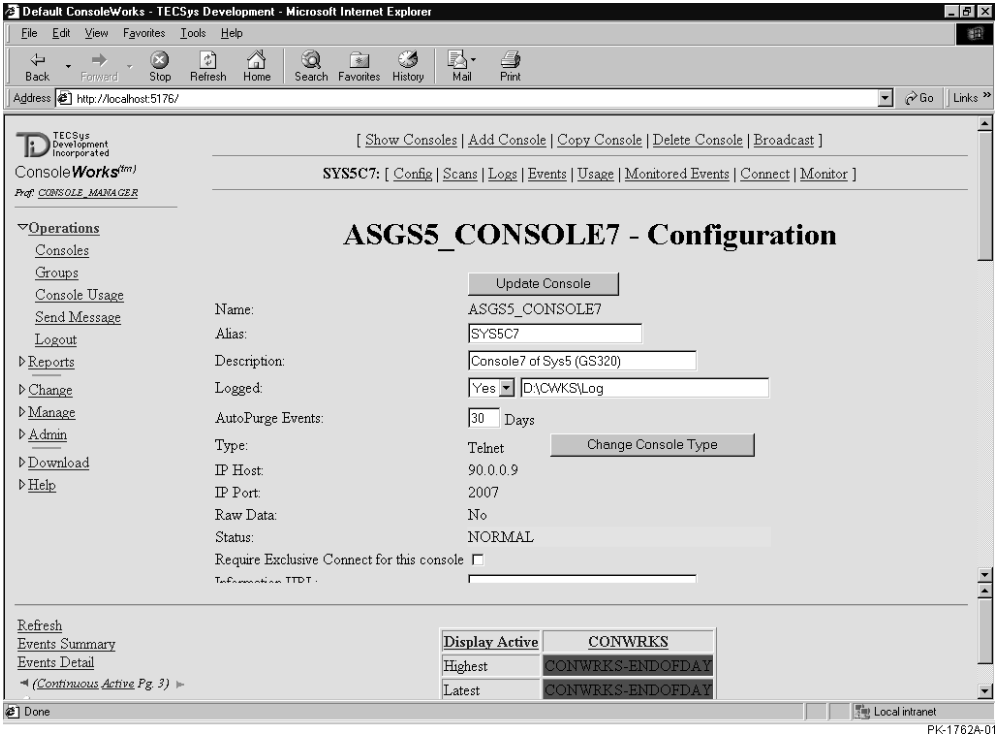
5. Click the Add Console button. The *console_name* Configuration screen opens (Figure 3–20).
6. If you want ConsoleWorks to automatically delete events, enter a number from 1 to 999 in the AutoPurge Events block. The number corresponds to the number of days before events are purged. Enter 0 to prevent ConsoleWorks from deleting events.
7. Enter the profile access information at the bottom of the main data panel. Click the Update button.
8. At the top of the screen select Connect. A window opens showing console line activity. Press Enter to validate the connection. The connection is working if the SCM, SRM, or operating system prompt displays.
9. Add the console to the system group (see Section 3.3.8).
10. Run the Console Group Validator utility. See Chapter 11 of the *System Management Console Installation Guide*.

3.3.4 Renaming a Console

ConsoleWorks does not allow direct renaming of a console. To change a name, delete the console and add a new one with the preferred name.

Privileges required: Admin –R W C; Console –none

Figure 3-21 *console_name* Configuration Screen



PK-1762A-01

The SMC is configured with the number of consoles chosen at installation. Since ConsoleWorks does not allow direct renaming of a console, to change a name, you must delete the console and add a new one with the name you choose.

NOTE: *If the Show Consoles screen lists the maximum number of consoles permitted by the ConsoleWorks license (not including the ConsoleWorks internal console, CONWRKS), be sure to delete the console before adding a new one.*

---

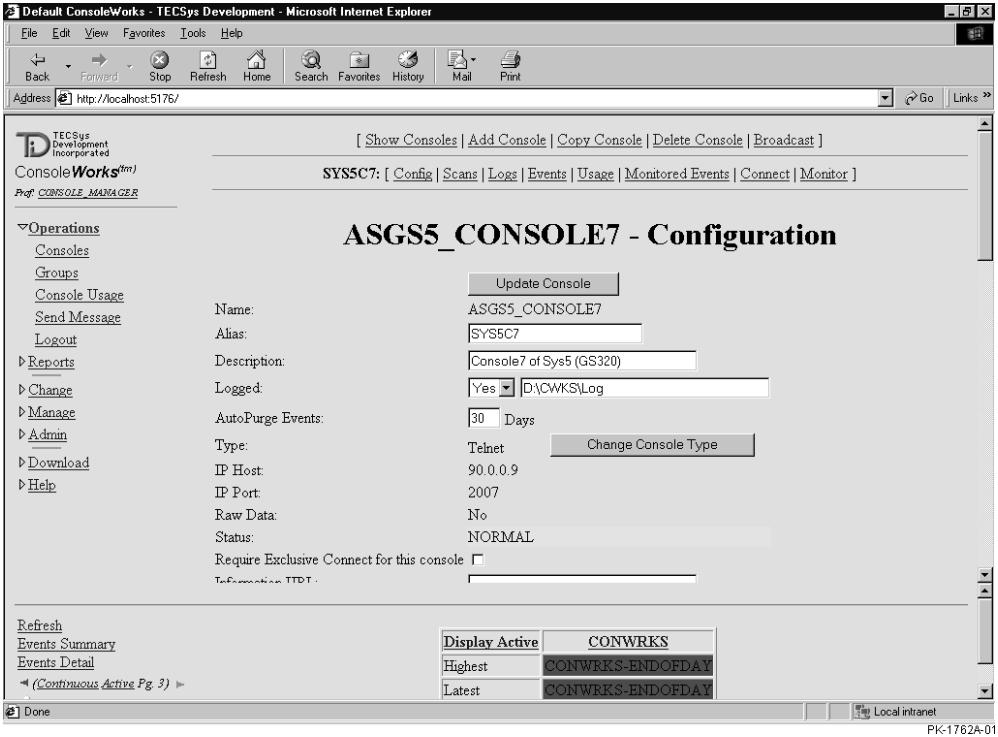
1. Determine the console's properties.
   a. In the left navigation panel select Operations. From the selection links select Consoles. The Show Consoles screen opens.
   b. Select the console you want to rename from the list in the main data panel. The *console_name* Configuration screen opens (Figure 3–21).
   c. Note the properties of this console, including the IP host and IP port numbers, profile access, special characters, log file, and raw characters.
2. Delete the console (see Section 3.3.2).
3. Create a new console with the selected name and the properties noted in step 1c (see Section 3.3.3).

NOTE: *The console name is included in the name of the log files for that console. Log files may have been generated for the console prior to the renaming. These file names will not change; that is, the old console name will remain in the name of the log files.*

3.3.5 Giving a Console an Alias

Enter the alias in the Alias block on the *console_name* Configuration screen and click the Update Console button.

Figure 3-22 *console_name* Configuration Screen



PK-1762A-01

An easier way to give a console a different name than renaming it (Section 3.3.4) is to give it an alias. The alias displays in ConsoleWorks and CAPM wherever the console's name would be used.

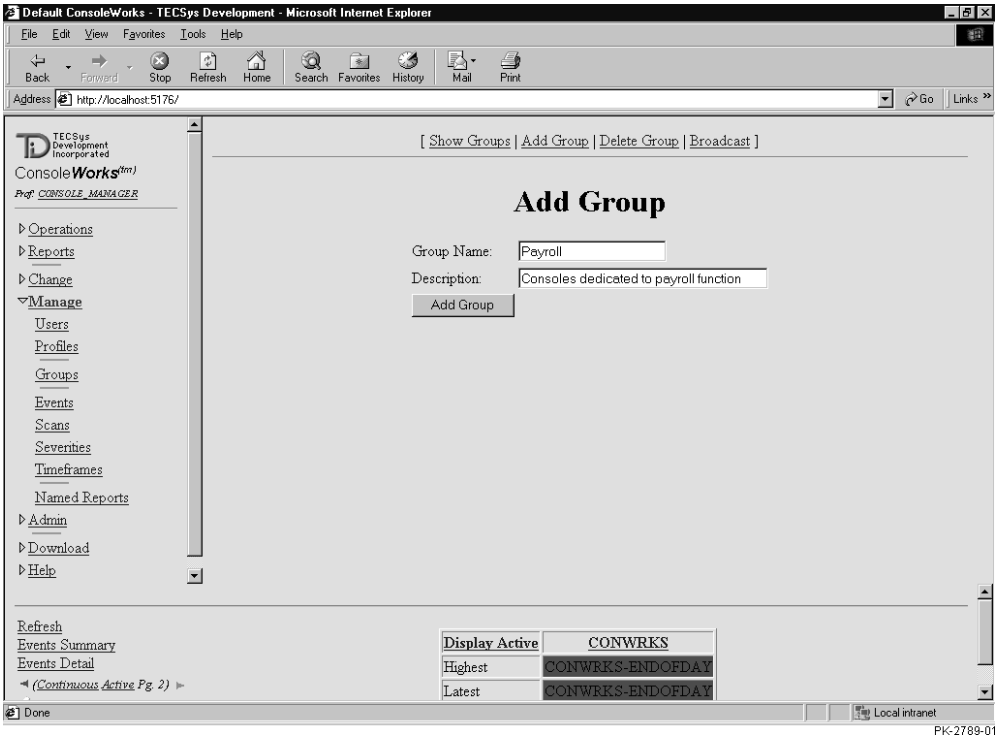
To give a console an alias, enter it in the Alias block on the *console_name* Configuration screen (Figure 3–22) and click the Update Console button.

3.3.6 Adding a Console Group

Select Manage|Groups from the left navigation panel, then Add Group from the top of the screen. All consoles in a system must be in the same group before the system can be partitioned.

Privileges required: Admin –R W; Console –none

Figure 3-23 Add Group Screen

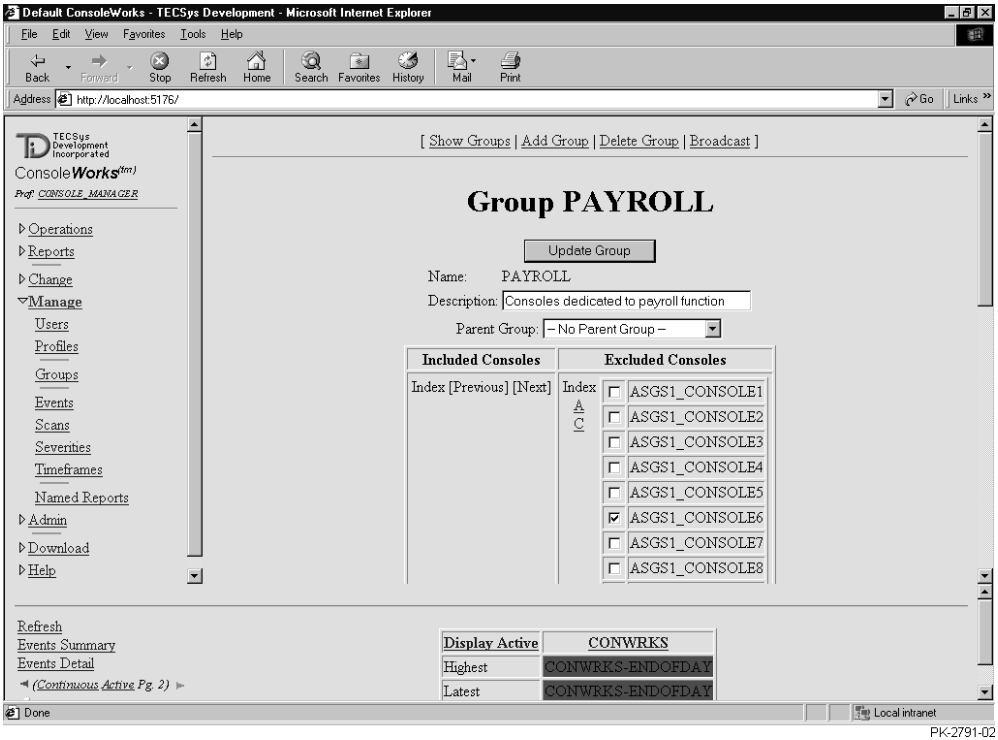


All consoles in a system are configured into a group when the system is installed. Each system's consoles constitute one group. The user can create other groups so that consoles are in a meaningful organization. A console can belong to multiple groups.

1. In the left navigation panel select Manage. From the selection links select Groups. The Show Groups screen opens.

2. At the top of the Show Groups screen select Add Group. The Add Group screen opens (Figure 3–23).
3. Enter a name in the Group Name box. The name is limited to 31 characters.
4. Optionally, enter a description.
5. Click the Add Group button. The Group *group_name* screen opens (Figure 3–24).
6. Add a console to the group by selecting the checkbox next to the console's name. Remove a console by toggling the console's checkbox.
7. When you have selected all consoles that belong in the group, click the Update Group button. The screen redisplays with the selected consoles in the Included Consoles column.

Figure 3-24 Group *group_name* Screen



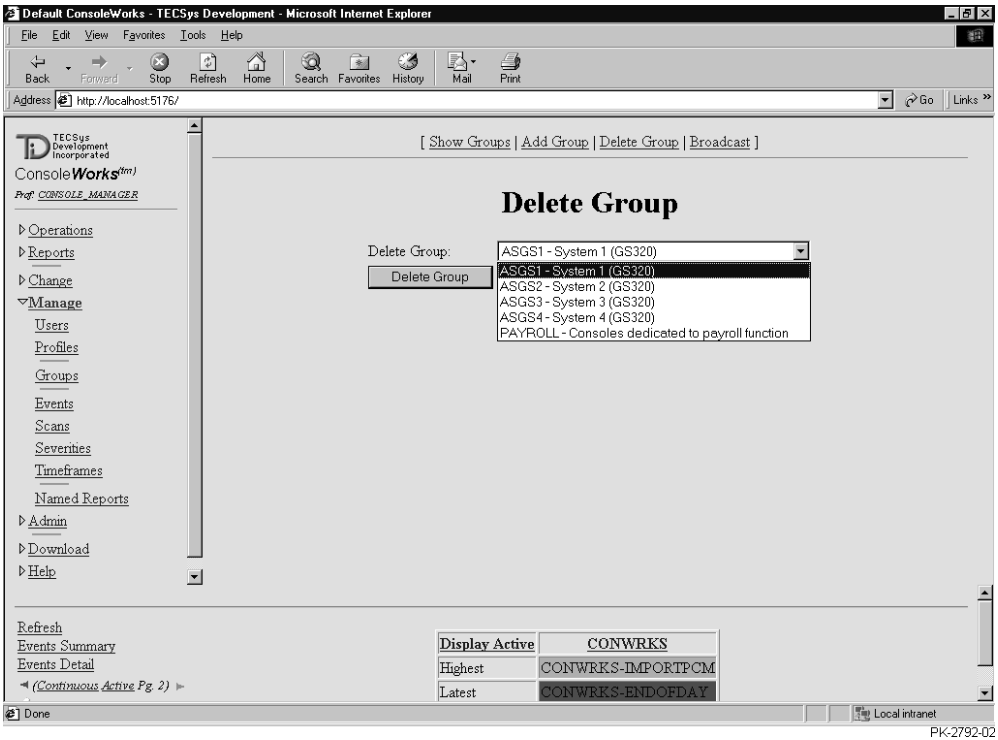
PK-2791-02

3.3.7 Deleting a Console Group

Select Manage|Groups from the left navigation panel, then Delete Group from the top of the screen.

Privileges required: Admin –R W C D; Console –none

Figure 3-25 Delete Group Screen



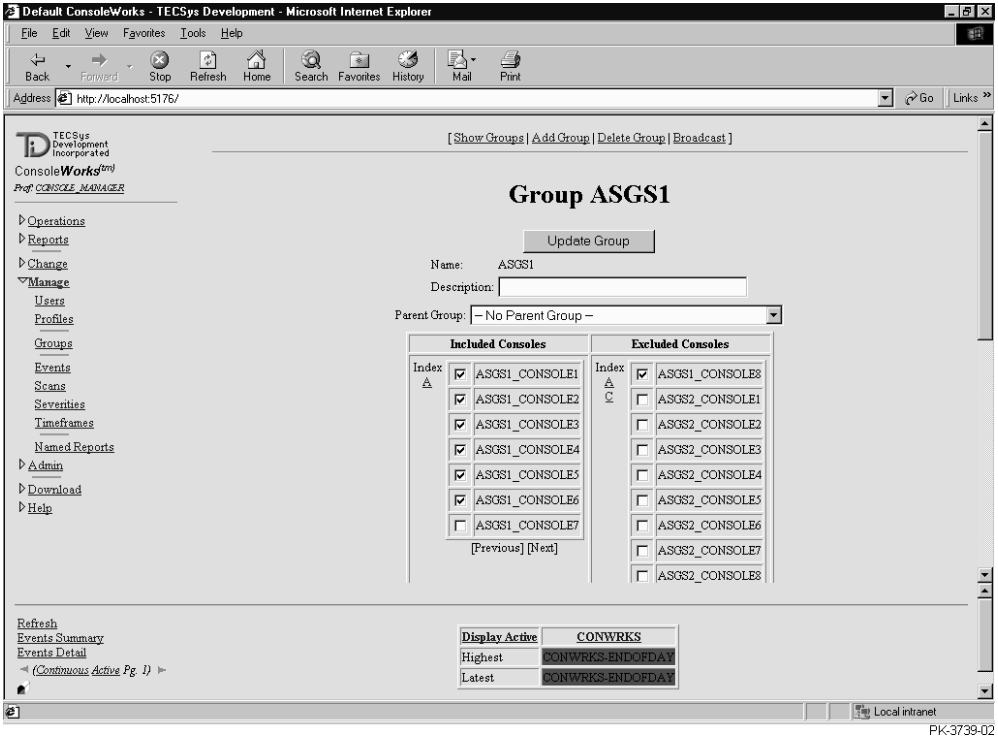
PK-2792-02

1. In the left navigation panel select Manage. From the selection links select Groups. The Show Groups screen opens.
2. At the top of the screen select Delete Group. The Delete Group screen opens (Figure 3–25).
3. In the pulldown list select the group to delete. Click the Delete Group button.
4. An acknowledge box opens. Click OK to confirm that the group should be deleted.

3.3.8 Removing a Console from or Adding One to an Existing Group

Select Manage|Groups from the left navigation panel, then the link for the group.

Figure 3-26 Group *group_name* Screen



PK-3739-02

Removing a Console from a Group

1. In the left navigation panel select Manage. From the selection links select Groups. The Show Groups screen opens.
2. Select the link for the group. The Group *group_name* screen opens (Figure 3–26).
3. In the Included Consoles list, click the checkbox for the console to clear the box. (In Figure 3–26, ASGS1_CONSOLE7 is being removed.) Click the Update Group button.

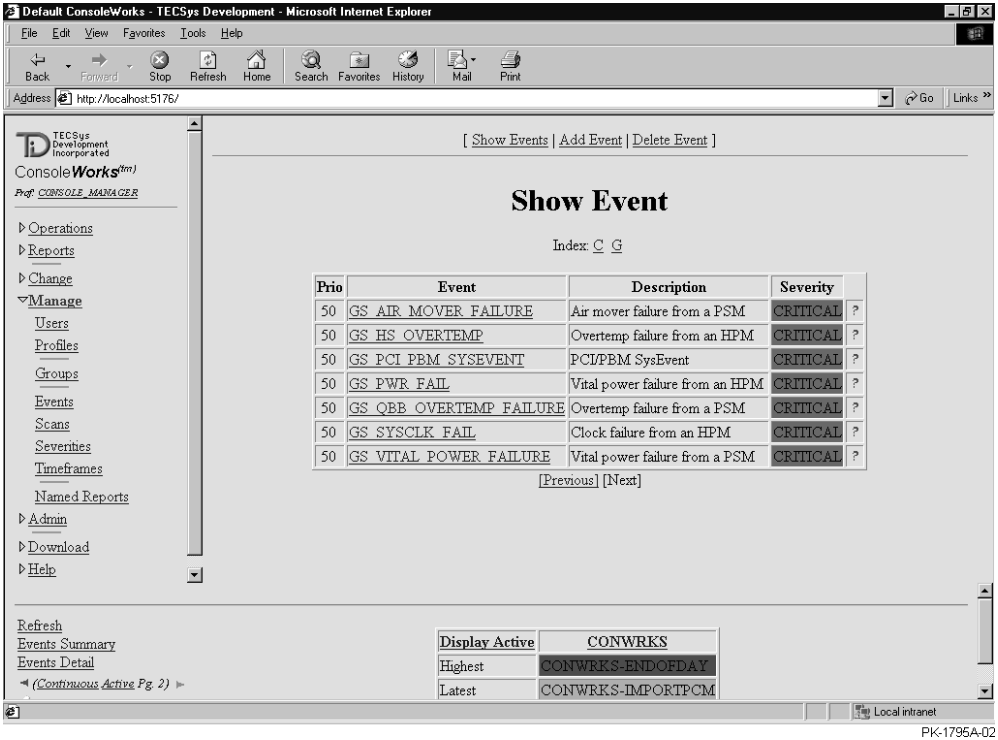
Adding a Console to an Existing Group

1. Create the console if it does not exist. See Section 3.3.3.
2. In the left navigation panel select Manage. From the selection links select Groups. The Show Groups screen opens.
3. Select the link for the group. The Group *group_name* screen opens (Figure 3–26).
4. In the Excluded Consoles list, click the checkbox for the console to select it. (In Figure 3–26, ASGS1_CONSOLE8, which previously was removed, is being added.) Click the Update Group button.

3.4 Managing Events and Actions

An event is a text string in the input or output of a console's SCM, SRM, or operating system instance for which ConsoleWorks monitors. Based on the event, ConsoleWorks can trigger an action. Each event is associated with one or more scans, or collection of events. A scan, in turn, is associated with one or more consoles.

Figure 3-27 Show Events Screen



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An event is a text string in the input or output of a serial port for which ConsoleWorks tests. The string can be to or from the SCM, SRM, or operating system. A number of events are supplied by ConsoleWorks and by Compaq; the user can create others (Section 3.4.3). Compaq supplies a number of events that are specific to the GS80/160/320 system (Section 3.4.1).

An event can trigger an action. Three actions are available: acknowledge (and optionally purge) the event, send mail to a designated recipient, and broadcast a message. In order for an action to occur, the user must enable it for the event (Section 3.4.2).

An event must be part of a scan, which is a collection of events that is associated with a console. The Compaq-supplied events are all included in one scan; other scans can be added (Section 3.4.4). In addition, scans can be imported to ConsoleWorks from other console management software. See the *ConsoleWorks Administrator and User Guide* for information about importing scans.

Every time ConsoleWorks starts, it validates all outstanding events (events that have not been acknowledged). This can result in a long startup if unacknowledged events are allowed to accumulate. You can acknowledge and, optionally, purge selected events or a page of events for a specified console (3.4.5). Or you can expunge (acknowledge and purge) all events of a specified priority or lower for one or more consoles (Section 3.4.6). Alternatively, you can have ConsoleWorks automatically acknowledge (or acknowledge and purge) selected events for a specified console by using an action (Section 3.4.2).

3.4.1 Importing and Using Compaq-Supplied Events

The Compaq-supplied events and script send mail to a designated individual if any of seven conditions occurs in the GS80/160/320 system. Some configuration is required to enable these actions.

Table 3-5 Compaq-Supplied Events

Event	Description
GS_AIR_MOVER_FAILURE	Air mover failure in a QBB
GS_HS_OVERTEMP	Overtemperature condition in the hierarchical switch housing
GS_PCI_PBM_SYSEVENT	System event in a PCI box
GS_PWR_FAIL	Vital power failure in the hierarchical switch housing
GS_QBB_OVERTEMP_FAILURE	Overtemperature condition in a QBB
GS_SYSCLK_FAIL	Clock failure in the hierarchical switch housing
GS_VITAL_POWER_FAILURE	Vital power failure in a QBB

The Compaq-supplied events warn of a number of *AlphaServer* conditions that require attention (Table 3–5). These events must be brought into ConsoleWorks before they can be used. Unless ConsoleWorks is re-installed, this procedure is done only once.

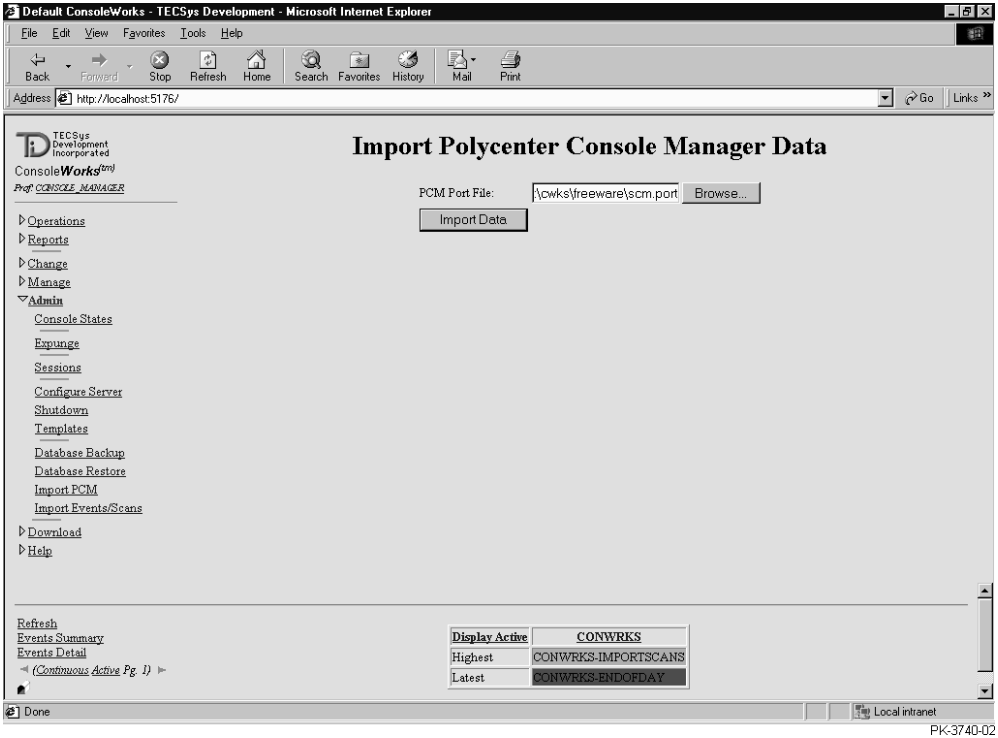
There are two procedures for importing these events; follow only one of them. The first is explained below; the second is on page 3-51.

1. In the left navigation panel select Admin. From the selection links select Import PCM. The Import Polycenter Console Manager Data screen opens (Figure 3–28).
2. In the box labeled *PCM Port File* enter **`c:\cwks\freeware\scm.port`**. Or, if you prefer, click the Browse… button and browse to that file.
3. With the path and file name in the box, click the Import Data button.

To use the Compaq-supplied events, do the following:

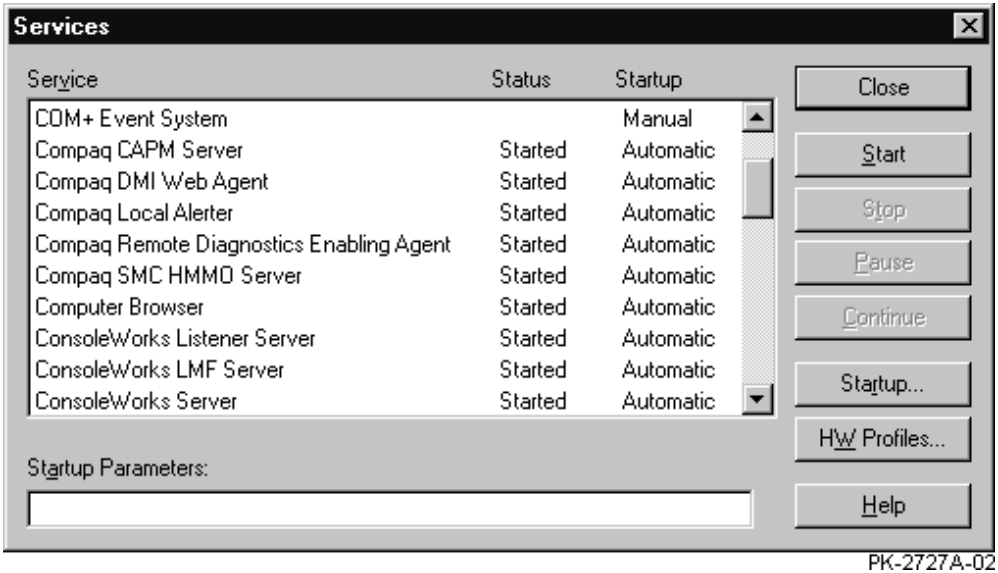
1. The ConsoleWorks script (c:\cwks\default\actions\event\mail.pl) should have been been modified at installation to include the name of your mail server. If it was not, or if you want to change it, do so now by opening the file Mail.pl in Notepad and following the instructions under the heading "WARNING!!!".
2. Follow the instructions in Section 3.4.2 to enable MAIL.BAT on all consoles for each of the seven events that begins with the string "GS–".

Figure 3-28 Import Polycenter Console Manager Data Screen



PK-3740-02

Figure 3-29 Services Dialog Box



PK-2727A-02

This is the second procedure for importing Compaq-supplied events.

1. Stop the ConsoleWorks services:
   a. Open the Control Panel. From the Start button select Settings|Control Panel.
   b. In the Control Panel double-click the Services icon. The Services dialog box opens (Figure 3–29).
   c. Click to highlight the ConsoleWorks LMF Server service and click the Stop button. This also stops the ConsoleWorks Server service.
2. Open a Command Prompt window by double-clicking the MSDOS Command desktop icon.
3. In the Command Prompt window enter the following (shown here in bold); press the Enter key at the end of each line:

   ```
   C:\> cd c:\cwks
   C:\cwks> import_pcm c:\cwks\freeware\scm.port
   ```

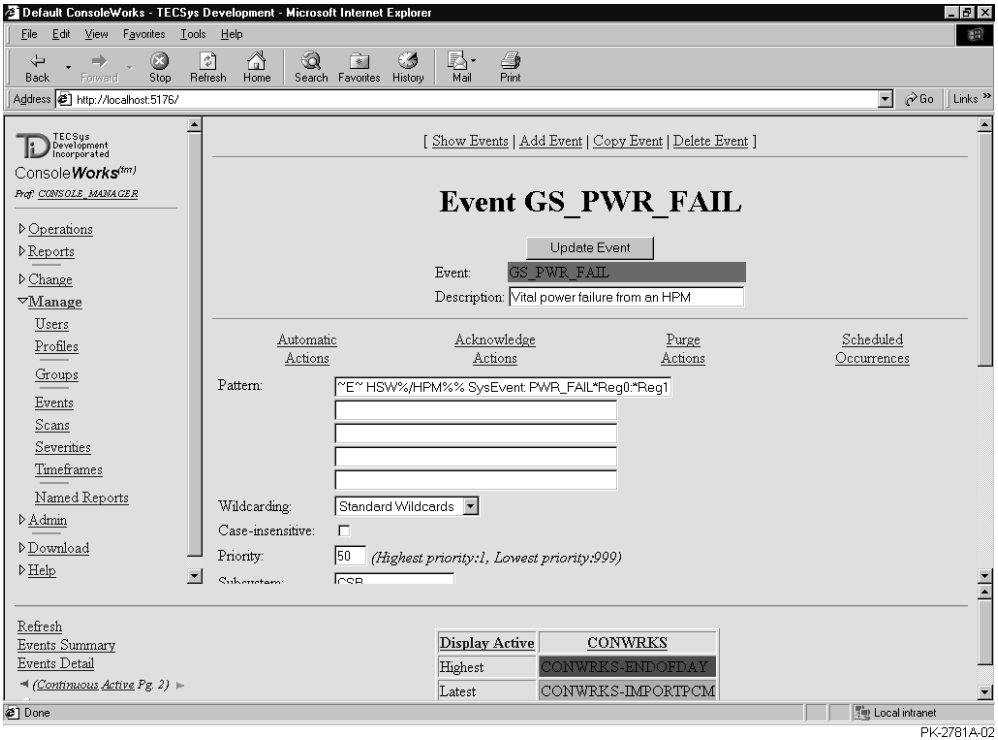
4. Restart the ConsoleWorks services. In the Services dialog box click to highlight the ConsoleWorks Server service and click the Start button. This also starts the ConsoleWorks LMF Server service.

3.4.2 Enabling an Action

Each event can have a number of associated actions.

