



Software Product Description

PRODUCT NAME: Compaq™ SNA APPC/LU6.2 Programming
Interface for Tru64 UNIX, Version 4.0

SPD 56.11.03

This SPD describes the *Compaq SNA APPC/LU6.2 Programming Interface for Tru64 UNIX* product, which is available for the Tru64 UNIX platform.

DESCRIPTION

The *Compaq SNA Advanced Program-to-Program Communications/Logical Unit 6.2 (APPC/LU6.2) Programming Interface for Tru64 UNIX* product is a layered software product that allows user-written applications running on suitably configured Tru64 UNIX systems, either within a TCP/IP or DECnet network environment, to exchange messages with cooperating applications on an IBM host. The APPC software exists in the Tru64 UNIX system as two executable images, two shareable objects, and two static archives. Access between the cooperating Compaq and IBM applications is via one of the following products:

- *Compaq SNA Peer Server* (TCP/IP or DECnet)
- *Compaq SNA Domain Gateway for Channel Transport* (TCP/IP or DECnet)
- *Compaq SNA Domain Gateway for Synchronous Transport* (TCP/IP or DECnet)
- *Compaq SNA Gateway for Channel Transport* (DECnet only)
- *Compaq SNA Gateway for Synchronous Transport* (DECnet only)

The APPC product includes a set of subroutines called by Tru64 UNIX programs that act as LU6.2 transaction application programs. These subroutines allow a Tru64 UNIX transaction application to:

- Activate and deactivate sessions

- Allocate and deallocate LU6.2 basic and mapped conversations
- Send and receive data
- Request confirmation and confirm transactions
- Send and receive error information
- Define local LU, remote LU, mode, and transaction program parameters
- Supply program initialization parameters
- Supply session-level security and conversation-level security
- Allocate a conversation in response to an allocation request from a partner transaction program

Features

The APPC product provides features to assist the user in writing and executing the Tru64 UNIX transaction program. The APPC product performs the SNA communications function on the programmer's behalf, allowing the user to concentrate on solving the application problem rather than having to learn about the underlying communications medium. The APPC product performs all the SNA functions on the user's behalf. However, users must understand binds, mode parameters, and generalized data stream (GDS) level information.

The APPC product comprises verbs that are defined to make the individual subroutine calls correspond to the verbs defined in the IBM manuals *SNA Transaction Programmer's Reference Manual for LU Type 6.2* and *CPI-C Programmer's Reference Manual*. This makes it easier for IBM application-level programmers to code Tru64 UNIX LU6.2 programs.

The APPC product implements both the basic and mapped conversation verb set using the same procedure calls.

The APPC product supports parallel sessions and single session communication.

The APPC product provides facilities for configuration, monitoring, and controlling the APPC/LU6.2 sessions.

Both sets of verbs support blocking and nonblocking operation and thread reentrant usage. Both sets of verbs support full-duplex operation, and expedited data transmission/reception.

The following sections describe the supported and unsupported verbs.

Supported Verbs

The following basic and mapped conversation verbs are supported:

- Allocate
- Confirm
- Confirmed
- Deallocate
- Flush
- Get_attributes
- Get_tp_properties
- Get_type
- Post_on_receipt
- Prepare_to_receive
- Receive_and_wait
- Receive_expedited_data
- Receive_immediate
- Request_to_send
- Send_data
- Send_error
- Send_expedited_data
- Test
- Wait
- Wait_for_completion

The following control operator verbs are supported:

- Activate_session
- Change_session_limit
- Deactivate_conv_group
- Deactivate_session

- Define_local_lu
- Define_mode
- Define_remote_lu
- Define_tp
- Delete
- Display_local_lu
- Display_mode
- Display_remote_lu
- Display_tp
- Initialize_sess_limit
- Process_session_limit
- Reset_session_limit

The following product-specific verbs are supported:

- API_trace_extract
- AP_trace_set
- As2eb
- Attach_listen
- Cancel_conversation
- Define_server
- Display_server
- Eb2as
- Free_mem
- Get_event
- Get_log_data
- Get_message
- Get_pip
- Pass_resource
- Receive_allocate

Refer to the APPC product documentation for complete descriptions of the use of these verbs.

Unsupported Verbs

The following basic and mapped conversation verbs are not supported:

- Backout
- Receive_expedited_data
- Send_expedited_data
- Set-syncpt_options
- Syncpt

The following additional verbs are not supported:

- Display_signed_on_list
- Process_sign_off
- Sign_off

Supported CPI-C 2.1 Calls

The following CPI-C 2.1 calls are supported:

- Accept_Conversation
- Accept_Incoming
- Allocate
- Cancel_Conversation
- Confirm
- Confirmed
- Convert_Incoming
- Convert_Outgoing
- Deallocate
- Extract_Conversation_Context
- Extract_Conversation_State
- Extract_Conversation_Type
- Extract_Maximum_Buffer_Size
- Extract_Mode_Name
- Extract_Partner_LU_Name
- Extract_Secondary_Information
- Extract_Security_User_ID
- Extract_Send_Receive_Mode
- Extract_Sync_Level
- Extract_TP_Name
- Flush
- Initialize_Conversation
- Initialize_For_Incoming
- Prepare_To_Receive
- Receive

