Comm-Pro Associates
Host Network Access Support
V2R3Mn

Glossary

Glossary of Terms

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For additional documentation and up-to-date information, please refer to member @README in the Comm-Pro distribution macro library. See our WEB site for the latest information.

Important Notes

1) Please refer to the optional README/@README file included with the HNAS product distribution media (separate file or HNASMAC macro member) for additional product information and documentation not included in this manual. Additional information can also be located on our web site (Please refer to Contact Information section for contact details).

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GLOSSARY

This glossary contains a list of acronyms, abbreviations and terms associated with mainframe (host) communications networking products as related to the IBM 3745 communication controller and IBM NPSI program products. HNAS is a NPSI replacement product primarily utilizing Cisco routers and the XOT (X.25 over TCP/IP) protocol to support remote equipment and host NPSI application with no further requirement for NPSI or 3745 communication controllers.

The descriptions for some of these terms are from the perspective of data communications background with FEPs, Routers and X.25 based equipment and software. Some of the terms and abbreviations are Comm-Pro's interpretation or generalization of usage.

Glossary of Terms

37XX	37XX represents the family of IBM 3745, 3720, 3725 and 3705 Communications Controllers. 37*mm* is listed whenever substitution for a particular communication controller is appropriate.
37XXNAS	X.25 Network Access Support for 37XX Communication Controllers. This collection of 37XX software packages allows personal computers, asynchronous TTY terminals, BSC 2780/3780 contention mode terminals, BSC 3270 terminals and native SNA PU type 1and 2 terminal equipment to access host systems via packet switched networks that utilize X.25 link access procedures. From the host's viewpoint, there is no distinction between directly connected terminals and those that communicate via an X.25 network. 3745 products provided by Comm-Pro Associates, Inc.
ABEND	Abnormal End of Task. HNAS issues **NASHALT** or **HALT AT LOC** sysprint messages prior to program termination when unrecoverable errors are detected.
ABM	Asynchronous Balance Mode. Handshake method used to establish an X.25 DTE to DCE connection. Balanced mode allows either the DTE or DCE to initiate the connection as peer entities.
ACB	Application Control Block. VTAM control block generated from the Major Node APPL statement that is used to manage LU sessions.
AMNF	VTAM Application Major Node File. This file contains APPL statements that HNAS uses to provide paths into host applications. Each APPL statement represents an SLU that can be acquired by host applications (PLUs). HNAS opens each APPL for host communication when a path is required for a remote terminal.

APAR   Authorized Program Analysis Report (maintenance).
Typically a memo describing a software or operational problem often
including a reference to corrective logic (PTF).

ARM   Asynchronous Response Mode.
Handshake method used to establish an X.25 DTE to DCE connection.
Response mode allows the DCE to control the DTE to DCE connection.

ARP   Address Resolution Protocol.
Protocol used to derive an unknown LAN address using a known IP
address on an Ethernet or Token Ring network.

BIN (*.BIN)   Binary File Type.
Comm-Pro generally refers to EBCDIC (LRECL=80, RECFM=F|FB)
sequential files as binary EBCDIC files and assigns the *.BIN designation
to filename extension. An example of this is the HNASRCV.BIN distribu-
tion file type.

BSC   Binary Synchronous Communications line control.

BPAD   BSC Packet Assembler/Disassembler Protocol.
Protocol used to transport BSC 2780/3780 RJE work station traffic across
X.25 networks.

Callin   Network Initiated Host Access

Callout   Host Initiated Network Access

CART   Command And Response Token
Used for Operator message routing.

CC/VRM   Change Control / Version Release Modification Level Identifier.
Comm-Pro employs this method of identification for product maintenance
and enhancement activity.

CCITT   International Telegraph and Telephone Consultative Committee.
Organization sets international standards for data communications (X.21,
X.25, X.3 etc.)

CCU   Communications Control Unit.
Indicates a 3705, 3720, 3725 or 3745 front end processor.

CDF   Configuration Data File.
This file contains definition statements that HNAS uses to create the
resource control blocks it needs to manage sessions between X.25 DTEs
and host applications.

CID   Connection Identifier
An identifier assigned by VTAM for a PLU/SLU session.

CSI   Consolidated Software Inventory is a system used to manage and identify
                software products typically installed under the control of SMP/E.

CTCP   Communication and Transmission Control Program.
                Host resident software that utilizes NPSI GATE functions to communicate
                with devices across an X.25 network.

CUD   Call User Data.
                The data portion of an X.25 Call Request packet. The CUD field follows
                the address and facilities fields in the packet.

CUD0   Call User Data, byte 0.

CUME   Cumulative Maintenance. Refers to product distribution levels with cumu-
                lative maintenance included up through a specific date.

DASD   Direct Access Storage Device.
                Storage device for locating programs and data.

DCB   Dataset Control Block.
                Operating System element that used to manage (DASD) I/O transfers.

DCE   Data Circuit Terminating Equipment.
                Normally associated with the network component of an X.25 access line.

DLSw   Data Link Switching.
                A method used in transporting SNA (LLC type 2) data across a router
                based network.

DNIC   Data Network Identification Code.
                The first 4-digits of an X.25 DTE address. The DNIC serves to identify the
                specific public or private packet switched network over which data traffic
                flows.

DATE   Dedicated Access Transport Extension.
                Specialized X.25 NPSI extended function that allows host applications to
                control the X.25 Packet Layer, security control, resource allocation,
                accounting as well as the X.25 virtual circuit session establishment and
                disconnect using a control LU session and data transfer using a separate
                data LU session.