Privileges required: Admin –R W C; Console –none

Figure 3-30 Event *event_name* Screen

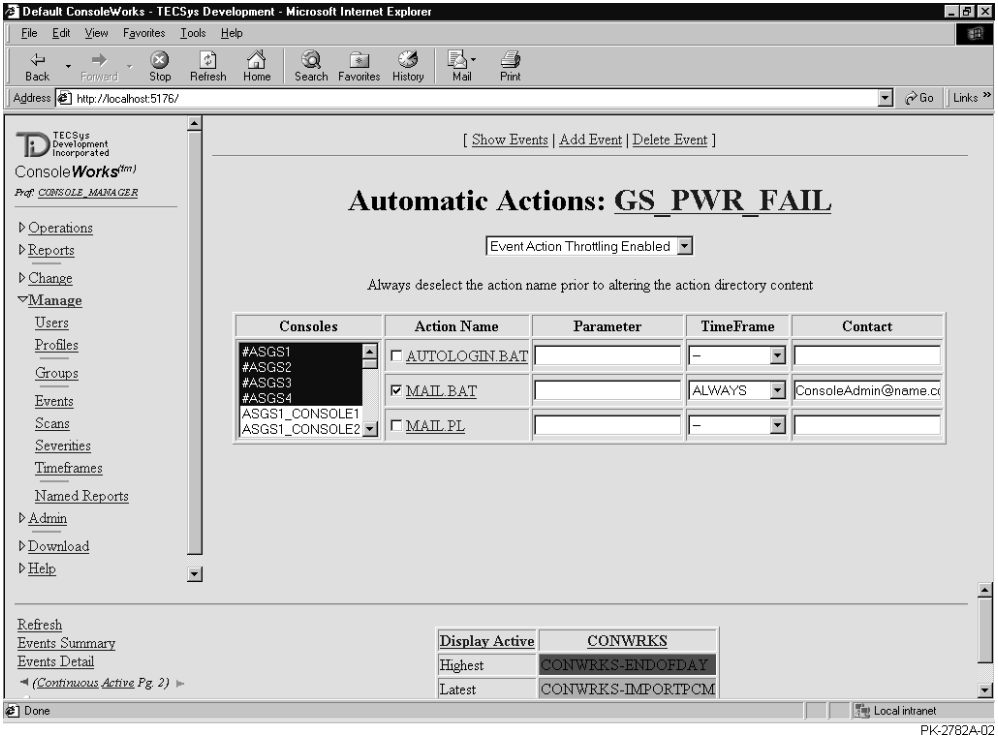


PK-2781A-02

1. In the left navigation panel select Manage. From the selection links select Events. The Show Events screen opens.
2. Select the event link from the list. The Event *event_name* screen opens (Figure 3–30).
3. Select the Automatic Actions link (above the Pattern box). The Event *event_name* Actions screen opens (Figure 3–31).
4. Enable or disable event throttling. If throttling is enabled, the event triggers the action once, but does not activate it again until the event is acknowledged. If throttling is disabled, the event triggers the action every time it occurs.
5. Highlight the console or consoles for which the event will trigger an action.

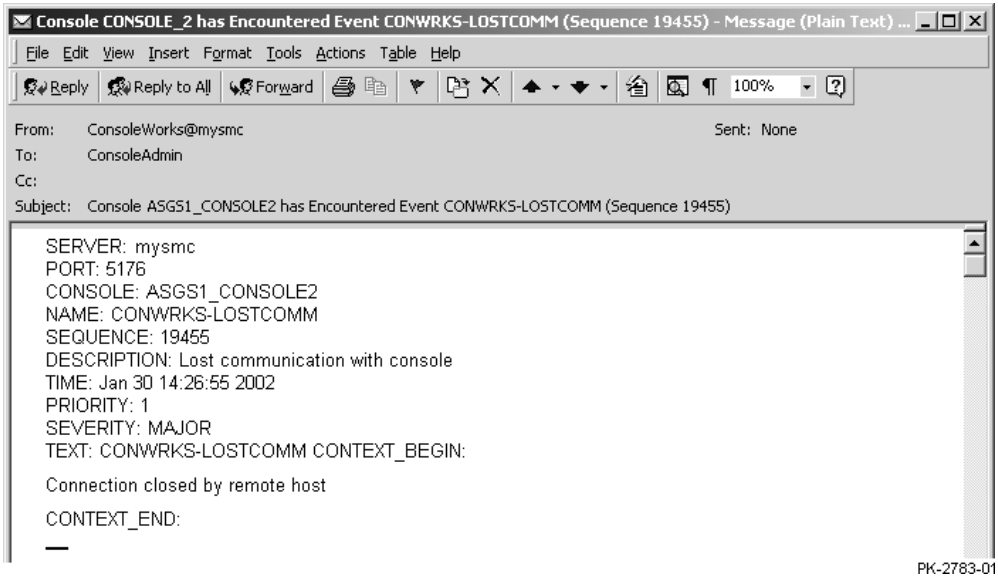
Continued on page 3-55

Figure 3-31 Event *event_name* Actions Screen



PK-2782A-02

Figure 3-32 Mail from ConsoleWorks



6. Click the checkbox(es) of the action or actions that you want to have triggered by the event. Four items are listed; they represent the four files in the folder C:\Cwks\Actions\Event. Three of them represent valid actions:
   - AUTOCANCEL.BAT – Acknowledge an event immediately after it occurs and, optionally, purge it.
   - BROADCAST.BAT – Broadcast a message to the indicated contact.
   - MAIL.BAT – Send mail to the indicated contact.

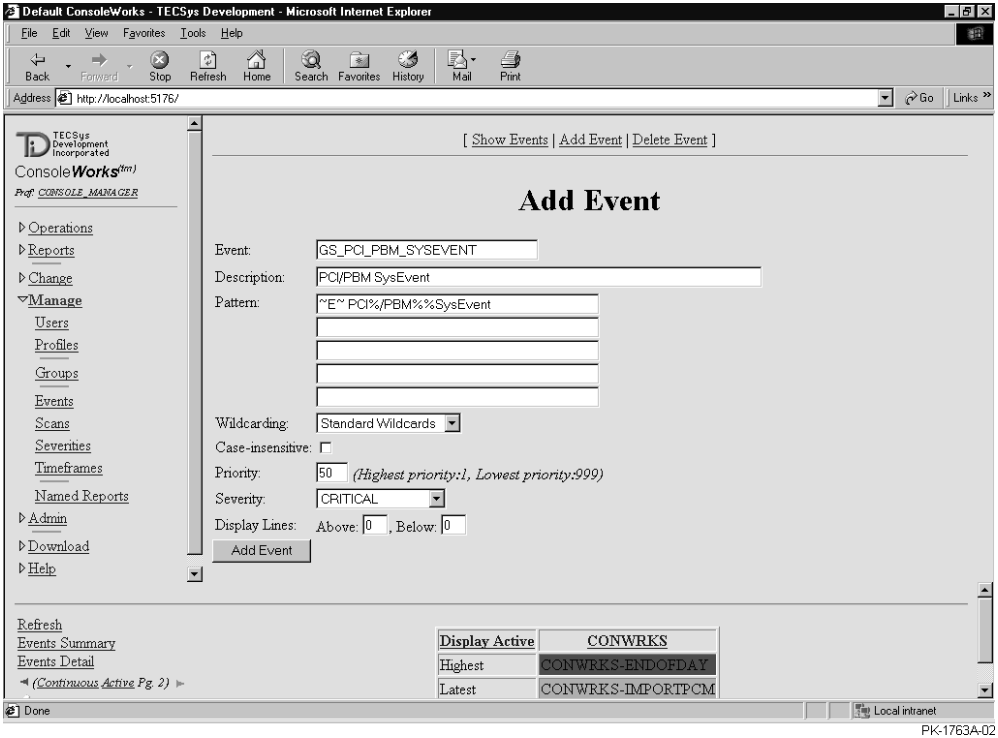
   The fourth item, MAIL.PL, is used by MAIL.BAT. Selecting it has no effect.
7. Supply a timeframe from the drop-down menu for the action(s) selected.
8. If you selected BROADCAST.BAT or MAIL.BAT, supply a contact.
9. If you selected AUTOCANCEL.BAT and want ConsoleWorks to purge all occurrences of the event, do the following:
   a. Open Windows Explorer: From the Start button, select Programs | Windows NT Explorer.
   b. Open the folder C:\Cwks\Actions\Event.
   c. Right-click on the file AUTOCANCEL.BAT and select Properties in the pop-up menu. The AUTOCANCEL.BAT Properties window opens.
   d. If the Read-only attribute is checked, click to clear the checkbox. Click OK.
   e. Right-click on the file again in Windows Explorer and select Edit. The file opens in Notepad.
   f. Scroll to the end of the file. Remove the string "Rem " from the beginning of the line before the last line.
   g. From the File menu select Save, then select Exit.

3.4.3 Adding an Event

Select Manage|Events in the left navigation panel, then Add Event at the top of the screen.

Privileges required: Admin –R W C; Console –none

Figure 3-33 Add Event Screen



PK-1763A-02

1. In the left navigation panel select Manage. From the selection links select Events. The Show Event screen opens.
2. At the top of the Show Event screen select Add Event. The Add Event screen opens (Figure 3–33).
3. Enter the information for the event:
   a. **Event** – Name of the event, limited to 61 characters. The name specified in this field is used in the list on the Show Event screen.
   b. **Description** – Description of the event, maximum 127 characters.
   c. **Pattern** – The text string for which ConsoleWorks tests. This field is limited to 255 characters. Wildcards are allowed: a percent sign (%) is a single-character wildcard; an asterisk (*) is multiple characters. If you use wildcards, be sure to check the Wild checkbox.
   d. **Wild** – Check this box to indicate that the pattern field contains one or more wildcard characters.
   e. **Case-insensitive** – Check this box to disable case sensitivity.
   f. **Priority** – The range is 1 (highest) to 999 (lowest). This is used by ConsoleWorks to sort events.
   g. **Severity** – The choices in this drop-down menu are: critical, informational, major, minor, and warning. The severity is used by ConsoleWorks to sort events.
   h. **Display lines above** and **Display lines below** – Provides context for the string; maximum of 25 lines above and below the matched string, for a total of 51 lines.
4. Click the Add Event button.

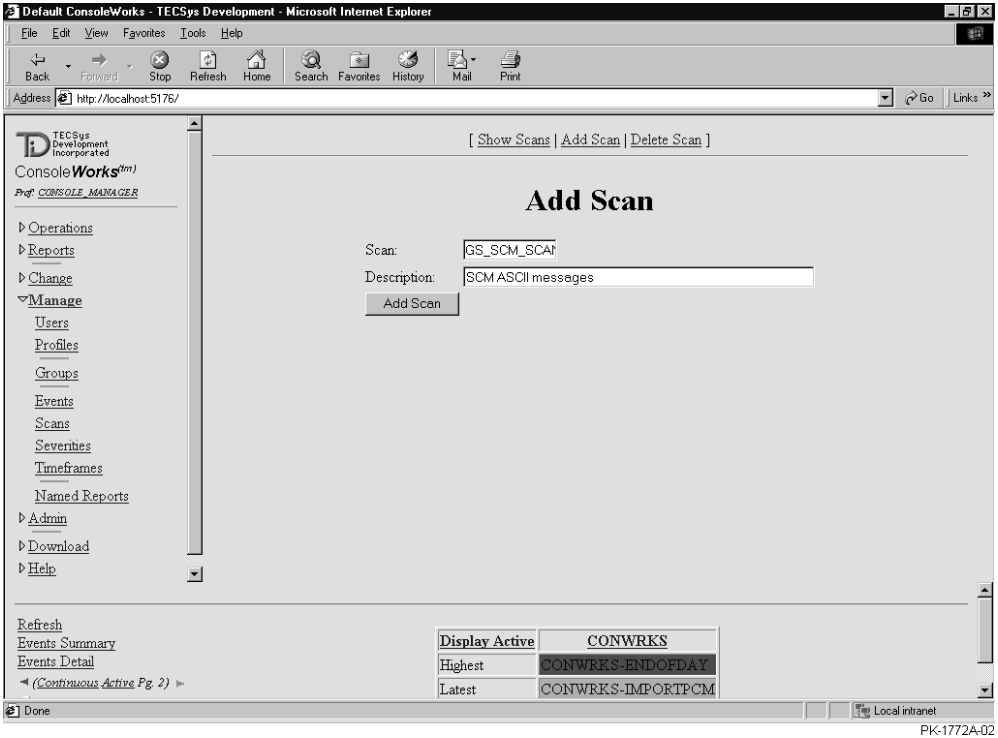
NOTE: *When a text string matches, ConsoleWorks triggers an event (such as sending mail) only when a carriage return is received from the console. If lines below the string are displayed, the event activates only after the carriage return from the last line is received.*

3.4.4 Adding a Scan

Select Manage|Scans in the left navigation panel, then Add Scan at the top of the screen.

Privileges required: Admin –R W C; Console –none

Figure 3-34 Add Scan Screen

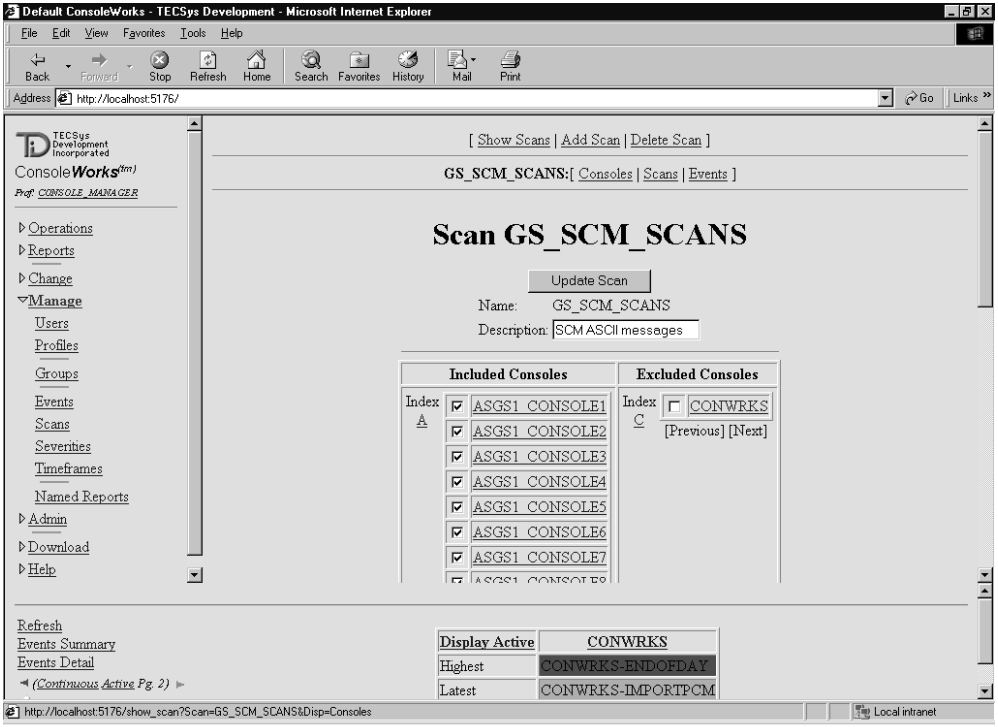


PK-1772A-02

1. In the left navigation panel select Manage. From the selection links select Scans. The Show Scans screen opens.
2. At the top of the Show Scan screen select Add Scan. The Add Scan screen opens (Figure 3–34).

3. Enter the information for the scan:
   a. **Scan** – Name of the scan, limited to 30 characters.
   b. **Description** – Description of the event, maximum 126 characters.
4. Click the Add Scan button. The Scan *scan_name* screen opens.
5. At the top of the screen select Events. A list of events displays; all are shown as excluded.
6. In the Excluded Events column select the events to include in this scan. Click the Update Scan button. The screen refreshes, and the events you selected are now in the Included Events column (Figure 3–35).

Figure 3-35 Scan *scan_name* Screen



PK-3732-02

3.4.5 Acknowledging and Purging Events

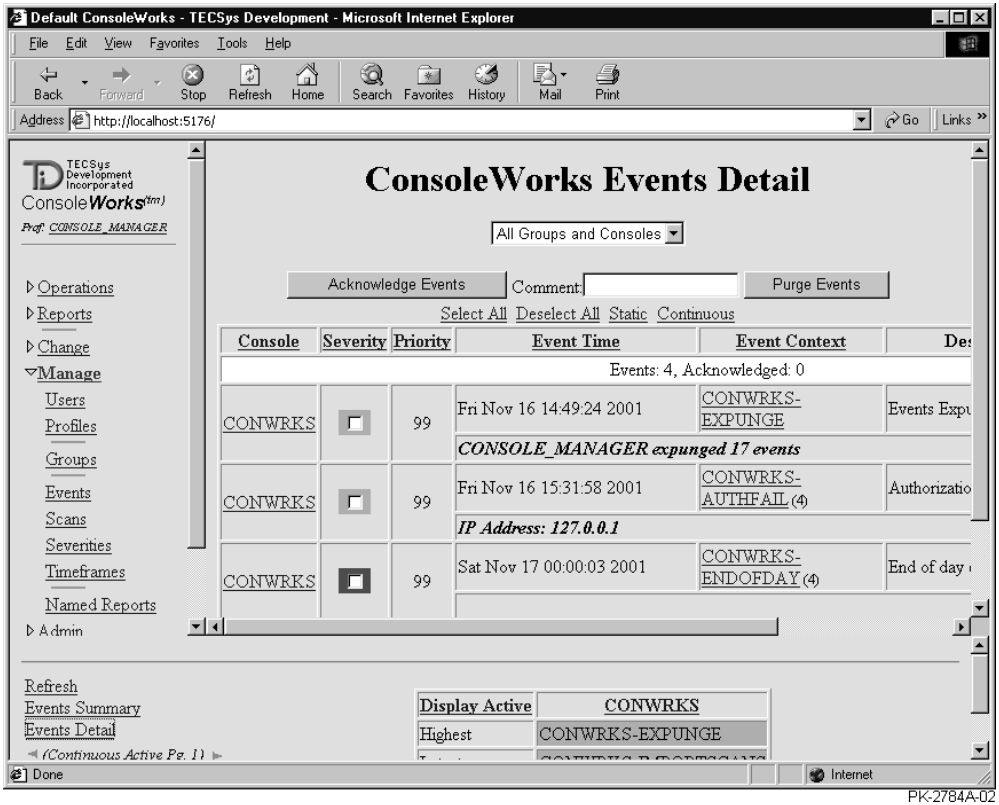
Click Events Detail. Select individual events or the Select All link. Click Acknowledge Selected Events, then Purge Acknowledged Events.

Privileges required:

Acknowledge: Admin –none; Console –R A

Delete: Admin –none; Console –R A W C

Figure 3-36 ConsoleWorks Events Detail Screen



PK-2784A-02

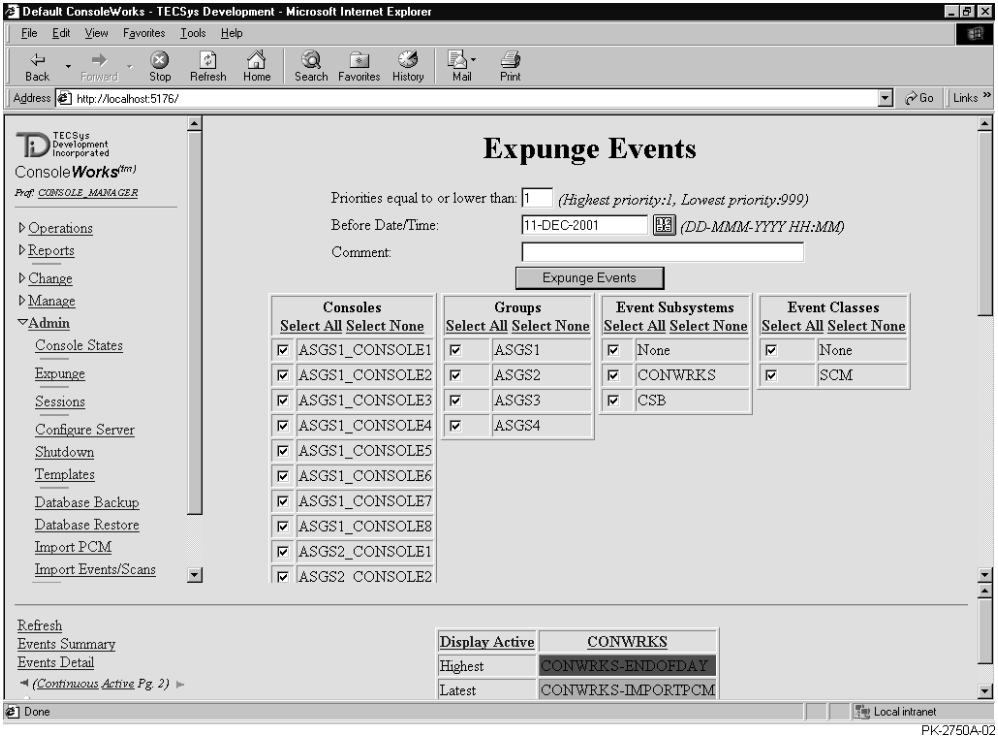
1. Display the events. You can display the events for one console only or for all consoles.
   - **One console:** From the left navigation panel select Operations. From the selection links select Consoles. The Show Consoles screen opens. Select the console for which you want to acknowledge events from the list. The *console_name* Configuration screen opens. At the top of the screen select the Events link. The *console_name* Events screen opens.
   - **All consoles:** From the lower navigation panel select Events Detail. The ConsoleWorks Events Detail screen opens (Figure 3–36).
2. Select the event or events to acknowledge.
   - **Individual events:** Each occurrence of an event is listed on a line. Click in the checkbox on that line to select the event.
   - **All events on the page:** Click the link Select All. This selects all events on the page. Click this link on other pages to select all events.
3. Optionally, enter a comment in the Comment box.
4. Click the button labeled Acknowledge Selected Events. The screen redisplays with the name of the user who acknowledged the event and the date in place of the checkbox and the comment, if included, in the description column.
5. To delete the acknowledged events, click the button labeled Purge Acknowledged Events. The screen redisplays without the event.

3.4.6 Expunging Events

Expunging acknowledges and deletes all events of a specified priority and lower from a console. Select Admin|Expunge. Select the console or consoles from which events are to be deleted and click Expunge Events.

Privileges required: Admin –R W C; Console –none

Figure 3-37 Expunge Events Screen



PK-2750A-02

Expunging acknowledges and deletes all events of a specified priority and lower from a console in one operation.

1. In the left navigation panel select Admin. From the selection links select Expunge. The Expunge Events screen opens (Figure 3–37).
2. In the box labeled Priorities equal to or lower than, select the highest priority of events to delete.
3. Click the checkbox of each console for which events will be deleted.
4. Click the Expunge Events button.
5. Wait for the message indicating the number of events that have been expunged (Figure 3–38).

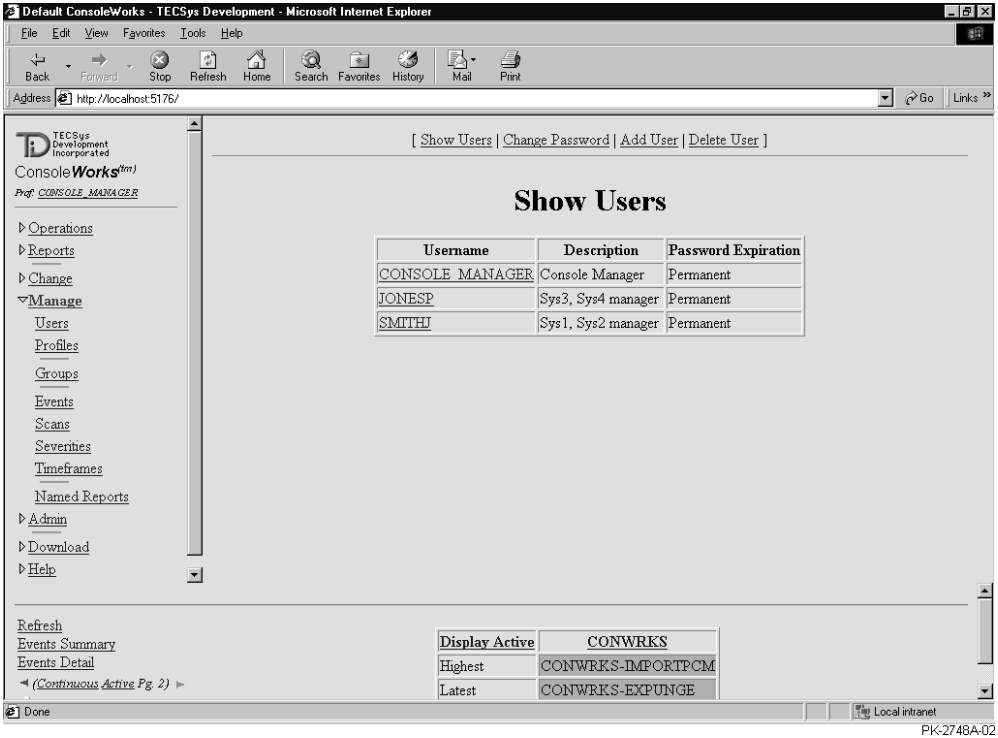
NOTE: *Expunging events from within ConsoleWorks does not reduce the size of the file default.config. To reduce the file size, run the Expunge utility. See Section 2.3.*

Figure 3-38 Expunge Completed Message

3.5 Managing Users

The SMC system administrator determines the consoles to which a user has access and the level of that access. The level of access is controlled by a profile; each user is associated with one or more profiles.

Figure 3-39 Show Users Screen



PK-2748A-02

Users gain access to consoles through profiles. A profile specifies the privileges granted to any user who is listed in its Users Granted table. Each user has access to one or more profiles but can use only one profile at a time.

Profiles specify two types of privileges: Console and Admin (administrative). Console and Admin privileges are independent.

Console privileges are for managing consoles. These privileges identify the level of interaction a user can have with a console and are hierarchical. That is, the level of privilege increases from read to control, and a higher level implies all lower levels.

Console privileges are:

Read – The user has read-only access to a console. The user can monitor a console's traffic but cannot interact with the console.

Ack – The user can acknowledge a console's events.

Write – The user can interact with (write to) the console.

Control – The user can purge acknowledged events and can send protected characters to the console.

Admin privileges are for managing ConsoleWorks. These privileges are not hierarchical, but they increase in the capabilities they grant from Read to Delete.

Admin privileges are:

Read and **Write** – The user can display and organize information.

Control – The user has access to the Admin menu in the left navigation panel.

Delete – The user can perform a number of delete operations.

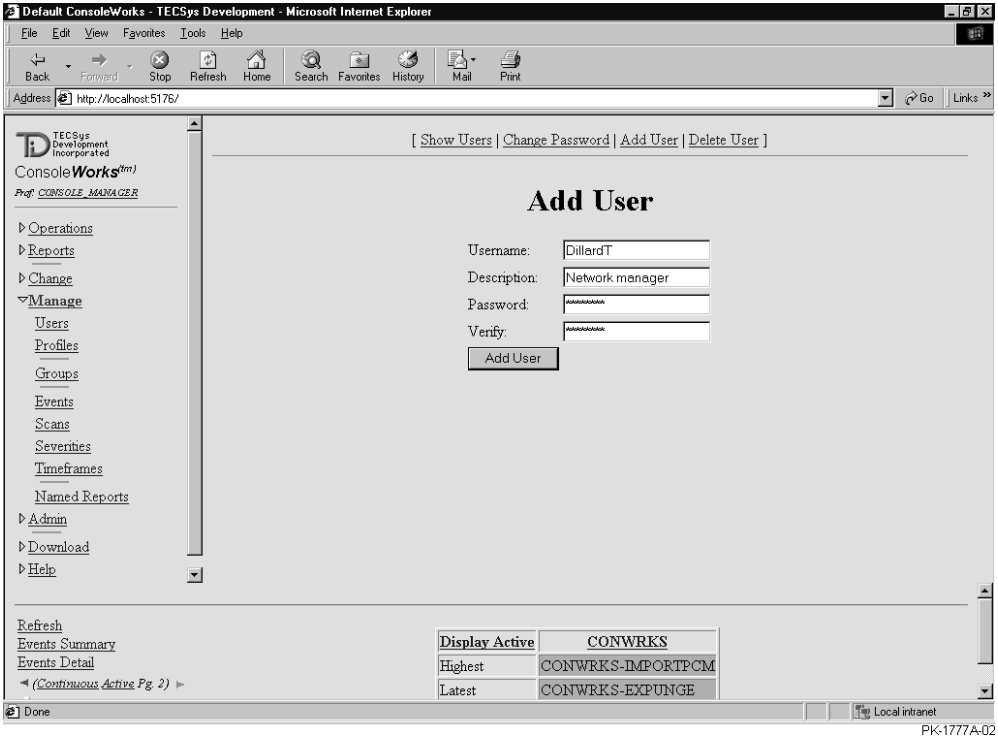
The Show Users screen (Figure 3–39) lists the users and the profiles to which they have access.

3.5.1 Adding a User

Select Manage|Users in the left panel, then Add User at the screen top.

Privileges required: Admin –R W C; Console –none

Figure 3-40 Add User Screen



PK-1777A-02

1. In the left navigation panel select Manage. From the selection links select Users. The Show Users screen opens.
2. At the top of the Show Users screen select Add User. The Add User screen opens (Figure 3–40).
3. Enter the information for the user:
   a. **Username** – Must be unique. May not contain spaces; ConsoleWorks replaces any spaces with underscores.

b. **Description** – For information only; not used elsewhere in ConsoleWorks.

c. **Password** – Must be at least six characters long.

d. **Verify** – Enter the password again. Verify must match Password.

4. Click the Add User button. The *user_name* screen opens (Figure 3–41).

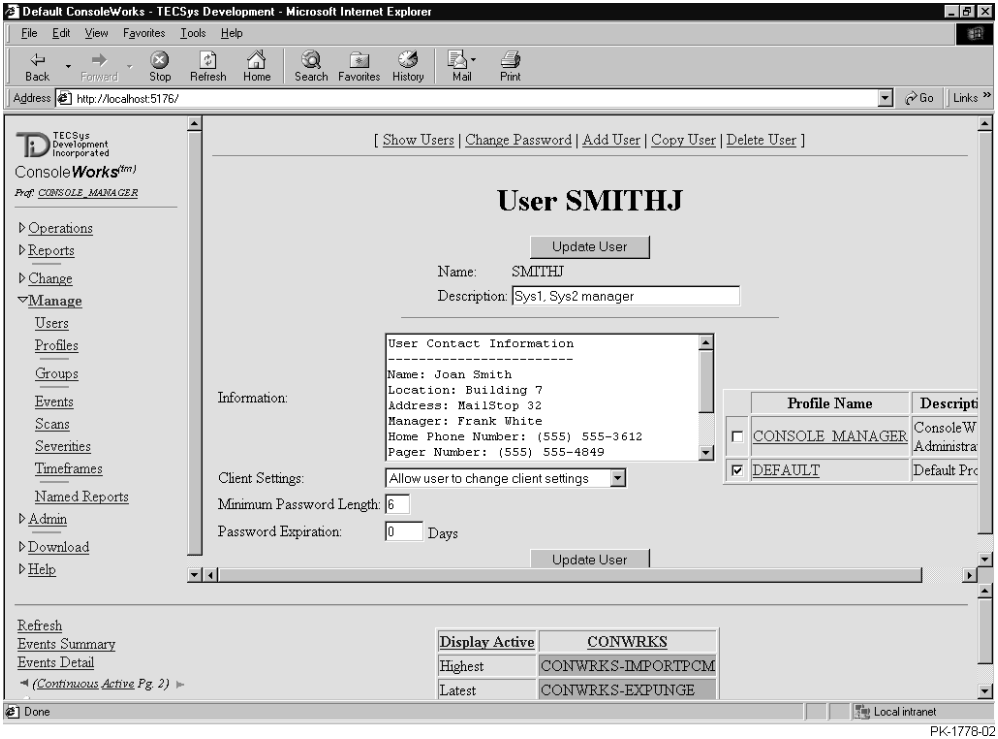
5. Enter the user contact information and select the profile for this user.

NOTE: *If you select more than one profile, the user is logged in with the one that has the least administrative privilege. The user can change the profile used after logging in by selecting Change|Profile.*

---

6. Click the Modify User button.

Figure 3-41 *user_name* Screen



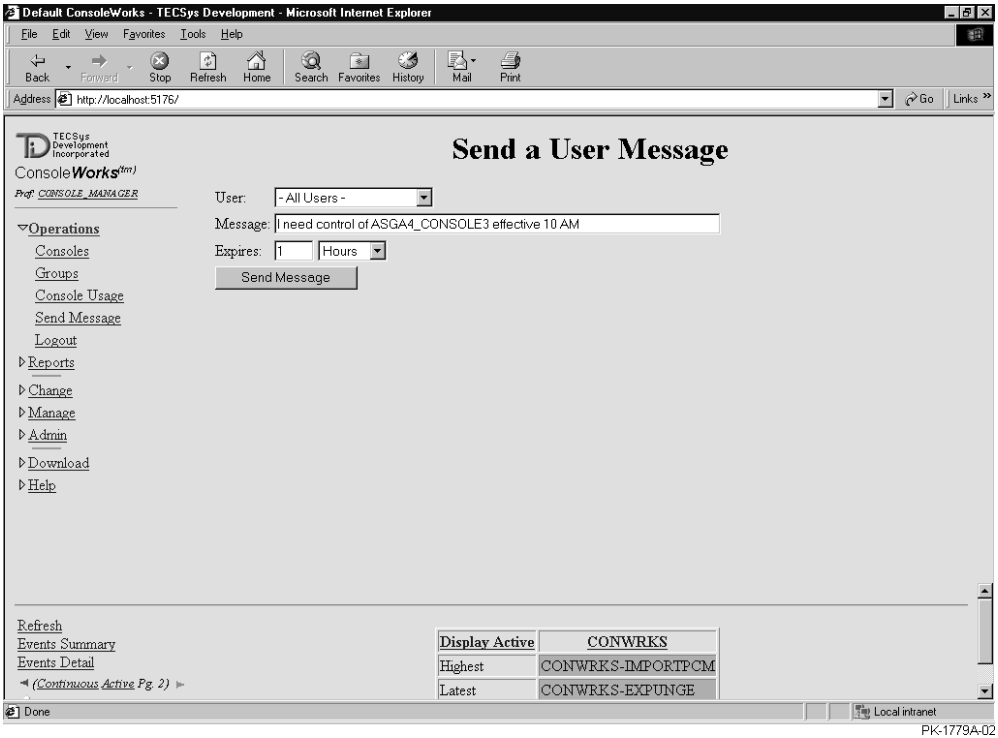
PK-1778-02

3.5.2 Communicating with Another User

To send a message, select Operations|Send Message in the left navigation panel. To read messages, click the mailbox icon in the bottom panel.

