



Software Product Description

PRODUCT NAME: Remote Commander for Compaq Tru64 UNIX
Version 1.1

SPD 80.04.01

DESCRIPTION

Remote Commander for Compaq Tru64 UNIX, Version 1.1, is a layered software product providing a framework to manage a wide range of telephony elements, or software subsystems that run on the AlphaServer Enhanced Services Platform (AESP) from a local or remote network management system. Managed elements include platform software, Compaq IN7 (formerly referred to as DECss7) software, as well as user applications. Remote Commander features a simple ASCII command interface designed to allow an operator to execute vendor-specific control scripts from a remote console. The ASCII interface includes commands to startup, shutdown, halt, reinitialize, and show status of the managed elements. Control scripts for Compaq IN7 specific managed elements are included with the base product to perform these management actions. Generic template shell scripts for non-IN7 managed elements used to perform these management actions are also included with Remote Commander. Developers and system integrators can use these template scripts to create vendor and application-specific implementations.

SYSTEM ARCHITECTURE

The Remote Commander is used to control the SNM, VRU, Compaq IN7, and Compaq IN7 ISUP components on a telecommunications system. Each managed element represents a group of processes that are to be controlled as a single entity. The managed entities can be configured on the same AlphaServer host, or on different AlphaServer hosts. The Remote Commander is composed of the following functional components:

- ASCII Command Interface - Simple command language parser used to execute commands controlling

the managed elements.

- Vendor-specific Control Scripts - Compaq Tru64 UNIX shell scripts controlling vendor-specific software for the SNM and VRU managed elements. The Remote Commander product includes template scripts that can be used to create customized vendor and application-specific scripts. Vendor-specific scripts are available for managing Converse software entities (SNM and VRU) in the Alpha-Server Enhanced Services Platform (AESP). Other customized scripts can be developed by the vendor providing the software or by Compaq.
- Maintains the managed element service state. Provides command integrity for critical commands and operations.
- Naming Service - Provides a facility to accept connections from external applications with different naming conventions.

Remote Commander V 1.1 is installed on every component of the telecommunications system except the SCE (Service Creation Environment). Remote Commander scripts are invoked on each component from the Remote Commander account, which runs on the SNM managed element.

FUNCTIONAL DESCRIPTION

The Remote Commander functions are:

Lock Manager

The Remote Commander handles multiple concurrent invocations of commands by maintaining a service state for each element it controls. A lock manager is used to enforce mutual exclusion for critical operations and

command transactions are enforced by the use of the element service state.

Naming Service

The Remote Commander has been designed to provide a naming service enabling entity 'nicknames' rather than internal host names to be used in Remote Commander commands. This allows entities in a telecommunications system to have differing internal and external names. This facility allows the telecommunications system to accept connections from external applications with naming conventions different from those used within the telecommunication system.

Managed Element Types

The Remote Commander allows management actions to be performed on the seven classes of managed elements, where each element represents a defined software subsystem.

SNM	Managed element where the Remote Commander software runs. The SNM can also run other vendor-specific software like traditional back-end software that manages the allocation of voice resources and handles signaling communication.
VRU	Managed element running vendor-specific voice response software that provides voice resources to support text-to-speech, speech recognition, and IVR capabilities.
SS7BEP	Managed element running the Compaq IN7 BEP subsystem. This managed element handles back-end functions that handle the user applications accessing SS7 services.
SS7DIR	Managed element running the Compaq IN7 DIR subsystem. The DIR subsystem consists of the SS7 Director process, the main management API, and the management applications. For Remote Commander V1.1, the DIR subsystem uses the System 7 Management Program (S7MP) provided with Compaq IN7.
SS7FEP	Managed element running the Compaq IN7 FEP subsystem. This managed element hosts the Compaq IN7 front-end processes that handle the SS7 protocol stack and provide connectivity to the SS7 network.
SS7ISUP	Managed element running the COMPAQ IN7 ISUP processes and the Automatic Blocking Instance processes.
SS7SNMP	Managed element running the Compaq IN7 SNMP processes. This managed element enables a network management application that uses SNMP (i.e. TeMIP) to monitor Compaq IN7 platforms and to receive selected Compaq IN7 events reported through SNMP traps.

Commands

- dir - The directory command

The dir command is provided to allow operators to obtain a list of all known elements registered with the Naming Service of a specified class.

- start managed_element - Command to start up a managed element

The start command is offered to enable operators or connected systems to start the managed elements listed below.

vru	Starts the VRU application software
snm	Starts the software processes associated with the SNM managed element.
ss7bep	Starts the software processes associated with the Compaq IN7 BEP subsystem.
ss7dir	Starts the software processes associated with the Compaq IN7 DIR subsystem.
ss7fep	Starts the software processes associated with the Compaq IN7 FEP subsystem.
ss7isup	Starts the software processes associated with Compaq IN7 ISUP.
ss7snmp	Starts the software processes associated with the Compaq IN7 SNMP subagent.