- Receive_Expedited_Data
- Release_Local_TP_Name
- Request_To_Send
- Send_Data
- Send_Error
- Send_Expedited_Data
- Set_Conversation_Security_Password
- Set_Conversation_Security_Type
- Set_Conversation_Security_User_ID
- Set_Conversation_Type
- Set_Deallocate_Type
- Set_Error_Direction
- Set_Fill
- Set_Log_Data
- Set_Mode_Name
- Set_Partner_LU_Name
- Set_Prepare_To_Receive_Type
- Set_Processing_Mode
- Set_Queue_Callback_Function
- Set_Queue_Processing_Mode
- Set_Receive_Type
- Set_Return_Control
- Set_Send_Receive_Mode
- Set_Send_Type
- Set_Sync_Level
- Set_TP_Name
- Specify_Local_TP_Name
- Test_Request_To_Send_Received
- Wait_For_Completion
- Wait_For_Conversation

The following product-specific verbs are supported.

- Extract_API_Trace
- Extract_Conversation_Security_Type
- Extract_Local_LU_Name
- Extract_Server_Name
- Extract_Server_Node_Name
- Extract_Server_Transport
- Set_API_Trace
- Set_Local_LU_Name
- Set_Server_Name

- Set_Server_Node_Name
- Set_Server_Transport

User Interface

Users of the APPC product should be experienced Tru64 UNIX application programmers who are familiar with the C programming language to write an APPC application to communicate with programs on an IBM system. The user documentation provides example programs written in the native form of the C language.

INSTALLATION

Compaq recommends that a customer's first purchase of this software product include Compaq Installation Services. These services provide for installation of the software product by an experienced Compaq Software Specialist.

Customer Responsibilities

Before installation of the software, the customer must:

- Previously have installed all requisite hardware, including terminals.
- Have generated, to Compaq's satisfaction, any necessary IBM host software that will be communicating with the SNA gateway and the APPC Programming Interface.
- Make available for a reasonable period of time, as mutually agreed by Compaq and the customer, all hardware, communications facilities, and terminals that are to be used during installation.

Delays caused by any failure to meet these responsibilities will be charged at the prevailing rate for time and materials.

Successful use of this product requires that:

- The customer must be prepared to work with both Compaq and IBM systems personnel to coordinate the preinstallation activities.
- The customer should be capable of modifying IBM component generation parameters to support the SNA gateway and the APPC Programming Interface.

HARDWARE REQUIREMENTS

This product requires the following hardware:

- An Alpha workstation or server running DIGITAL UNIX V4.0D or later or Tru64 UNIX Version 5.0 operating system.

- Any properly configured SNA gateway as specified in this document.

Refer to the DIGITAL UNIX (SPD 41.61.xx) or Tru64 UNIX (SPD 70.70.xx) Operating System Software Product Description for valid configurations and supported processors.

SOFTWARE CONFIGURATION REQUIREMENTS

The *Compaq SNA APPC/LU6.2 Programming Interface for Tru64 UNIX* product requires the following software configurations:

- DIGITAL UNIX Operating System Version 4.0D (SPD 41.61.xx) or later, or Compaq Tru64 UNIX V5.0 (SPD 70.70.xx).
- One of the following SNA gateways:
 - *Compaq SNA Peer Server* (SPD 51.08.xx)
 - *Compaq SNA Domain Gateway for Channel Transport* (SPD 38.69.xx)
 - *Compaq SNA Domain Gateway for Synchronous Transport* (SPD 38.69.xx)
 - *Compaq SNA Gateway for Channel Transport* (SPD 29.76.xx)
 - *Compaq SNA Gateway for Synchronous Transport* (SPD 25.C6.xx)

ORDERING INFORMATION

Compaq SNA APPC/LU6.2 Programming Interface for Tru64 UNIX, Development system

Software Licenses: QL-4URA*-AA (traditional) QL-4URAM-*B (concurrent user)
Software Documentation: QA-4UQAA-GZ
Software Product Services: QT-4UR*-*

Compaq SNA APPC/LU6.2 Programming Interface for Tru64 UNIX, Runtime system

Software Licenses: QL-4UQA*-AA (traditional) QL-4UQAM-*B (concurrent user)
Software Documentation: QA-4UQAA-GZ
Software Product Services: QT-4UQ*-*

* Denotes variant fields. For additional information on available licenses, services, and media, refer to the appropriate price book.

Media and documentation for this product are available on the Compaq CD-ROM Software Library for Tru64 UNIX. Documentation in hardcopy copy format can be ordered separately.

Supported IBM Software Configurations

The *Compaq SNA APPC/LU6.2* product supports the following IBM software configurations.

Software Product	Version	Release
OS/390™	1	3.0
	2	4.0
	2	5.0
MVS/ESA™ SP	5	1.0
	5	2.0
	5	2.1
	5	2.2
VM/ESA®	1	2.2
	2	1.0
	2	2.0
ACF/VTAM®	3	4.2
	4	3.0
	4	4.0
ACF/NCP (for 3725s)	4	3.1
ACF/NCP (for 3745s)	6	3.0
	7	1.0
	7	2.0
	7	3.0
	7	4.0
	7	5.0
	7	6.0
NPSI	3	4.0
	3	6.0
	3	7.0
	3	8.0
OS/400®	3	6.0
	3	7.0
	4	4.1
	4	4.2
CICS®	3	3.0
	4	1.0
CICS Transaction Server for OS/390	2	4.0

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SOFTWARE PRODUCT SERVICES

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