Privileges required: Admin –none; Console –none

Figure 3-42 Send a User Message Screen



PK-1779A-02

Sending a Message

1. In the left navigation panel select Operations. From the selection links select Send Message. The Send a User Message screen opens (Figure 3–42).
2. Select the recipient from the Select User dropdown menu.

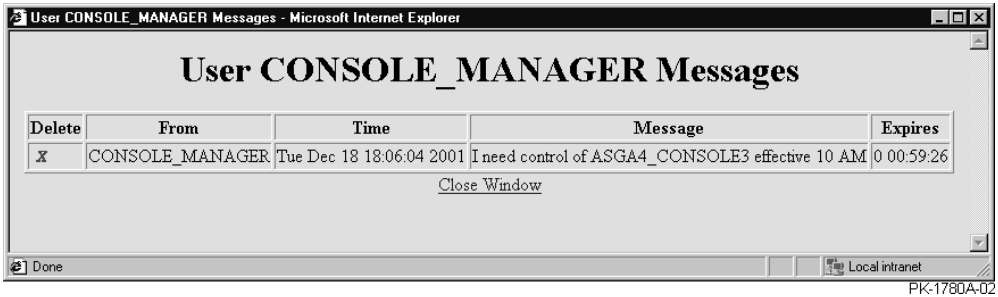
3. Enter the message in the Message text box. The maximum length is 255 characters.
4. Enter the timeout period in the Expires text box and select the units in the dropdown menu to the right of the text box. The default is 1 hour, the minimum 1 minute, and the maximum 9999 days. The message is deleted if the recipient does not read it before the timeout period expires.

Reading Messages

Message status is indicated by the icon in the lower left corner of the lower navigation panel. A plain mailbox icon ( ) indicates that the user has no new messages. An icon showing a mailbox with an envelope ( ) means that the user has messages.

1. Click on the icon to display a list of undeleted, unexpired messages. The User *user_name* Messages screen (Figure 3–43) opens in a separate browser window. The text of each message is displayed in a separate row along with the name of the sender, the time the message was sent, and the time and date it expires.
2. To delete a message, click the X in its row. The message is immediately deleted, without confirmation.

Figure 3-43 User *user_name* Messages Screen



PK-1780A-02

3.5.3 Changing a User Password

Select Change|Password in the left navigation panel.

Privileges required: Admin –R W C (none for user's own) ; Console – none

Figure 3-44 Change Password Screen

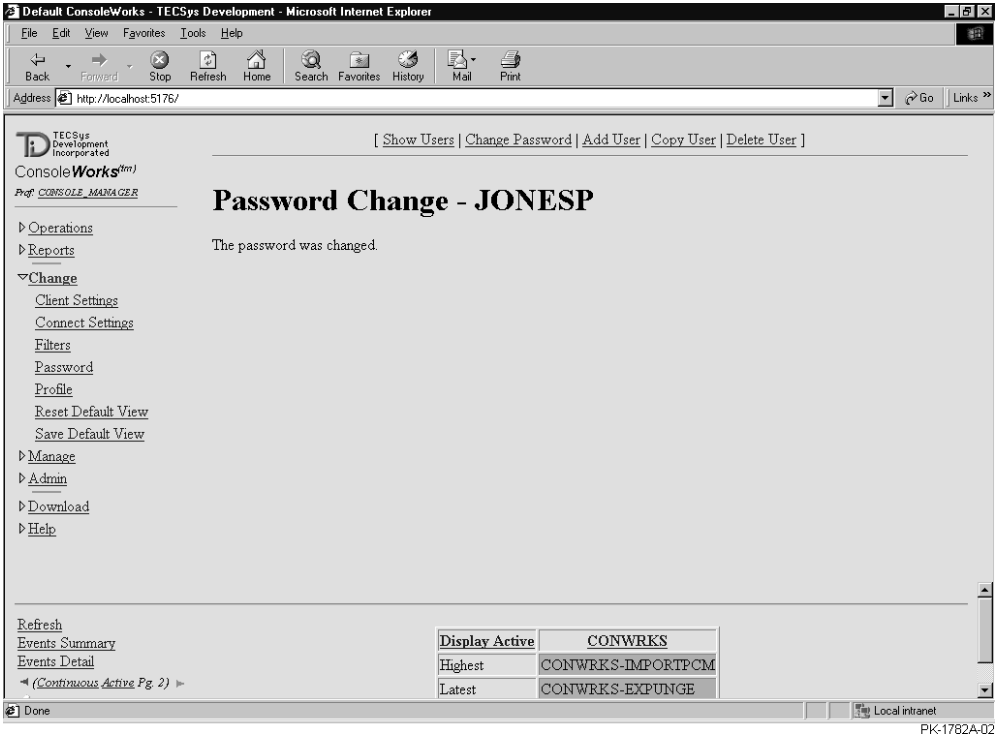
PK-1781A-02

1. In the left navigation panel select Change. From the selection links select Password. The Change Password screen opens (Figure 3–44).
2. From the Change Password dropdown list select the user whose password is to change.

3. Enter the information for the password:
   a. **Password** – The new password; six characters or longer.
   b. **Verify** – Retype the new password.
4. Click the Change Password button. The Password Change screen (Figure 3–45) opens, confirming the change.

NOTE: *If the password is changed for an account in use, that user's session ends, and the user must log in with the new password. Administrative privileges Read, Write, and Control are required to change another user's password. You need no privileges to change your own password.*

Figure 3-45 Password Change Screen



PK-1782A-02

3.5.4 Resetting the console_manager Password

Stop the ConsoleWorks services, run C:\ Cwks\bin\consoleworks_reset_ password.exe, and restart the services.

Figure 3-46 Services Box

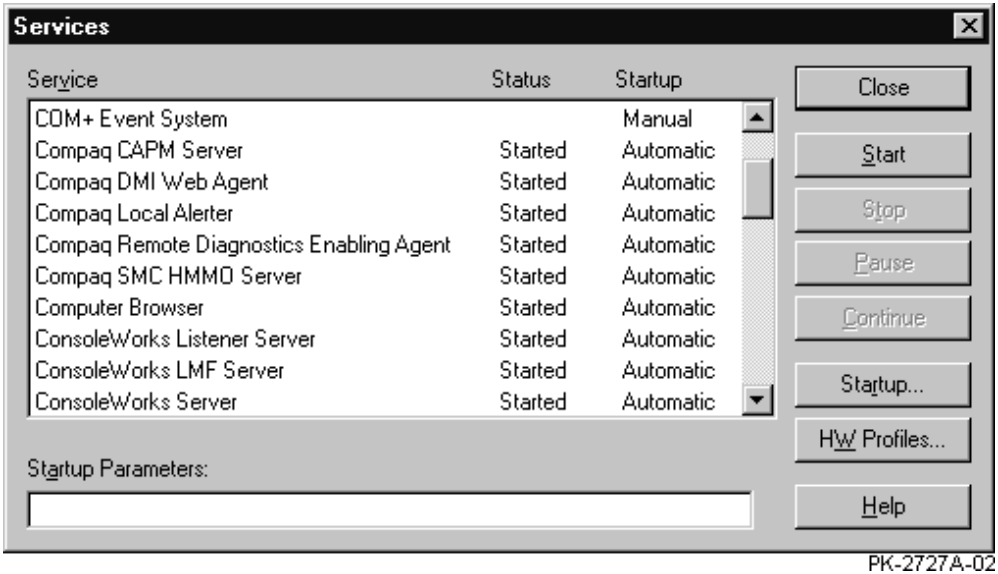
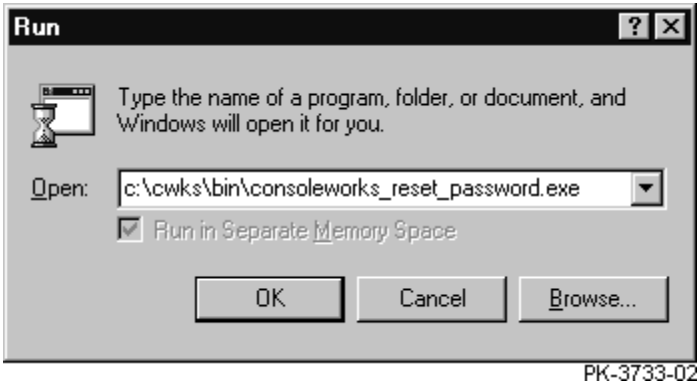


Figure 3-47 Run Box



If you forget the password for the console_manager account, you will not be able to perform administrative tasks such as purging or expunging events, creating new users, or adding or deleting consoles.

Follow this procedure to reset the password.

1. Stop the ConsoleWorks services:
    a. From the Start button select Settings|Control Panel. The Control Panel box opens.
    b. Double-click the Services icon. The Services box opens (Figure 3–46).
    c. Scroll down to ConsoleWorks LMF Server. Click to select this service, and click Stop.
    d. Repeat step c to stop the ConsoleWorks Server service.
2. Run the program conwrks_reset_password.exe:
    a. From the Start button select Run. The Run box opens (Figure 3–47).
    b. In the Open block, enter

        `c:\cwks\bin\consoleworks_reset_password.exe`

    c. Click OK.
3. Restart the ConsoleWorks services:
    a. Return to the Services box.
    b. Select ConsoleWorks LMF Server service and click Start.
    c. Repeat step b to start ConsoleWorks Server service.
    d. Close the Services box and the Control Panel.

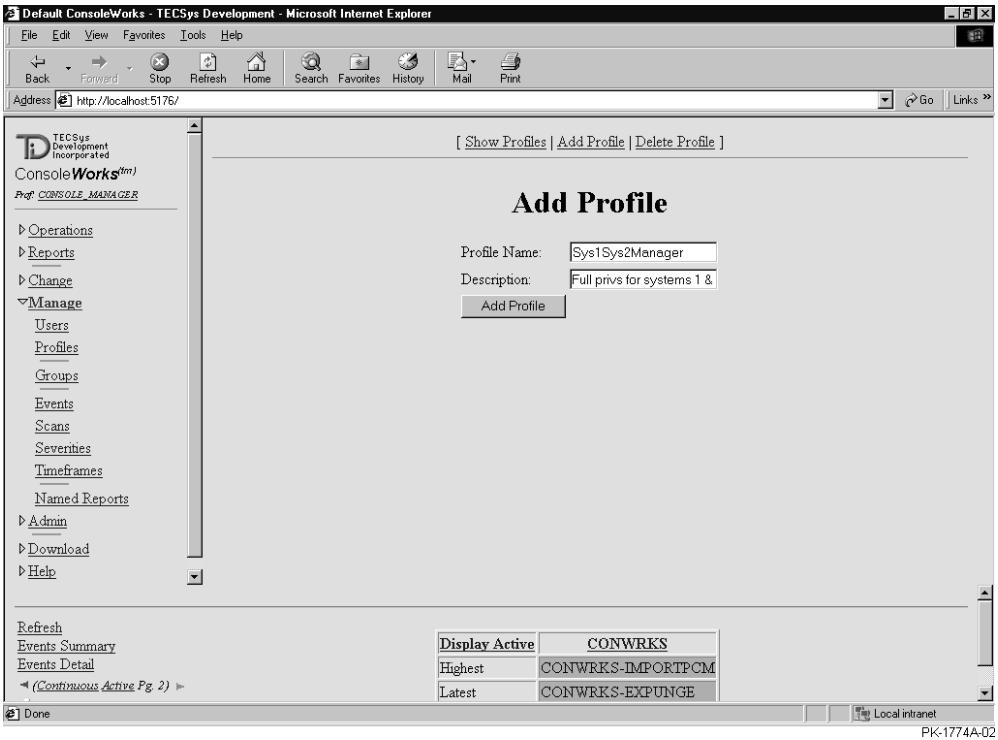
The password for console_manager is now set to the default, *setup*. Log into ConsoleWorks with the username *console_manager* and the password *setup*. (After logging in, you can change the password. See Section 3.5.3.)

3.5.5 Adding a Profile

Select Manage|Profiles in the left navigation panel, then Add Profile at the top of the screen.

Privileges required: Admin –R W C; Console –none

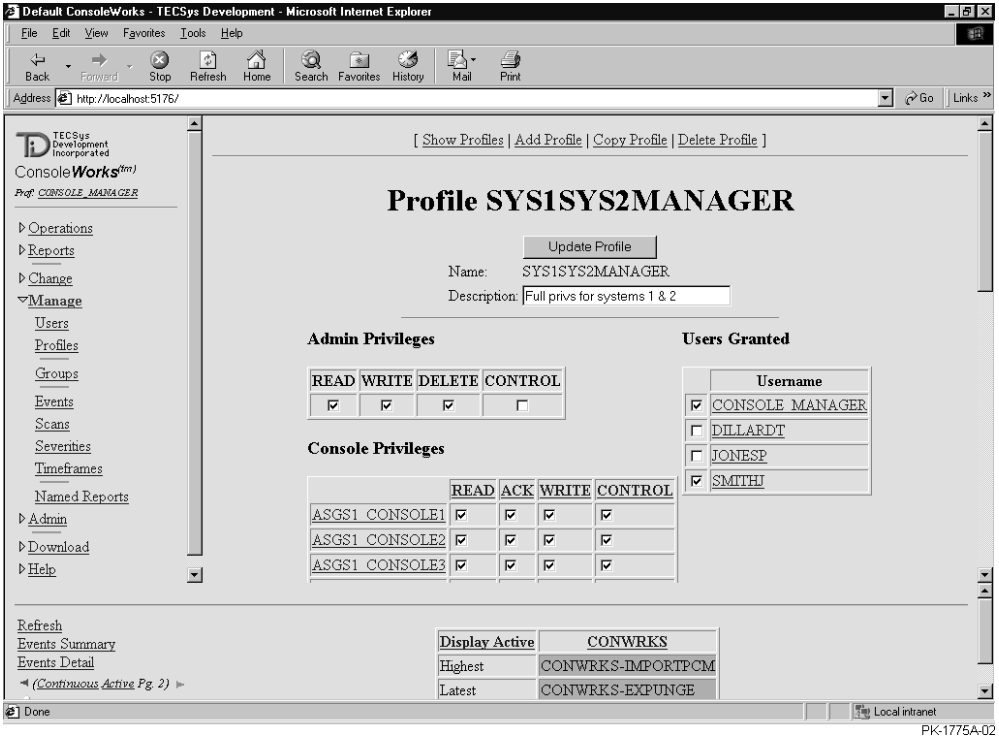
Figure 3-48 Add Profile Screen



PK-1774A-02

1. In the left navigation panel select Manage. From the selection links select Profiles. The Show Profiles screen opens.
2. At the top of the Show Profiles screen select Add Profile. The Add Profile screen opens (Figure 3–48).
3. Enter the information for the profile:
   a. **Profile Name** – Can be no longer than 30 characters.
   b. **Description** – Maximum 62 characters.
4. Click the Add Profile button. The *profile_name* screen opens (Figure 3–49).
5. Select privileges for users who have this profile.
6. Click the Update Profile button.

Figure 3-49 *profile_name* Screen



PK-1775A-02

3.5.6 Modifying a Profile

Select Manage|Profiles in the left navigation panel.

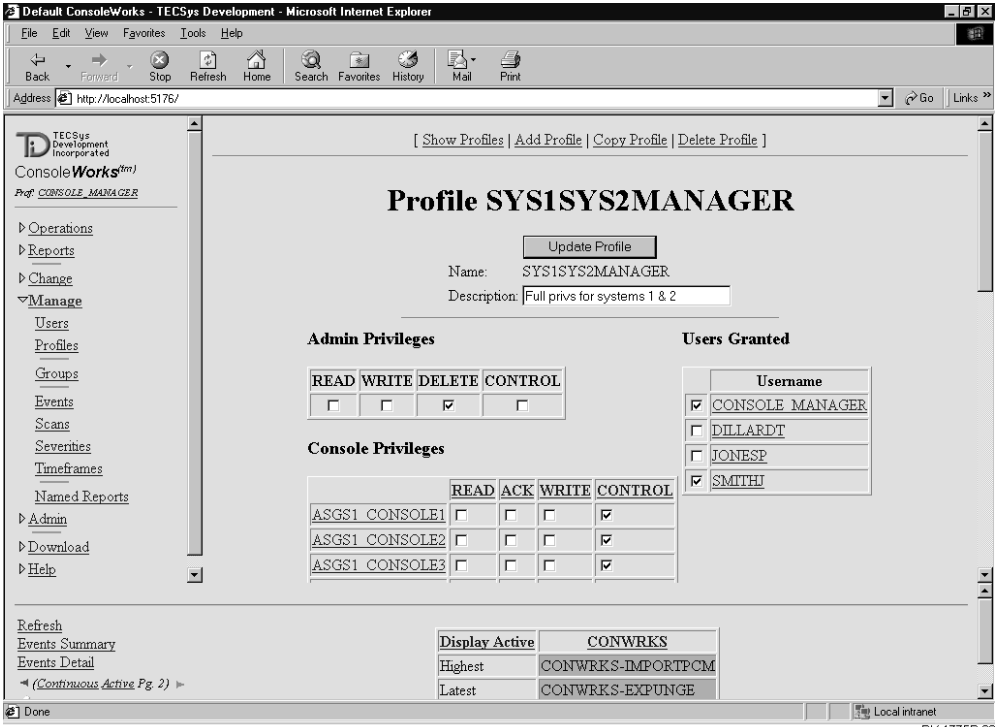
Privileges required: Admin –R W C; Console –none

Figure 3-50 Show Profiles Screen

PK-1776A-02

1. In the left navigation panel select Manage. From the selection links select Profiles. The Show Profiles screen opens (Figure 3–50).
2. Select the profile to modify from the list. The *profile_name* screen opens (Figure 3–51).
3. Make the changes to the profile. Click the Update Profile button.

Figure 3-51 *profile_name* Screen

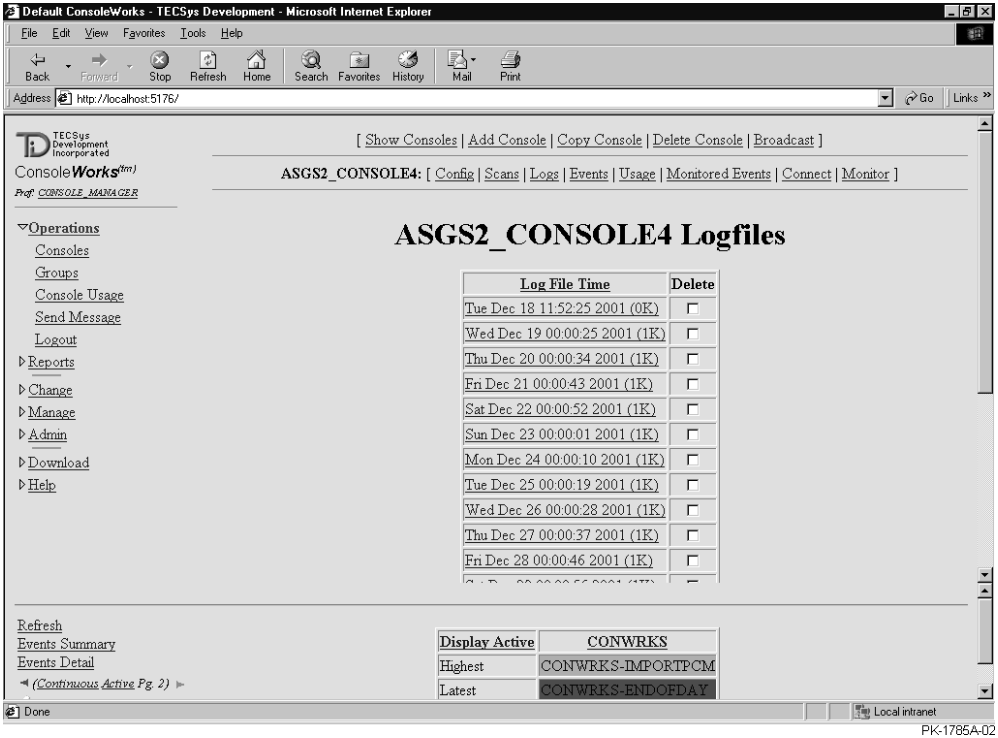


PK-1775B-02

3.6 Managing ConsoleWorks Log Files

ConsoleWorks creates log files for each console. These logs are text files that can be viewed or deleted through ConsoleWorks or by accessing them in the directory.

Figure 3-52 *console_name* Logfiles Screen



PK-1785A-02

ConsoleWorks creates a new log file for each console every day at midnight. These log files are on the SMC hard drive in the directory D:\cwks\log. The naming convention is *console_name*.LOG_*yyyy_mm_dd*. A console log shows all activity on the console for the specified day. The log for CONWRKS shows activity and events from all consoles on the specified day.

Log files can quickly fill the disk if they are not managed. For that reason, it is a good idea to archive or delete these files often.

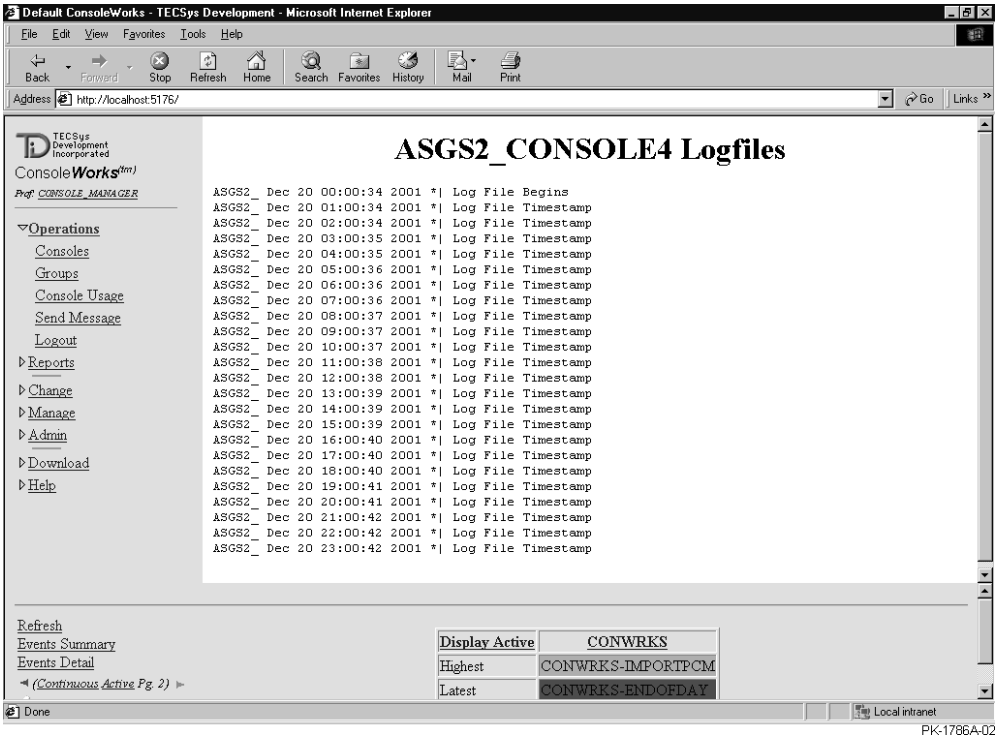
You can view a log file in ConsoleWorks (Section 3.6.1) or by opening it with Notepad. Similarly, you can delete a log file from ConsoleWorks (Section 3.6.2) or from Windows Explorer. To mail a log file, use Outlook Express (Section 3.6.3).

3.6.1 Viewing a Log File

Select Operations|Consoles in the left navigation panel. Then select the console from the list. At the top of the screen select the Logs link and the log to view from the list.

Privileges required: Admin –none; Console –R

Figure 3-53 Log File Screen



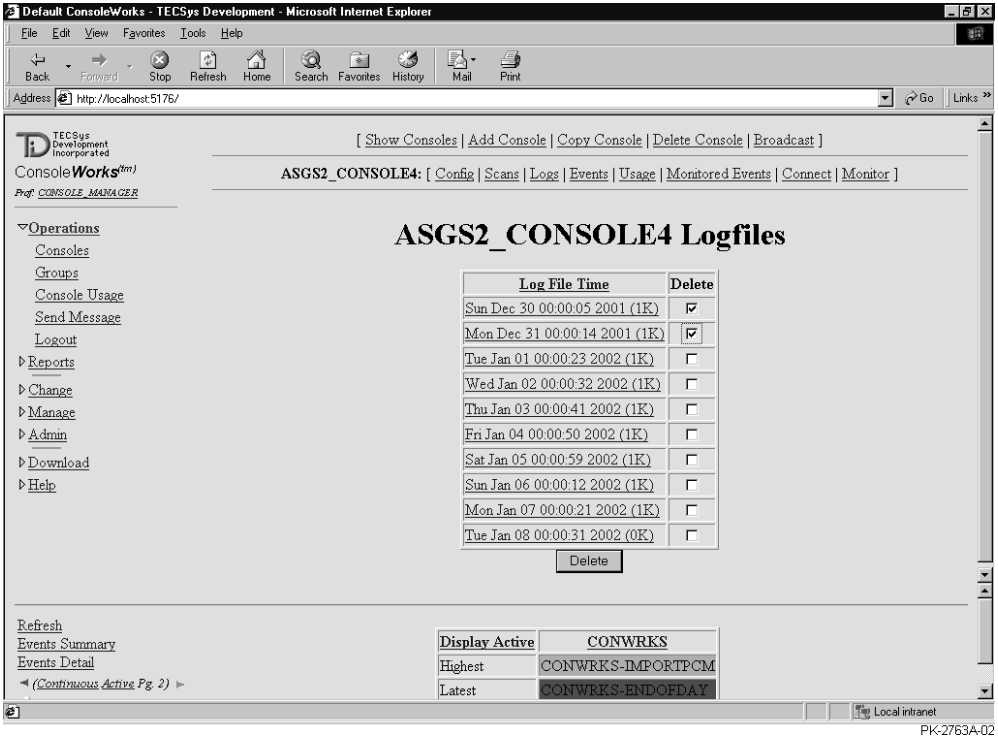
PK-1786A-02

1. From the left navigation panel select Operations. From the selection links select Consoles. The Show Consoles screen opens.
2. Select the console from the list. The *console_name* Configuration screen opens.
3. At the top of the screen select Logs. The *console_name* Logfiles screen opens (Figure 3–52).
4. Select the log file from the list. The file displays (Figure 3–53).

3.6.2 Deleting Log Files

Select Operations|Consoles in the left navigation panel. Then select the console from the list. At the top of the screen select the Logs link.

Figure 3-54 *console_name* Logfiles Screen



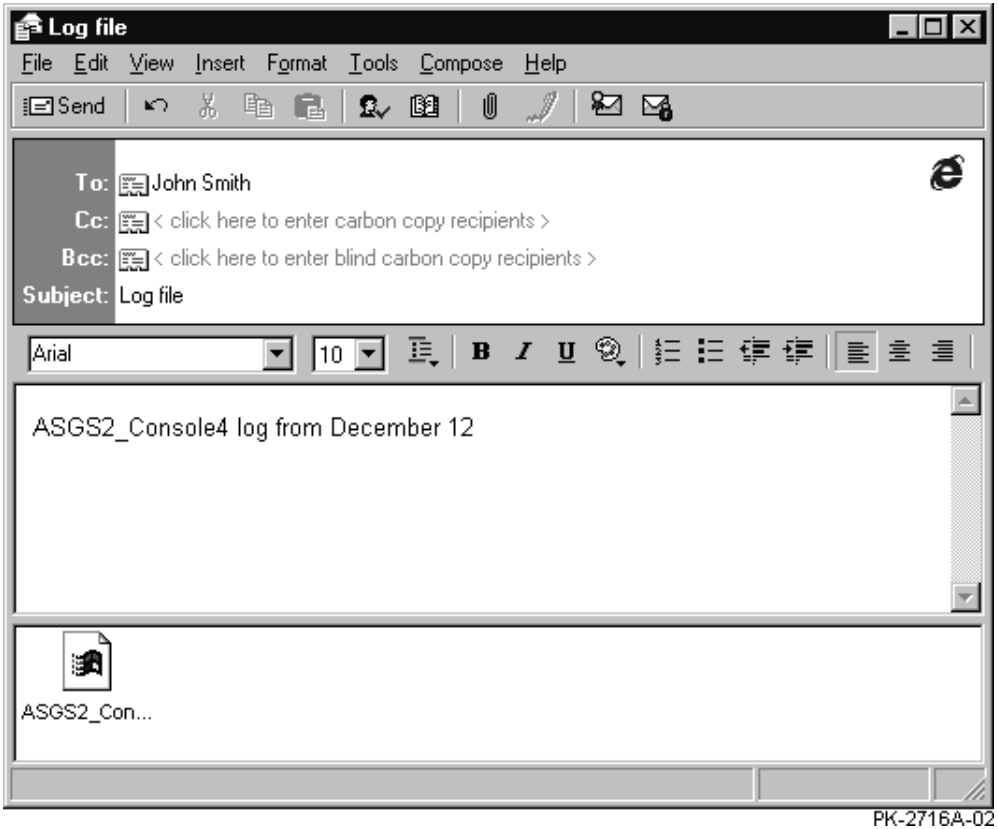
PK-2763A-02

1. From the left navigation panel select Operations. From the selection links select Consoles. The Show Consoles screen opens.
2. Select the console from the list. The *console_name* Configuration screen opens.
3. At the top of the screen select Logs. The *console_name* Logfiles screen opens (Figure 3–54).
4. Click the checkboxes of the log files to delete and click the Delete button.

3.6.3 Mailing a Log File

Start Outlook Express, then include the log file as an attachment.

Figure 3-55 Outlook Express Message Window



1. Double-click the Outlook Express icon on the SMC desktop. The Outlook Express Window opens.
2. From the Compose menu select New Message. The New Message window opens (Figure 3–55).
3. Enter recipients' names or addresses and the subject. The title bar text changes to the subject.
4. To include the log file as an attachment, from the Insert menu select File Attachment… or click the button with the paperclip icon. Select Browse… and switch to the D drive, cwks\log folder (D:\cwks\log) for a list of files. Select the file to include.
5. Click the Send button to send the message.

Chapter 4
Compaq AlphaServer Partition Manager

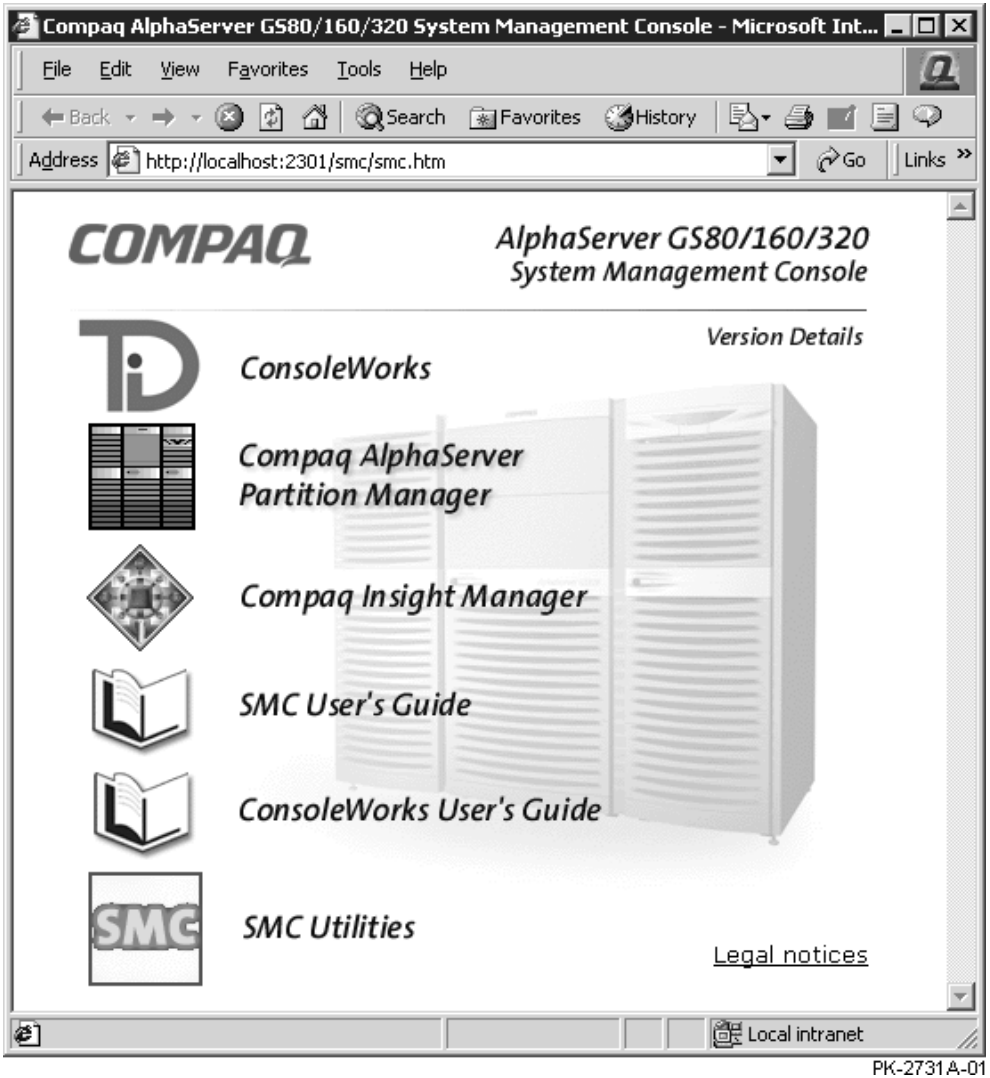
The *Compaq AlphaServer* Partition Manager (CAPM) simplifies creation of partitions. Sections in this chapter are:

- Starting CAPM
- Overview of CAPM
- Partition Maps
- Working With Hard Partitions
  - Creating Hard Partitions
  - Adding a Hard Partition
  - Deleting a Hard Partition
  - Modifying a Partition Map
  - Saving, Validating, and Committing a Partition Map
  - Loading a Saved Partition Map
- Working With Soft Partitions
  - Basic Soft Partitioning
  - Adding a Soft Partition
  - Modifying a Soft Partition
  - Deleting a Soft Partition
  - Advanced Soft Partitioning
- Managing CAPM Files

4.1 Starting CAPM

Start CAPM from the SMC desktop icon or from the SMC Web page.