- shutdown managed_element - Command to perform a controlled stop of a managed element

The shutdown command is offered to enable operators or connected systems to perform a controlled stop of the managed elements listed below.

vru	Performs a controlled stop of the VRU application software.
snm	Performs a controlled stop of the software processes associated with the SNM managed element.
ss7bep	Performs a controlled stop of the software processes associated with the Compaq IN7 BEP subsystem.
ss7dir	Performs a controlled stop of the software processes associated with the Compaq IN7 DIR subsystem.
ss7fep	Performs a controlled stop of the software processes associated with the Compaq IN7 FEP subsystem.
ss7isup	Performs a controlled stop of the software processes associated with Compaq IN7 ISUP.

ss7snmp Performs a controlled stop of the software processes associated with the Compaq IN7 SNMP subagent.

- halt managed_element - Command to perform a forced stop of a managed element

The halt command is offered to enable operators or connected systems to perform a forced stop of the managed elements. It is provided for emergency use only.

vru Performs a forced stop of the VRU application software.

snm Performs a forced stop of the software processes associated with the SNM managed element.

ss7bep Performs a forced stop of the software processes associated with the Compaq IN7 BEP subsystem.

ss7dir Performs a forced stop of the software processes associated with the Compaq IN7 DIR subsystem.

ss7fep Performs a forced stop of the software processes associated with the Compaq IN7 FEP subsystem.

ss7isup Performs a forced stop of the software processes associated with Compaq IN7 ISUP.

ss7snmp Performs a forced stop of the software processes associated with the Compaq IN7 SNMP subagent.

- reinit managed_element - Command to reinitialize a managed element

The reinit command is offered to enable operators or connected systems to shutdown and restart the managed elements listed below.

vru Performs a shutdown and restart of the VRU application software.

snm Performs a shutdown and restart of the software processes associated with the SNM managed element.

ss7bep Performs a shutdown and restart of the software processes associated with the Compaq IN7 BEP subsystem.

ss7dir Performs a shutdown and restart of the software processes associated with the Compaq IN7 DIR subsystem.

ss7fep Performs a shutdown and restart of the software processes associated with the Compaq IN7 FEP subsystem.

ss7isup Performs a shutdown and restart of the software processes associated with Compaq IN7 ISUP.

ss7snmp Performs a shutdown and restart of the software processes associated with the Compaq IN7 SNMP subagent.

- show all statuses - Commands to display element status

The show command is provided to allow operators or connected applications to display the current service state of any element.

INTERFACES

Remote Commander has an ASCII command interface. The ASCII command interface is a simple command language typical to most "Craft" terminals. Commands are sent to Remote Commander by:

- Logging in to the Remote Commander account in interactive mode.
- Using a telnet service and remotely executing the Remote Commander from the Remote Commander account in interactive mode.
- Using rsh or rexec to execute Remote Commander commands in "single-shot" mode. This is referred to as non-interactive mode.

HARDWARE REQUIREMENTS

Processors Supported

AlphaServer 1000A:	Model 5/500 Model 5/400
AlphaServer 4100 CO:	Model 5/533
AlphaServer DS20E:	Model EV6/500 Model EV67/667

Disk Space Requirements for AlphaServer and Tru64 UNIX Systems:

Disk space required for installation: 2 MB

These counts refer to the disk space required on the system disk. The sizes are approximate; actual sizes may vary depending on the user's system environment, configuration, and software options.

SOFTWARE REQUIREMENTS

- Compaq Tru64 UNIX, V4.0D
- Compaq Tru64 UNIX, V4 OF Patch Kit 3

OPTIONAL SOFTWARE REQUIREMENTS

- Compaq IN7 3.1-I
- Compaq IN7 SNMP option 3.1-I
- Compaq IN7 ISUP 3.3A

SOFTWARE LICENSING

This product does not provide support for the (Open-VMS/Compaq UNIX) License Management Facility. A Product Authorization Key (PAK) is not required for installation or use of this version of the product.

GROWTH CONSIDERATIONS

The minimum hardware/software requirements for any future version of this product may be different from the requirements for the current version.

ORDERING INFORMATION

Remote Commander for Tru64 UNIX	
QA-6EEAA-GZ	REMOTE CMDR U/A DOC KIT
QB-6EEAA-LD	REMOTE CMDR U/A LOAN/CDRM PKG
QB-6EEAA-SA	REMOTE CMDR U/A LIC/CDRM PKG
QM-6EEAA-AA	REMOTE CMDR U/A 1 SYS LIC
QM-6EEAA-AB	REMOTE CMDR U/A 10 SYS LIC
QM-6EEAA-AC	REMOTE CMDR U/A 20 SYS LIC

QM-6EEAA-LD REMOTE CMDR U/A 1 LOAN/60DAYS

The above information is valid at time of release. Please contact your local Compaq office for the most up-to-date information.

SOFTWARE PRODUCT SERVICES

A variety of service options are available from Compaq. For more information, contact your local Compaq office.

SOFTWARE WARRANTY

Warranty for this software product is provided by Compaq with the purchase of a license for the product as defined in the Software Warranty Addendum of this SPD.

® Compaq and the Compaq logo are registered in the U.S. Patent and Trademark Office.

™ AlphaServer and TRU64 are trademarks of Compaq Computer Corporation.

® UNIX is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company Limited.

Tru64 UNIX is an X/Open UNIX 95 branded product.

© 2001 Compaq Computer Corporation.

All rights reserved.