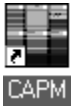
Figure 4–1 SMC Web Page



PK-2731A-01

You can run CAPM directly from the desktop icon on the SMC or from the SMC Web page.

- To run CAPM from the SMC system, double-click the CAPM desktop icon:

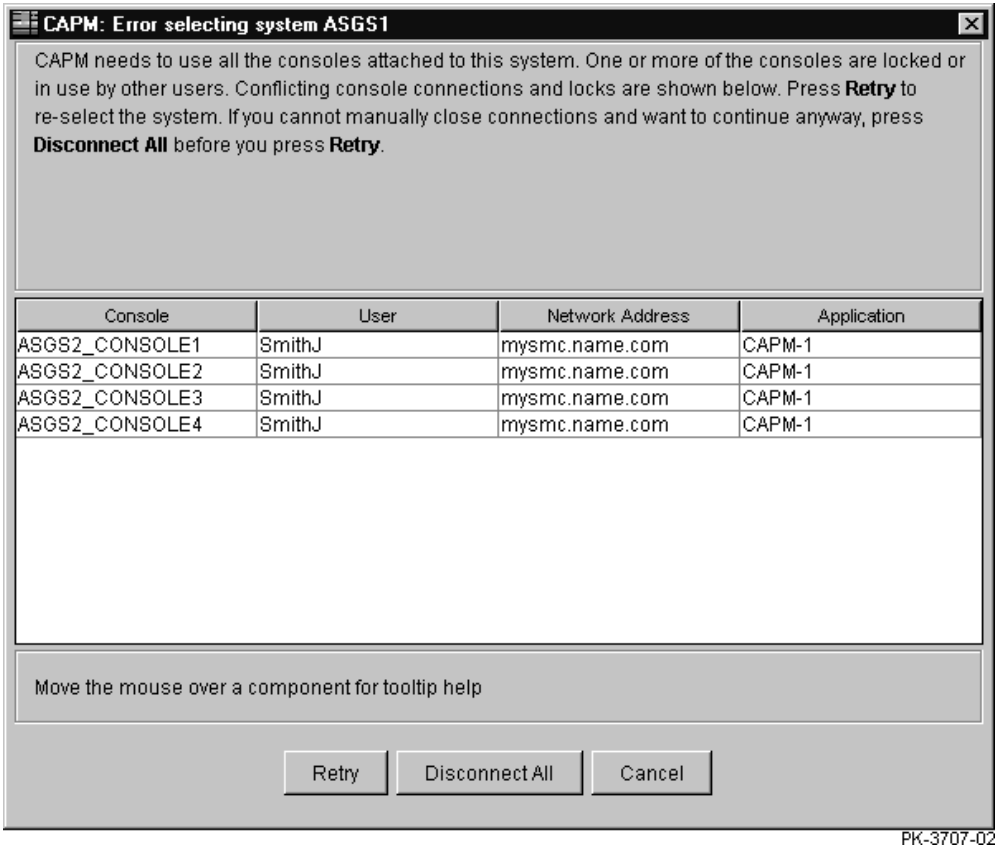
  

- To run CAPM from a workstation networked to the SMC system, click the icon on the SMC Web page (Figure 4–1). To display the SMC Web page on a system running Windows, enter this in the browser Address box: **`http://`*`name.domain`*`:2301/smc/smc.htm`**, where *name.domain* is the fully qualified address or the IP address of the SMC on the corporate network; press Enter.

  You must have the Java™ 2 Runtime Environment, Standard Edition running on the system on which you are working. Go to the URL http://java.sun.com/j2se/1.3/jre to download it. The Java 2 plug-in for *Tru64 UNIX* can be found at http://www.compaq.com/java.

Continued on page 4-5

Figure 4-2 Error Selecting System



Before You Begin

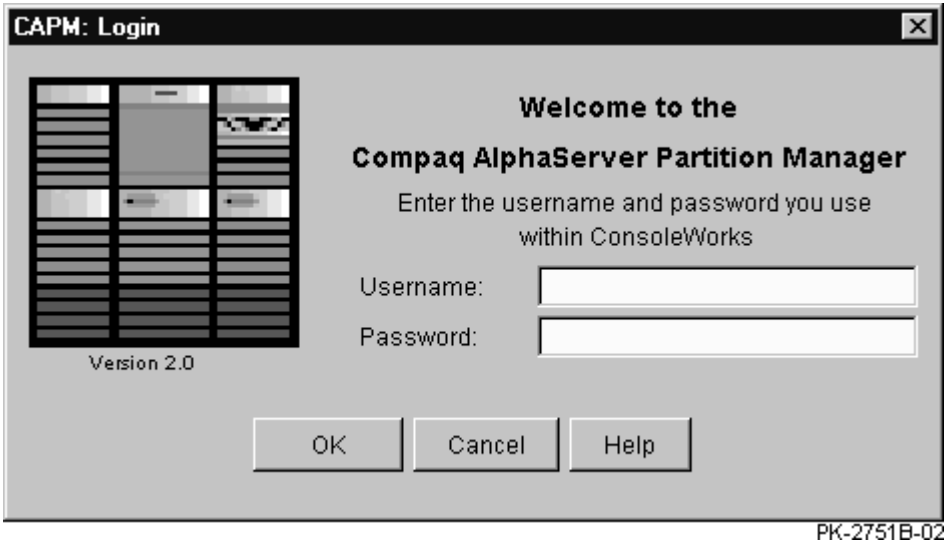
The following conditions must be observed when running CAPM:

- An instance of CAPM can partition only one system. To partition more than one system, you must start additional instances.
- CAPM partitions consist only of consoles that are assigned to ConsoleWorks groups. Before running CAPM the first time, or if any changes are made to the hardware, run the Console Group Validator utility (see Chapter 11 of the *System Management Console Installation Guide*). This utility determines if a ConsoleWorks group corresponds to a system, which is the only kind of group that CAPM can partition.
- Having a ConsoleWorks console window open on the same console line as CAPM can cause a problem. CAPM displays a dialog box with the title "Error selecting system x" when you select a system, refresh the discovered partition map, and select the Commit button. This dialog box helps the user avoid conflicting connections and locks (Figure 4–2). To watch progress, use a ConsoleWorks monitor window.
- These Windows NT services must be running on the SMC system: ConsoleWorks LMF Server Service, ConsoleWorks Server Service, and Compaq CAPM Server. Additionally, if you run CAPM from the SMC Web page, the Compaq SMC HMMO Server service must be running on the SMC system. All of these services are started automatically when the SMC starts.
- Each instance of CAPM is a single-user application. Only one user can run it at a time (from the SMC system or a network location) to partition a specific GS80/160/320 system. If the SMC supports more than one GS80/160/320 system, multiple copies of CAPM can run and commit at the same time.
- CAPM can run while a partition is running an operating system. However, you cannot commit a partition map that reassigns hardware to a hard partition that is running an operating system, but you can create and save that partition map. If any soft partition within a hard partition is running an operating system, CAPM will not allow you to commit changes to that hard partition.

4.2 Overview of CAPM

CAPM enables the user to partition a GS80/160/320 system without using console commands.

Figure 4-3 Login Box



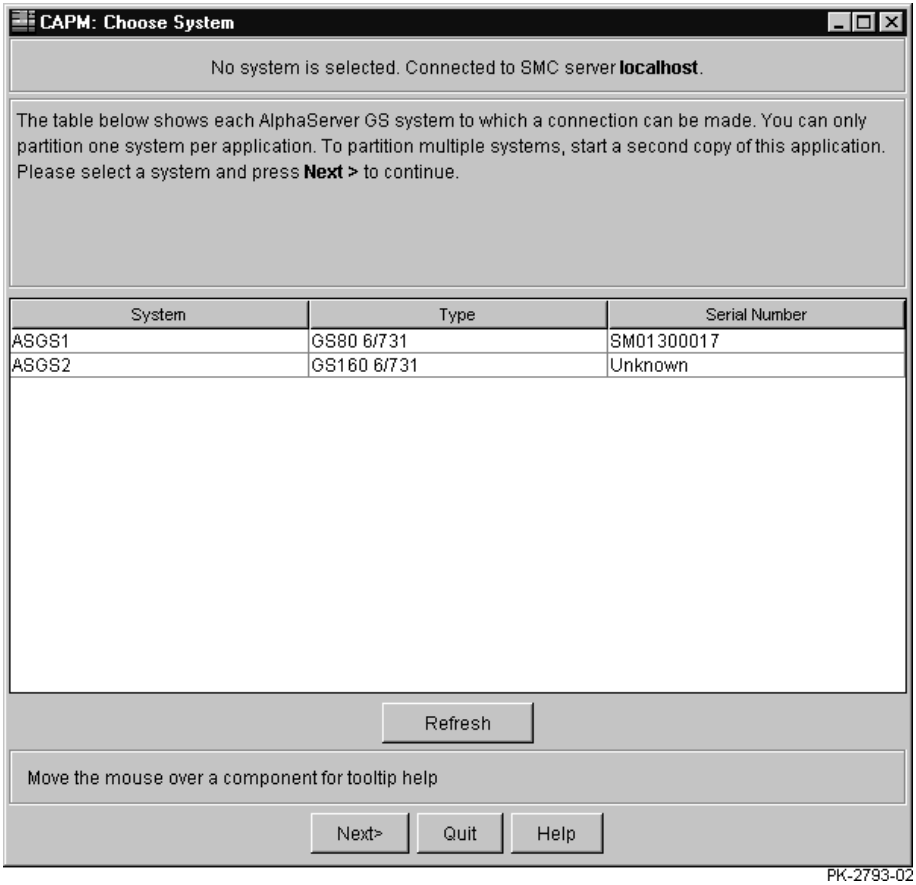
Compaq AlphaServer Partition Manager (CAPM) is a graphical application that simplifies the creation and management of partitions[1] on a GS80/160/320 system. CAPM runs on the SMC and, through a wizard-like series of screens, enables you to work with partitions without having to know anything about the console commands involved. These can be hard partitions and, if OpenVMS Galaxy is the operating system in a hard partition, soft partitions.

CAPM uses ConsoleWorks usernames and passwords. When you start CAPM, the login box displays (Figure 4–3). Supply a username and password for a ConsoleWorks user. This user must be associated with a ConsoleWorks profile that has full privileges. If you enter an invalid username or password, an error message displays. Click OK to redisplay the login box.

[1] If you are not familiar with partitions, see the manual *AlphaServer GS80/160/320 Getting Started with Partitions*.

After the username and password are validated, CAPM displays a window requesting the user to select the system to partition (Figure 4–4). CAPM then connects to the selected GS80/160/320 system and discovers its configuration. (If conflicting connections or locks exist in ConsoleWorks to this system, CAPM displays an error dialog showing the conflicts.) The discovery phase can take up to several minutes; the length of time depends on the size of the system and the number of consoles that have been configured in ConsoleWorks. Do not minimize the screen during the discovery phase or use the SMC system for any other operation. When the discovery phase is complete, CAPM displays a partition map for the current system configuration.

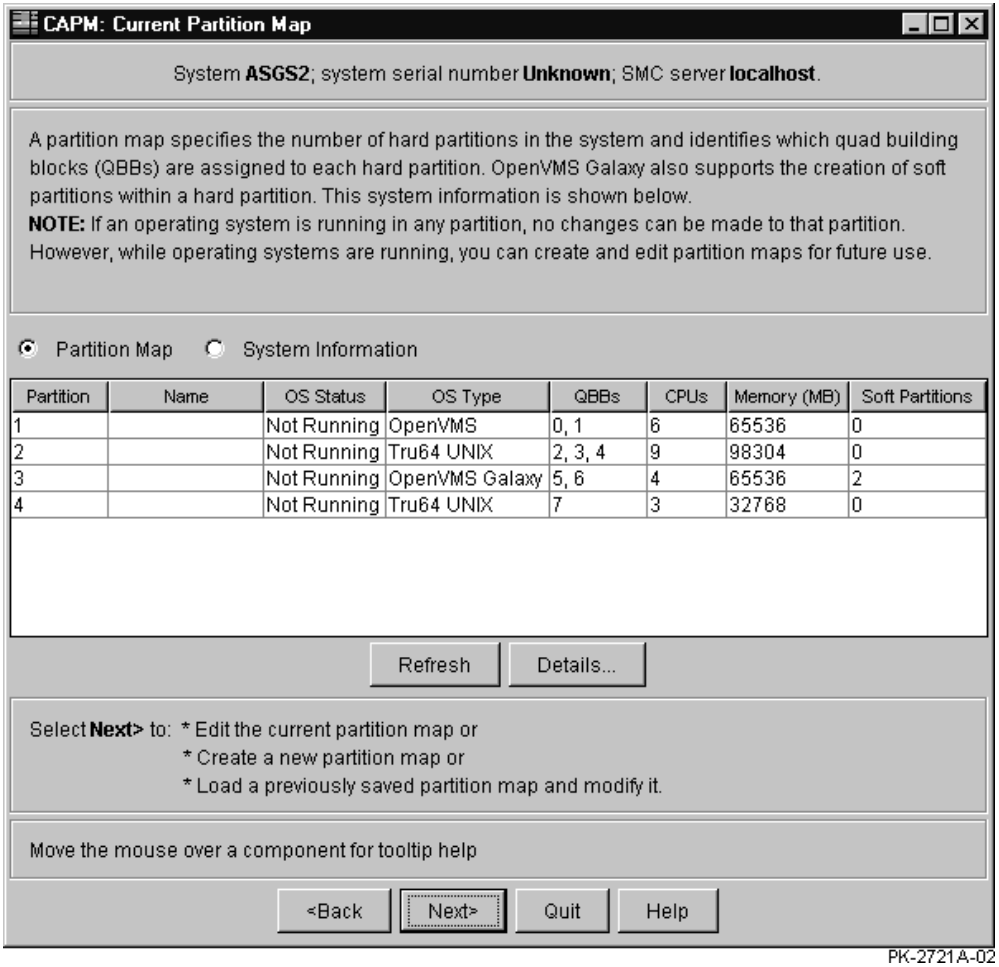
Figure 4-4 Choose System Window



4.3 Partition Maps

The partition map provides partitioning information about the GS80/160/320 system.

Figure 4-5 Partition Map



PK-2721A-02

Figure 4–5 shows the Current Partition Map screen with the Partition Map option button selected. This selection provides partition information about the GS80/160/320 system in the form of a table. (See page 4-10 for the screen with the System Information button selected.)

The parts of the display are described here.

Partition – A number from 1 to the number of quad building blocks (QBB) in the system (maximum 8). If the system has already been partitioned, with either CAPM or console commands, and this partitioning is still in effect, that partitioning information is displayed here.

NOTE: *Partition numbering in CAPM differs from partition numbering shown in the output of console commands.*

Name – The name of the hard partition's console in ConsoleWorks.

OS Status – *Running* if an operating system is running in this partition; *Not Running* if the SRM firmware is running; *Powered Off* if the partition is powered off; *Faulted* if there is a fault.

OS Type – The operating system for this partition. This is set in the Add or Modify Hard Partition screen and can be *Tru64 UNIX*, *OpenVMS*, *OpenVMS Galaxy*, or *Unknown*.

QBBs – The hard QBB number of each QBB in this partition.

CPUs – The number of CPUs found by CAPM in the partition during the discovery process. This may include faulted CPUs.

Memory – The amount of memory (in megabytes) found by CAPM in the partition during the discovery process. If an operating system is running, this might display as *Unknown* or show the memory discovered the last time CAPM was run.

Soft Partitions – The number of soft partitions in this hard partition.

Details – Click this button for additional information about the system, as shown in Figure 4–7.

You can resize the columns in the display by clicking on a divider between columns and dragging. Roll the mouse over a button at the bottom of the screen to see a description of it in the block above the buttons.

Continued on page 4-10

Figure 4-6 System Information

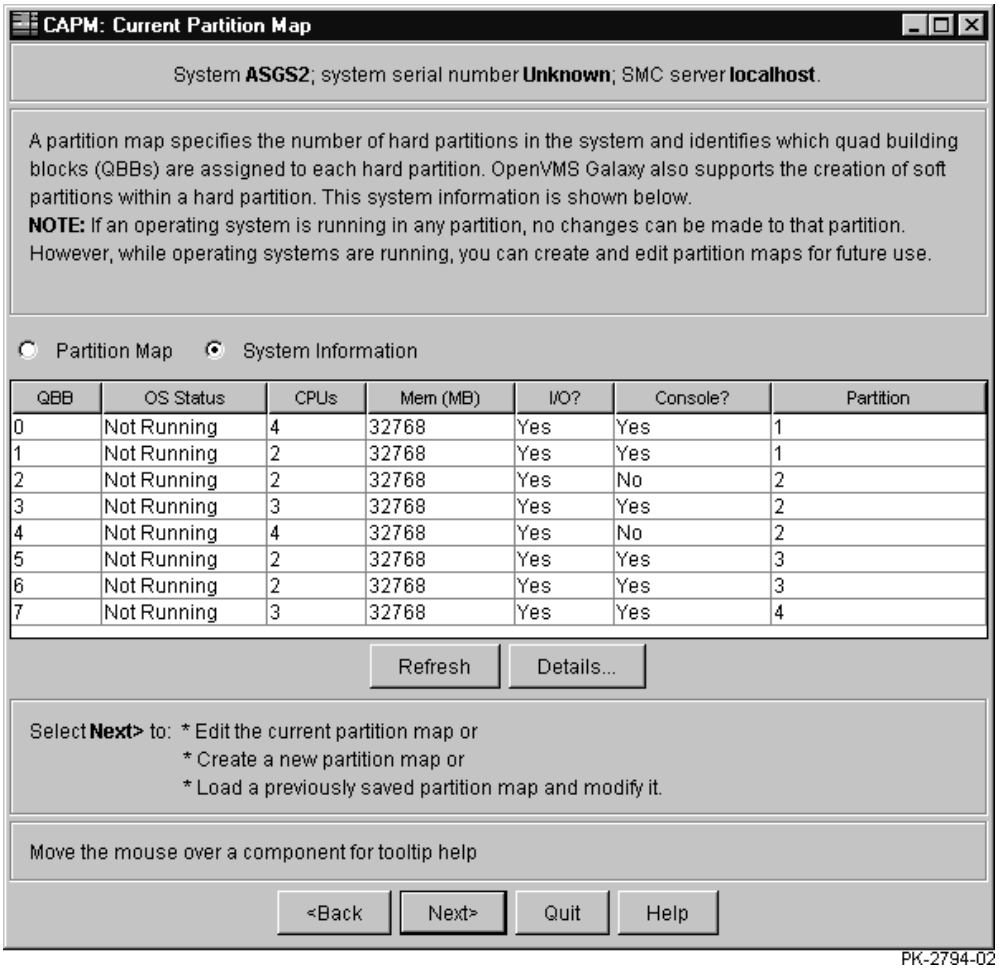


Figure 4–6 shows the Current Partition Map screen with the System Information option button selected. This selection provides QBB information about the GS80/160/320 system.

QBB – The hard QBB number. There is one line in the partition map for each QBB.

OS Status – *Running* if an operating system is running in this partition; *Not Running* if the SRM firmware is running; *Powered Off* if the partition is powered off; *Faulted* if there is a fault.

CPUs – The number of CPUs found by CAPM in the QBB during the discovery process. This includes failed and powered-off CPUs.

Mem (MB) – The amount of memory (in megabytes) found by CAPM in the QBB during the discovery process.

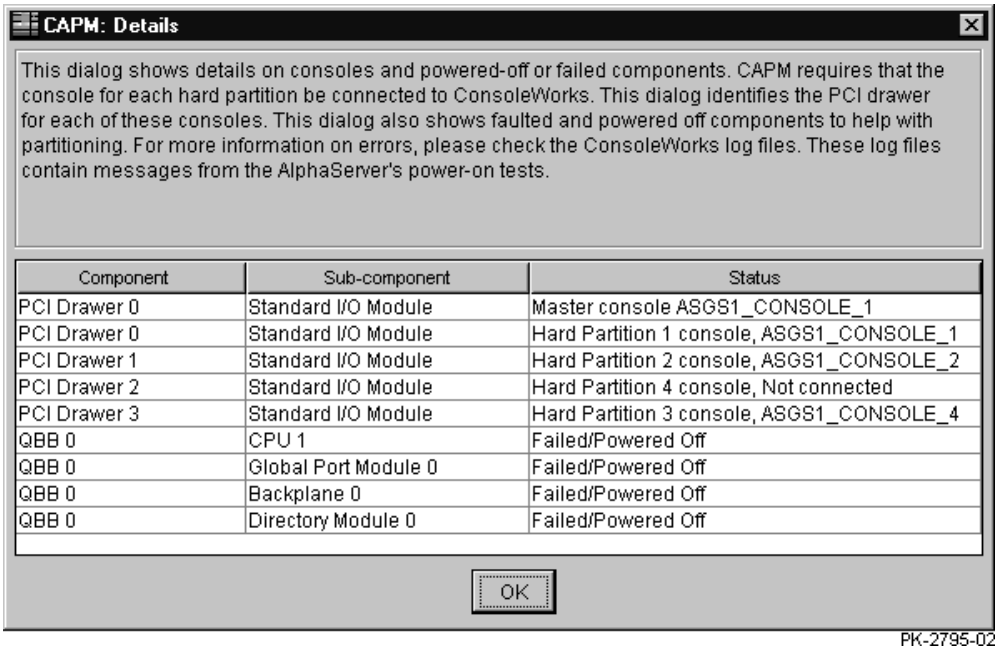
I/O? – *Yes* if CAPM detects a PCI box attached to the QBB; otherwise *No*.

Console? – *Yes* if CAPM found a standard I/O module during discovery; otherwise *No*.

Partition – The partition number of which this QBB is a part; *Unassigned* if it is not part of a partition.

Details – Click this button for additional information about the system, as shown in Figure 4–7.

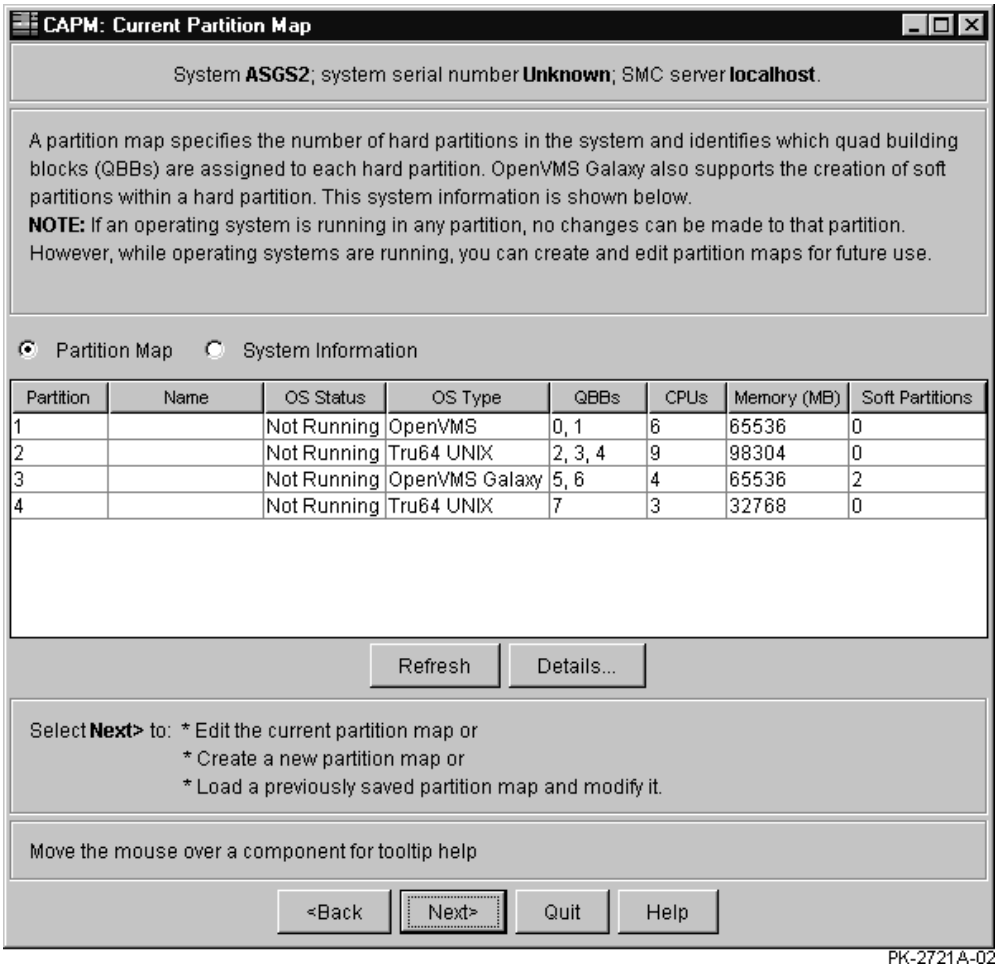
Figure 4-7 Details



4.4 Working With Hard Partitions

Hard partitions do not share resources. CAPM can create, add, and delete hard partitions and modify, save, validate, and commit partition maps.

Figure 4-8 Current Partition Map Screen



PK-2721A-02

After you select a system, the first screen that displays is the Current Partition Map (Figure 4–8), which shows hard partition information. Section 4.3 describes the information that is displayed in a partition map.

The GS80/160/320 system can have two types of partitions, hard and soft. In this section we look at hard partitions; Section 4.5 discusses soft partitions.

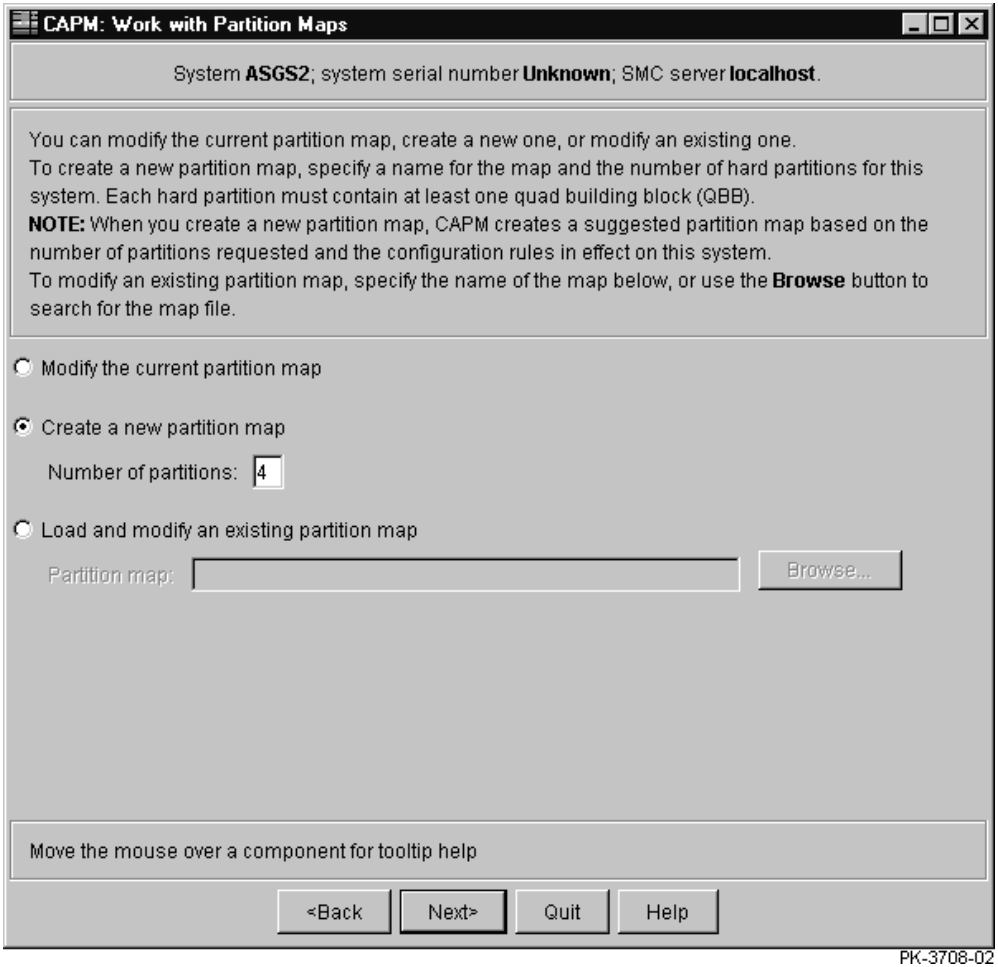
Hard partitions do not share any CPU, memory, or I/O resources. In other words, the boundaries of these partitions are hard. An instance of an operating system can run in each hard partition; these instances run independently of each other.

Using CAPM, you can perform several operations on hard partitions. These procedures are described in the following sections:

- Creating Hard Partitions
- Adding a Hard Partition
- Deleting a Hard Partition
- Modifying a Partition Map
- Saving, Validating, and Committing a Partition Map
- Loading a Saved Partition Map

4.4.1 Creating Hard Partitions

Figure 4-9 Work with Partition Maps Screen

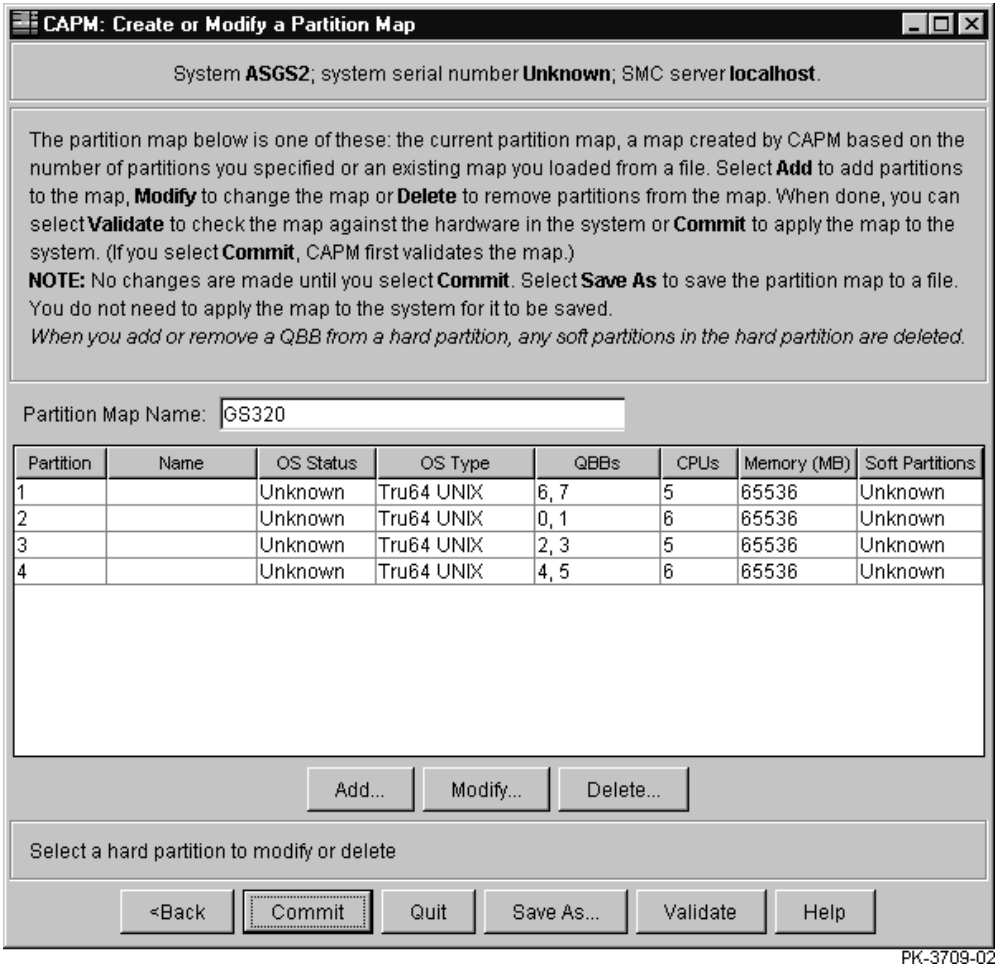


1. From the Current Partition Map screen (Figure 4–8), click Next. The Work with Partition Maps screen displays (Figure 4–9).
2. Select the option button labeled *Create a new partition map*.
3. Enter a number in the box labeled *Number of partitions*. Click Next.

   If the GS80/160/320 system does not have sufficient resources to create the number of partitions specified, a message displays indicating that the system has insufficient resources.

Continued on page 4-17

Figure 4–10 Create or Modify a Partition Map



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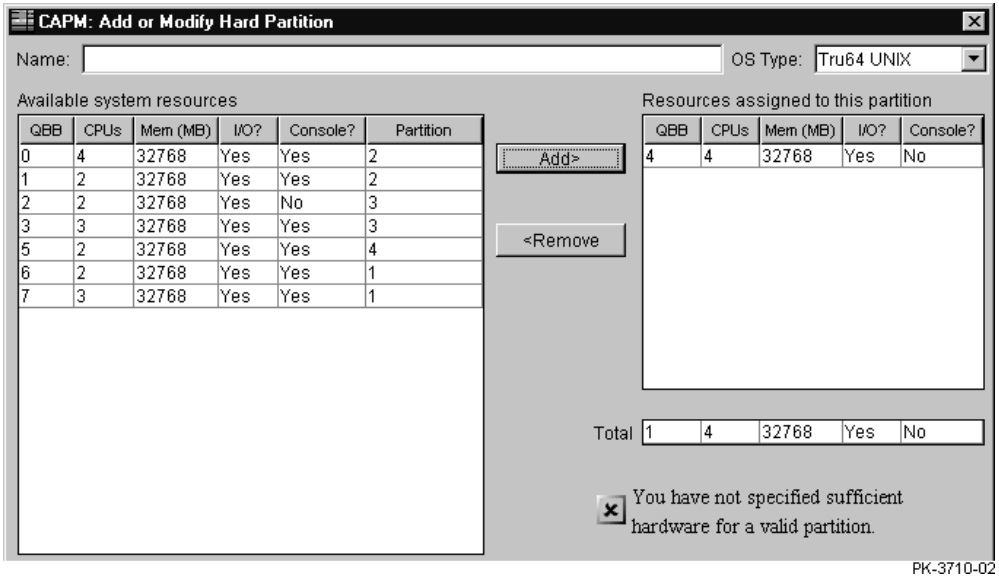
4. The Create or Modify a Partition Map screen displays (Figure 4–10). This screen includes a suggested partition map created by CAPM based on the number of partitions you selected in the Work with Partition Maps screen. As much as possible, CAPM balances the system resources (existing and potential CPU and memory modules) among the partitions.

   Optionally, you can name the partition map by typing the name in the block labeled *Partition Map*. This is not the same as saving the map to a file. (See Section 4.4.5.)

   When this new partition map displays, the operating system (OS Type) defaults to Tru64 UNIX. To specify a different operating system for a partition, select the partition in the map and click Modify…. (See Section 4.4.3.)

4.4.2 Adding a Hard Partition

Figure 4–11 Add or Modify Hard Partition Screen



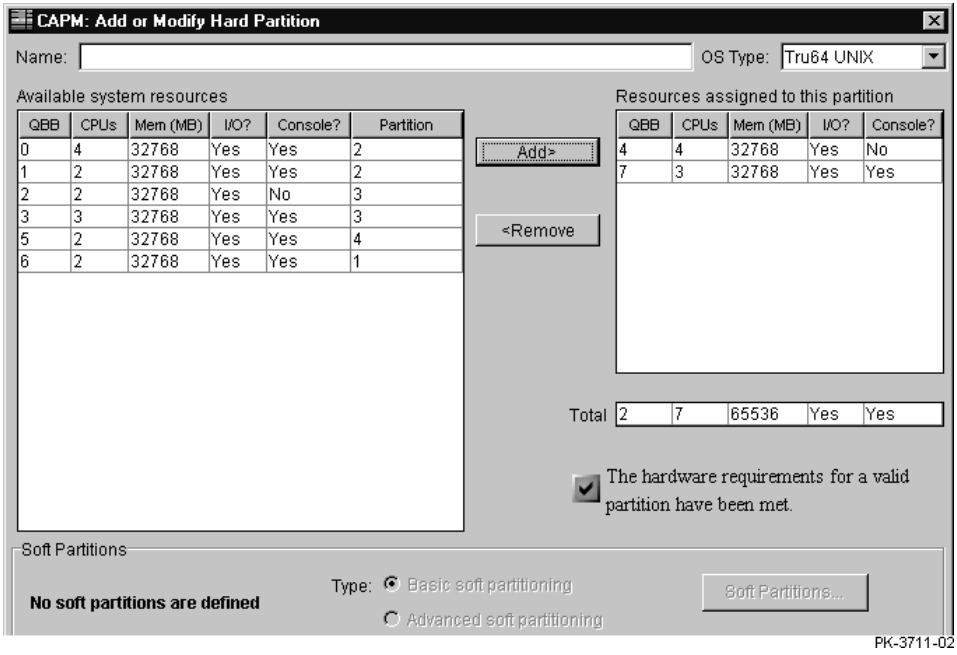
1. From the Current Partition Map screen (Figure 4–8) click Next. The Work with Partition Maps screen displays (Figure 4–9).
2. Select the option button labeled *Modify the current partition map*. The Create or Modify Partition Map screen displays (Figure 4–10).
3. Click Add. The Add or Modify Hard Partition screen displays (Figure 4–11). The number of the hard partition is shown in the title bar.
4. Select a QBB in the block labeled *Available system resources* to add it to the partition specified in the title bar; click Add. Repeat with any other QBBs to add.
5. Specify the operating system for the partition in the OS type dropdown list, and, optionally, supply a name for the partition in the name block. Naming a hard partition enables you to select the name in ConsoleWorks to reach the console for the partition. The name acts as a console alias in ConsoleWorks. You must enter the name in capital letters, and it cannot match a console name, group name, or alias in ConsoleWorks (it must be unique). Click OK. The Create or Modify a Partition Map screen returns.

6. Repeat steps 3 through 5 to add other partitions.

As QBBs are added, the message below the Total block indicates if the hardware requirements of a partition have been met. Each partition must have at least one CPU, 64 Mbytes of memory, and an I/O riser module that is connected to a master PCI box with a standard I/O module. The partition shown in Figure 4–11 does not yet have a connection to a PCI box with a standard I/O module. In Figure 4–12 this is resolved by adding QBB 7 to the partition. The message below the Total block now indicates that the hardware requirements for a partition have been met.

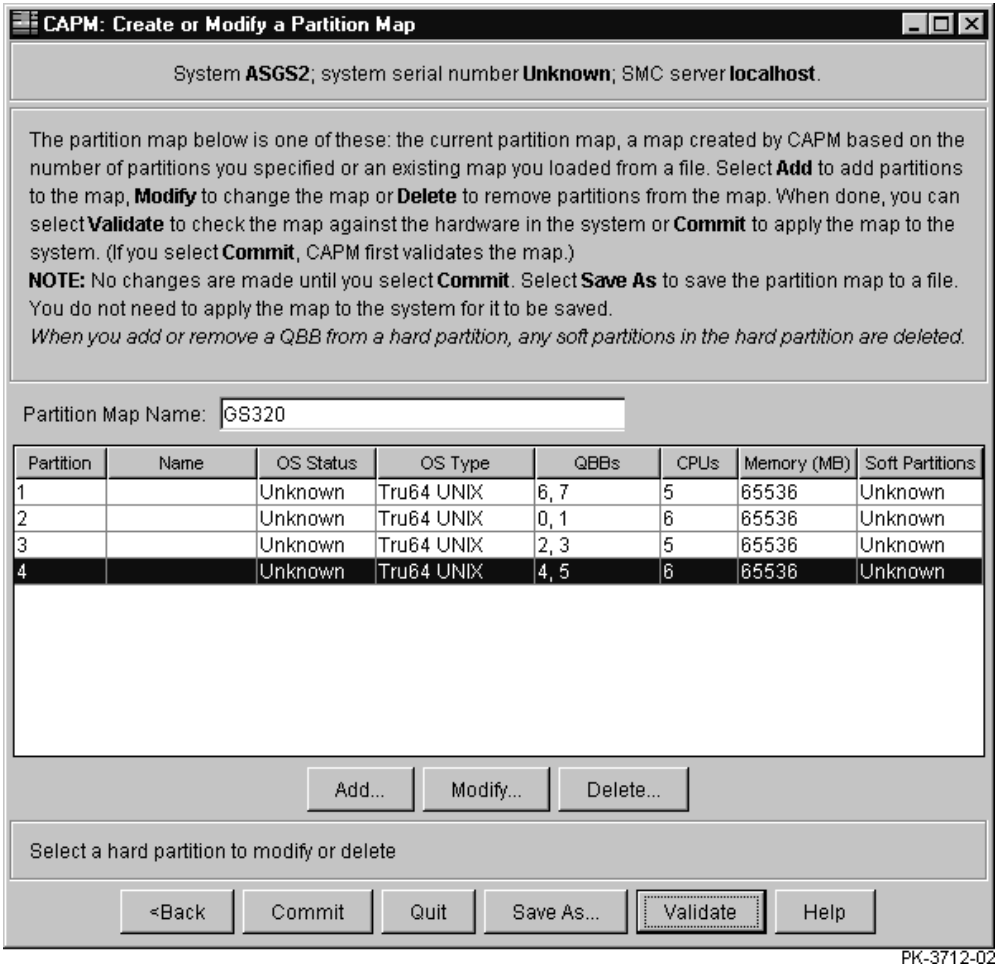
NOTE: *You can add an unpowered QBB to a partition if that partition already has at least one QBB that is powered and if the hardware requirements for a valid partition have been met. Memory in the unpowered QBB cannot be seen until the QBB is powered on.*

Figure 4–12 Add or Modify Hard Partition Screen



4.4.3 Deleting a Hard Partition

Figure 4–13 Create or Modify a Partition Map Screen

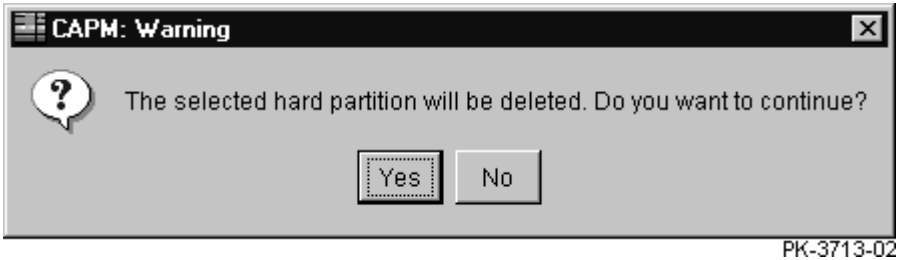


1. From the Current Partition Map screen (Figure 4–8) click Next. The Work with Partition Maps screen displays (Figure 4–9).
2. Select the option button labeled *Modify the current partition map*. The Create or Modify a Partition Map screen displays (Figure 4–13).
3. Click to highlight the partition to be deleted, and click the Delete button.

4. A confirmation message displays (Figure 4–14). Click Yes to delete the partition or No to keep the partition.

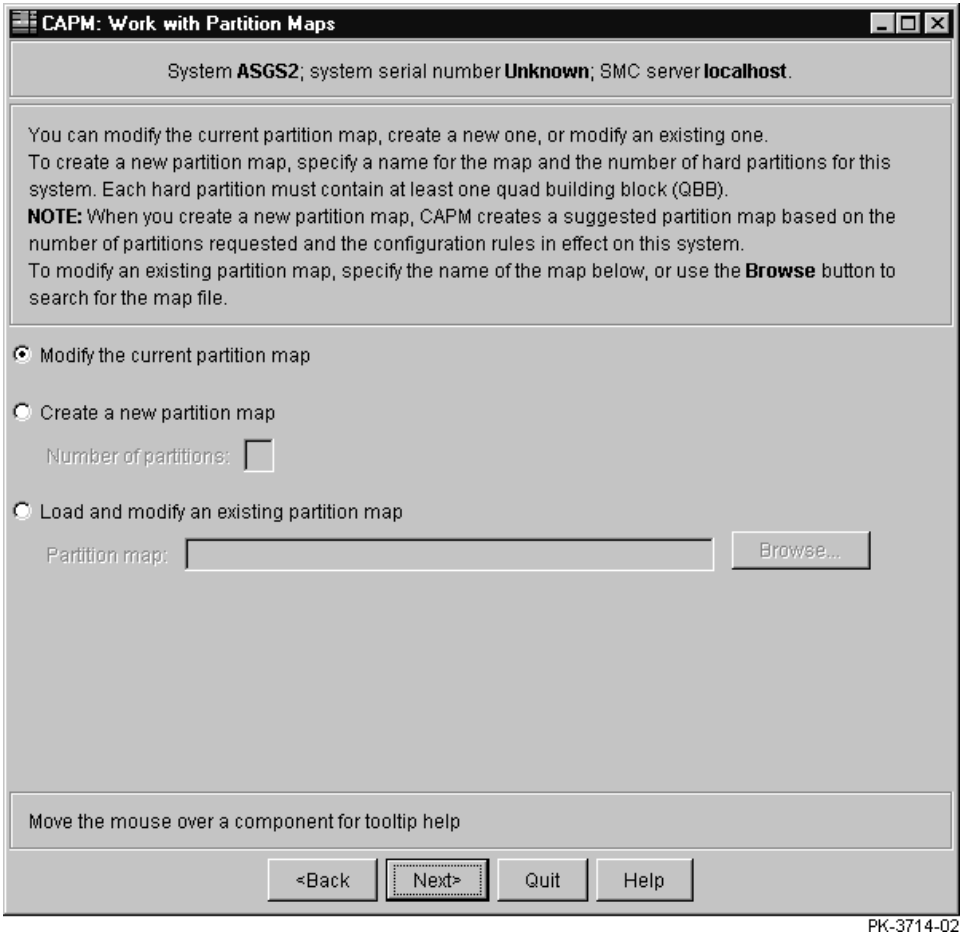
When a hard partition is deleted, all of its resources are returned to Unassigned, indicating that the hardware is not part of any partition.

Figure 4–14 Delete Confirmation Message



4.4.4 Modifying a Partition Map

Figure 4–15 Work with Partition Maps Screen

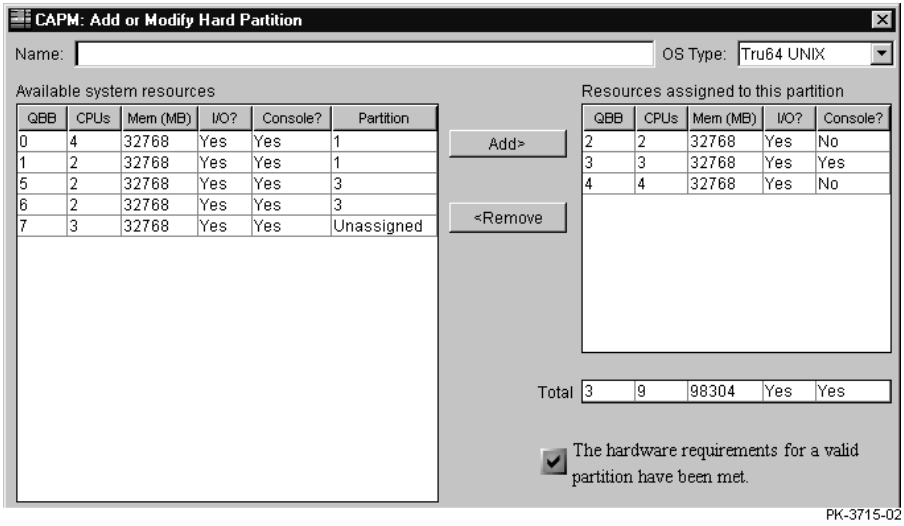


1. From the Current Partition Map screen (Figure 4–8) click Next. The Work with Partition Maps screen displays (Figure 4–15).
2. Select the option button labeled *Modify the current partition map*. Click Next. The Create or Modify a Partition Map screen displays (Figure 4–13).

3. Click to highlight the partition[2] to be modified, and click the Modify button. The Add or Modify Hard Partition screen displays (Figure 4–16).
4. Do one of the following:
   - Select a QBB in the block labeled *Available system resources* to add it to the partition specified in the title bar; click Add, or
   - Select a QBB in the block labeled *Resources assigned to this partition* to remove it from the partition; click Remove. The partition information for the QBB changes to *Unassigned*.
5. Specify the operating system for the partition in the OS type dropdown list, and, optionally, supply a name for the partition in the name block. You must enter the name in capital letters, and it cannot match a console name, group name, or alias in ConsoleWorks (it must be unique). Click OK. The Create or Modify a Partition Map screen returns.
6. Repeat steps 3 through 5 to modify other partitions.

NOTE: *A QBB can be assigned to only one partition at a time.*

Figure 4–16 Add or Modify Hard Partition Screen



[2] Any hard partition that is running an operating system is grayed out. The QBBs in this partition are also grayed out and cannot be assigned.

4.4.5 Saving, Validating, and Committing a Partition Map

Figure 4–17 Saving a Partition Map

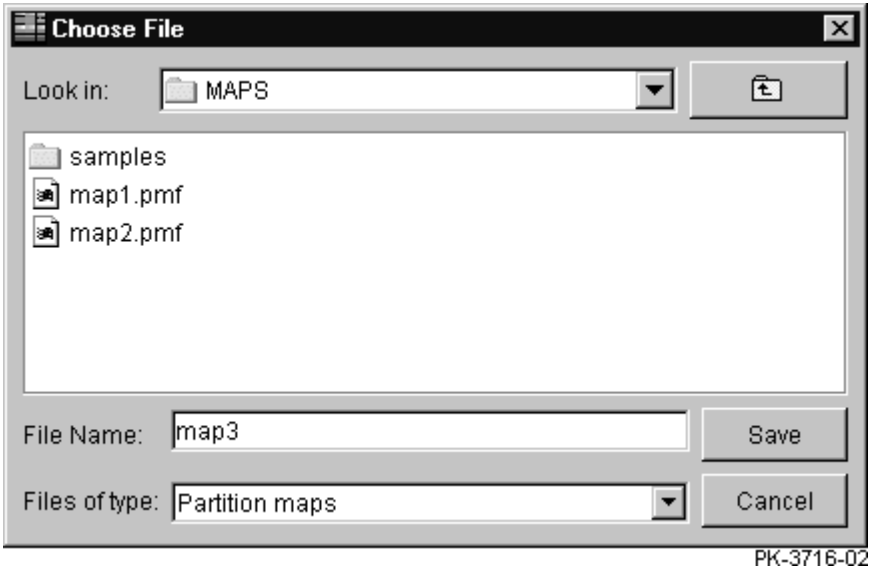
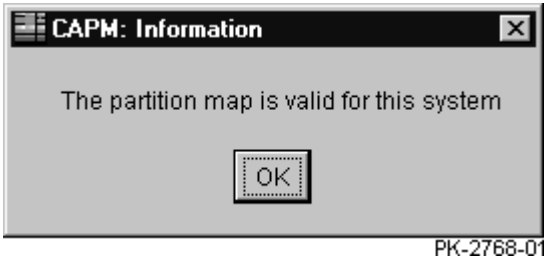


Figure 4–18 Validating a Partition Map



Saving a Partition Map

1. In the Create or Modify a Partition Map screen click the Save As… button. An information box displays (Figure 4–17).
2. Supply a file name and, optionally, change the location to which the file is saved. Click Save. A message confirms that the file was saved successfully.

The default file extension is .PMF (partition management file). The default (and recommended) location is c:\smc\capm\maps. When CAPM is launched from the SMC Web page, c:\smc\capm\maps is the only location available for saving or loading a partition management file.

Validating a Partition Map

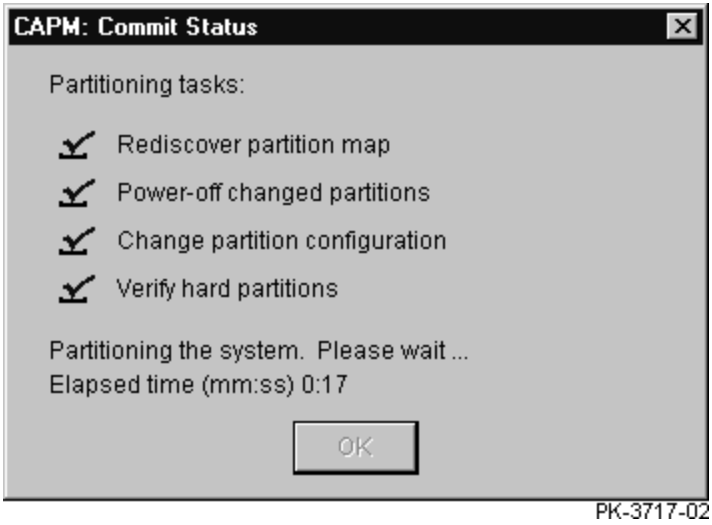
To have CAPM evaluate a partition map and determine if it is valid, in the Create or Modify a Partition Map screen click the Validate button. A message confirms that the partition map is valid (Figure 4–18) or indicates that it is not valid.

Committing a Partition Map

To commit the partition map to the GS80/160/320 system, in the Create or Modify a Partition Map screen click the Commit button. If the map has not been saved to a file, a message displays asking you to do so.

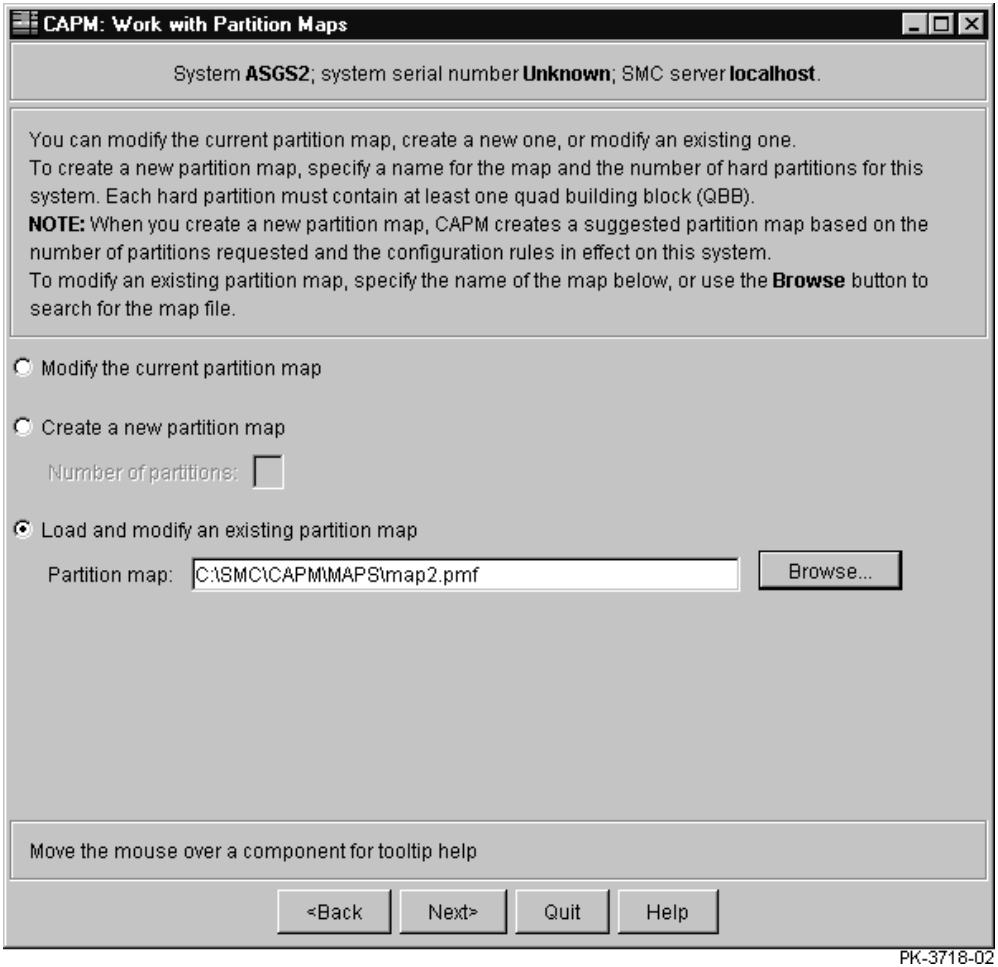
When you click Commit, CAPM first validates the configuration, then it applies the map to the GS80/160/320 system and restarts the system. A status box displays (Figure 4–19), showing the progress of the commit, and the commit status is written to the log file. (See Section 4.6.)

Figure 4–19 Committing a Partition Map



4.4.6 Loading a Saved Partition Map

Figure 4-20 Work with Partition Maps Screen



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1. In the Current Partition Map screen click Next. The Work with Partition Maps screen displays (Figure 4–20).
2. Select the option button labeled *Load and modify an existing partition map*. Enter the file name of a partition map that has been saved to a file (see Section 4.4.5) in the Partition Map box, or click the Browse button to find the file. The default file extension is .PMF.

NOTE: *If you are running CAPM from a location other than the SMC system, the partition map file must be in the Maps folder on the SMC system (c:\smc\capm\maps).*

---

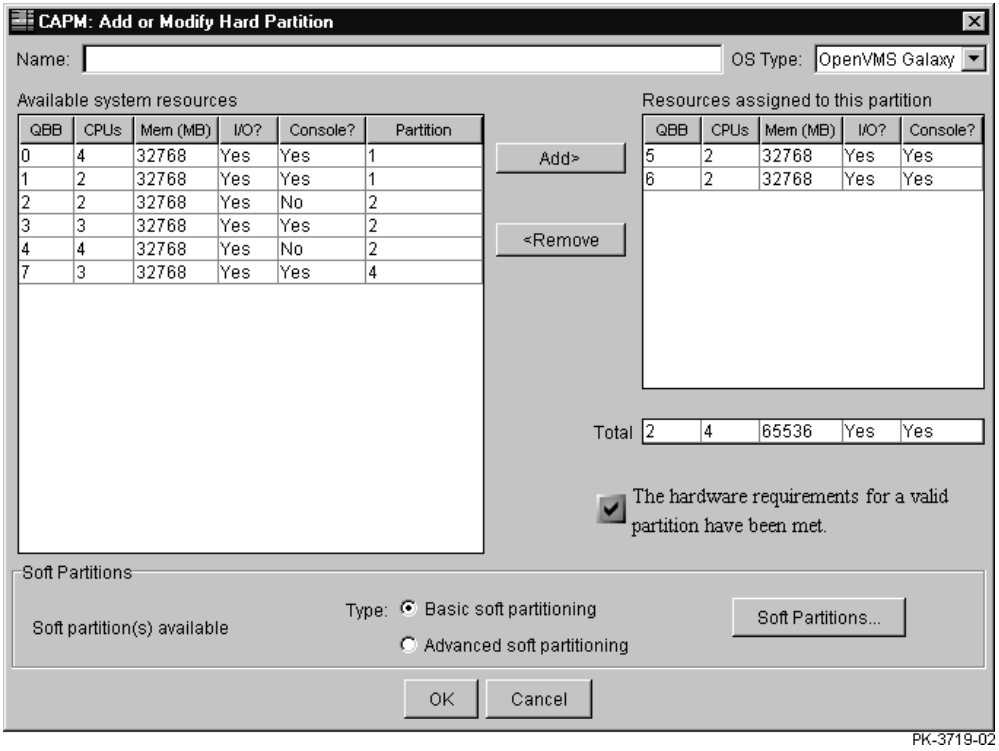
3. Click Next. The Create or Modify a Partition Map screen displays. From this screen you can perform any of the procedures in Sections 4.4.2 through 4.4.5.

CAPM does not validate the partition map file when it loads. To ensure that the map is valid, click the Validate button in the Create or Modify a Partition Map screen. (See Section 4.4.5.)

4.5 Working With Soft Partitions

Soft partitions can share memory, and CPUs can be moved among them. CAPM can create soft partitions by two methods.

Figure 4-21 Add or Modify Hard Partition Screen Showing Soft Partitioning Options



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Soft partitions are implemented within the boundaries of a hard partition. A portion of memory can be defined so it is shared among all the soft partitions in the hard partition. In addition, CPUs can be reassigned to other soft partitions. Because of this sharing of resources, the boundaries of these partitions are considered soft.

The hardware requirements for a soft partition are the same as for a hard partition: at least one CPU, 64 Mbytes of memory, and an I/O riser module that is connected to a master PCI box with a standard I/O module.

When the operating system for a hard partition is OpenVMS Galaxy, two option buttons are available in the Add or Modify Hard Partition screen (Figure 4–21) for specifying the method to use when working with soft partitions:

- **Basic soft partitioning** – Enables you to create, modify, and delete soft partitions without needing to know about the environment variables that are used. Each soft partition created by this method consists of one or more QBBs. Sections 4.5.1 through 4.5.4 discuss this method of working with soft partitions.
- **Advanced soft partitioning** – Enables you to work with soft partitions by specifying values for the relevant environment variables. This method is for experienced users only. See Section 4.5.5.

NOTE: *Do not attempt to create soft partitions if the hard partition contains an unpowered QBB. Commit the hard partitions first (see Section 4.4.5), and then create the soft partitions. When the hard partitions are committed, the unpowered QBB is powered on.*

4.5.1 Basic Soft Partitioning

Figure 4-22 Basic Soft Partitioning Message

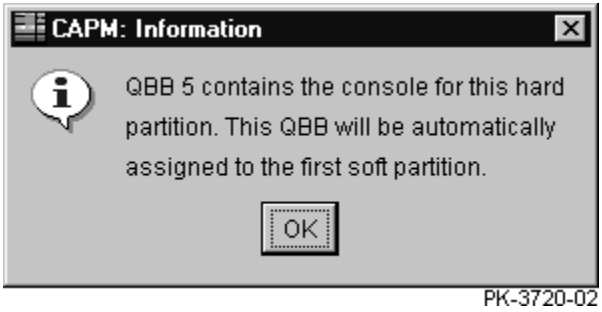
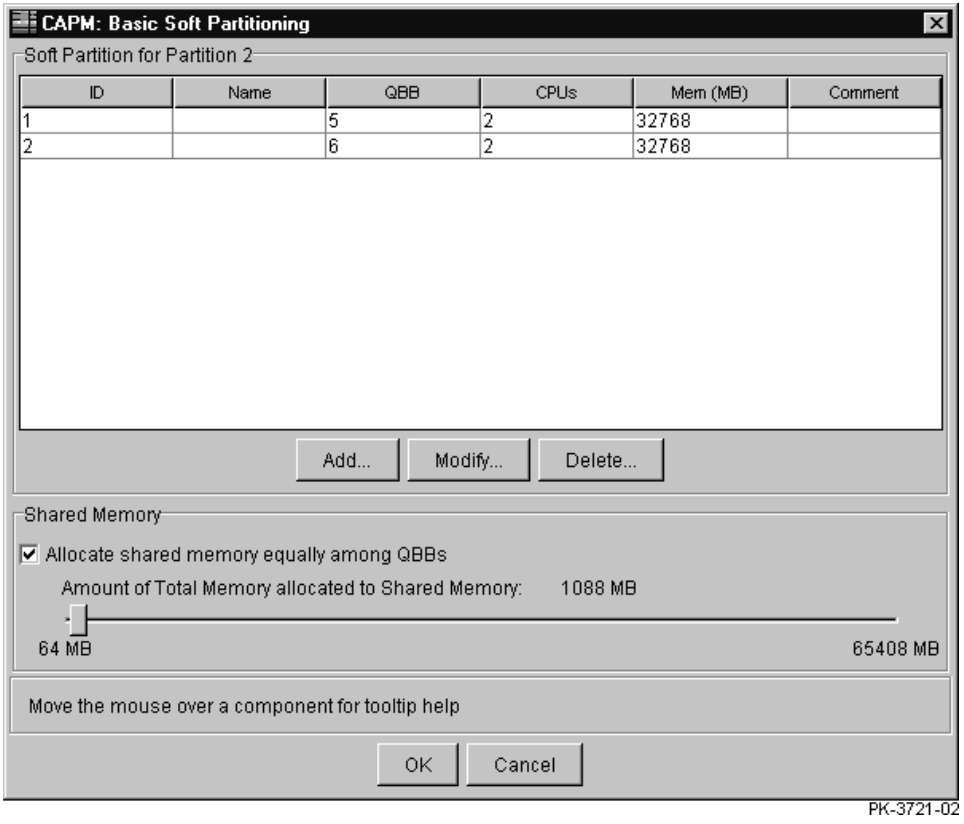


Figure 4-23 Basic Soft Partition Screen



1. In the Add or Modify Hard Partition screen (Figure 4–21), select the option button labeled *Basic soft partitioning* and click the Soft Partitions… button.
2. An informational message displays (Figure 4–22), indicating which QBB has the console for the hard partition. This QBB must be assigned to the first soft partition. Click OK.
3. The Basic Soft Partition screen displays (Figure 4–23), with the following information about the soft partitions in this hard partition:

   ID – The number of the soft partition within this hard partition. This number is assigned automatically by CAPM.

   Name – Optionally given to the soft partition in the Add or Modify Soft Partition screen.

   QBB – The hard QBB number.

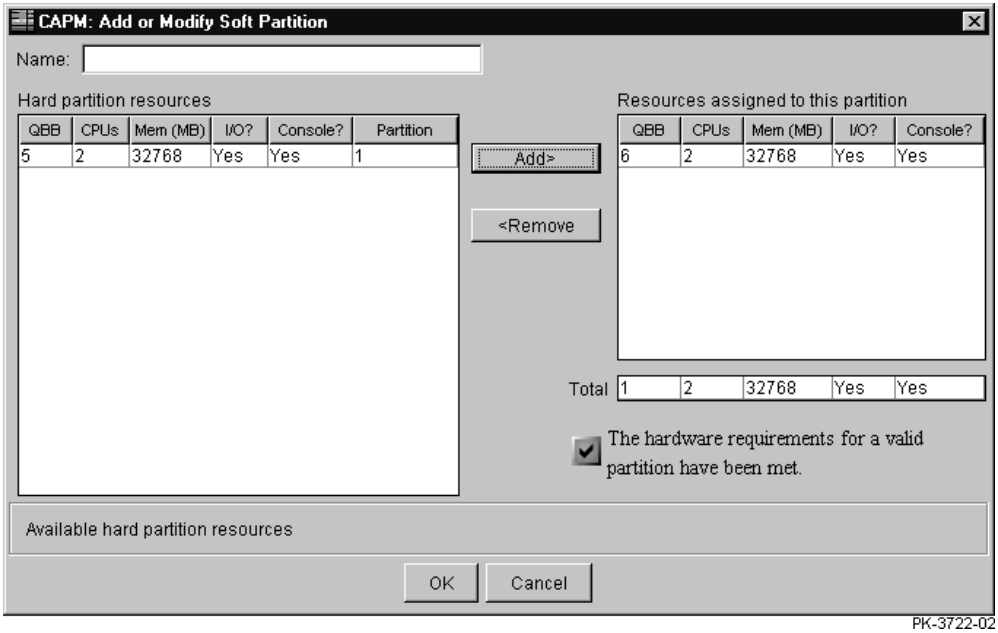
   CPUs – The number of CPUs in this soft partition.

   Memory – The amount of memory in this soft partition.

   Amount of Total Memory allocated to Shared Memory – An amount of memory is allocated to shared memory. The lower limit is 64 MB; the upper limit is the total of memory for all soft partitions within the hard partition less 128 MB.

4.5.2 Adding a Soft Partition

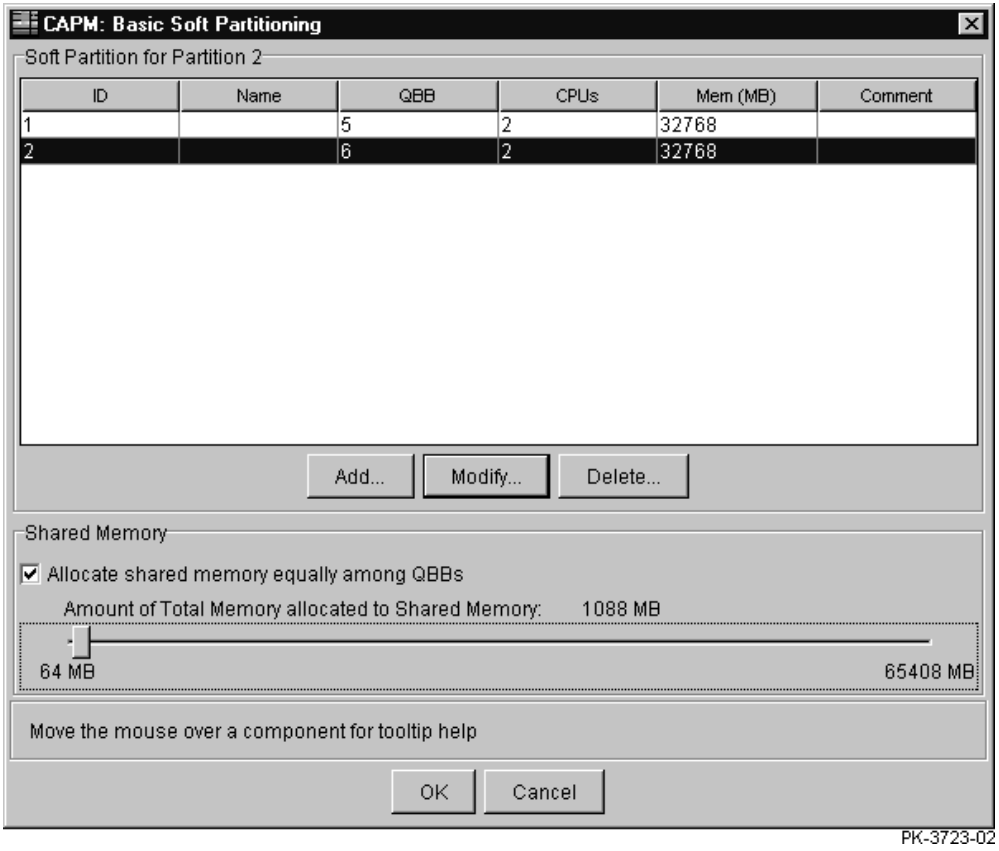
Figure 4-24 Add or Modify Soft Partition Screen



1. In the Basic Soft Partition screen (Figure 4–23), click the Add… button. The Add or Modify Soft Partition screen displays (Figure 4–24). If this is the first soft partition in the hard partition, the QBB that contains the hard partition's console is listed in the block labeled *Resources assigned to this partition*. This QBB must be in the first soft partition; CAPM will not allow you to remove it.
2. Do one of the following in the Add or Modify Soft Partition screen:
   - If no other QBBs are to be added to this soft partition, click OK; or
   - Add another QBB to this soft partition by clicking on the QBB in the box labeled *Hard partition resources* and clicking the Add button. Continue doing this until you have added all the QBBs that belong in this soft partition. Click OK; or
   - Remove a QBB from the soft partition by clicking on the QBB in the box labeled *Resources assigned to this partition* and clicking the Remove button. Click OK.
3. The Basic Soft Partition screen returns, showing the soft partitions that have been configured. Repeat steps 1 and 2 to add other soft partitions.
4. Designate the amount of shared memory and its allocation:
   a. In the Basic Soft Partition screen, move the slider until the amount of memory to be shared is displayed in the line above the slider. Memory is allocated in 64 MB blocks, so the amount shown is a multiple of 64.
   b. Select the checkbox labeled *Allocate shared memory equally among QBBs* to take an equal (or nearly equal) amount of memory from each QBB in the hard partition for the shared memory.

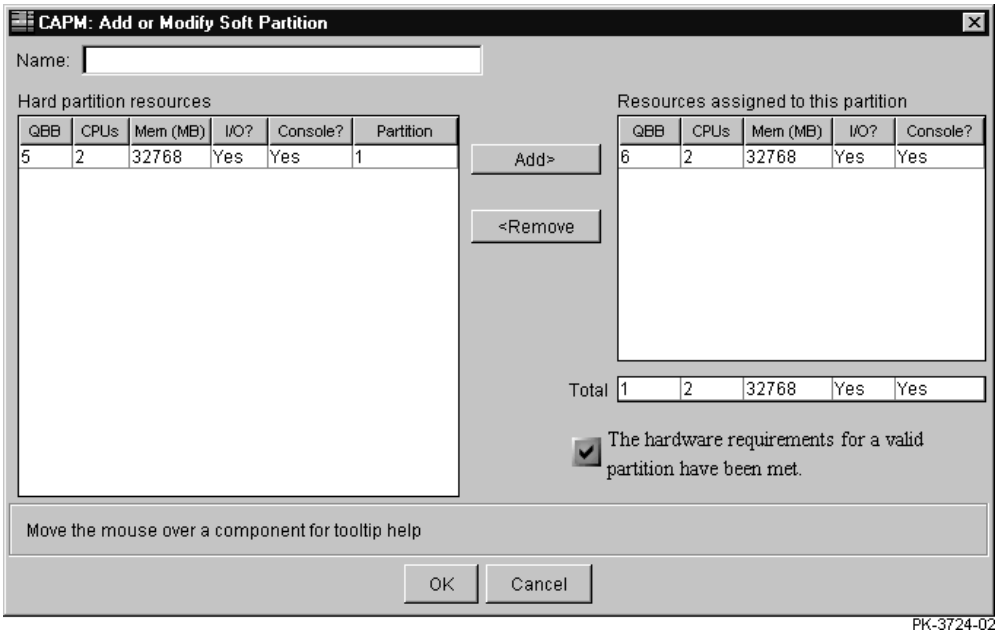
4.5.3 Modifying a Soft Partition

Figure 4-25 Basic Soft Partition Screen; Modifying a Partition



1. In the Basic Soft Partition screen (Figure 4–25), click to select the partition you want to modify and click the Modify… button. The Add or Modify Soft Partition screen displays (Figure 4–26).
2. Do one of the following in the Add or Modify Soft Partition screen:
   - Add another QBB to this soft partition by clicking on a QBB in the box labeled *Hard partition resources* and clicking the Add button. Continue doing this until you have added all the QBBs that belong in this soft partition. Click OK; or
   - Remove a QBB from the soft partition by clicking on a QBB in the box labeled *Resources assigned to this partition* and clicking the Remove button. Click OK.
3. The Basic Soft Partition screen returns. Optionally change the amount of shared memory by moving the slider to the preferred amount and change the allocation by clicking the checkbox labeled *Allocate shared memory equally among QBBs*. Click OK.

Figure 4-26 Add or Modify Soft Partition Screen



4.5.4 Deleting a Soft Partition

Figure 4-27 Basic Soft Partition Screen; Deleting a Partition

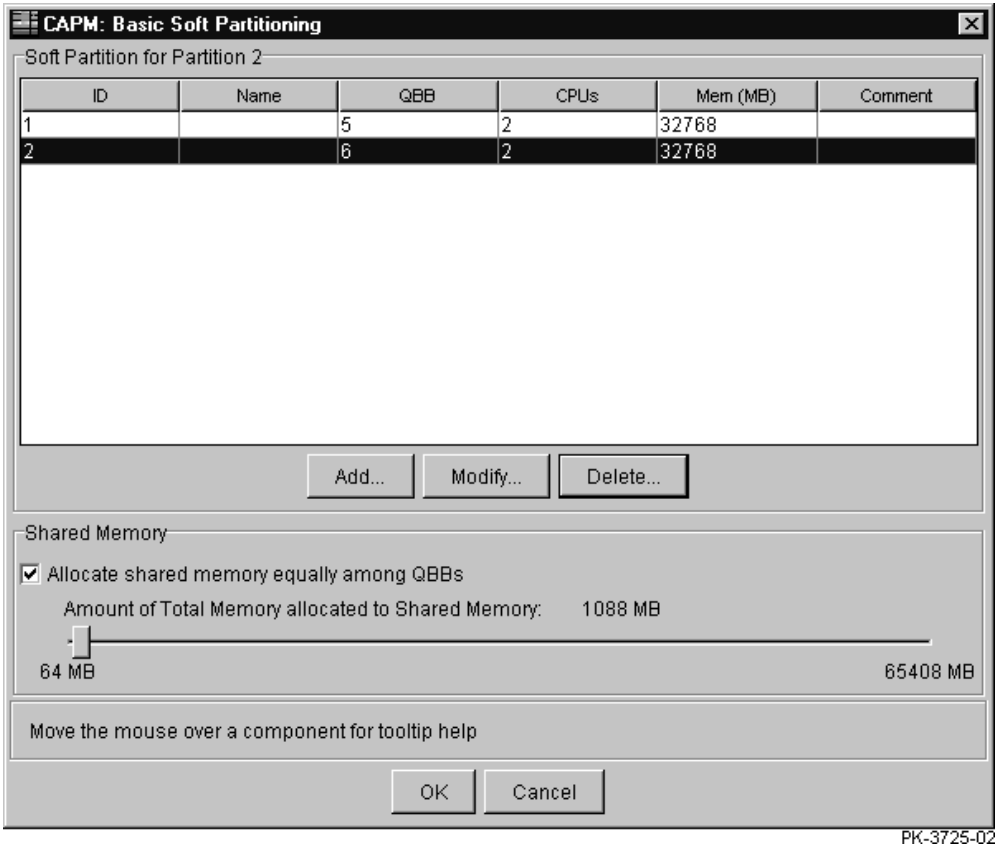
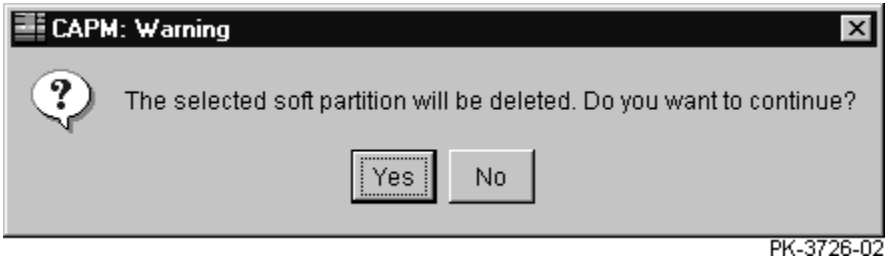
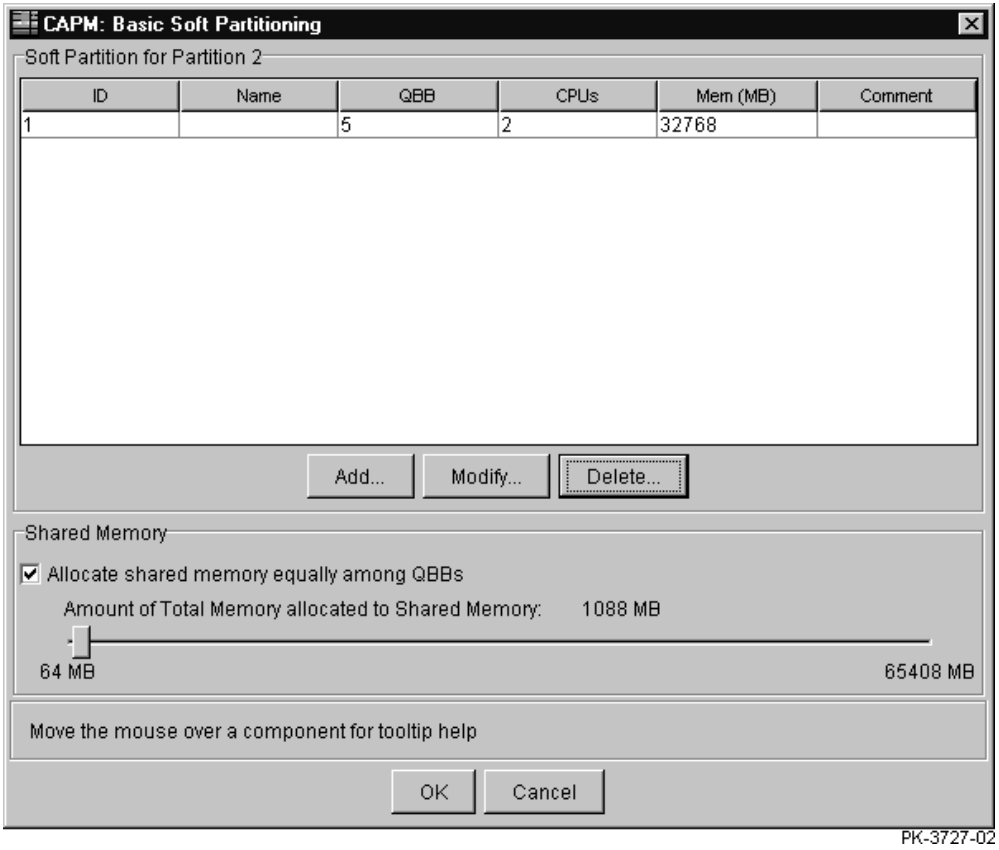


Figure 4-28 Delete Confirmation



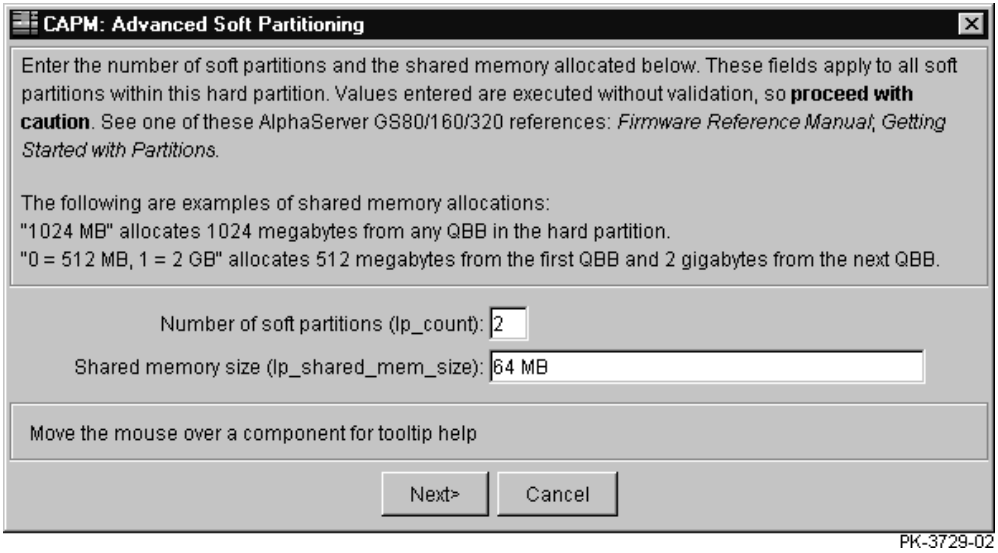
1. In the Basic Soft Partition screen (Figure 4–27), click to select the partition you want to delete and click the Delete… button.
2. A message displays, asking for confirmation of the action (Figure 4–28). Click the appropriate button.
3. The Basic Soft Partition screen updates if you chose to delete the partition. (See Figure 4–29.) Click OK.

Figure 4-29 Basic Soft Partition Screen; Partition Deleted



4.5.5 Advanced Soft Partitioning

Figure 4-30 Advanced Soft Partition Screen



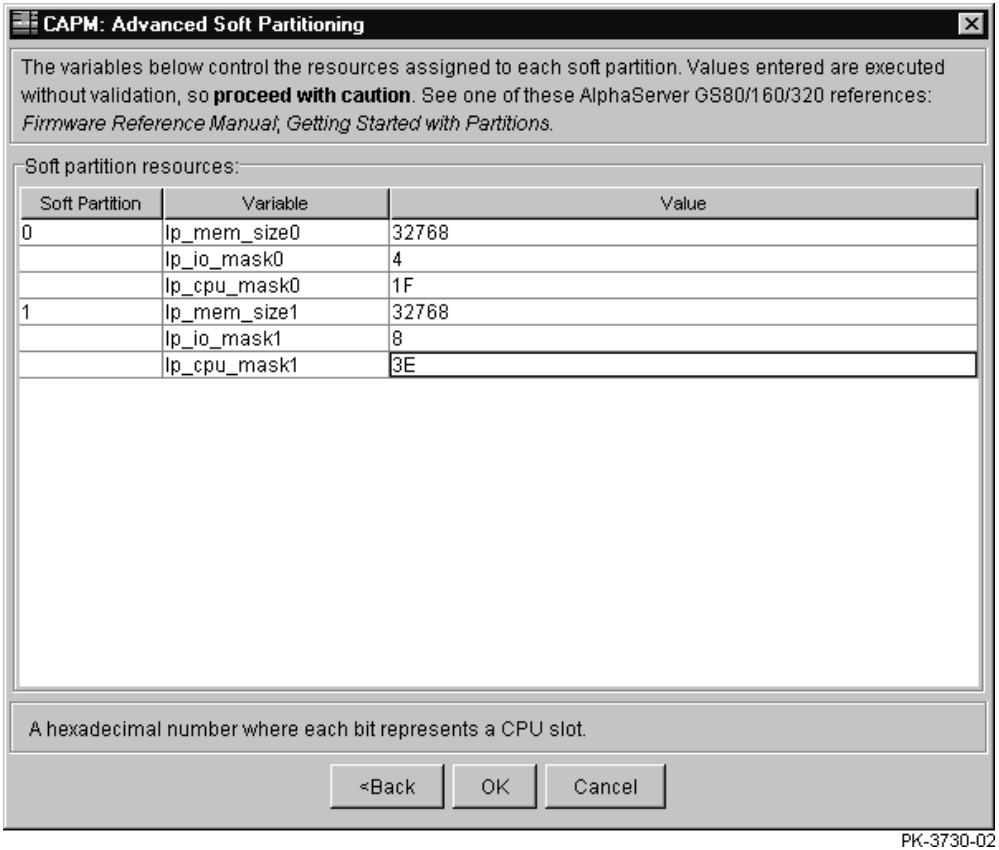
CAUTION: *Advanced Soft Partitioning is intended for users who are familiar with AlphaServer SRM environment variables. CAPM does not validate any information entered in these screens.*

Advanced Soft Partitioning gives the user more precise control than the Basic Soft Partition process. It requires knowledge of *AlphaServer* SRM environment variables.

1. In the Add or Modify Hard Partition screen (Figure 4–21), select the option button labeled *Advanced soft partitioning* and click the Soft Partitions… button. The Advanced Soft Partition Screen displays (Figure 4–30).
2. This screen lists the environment variables used to create soft partitions. Enter values for these environment variables in the column on the right. Click OK.

For descriptions of the *AlphaServer* SRM environment variables used to create soft partitions, and examples of using them, see the manual *AlphaServer GS80/160/320 Getting Started with Paritions*.

Figure 4-31 Advanced Soft Partitioning Variables



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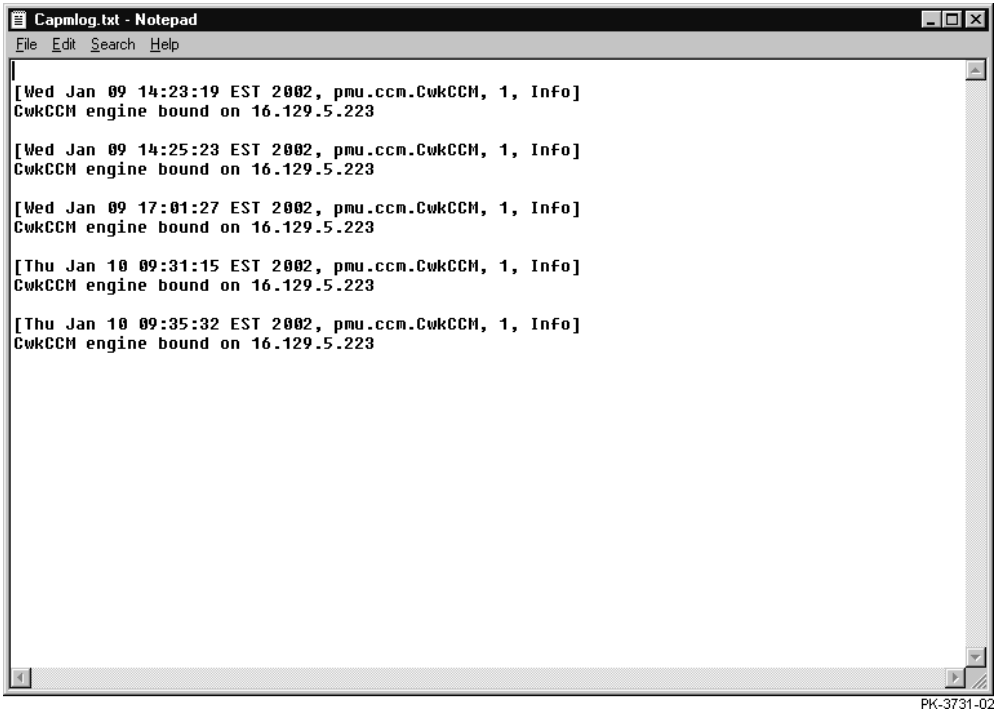
4.6 Managing CAPM Files

CAPM creates log files and partition map files.

Figure 4-32 CAPM Log File



The CAPM log file contains a record of the transaction information and any errors that occur as the application runs. An excerpt from a CAPM log file is shown in Figure 4–32. The file is saved to the folder D:\capm\logs.

CAPM creates a new log file for every session. A session starts when the user presses OK on the login window and ends when the user quits CAPM. The naming convention for log files is capmlog-*yyyy.mm.dd-s*.txt where *yyyy* is the year, *mm* the month, *dd* the day of the month, and *s* is the session. For example, if you use CAPM twice on February 21, 2002, the name of the log file for the second session is capmlog-2002.02.21-2.txt.

As shown in Figure 4–32, the information type for each entry is listed in brackets. This is for ease of sorting and processing.

CAPM partition map files are written to c:\smc\capm\maps. This is done only when you select the Save As… button and provide a file name. The default extension is .PMF.

Chapter 5
Graphical Configuration Utility

The Graphical Configuration Utility (GCU) is an OpenVMS Galaxy utility for creating and maintaining partitions.

Sections in this chapter are:

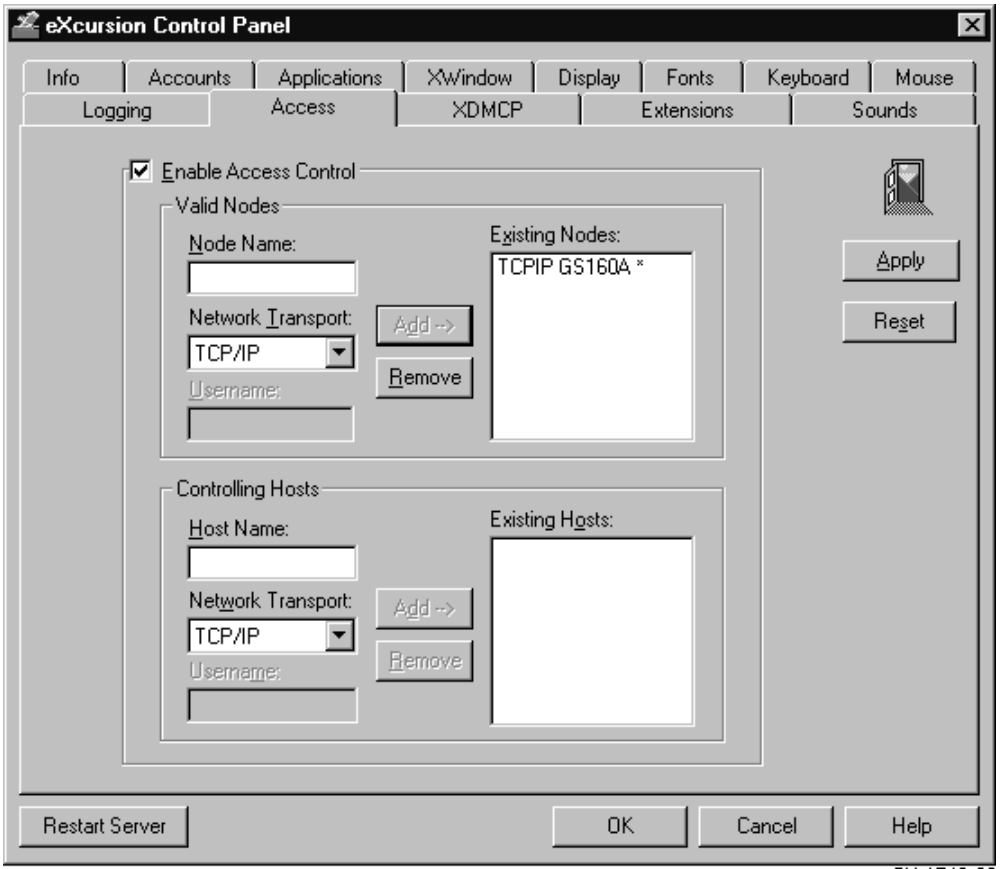
- Setting Up the GCU
- Using the GCU

5.1 Setting Up the GCU

Define information for the Galaxy instances in the eXcursion Control Panel.

5.1.1 Establish Access Control

Figure 5–1 eXcursion Control Panel Access Tab



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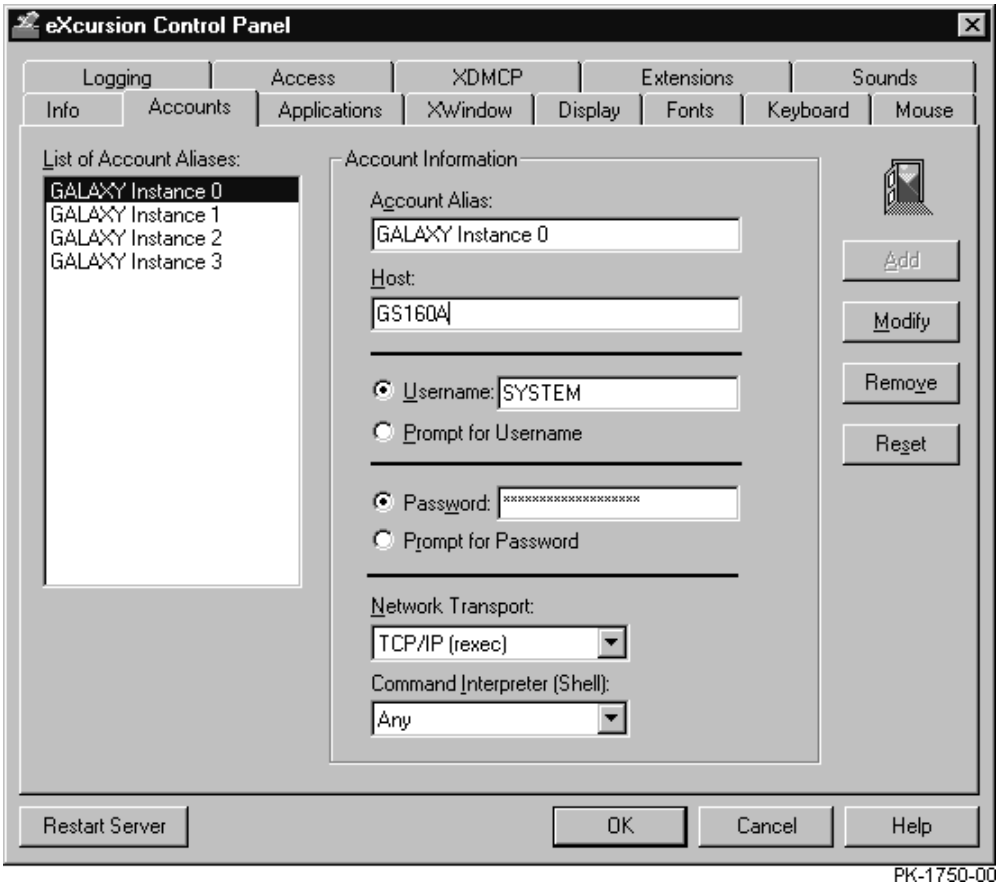
1. From the Start menu select Programs|eXcursion V7|eXcursion Control Panel. The eXcursion Control Panel window opens with the Info tab displayed.
2. Select the Access tab (Figure 5–1).
3. In the Access tab select the Enable Access Control checkbox, enter the Node Name, and click the Add button. Click Apply.

5.1.2 Create an Account for Each Galaxy Instance

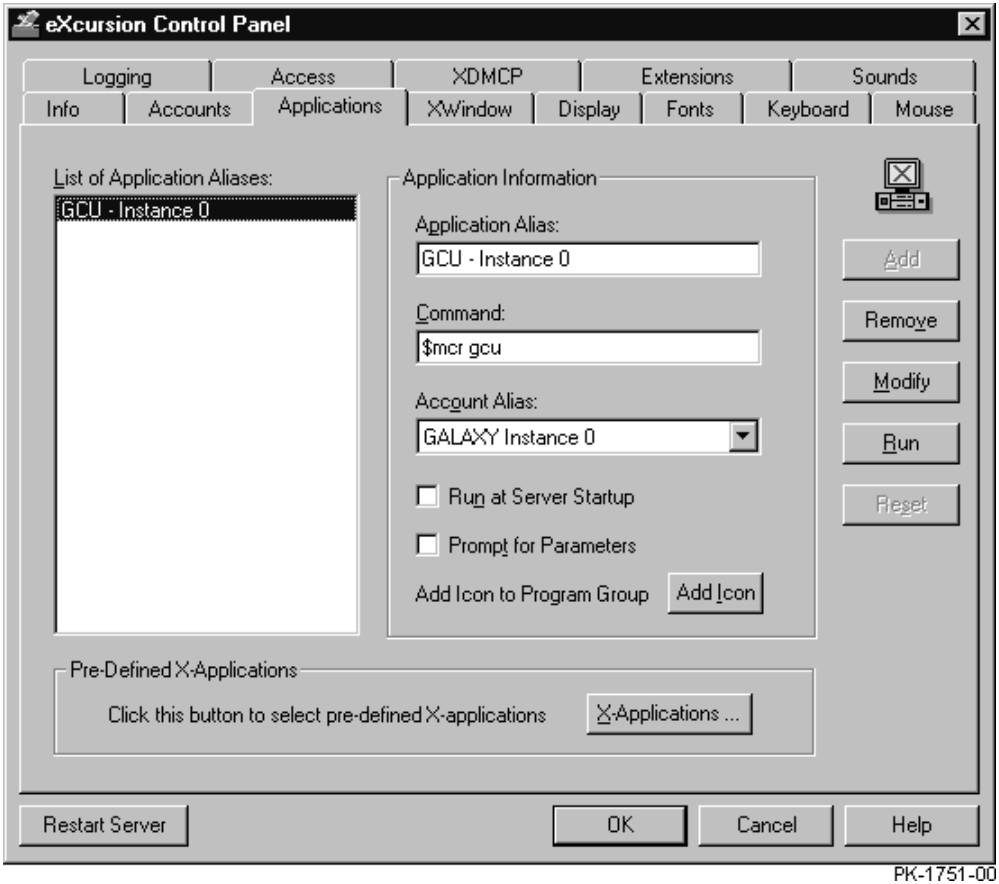
Figure 5-2 Accounts Tab



1. In the eXcursion Control Panel window select the Accounts tab (Figure 5–2).
2. Enter the Account Alias, Host name, Username, and Password. Click the Add button.
3. Repeat step 2 for each instance.

5.1.3 Define the Applications

Figure 5-3 Applications Tab

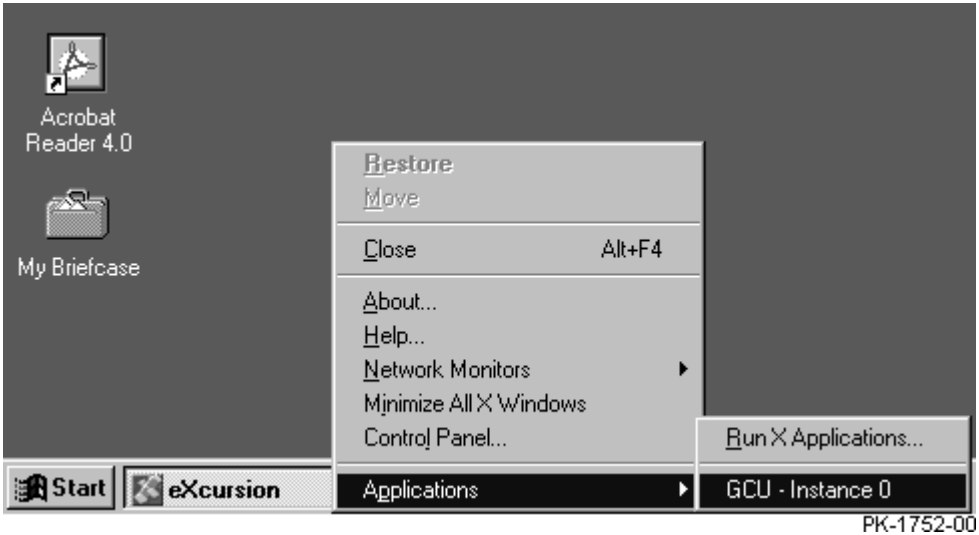


1. In the eXcursion Control Panel window select the Applications tab (Figure 5–3).
2. Enter an alias in the Application Alias box.
3. In the Command box enter **`$mcr gcu`**.
4. Select an Account Alias from the dropdown list.
5. Click the Add button.
6. Repeat steps 2 through 5 for each instance.
7. When an application has been defined for each instance, click OK.

5.2 Using the GCU

From the eXcursion icon select Applications and the Galaxy instance.

Figure 5-4 eXcursion Icon



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1. Right-click on the eXcursion icon in the task bar.
2. Select Applications and the name of the Galaxy instance. The Graphical Configuration Utility window displays. See the *OpenVMS Alpha Galaxy Guide* for information on managing Galaxy partitions.

   This manual is available in HTML and PDF formats on the Web. Go to the URL http://www.openvms.compaq.com:8000/ and click the link OpenVMS Operating System. Scroll down the list to *OpenVMS Alpha Galaxy Guide*.

Chapter 6
Troubleshooting

This chapter contains troubleshooting tips for the system management console hardware and software. Sections in this chapter are:

- Troubleshooting Chart
- Changing Baud Rates: System with Multiple Console Lines
- Changing Baud Rates: System with Single Console Line
- Changing the Internet Explorer Proxy Setting
- Starting the ConsoleWorks Services
- Configuring the SMC System to Restart After a Power Failure
- Setting the Path Variable
- Setting a Hot Key in the ConsoleWorks Terminal Emulator Window

6.1 Troubleshooting Chart

Table 6–1 lists a number of potential symptoms along with their possible causes and suggested solutions.

Table 6–1 Troubleshooting Chart

Symptom	Possible Cause	Suggested Solution
SMC System		
System takes a long time to boot.	File default.config has become too large.	Run the Expunge utility. (Section 2.3)
Communications		
No communication between the terminal server and the SMC system.	Terminal server is not powered.	Connect the terminal server to the power source (see Section A.4 or B.4 of the *System Management Console Installation Guide*).
	Terminal server software has not been configured.	Configure the software (see Chapter 10 of the *Installation Guide*).
	SMC is incorrectly cabled.	**Multiple-system installation:** Check that cables from the terminal server to the hub and from the hub to the SMC system are connected correctly (see Chapter 4 of the *Installation Guide*). **Single-system installation:** Check that the cable from the terminal server to the SMC system is connected correctly (see Section 3.1 of the *Installation Guide*).

Table 6–1 Troubleshooting (Continued)

Symptom	Possible Cause	Suggested Solution
Communications (continued)		
	Position identifier dial is set incorrectly.	Set the position identifier dial on the terminal server to management agent (see Section A.3 or B.3 of the *Installation Guide*).
	The SMC system and the terminal server are connected by the wrong cable.	Change the cable to a BN24Q.
No prompt in a terminal window.	Terminal server is hung.	Reload the terminal server using Access Server Manager (see Section 10.2 of the *Installation Guide*).
	Console line is not associated with a partition.	No action required.
	Baud rate mismatch.	Change the baud rate (Sections 6.2 and 6.3 of this manual).
	Incorrect IP Host setting for terminal server.	Check the console settings in the ConsoleWorks console configuration screen (Section 3.3.3 of this manual). See Section 1.5 for the IP Host setting for each system.
	The terminal server and standard I/O module (PCI box) are connected by the wrong cable.	Change the cable to a BN25G.
	The connector on the PCI box is the wrong type.	Change the connector to an H8585–AA.

Table 6–1 Troubleshooting (Continued)

Symptom	Possible Cause	Suggested Solution
Communications (continued)		
Text is garbled when UNIX is booting.	Partition's baud rate was set to 9600 by UNIX; terminal server's or SMC's baud rate is not 9600.	Set terminal server's or SMC's baud rate to 9600 (Sections 6.2 and 6.3).
ConsoleWorks		
ConsoleWorks takes a long time to start.	ConsoleWorks has unused consoles.	Delete consoles that will never be used (Section 3.3.2).
	A large number of events has accrued.	Acknowledge and purge (Section 3.4.5) or expunge (Section 3.4.6) events. Or run the Expunge utility (Section 2.3).
	File default.config has become too large.	Run the Expunge utility (Section 2.3).
	ConsoleWorks is using an increasing amount of physical memory.	Run the Expunge utility (Section 2.3).
ConsoleWorks takes a long time to access data.	Proxy server is being used to access local files.	Change Internet Explorer settings (Section 6.4).

Table 6–1 Troubleshooting (Continued)

Symptom	Possible Cause	Suggested Solution
ConsoleWorks (continued)		
	The SMC system has hung. (The pointer does not move when the mouse moves, or windows cannot be selected.)	Reboot the SMC system.
ConsoleWorks does not start.	ConsoleWorks services are not running.	Start ConsoleWorks services (Section 6.5).
	Default.config file might be corrupted.	Stop the ConsoleWorks services (Section 6.5); rename the file c:\Cwks\Default\Config\ default.config; restart the ConsoleWorks services. If ConsoleWorks starts now, run the restore utility (Section 2.5) to restore the last saved settings.
A security warning displays whenever a console is opened.	Certificate authority has not been loaded.	Load the certificate authority (Section 3.3.1).
Text in the ConsoleWorks terminal emulator window is garbled.	Output sent to another ConsoleWorks terminal emulator window is being updated.	Run any application that periodically updates or refreshes the screen either remotely or from a terminal emulator application such as KEA! or PowerTerm. Instructions for using a terminal emulator application with ConsoleWorks are in Section 3.2.3.
Cannot find a ConsoleWorks file.	Some files are in different folders in this version.	In Windows Explorer, search c:\cwks for the file.

Table 6–1 Troubleshooting (Continued)

Symptom	Possible Cause	Suggested Solution
CAPM		
A newly added GS80/160/320 system is not recognized by CAPM.	The console group has not been validated.	Run the Console Group Validator utility (see Chapter 11 of the *Installation Guide*).
CAPM does not start.	ConsoleWorks services are not running.	Start ConsoleWorks services (Section 6.5).
	CAPM service is not running.	Start the CAPM service in the same way as the ConsoleWorks services (Section 6.5). The service name is Compaq CAPM Server.
A message displays when you try to start CAPM indicating that the client cannot connect to the server.	CAPM service is not running.	Start the CAPM service in the same way as the ConsoleWorks services (Section 6.5). The service name is Compaq CAPM Server.
CAPM does not run.	You have tried to run CAPM while another user is running it.	Only one client can connect to the CAPM server at a time. Wait for the other user to exit CAPM.
An error message displays when you install or start CAPM, stating that the file JVM.DLL cannot be found on the current path.	The setting for the system-wide variable Path is incomplete.	Edit the setting for the Path variable to include the path for JVM.DLL (Section 6.7).

Table 6–1 Troubleshooting (Continued)

Symptom	Possible Cause	Suggested Solution
CAPM (continued)		
CAPM no longer recognizes a system.	The consoles in the system are not part of a group.	Create a group consisting of the consoles in the system (see Section 3.3.6).
	The Console Group Validator utility has not been run.	Run CG Validator (see Chapter 11 of the *Installation Guide*).
Console Group Validator Utility		
CG Validator does not show a system.	The consoles in the system are not part of a group.	Create a group consisting of the consoles in the system (see Section 3.3.6).
SMC Utilities Page		
Cannot log on to SMC Utilities page.	Per-session cookies are not enabled.	Enable cookies (see Section 2.1).

Table 6–1 Troubleshooting (Continued)

Symptom	Possible Cause	Suggested Solution
SMC Web Page		
The SMC Web page does not display.	HMMO service is not running on the SMC system.	Start the service in the same way as the ConsoleWorks services (Section 6.5). The service name is Compaq SMC HMMO Server.
	You must have the Java™ 2 Runtime Environment, Standard Edition running on the system on which you are working.	Go to the URL http://java.sun.com/j2se/1.3/jre to download it. The Java 2 plug-in for *Tru64 UNIX* can be found at http://www.compaq.com/java.
	JavaScript is not enabled in the browser.	Enable JavaScript. **Internet Explorer:** From the Tools menu select Internet Options|Advanced. **Netscape:** From the Edit menu select Preferences|Advanced.
	Java is not enabled in the browser.	Enable Java (menu selections are the same as the item above).
	Browser is not the correct version.	Upgrade the browser. Supported browsers are Internet Explorer 5.0 or later and Netscape 4.7 or later.
	You are using Netscape V6.0 with Windows 98.	This combination is unsupported; use a previous version of Netscape or use Internet Explorer.
Clicking a link to either of the user guides does not display the manual.	Acrobat Reader is not the correct version.	Upgrade to Acrobat Reader V4.05c or later.

Table 6–1 Troubleshooting (Continued)

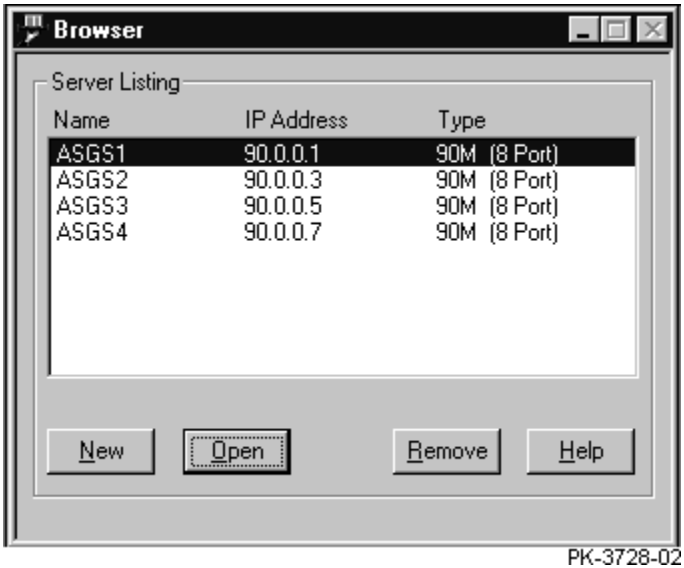
Symptom	Possible Cause	Suggested Solution
Restart after Power Fail		
The SMC system does not automatically restart after a power failure.	The system has not been configured to restart automatically.	Depending on the model, change a switch setting or a BIOS setting (Section 6.6).
UNIX		
In a Console-Works terminal emulator window, lines have double prompts (# #), or input appears invalid during a *Tru64 UNIX* install or when running 'setup' in *Tru64 UNIX*.	*Tru64 UNIX* misinterprets the Enter key.	Set up a hot key in the ConsoleWorks terminal emulator window (Section 6.8).

6.2 Changing Baud Rates: System with Multiple Console Lines

Change the terminal server port's baud rate to match the GS80/160/320 partition's rate and establish communication. Then change the partition baud rate to 9600, and finally change the terminal server rate to 9600.

6.2.1 Set the Terminal Server Port Speed to Match the GS80/160/320 Partition Speed

Figure 6–1 Browser Window



1. Open Access Server Manager (ASM). From the Start menu select Programs | Access Server Manager | Access Server Manager. A Browser window displays (Figure 6–1).
2. In the Browser window select the item with IP address 90.0.0.1. Click Open. The Access Server window displays.
3. Select the Configuration tab. In the box, select Ports. Click the Configure… button. The Ports Configuration dialog box displays (Figure 6–2).

Continued on page 6-13

Figure 6-2 Ports Configuration Dialog Box

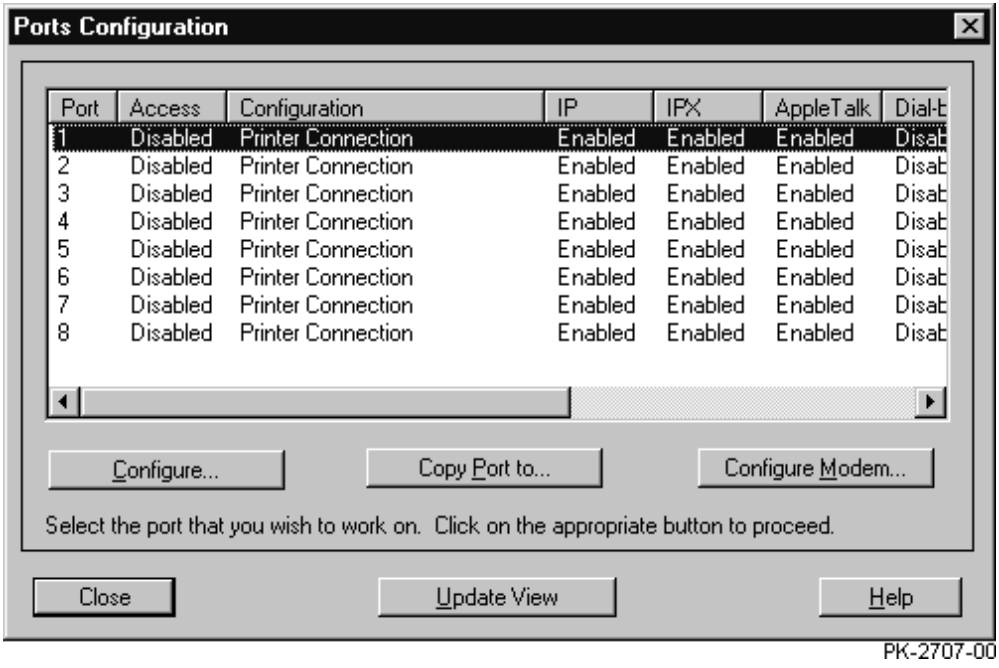


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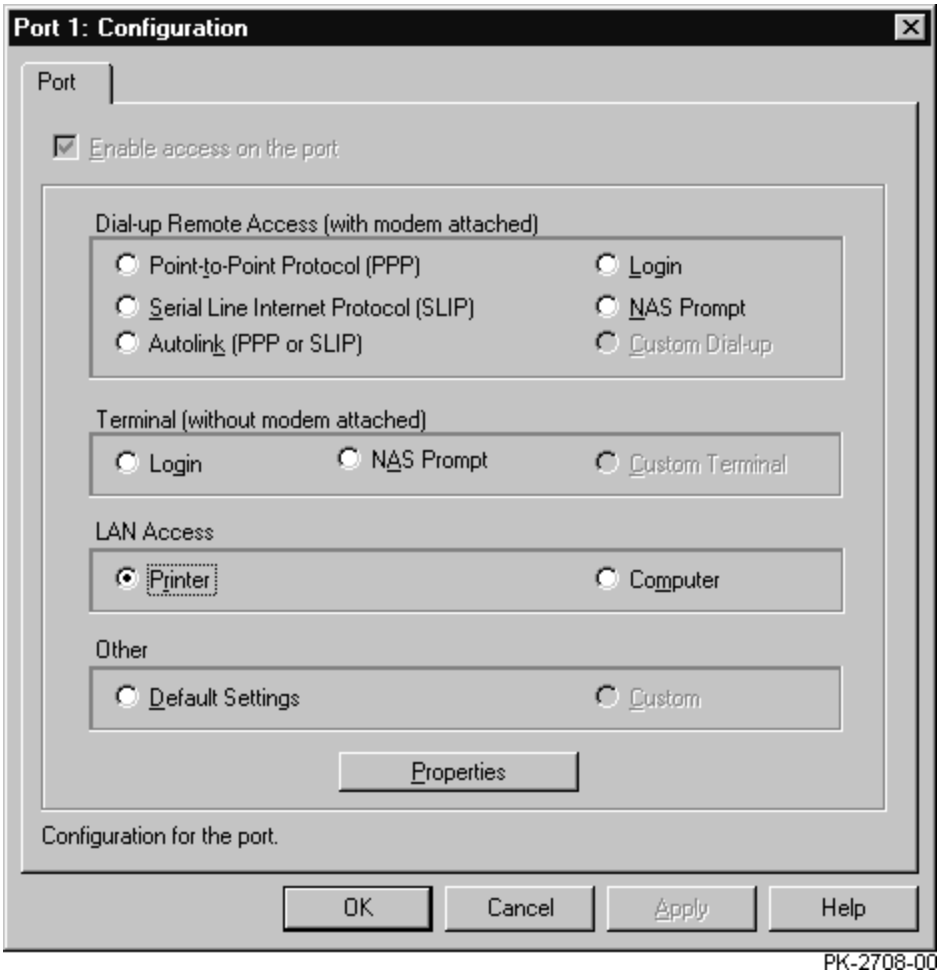
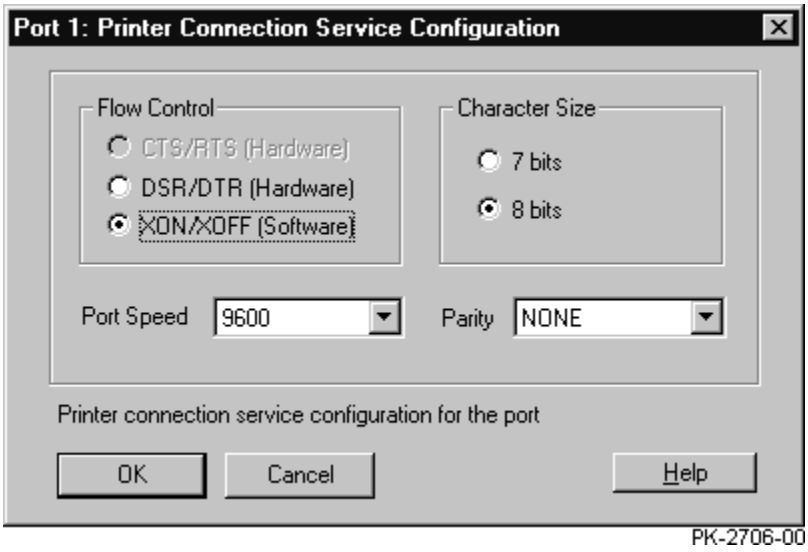
Figure 6-3 Configuration Dialog Box



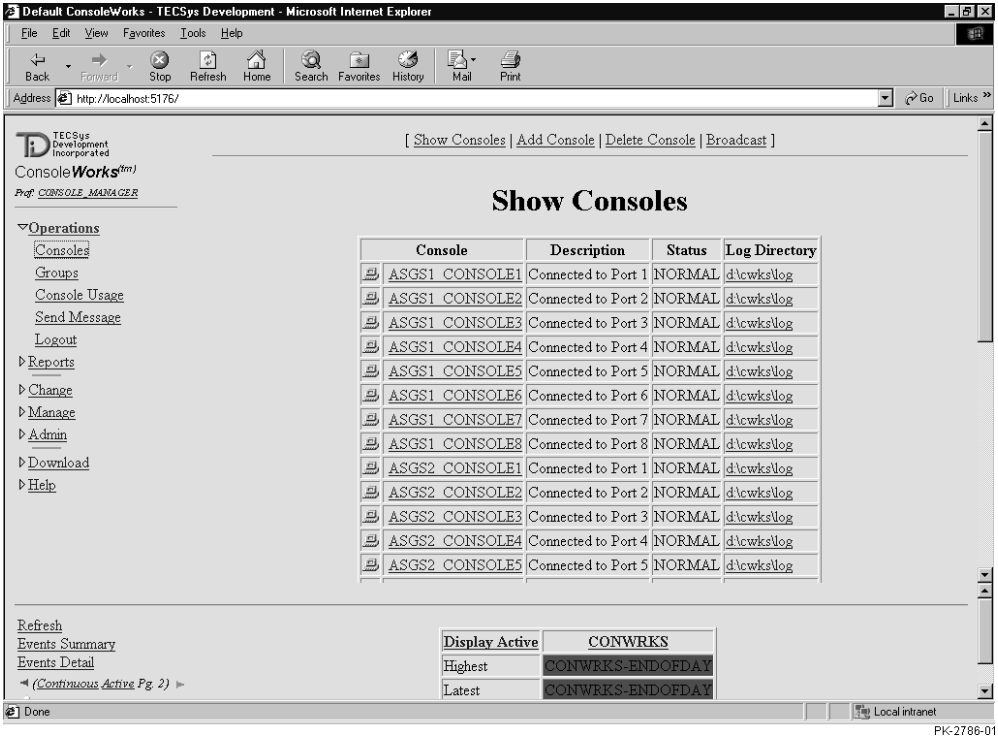
4. Select the port for which you will change the baud rate and click the Configure… button. The Configuration dialog box displays (Figure 6–3).
5. Click the Properties button. The Connection Service Configuration dialog box displays (Figure 6–4).
6. Change the port speed in this box, and check that the other settings are correct for your environment. Click OK.

Figure 6-4 Connection Service Configuration Dialog Box



6.2.2 Test for a Baud Rate Match and Set Both to 9600

Figure 6-5 Show Consoles Screen



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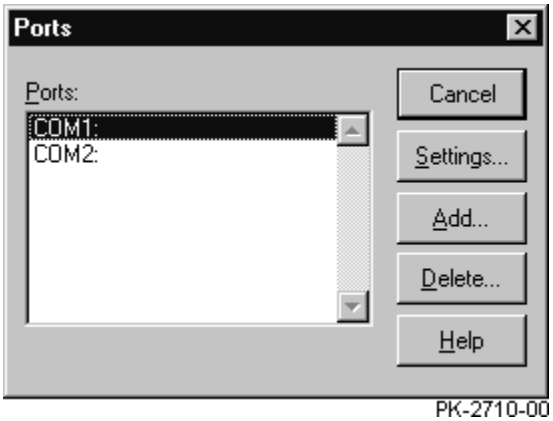
1. In the left navigation panel of a ConsoleWorks window, select Consoles. The Show Consoles screen displays.
2. Find the name of the console that is attached to the port you worked with in Section 6.2.1. Click the icon to the left of the name. A terminal emulator window for the console displays.
3. In the terminal emulator window press Enter. If the SCM or SRM console prompt displays, the baud rate of the terminal server port matches that of the GS80/160/320 partition. If no console prompt displays, return to Section 6.2.1 and set the terminal server port to a different speed. Whether a prompt displays or not, leave the terminal emulator window open.
4. When communication is restored, set the GS80/160/320 partition's baud rate to 9600. From the SRM prompt in the terminal emulator window, enter the command **`set com1_baud 9600`**.
5. Set the terminal server baud rate to 9600.
   a. Return to the ASM Access Server window.
   b. Select the port and follow the procedure in Section 6.2.1 to change its speed to 9600.
6. To verify that baud rates match, return to the terminal emulator window and press Enter. A prompt displays when the rates match.

6.3 Changing Baud Rates: System with Single Console Line

Change the baud rate of the system's COM1 port to match the GS80/160/320 system and establish communication. Then change the system rate to 9600, and finally change the COM1 rate to 9600.

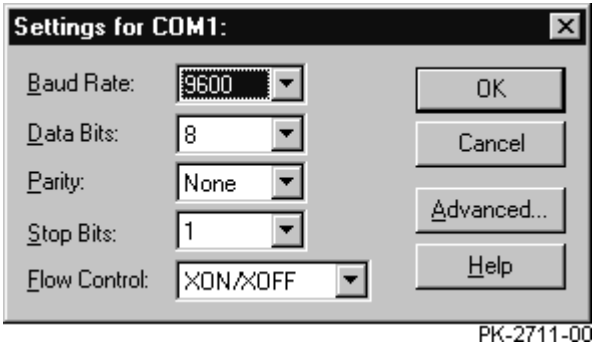
6.3.1 Set the SMC System Speed to Match the GS80/160/320 Speed

Figure 6-6 Ports Dialog Box



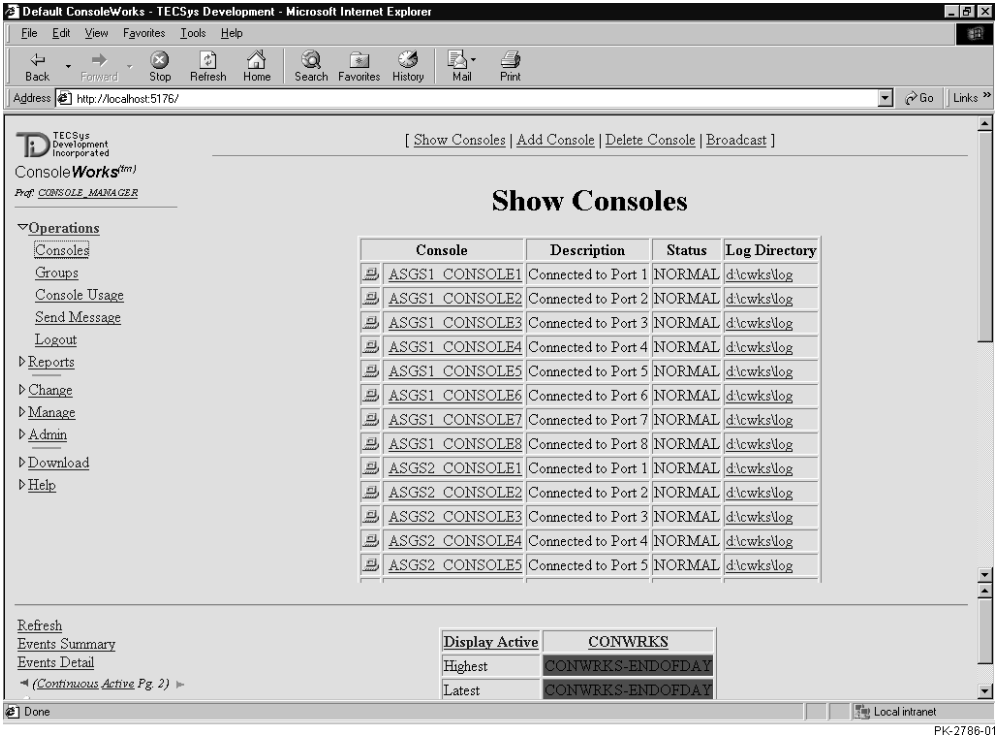
1. From the Start button select Settings | Control Panel.
2. In the control panel, double click the Ports icon. The Ports dialog box displays (Figure 6–6).
3. Select COM1 and click the Settings… button. The Settings for COM1 dialog box displays (Figure 6–7).
4. Change the baud rate, and check that the other settings are correct for your environment. Click OK.

Figure 6–7 Settings for COM1 Dialog Box



6.3.2 Test for a Baud Rate Match and Set Both to 9600

Figure 6-8 Show Consoles Screen



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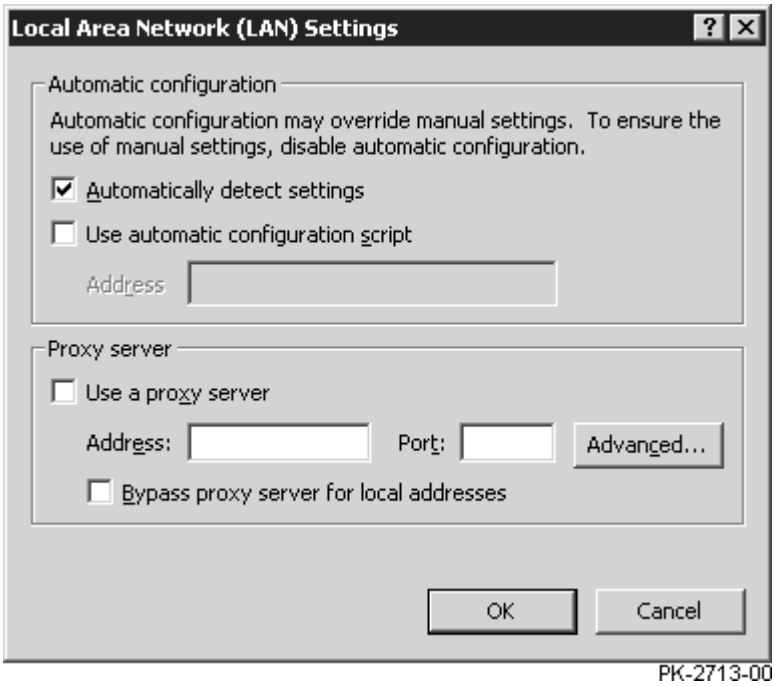
1. In the left navigation panel of a ConsoleWorks window, select Consoles. The Show Consoles screen displays (Figure 6–8).
2. Click the icon to the left of the ASGS1_CONSOLE1 link. A terminal emulator window for the console displays.
3. In the terminal emulator window press Enter. If an SRM console prompt displays, the baud rates match, and you can set the GS80/160/320 baud rate (step 4). If a prompt does not display, return to Section 6.3.1 and set the COM1 speed to a different setting.
4. At the SRM prompt, enter **`set com1_baud 9600`**.
5. Set the SMC system's COM1 baud rate to 9600 (Section 6.3.1).
6. To verify that baud rates match, return to the terminal emulator window and press Enter. A prompt displays when the rates match.

6.4 Changing the Internet Explorer Proxy Setting

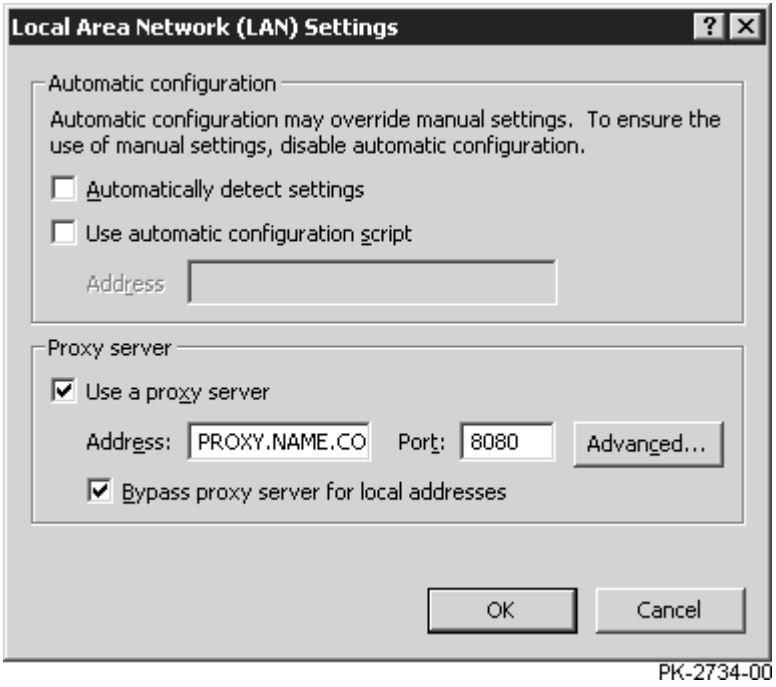
From the Internet Explorer Tools menu select Internet Options. Select the Connections tab and LAN Settings.

Figure 6-9 LAN Settings Dialog Box –Automatic Configuration



1. Ask the network administrator if settings are configured automatically or if proxy server information must be entered.
2. From the Tools menu select Internet Options… The Internet Options dialog box displays.
3. Select the Connections tab. Near the bottom click the LAN Settings… button. The Local Area Network (LAN) Settings dialog box displays.
4. Based on the network administrator's answer in step 1, do one of the following:
   - In the Automatic configuration section click the checkbox labeled *Automatically detect settings* (Figure 6–9). Click OK.
   - In the Proxy server section click the checkbox labeled *Use a proxy server* (Figure 6–10). In the Address box enter the proxy server address for your site. Click the checkbox labeled *Bypass proxy server for local addresses*. Click OK.

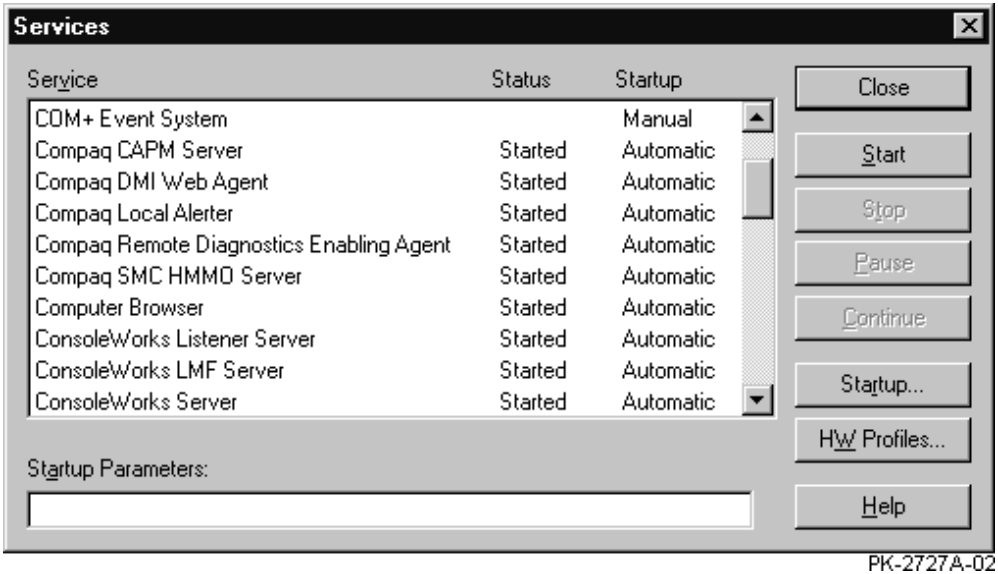
Figure 6–10 LAN Settings Dialog Box –Proxy Server



6.5 Starting the ConsoleWorks Services

Open the Control Panel and double-click the Services icon. Select the ConsoleWorks services and click Start.

Figure 6–11 ConsoleWorks Services



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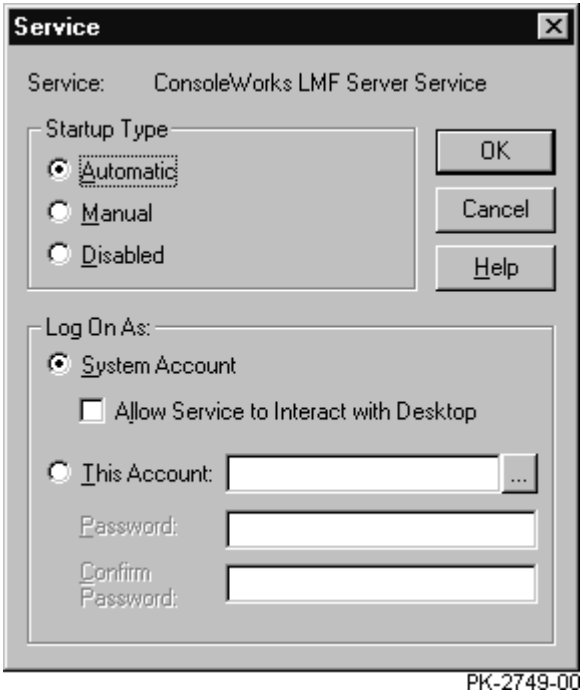
1. Open the Control Panel. From the Start button select Settings | Control Panel.
2. In the Control Panel double-click the Services icon. The Services dialog box displays (Figure 6–11).
3. Check the Status and Startup columns for the two ConsoleWorks services. If one or both do not look like the illustration, do the following:
   a. To change the status: Select a service and click Start. Repeat with the other service.
   b. To change the startup type: Select a service and click Startup…. In the Service dialog box (Figure 6–12), select the startup type Automatic and click OK.

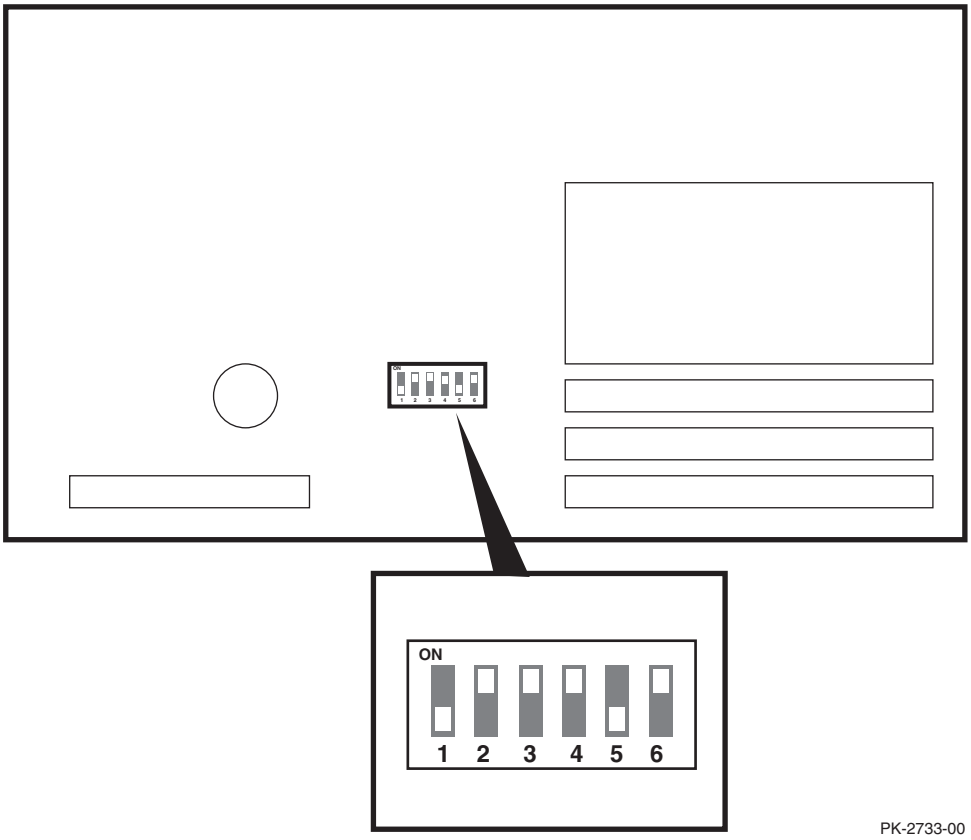
Figure 6–12 Service Dialog Box



6.6 Configuring the SMC System to Restart After a Power Failure

The SMC system should power up and boot following a power failure. If it does not, corrective action is necessary. The action to take depends on the system model.

Figure 6–13 Switch Setting for Models DPENM and DPEND



Location of Model Type Information

The instructions below differ according to model. You can determine the model of the SMC system by looking at the label on the top or side of the minitower or desktop box.

Models DPENM and DPEND

1. Shut down the SMC system and disconnect the power cord.
2. Remove the cover from the SMC box.
3. Locate the switchpack on the motherboard. Figure 6–13 and the label inside the SMC cover show the location of the switchpack.
4. Set switch 6 to On (Figure 6–13).
5. Replace the cover and connect the power cord.

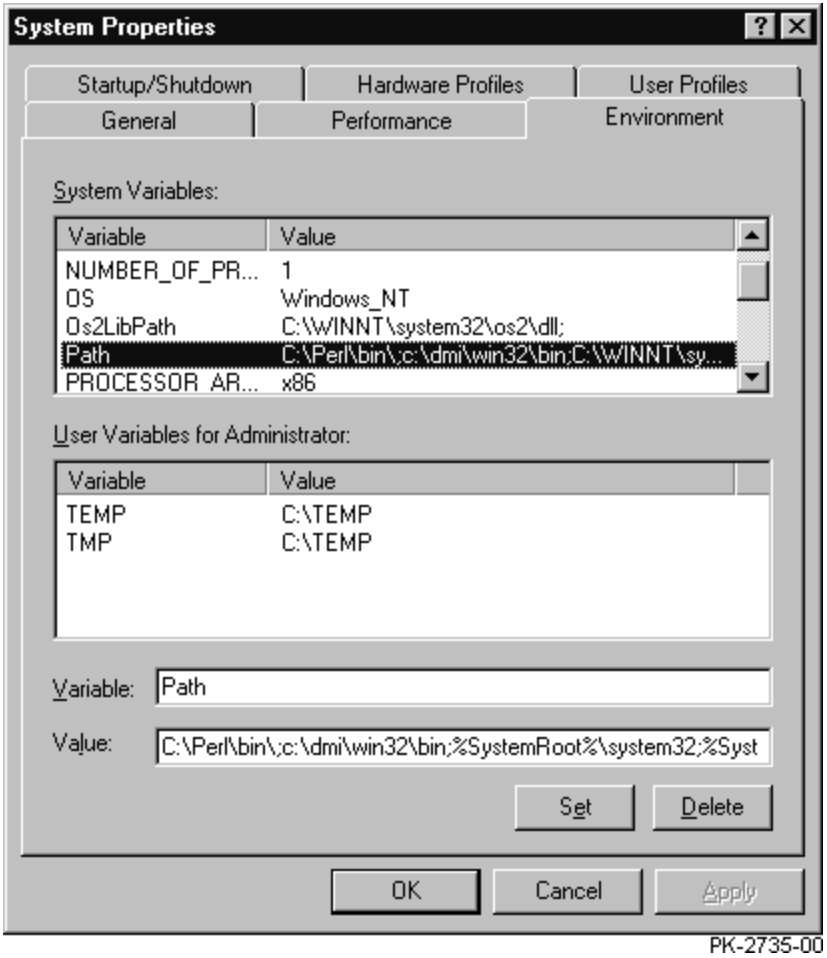
Models ENCM and ENL

1. Start or restart the SMC system.
2. During power-up, at the initial screen with the large Compaq logo, press the F10 key for setup. A list of languages, with English selected, displays. Press Enter.
3. The Setup Utility screen displays. Use the right-arrow key to select the Advanced menu. The Power-On Options item is selected. Press Enter.
4. The Power-On Options box displays. Check the setting for the entry After Power Loss. If it is Off, press the down-arrow to move the pointer to this setting. Press the right-arrow key to change the setting to On. Press F10 to accept this change.
5. The Setup Utility screen displays. Use the left-arrow key to select the File menu. Press the down-arrow key to select Save Changes and Exit. Press Enter. The power-up procedure continues.

6.7 Setting the Path Variable

Open the Control Panel and double-click the System icon. In the Environment tab select Path and add the path to the Java Runtime Environment in the Value box.

Figure 6–14 System Properties Dialog Box



1. From the Start menu, select Settings | Control Panel. Double-click the System icon. The System Properties dialog box displays.
2. Select the Environment tab (Figure 6–14).
3. In the *System Variables* block, highlight the Path variable. The name and value of the variable display near the bottom of the dialog box, in the *Variable* and *Value* boxes, respectively.
4. Move the cursor to the end of the Value box. (Do not delete anything in the box.) Enter the following at the end of the value:

   `;C:\Program Files\JavaSoft\Jre\1.3.0_01\bin\hotspot;`

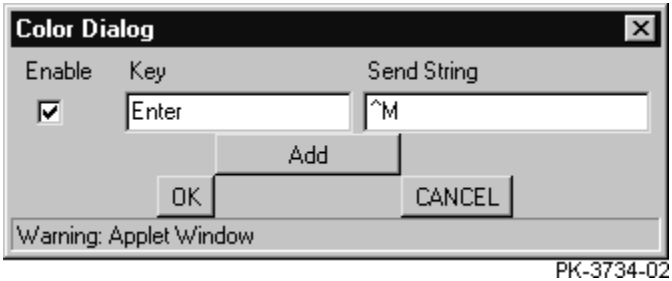
   Enter this string exactly as shown. Be sure to include the semicolons at the beginning and end, and the space in "Program Files."
5. Click Set.
6. Click Apply.

NOTE: *If the error message displays when you again try to install or start the CAPM service, restart the SMC system.*

6.8 Setting a Hot Key in the ConsoleWorks Terminal Emulator Window

In the terminal emulator window select Hot Keys from the Options menu.

Figure 6–15 Color Dialog Box



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A GS80/160/320 system connected to an SMC without a terminal server can have problems with menu-driven applications displayed in the ConsoleWorks terminal emulator window. (This is the window that displays when you click the Connect link in the ConsoleWorks *console_name* Configuration screen or when you click the icon to the left of the console name in the Show Consoles screen.) Examples of this problem are that input appears invalid during a *Tru64 UNIX* install or when running 'setup' in *Tru64 UNIX*. In addition, you might see double prompts on the same line (# #). This issue has been seen only on GS80/160/320 systems that are running *Tru64 UNIX*.

ConsoleWorks uses a Java application for its terminal emulator. This application sends the keys that are typed to the console. The SMC system interprets the Enter key as a carriage return character followed by a linefeed character. *Tru64 UNIX* interprets both the carriage return **and** the linefeed as linefeeds. Therefore, when you press the Enter key once, it appears to the GS80/160/320 system as if you had pressed the Enter key twice.

The current solution to this problem is to set up a hot key in the ConsoleWorks terminal emulator window:

1. In the terminal emulator window select Hot Keys from the Options menu. The Color Dialog Box displays (Figure 6–15).
2. Click in the Key column and press the Enter key. The word Enter displays in the text box.
3. Click in the Send String column and type ^M (Shift+6 and the letter M).
4. Select the Enable checkbox.
5. Click OK.

Now, when you press Enter on this console, only a carriage return is sent. ConsoleWorks remembers the hot key definitions, so any time you connect to this console using the same ConsoleWorks user account, that hot key is defined and enabled.

Appendix A
Using the SMC Software CD

Instructions for using the *AlphaServer* GS80/160/320 Console Management Software CD (AG–RRNCA–BE) can be found in the document *AlphaServer* GS80/160/320 System Management Console Installation and Release Notes (AA–RRNEA–TE). The printed version of the installation and release notes is packaged with the CD. A PDF version can be found at the top level of the CD. Both the CD and the printed document are part of the QB–6K4AB–SA kit, which also includes the print version of this manual and the system management console license.

The *AlphaServer* Console Management Software CD installs the applications listed in Table A–1 on the SMC hard disk. In addition, shortcuts are placed on the desktop for the following:

- SMC Web page
- ConsoleWorks for *AlphaServer*
- *Compaq AlphaServer* Partition Manager
- KEA!
- Outlook Express
- MSDOS command
- Windows NT Explorer
- A folder containing documentation for the SMC and ConsoleWorks
- A list of version numbers for SMC applications

Table A–1 SMC V4.0 Software

Software	Version
Access Server Loader	1.1
Acesss Server Manager	2.3
Acrobat Reader	4.05c
Carbon Copy Access Edition	5.5
WinVNC	3.3.3
Compaq Management Agents	4.37 REV H
Compaq AlphaServer Partition Manager (CAPM)	2.0
ConsoleWorks	1.5WNT
eXcursion	7.2.177
Internet Explorer	5.5
JRE	1.3.0_01
KEA!	5.1
Perl	5.60.613
Windows NT	4.0 (Service Pack 6)
WinZip	7.0 (SR-1)
World Wire	2.8

Appendix B
Compaq-Supplied Configuration Files for ConsoleWorks

This appendix describes components that enable ConsoleWorks to operate on the system management console of a GS80/160/320 system.

B.1 SCM.PORT

The file SCM.PORT contains the event and scan definitions in a format compatible with Polycenter Console Manager (PCM). This file is imported to ConsoleWorks to supply definitions of scans and events.

The name of the scan is GS_SCM_SCAN. All Compaq-supplied events, which are described in Table B–1, are part of this scan. The event pattern triggers are automatically defined during the import. The user may change the help text associated with an event to make it site-specific.

Table B–1 Events Created by SCM.PORT

Event	Description
GS_AIR_MOVER_FAILURE	Air mover failure from a PSM
GS_HS_OVERTEMP	Overtemp failure from an HPM
GS_PCI_PBM_SYSEVENT	PCI/PBM SysEvent
GS_PWR_FAIL	Vital power failure from an HPM
GS_QBB_OVERTEMP_FAILURE	Overtemp failure from a PSM
GS_SYSCLK_FAIL	Clock failure from an HPM
GS_VITAL_POWER_FAILURE	Vital power failure from a PSM

All events listed in Table B–1 have a priority of 50 and a severity of critical.

Note that event GS_PCI_PBM_SYSEVENT can be triggered by any of three subevents. These are defined and recognized in the Perl script, as described in Section B.2.

B.1.1 Loading

SCM.PORT is imported with the import_pcm utility. To do this, open a Command Prompt window, change the directory to C:\Cwks, and type the command **`import_pcm c:\cwks\port\scm.port`**.

The PC will need to be restarted after this is done.

B.1.2 Contents

The content of the SCM.PORT file is included in Section B.4. It is supplied for reference purposes; it is useful for verification and testing (Section B.3).

B.2 MAIL.BAT and MAIL.PL

ConsoleWorks invokes the command script MAIL.BAT when an event is triggered. MAIL.BAT, in turn, invokes the Perl interpreter, passing the Perl code filename (MAIL.PL) and the command arguments automatically supplied to it by ConsoleWorks.

Technical Note: ConsoleWorks requires the intermediate step of executing a .BAT file, which then executes the Perl script.

These are the arguments that ConsoleWorks automatically supplies to the MAIL.PL script:

```
$ARGV[0] Console name
$ARGV[1] Event name
$ARGV[2] Event sequence number
$ARGV[3] Name of event context file
$ARGV[4] Contact name (comma delimited if more than one)
$ARGV[5] User supplied parameter
```

The contact name field is based on the information provided during setup. It should be the fully qualified mail addresses of the users who are to be notified during an event action.

A current limitation of ConsoleWorks is the inability to set up a trigger based on patterns that span more than one line. When the event GS_PCI_PBM_SYSEVENT occurs, MAIL.PL parses the resultant context file,

which contains the trigger text and a defined number of displayed lines before and after this text, to determine if this event is one of which a user needs to be notified. These subevents are:

```
~E~ FAN. FAIL - POWEROFF IN 30 SECONDS
~E~ LM80. TEMP FAIL
~E~ PS. POK DEASSERTED
```

MAIL.PL then formats a mail addressee, subject, and message body from this information, and contacts (through a TCP/IP socket, port 25) an SMTP (Simple Mail Transport Protocol) server and sends this mail message.

It is assumed that a gateway exists at the user site that will forward this mail message to the mail system used at the installation site, similar to the way mail is received from the Internet. This script cannot send mail to non TCP/IP SMTP mail servers, such as Lotus Notes, Mail-11 (VAXmail) or X.400 without such a gateway.

This script does not acknowledge the event to the ConsoleWorks subsystem.

B.2.1 Loading and Configuration

MAIL.BAT and MAIL.PL are copied to the event directory, C:\Cwks\Default\Actions\Event.

Edit MAIL.PL to change the value of the variable *$remote* to point to the site's SMTP mail server. Find this section and modify the variable:

```
#-------------------------------------------------------------
#+
# WARNING !!!
# ===========================
# This file MUST be modified before it can be used.
#
# The smpt e-mail server that is used at the customer's site
# needs to be placed into the command below.
#
# It can be entered as a numerical TCPIP address or by node
# name. For example:
# $remote = "16.158.232.65"
# or
# $remote = "my.email.server.name.com"
#
# In the line below insert the customer's smpt e-mail server
# address or name between the quotation marks:
#
$remote = "post-office.domain.com";
#-
#-------------------------------------------------------------
```

B.2.2 Contents

The content of the MAIL.PL file is included in Section B.5.

B.3 Verification and Testing

The following procedures can be used to ensure that the setup was performed properly and that alerts from the GS80/160/320 system do in fact notify the designated persons. Three methods are provided to be used as appropriate.

Method 1 –Complete End-to-End Verification

This method uses the console line echo to drive the events as they would normally be encountered.

Verify that you can connect to the console and receive a prompt. The prompt can be from the SCM, SRM, or operating system. If you do not see a prompt, configure the console as appropriate.

Refer to Section B.4 for the contents of the SCM.PORT file. For any event, look for the string located at the TEXT: label. These patterns can also be seen in the pattern field of the discrete event screen. You can trigger an event by typing the pattern string on the console. Check that the recipients designated during setup receive the appropriate mail message.

Note that you will receive an error message from the console that received the string. This is normal, since the string does not contain a valid command.

Method 2 –Verification That Your Mail System Can Forward Mail to You Correctly

Open a Command window within Windows and type:

C:\cwks\actions\event\mail.pl console event 999 nul: myname@post

(For myname@post use your SMTP address.)

If this does not work, check both your address and the mail server name (see "$remote=" in Section B.2.1).

Method 3 –Activation from Within ConsoleWorks

This procedure causes ConsoleWorks to generate actions.

In the left navigation panel of the ConsoleWorks screen select Manage. From the selection links select Events. Scroll down to the item CONWKS-

EVENTMOD and click it. When the event details are displayed, select the link Automatic Actions. Click the Update Event button at the top of the screen.

This sequence fires off the mail message. It is not necessary to be connected to any consoles.

B.4 Contents of the SCM.PORT File

```
DELETE_EVENT:
   NAME: GS_AIR_MOVER_FAILURE
END:

ADD_EVENT:
   NAME: GS_AIR_MOVER_FAILURE
   INFO: Air mover failure from a PSM
   TEXT: ~E~ QBB%/PSM%% SysEvent:
AIR_MOVER_FAILURE*Reg0:*Reg1:*
   CLASS: SCM
   SUB_SYSTEM: CSB
   REGULAR_EXPRESSION: Y
   START: 0
   COUNT: 1
   PRIORITY: CRITICAL
END:

DELETE_EVENT:
   NAME: GS_VITAL_POWER_FAILURE
END:

ADD_EVENT:
   NAME: GS_VITAL_POWER_FAILURE
   INFO: Vital power failure from a PSM
  TEXT: ~E~ QBB%/PSM%% SysEvent:
VITAL_POWER_FAILURE*Reg0:*Reg1:*
   CLASS: SCM
   SUB_SYSTEM: CSB
   REGULAR_EXPRESSION: Y
   START: 0
   COUNT: 1
   PRIORITY: CRITICAL
END:

DELETE_EVENT:
   NAME: GS_QBB_OVERTEMP_FAILURE
END:

ADD_EVENT:
```

```
   NAME: GS_QBB_OVERTEMP_FAILURE
   INFO: Overtemp failure from a PSM
   TEXT: ~E~ QBB%/PSM%% SysEvent:
QBB_OVERTEMP_FAILURE*Reg0:*Reg1:*
   CLASS: SCM
   SUB_SYSTEM: CSB
   REGULAR_EXPRESSION: Y
   START: 0
   COUNT: 1
   PRIORITY: CRITICAL
END:

DELETE_EVENT:
   NAME: GS_HS_OVERTEMP
END:

ADD_EVENT:
   NAME: GS_HS_OVERTEMP
   INFO: Overtemp failure from an HPM
   TEXT: ~E~ HSW%/HPM%% SysEvent: HS_OVERTEMP*Reg0:*Reg1:*
   CLASS: SCM
   SUB_SYSTEM: CSB
   REGULAR_EXPRESSION: Y
   START: 0
   COUNT: 3
   PRIORITY: CRITICAL
END:

DELETE_EVENT:
   NAME: GS_PWR_FAIL
END:

ADD_EVENT:
   NAME: GS_PWR_FAIL
   INFO: Vital power failure from an HPM
   TEXT: ~E~ HSW%/HPM%% SysEvent: PWR_FAIL*Reg0:*Reg1:*
   CLASS: SCM
   SUB_SYSTEM: CSB
   REGULAR_EXPRESSION: Y
   START: 0
   COUNT: 3
   PRIORITY: CRITICAL
END:

DELETE_EVENT:
   NAME: GS_SYSCLK_FAIL
END:

ADD_EVENT:
   NAME: GS_SYSCLK_FAIL
```

```
   INFO: Clock failure from an HPM
   TEXT: ~E~ HSW%/HPM%% SysEvent: SYSCLK_FAIL*Reg0:* Reg1:*
   CLASS: SCM
   SUB_SYSTEM: CSB
   REGULAR_EXPRESSION: Y
   START: 0
   COUNT: 3
   PRIORITY: CRITICAL
END:

DELETE_EVENT:
   NAME: GS_PCI_PBM_SYSEVENT
END:

ADD_EVENT:
   NAME: GS_PCI_PBM_SYSEVENT
   INFO: PCI/PBM SysEvent
   TEXT: ~E~ PCI%/PBM%% SysEvent
   CLASS: SCM
   SUB_SYSTEM: CSB
   REGULAR_EXPRESSION: Y
   START: 0
   COUNT: 3
   PRIORITY: CRITICAL
END:

DELTE SCAN:
   NAME: GS_SCM_SCAN
END:

ADD_SCAN:
   NAME: GS_SCM_SCAN
   INFO: SCM ASCII messages
   EVENT: GS_AIR_MOVER_FAILURE
   EVENT: GS_VITAL_POWER_FAILURE
   EVENT: GS_QBB_OVERTEMP_FAILURE
   EVENT: GS_HS_OVERTEMP
   EVENT: GS_PWR_FAIL
   EVENT: GS_SYSCLK_FAIL
   EVENT: GS_PCI_PBM_SYSEVENT
END:
```

B.5 Contents of the MAIL.PL File

```
#!/usr/local/bin/perl
#
#------------------------------------------------------------
#+
# File Identification:  MAIL.PL
# Version Number: V2.0
# Date:                 16-Oct-2001
# Used By:        ConsoleWorks
# Copyright:            2001 Compaq Computer Corporation
#-
#------------------------------------------------------------
#+
# WARNING !!!
# ===========================
# This file MUST be modified before it can be used.
#
# The smpt e-mail server that is used at the customer's site
# needs to be placed into the command below.
#
# It can be entered as a numerical TCPIP address or by node
# name. For example:
# $remote = "16.158.232.65"
# or
# $remote = "my.email.server.name.com"
#
# In the line below insert the customer's smpt e-mail server
# address or name between the quotation marks:
#
$remote = "";
#-
#------------------------------------------------------------
#+
# Additional File Related Information:
#
# Description:
#     When ConsoleWorks has been configured to send
#     e-mail in response to an event, ConsoleWorks will
#     spawn MAIL.BAT which will execute this script.
#     This script will send a smpt e-mail to the contact(s)
#     in $ARGV[4] to alert them about this event.
#
# File Dependencies:
#     This file requires PERL programming language.
#     (PERL is installed as part of the ConsoleWorks
#     installation.)
#
# Engineering Group:    Compaq AlphaServer Engineering
#
```

```
# Revision History:
#     V1.0 - Nov 2000. First Release.
#     V2.0 - Oct 2001. Fix smtp incompatibility.
#
# Additional Information:
#     To check for updated versions of this file, check the
#     web-site below:
#           www.compaq.com
#-
#------------------------------------------------------------
#+
# NOTES:
# 1. This is written using a simple style of the PERL
#    programming language.
#
# 2. In PERL, a single character match is the period (".").
#    This contrasts with the ConsoleWorks program in which the
#    percent ("%"), is a single character match.
#
# 3. In both PERL and ConsoleWorks, the multiple character
#    matching is with the asterisk ("*").
#
# 4. WinNT can not start a PERL file directly. The MAIL.BAT
#    file is used to start this file. MAIL.BAT contains the
#    code line of:
#    C:\Perl\Bin\Perl C:\Cwks\Actions\Event\mail.pl %1 %2 %3
#    %4 %5 %6
#
# 5. MAIL.BAT can pass up to six arguments to MAIL.PL. The
#    meaning of each of these arguments is described below:
#     $ARGV[0] Console name
#     $ARGV[1] Event Name
#     $ARGV[2] Event Sequence Number
#     $ARGV[3] Name of event context file - Commonly referred
#              to as a "Log File".
#     $ARGV[4] Contact name(s) for those who should receive
#              e-mails.
#           Note: Delimit using commas when there are multiple
#                 names.
#     $ARGV[5] User Supplied Parameter - However currently
#              MAIL.PL doesn't use this.
#-
#------------------------------------------------------------
#
use Socket;

sub smtpmail {
    my ($to, $subj, $whoami, $mf, @msg) = @_;
    my ($port, $iaddr, $paddr, $proto, $line);
# This setting would supercede the one in the block comments
```

```
#  above, so its commented.
#    $remote  = "my.email.server.name.net";
    $port    = 25;
    $iaddr   = inet_aton($remote) || die "no host:
\"$remote\"\n";
    $paddr   = sockaddr_in($port, $iaddr);
    $proto   = getprotobyname('tcp');
    select(SOCK);
    $| = 1;          # Force flush after every write or print
    socket(SOCK, PF_INET, SOCK_STREAM, $proto) || die "socket:
$!";
    connect(SOCK, $paddr) || die "connect: ". @SOCK ." : $!";
    print SOCK "HELO $whoami\r\n";
    sleep(2);
    print SOCK "MAIL FROM: $mf\r\n";
    sleep(2);
    print SOCK "RCPT TO: $to\r\n";
    sleep(2);
    print SOCK "DATA\r\n";
#   print SOCK "From: $mf\r\n";
    print SOCK "Subject: $subj\r\n";
    print SOCK "To: $to\r\n";
    print SOCK "\r\n";
    print SOCK @msg;
    print SOCK "\r\n.\r\n";
    sleep(2);
    print SOCK "QUIT\r\n";
    sleep(2);
    close (SOCK) || die "close: $!";
}
#
# Main ()
#
my ($whoami, $hostname, $mf, @tolist, $subj, $to, $domail);
$whoami   = "ConsoleWorks";

#
#+
# For Exchange 2000 server uncomment the following 2 lines
use Sys::Hostname;
$hostname = hostname();
#
# For Exchange server uncomment the following line
#$hostname = `hostname`;
#-
#

$mf       = "$whoami\@$hostname";
@tolist   = split /,/, $ARGV[4];
$domail   = 1;
```

```
#+
# Parse PCI/BPM SysEvents
# The 3 line entries look something like this, with the last
# line changing
#       ~E~ PCI3/PBM13 SysEvent
#       ~E~ PBM13 Error:
#       ~E~ FAN1 FAIL - POWEROFF IN 30 SECONDS
#-
if ( $ARGV[1] eq /GS_PCI_PBM_SYSEVENT/ ) {
  open (SC, $ARGV[3]) ||
      die "Can not open event context file - $ARGV[3] $!";
  while (<SC>) {
    if (/^CONTEXT_BEGIN:/) {last};
  }
  while (<SC>) {
    if ($_ eq /^CONTEXT_END:/) {last};
    if ($_ =~ /^~E~/) {
      if ($_ =~ /^~E~ PCI.\/PBM.. SysEvent/) {next;}
      if ($_ =~ /^~E~ PBM.. Error:/) {next;}
#+
# Here is the real parsing, you may take other than mail
# actions or add other events than listed...
#-
      if ($_ =~ /^~E~ FAN. FAIL - POWEROFF IN 30 SECONDS/)
{next;}
      if ($_ =~ /^~E~ LM80 . TEMP FAIL/) {next;}
      if ($_ =~ /^~E~ PS. POK DEASSERTED/) {next;}
#   Other events are just ignored...
      $domail = 0;
    }
  }
  close(SC);
}
#+
# For other events we just mail the log file, no
# pre-processing.
#-
$subj = "Console $ARGV[0] has Encountered Event $ARGV[1]
(Sequence $ARGV[2])";
open (SC, $ARGV[3]) ||
      die "Can not open event context file - $ARGV[3] $!";
while ($l=<SC>) {
   push @msg, $l;
}
close(SC);
if ($domail) {
  foreach $to (@tolist) {
     smtpmail($to, $subj, $whoami, $mf, @msg);
  }
}
```

Appendix C
SMC Hard Disk

The hard disk in the SMC is partitioned at the factory. It is recommended that the partitions be used as shown in Table C–1.

Table C–1 Use of Disk Partitions

Partition	Recommended Use
C	Operating system and applications
D	User setups (unique scripts, other inputs) and log files

Appendix D
ConsoleWorks Licenses

The ConsoleWorks license for the first GS80/160/320 system (eight console lines) is included with the SMC. Each additional GS80/160/320 system connected to the SMC requires a ConsoleWorks license for the number of console lines planned for the system. The part numbers for these licenses are shown in Table D–1.

The licenses listed in Table D–1 are subject to the following restrictions:

- A single license may not be used to connect consoles of multiple systems. Each GS80/160/320 system must have a separate ConsoleWorks license; the type of license depends on the number of console lines in the system.
- A license may not be used for equipment other than GS80/160/320 consoles.

Table D–1 ConsoleWorks Licenses

Part Number	Description
3X–DS8CA–AA	GS80/160/320 SMC upgrade partition capability 2 PAK (two console lines)
3X–DS8CA–BA	GS80/160/320 SMC upgrade partition capability 4 PAK (four console lines)
3X–DS8CA–CA	GS80/160/320 SMC upgrade partition capability 8 PAK (eight console lines)

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