DSLU   Downstream Logical Unit.
                Protocol used to transport native SNA traffic across TCP/IP networks.

DSP   Display System Protocol.
                Protocol used to transport BSC 3270 display and printer device traffic
                across X.25 networks. The PID (protocol id) for DSP is 57.

DTE	Data Terminal Equipment. Normally associated with the router component of an X.25 access line.
ETHERNET	A local area network that allows multiple stations to access the transmission medium at will without prior coordination, avoids contention by using carrier sense and deference, and resolves contention by using collision detection and delayed retransmission. Ethernet uses carrier sense multiple access with collision detection.
FEP	Front End Processor. Normally refers to the family of IBM communications control units (3705, 3720, 3725, 3745). See also CCU/37XX.
FMD	Function Management Data PIU. Component of SNA.
FMID	Function Modification Identifier. A unique name used to identify a function (in the case of HNAS, a program) installed using the IBM SMP/E program product. The identifier assigned to Comm-Pro is LNS. HNAS at the V2R3M0 level is installed with FMID=LNS0230.
GATE	Generalized Access Transport Extension. NPSI function that allows host applications to control X.25 virtual circuit session establishment and disconnect using a control LU session and data transfer using a separate data LU session.
GATEFC	GATE Fast Connect. NPSI function that allows host applications to control X.25 virtual circuit session establishment, disconnect and data transfer using a single LU session. GATEFC provides a faster connection service than standard GATE.
GTF	Generalized Trace Facility. IBM program product used for capturing network trace information.
HDLC	High Level Data Link Control. This protocol is used primarily for X.25 link level communications. This protocol is a superset of SDLC.
HNAS	Host Network Access Support. Comm-Pro's X.25 Host Network Access Support software. Provides support for Cisco XOT and IBM XTP routers via the host resident TCP/IP stack (NPSI and 37XX communication controller replacement product running in the host). HNAS is a NPSI replacement product.
host-to-host	Host to Host Application Sessions. HNAS provides support for HNAS-XOT to HNAS-XOT host application sessions with no requirement for X.25 facilities or router XOT services.

HOSTNAS   See HNAS.

IP   Internet Protocol.

IPAD   ITI Packet Assembler/Disassembler.
               Hardware, software or firmware device that provides the interface between
               non-SNA equipment and an X.25 network. IPAD peers pass non-SNA
               data between each other in ITI packets.

               NPSI also has an Integrated PAD function which provides X.3 and X.29
               services for ITI devices.

ISARX25   ISARX25 3745 "NPSI like" product in Spain.

ITI   Interactive Terminal Interface.
               Protocol used to transport ASCII TTY device data across X.25 networks.
               The PID (protocol id) for ITI is 01 (00 in some environments).

LAN   Local Area Network.
               A local-area network connects together several machines that are located
               nearby (in the same room or building) allowing them to share files and
               devices such as printers.

LAP   Link Access Procedures.
               Used to identify asynchronous response mode link operation.

LAPB   Link Access Procedures Balanced Mode.
               Used to identify asynchronous balanced mode link operation.

LCN   Logical Channel Number.
               Used to identify a virtual circuit multiplexed across an X.25 access link.

LLC   Logical Line Control.
               Type of framing used to communicate with stations on an Ethernet LAN.
               LLC is also used to describe the procedures used to support virtual
               resources. For example, NPSI LLC0 (PCNE) identifies the LLC used to
               map non-SNA ITI devices to SNA LUT1 resources.

LSA   Link Services Architecture.

LU   Logical Unit (SNA terminal or end user).
               Indicates an SNA terminal, device or end user.

LUB   Logical Unit Block.
               The HNAS control block that is used to manage a Logical Unit session.

MCH   Multi-Channel Link.
               The acronym that represents a NPSI X.25 link resource.
               HNAS REMOTE TYPE=MCH client.

MXT   Multi-Channel Link Extension.
                HNAS REMOTE TYPE=MXT client.

NAS   Network Access Support.
                Comm-Pro's Network Access Support software.
                Provides enhanced support under NCP and/or EP in the IBM 37XX (3745)
                communication controller environment.

NCP   Network Control Program.
                IBM's FEP (37XX) control program for SNA terminal support.

NPSI   Network Packet Switching Interface.
                IBM's X.25 program product that runs in a FEP as an NCP add on.

NSC   Native Subchannel.
                The host subchannel that connects a mainframe to a FEP channel
                adapter.

NVT   Network Virtual Terminal.
                Normally associated with UNIX systems as a TCP/IP protocol for handling
                internet TELNET session.

OSA   Open Systems Adapter.
                A mainframe hardware interface that is used to connect an Ethernet or
                Token Ring LAN to a host.

PAD   Packet Assembler/Disassembler.
                Hardware, software or firmware device that provides the interface between
                a DTE and an X.25 network. See IPAD

PCNE   Protocol Conversion for non-SNA Equipment.
                NPSI function that allows ITI devices to access VTAM applications as SNA
                3767 LUT1 devices.

PIU   Protocol Information Unit.
                Element used to carry SNA protocol information.

PID   Protocol Identifier.
                Under X.25 packet level, the P.I.D. is located in the first byte of CUD (call
                user data) and is used to convey the session connect type.

PP-digits   Port Digits in X.25 Called Address.
                Old Datapac X.25 expression denoting the least significant digits (normally
                the last byte) in the called address field in the X.25 Call Request packet.
                Now generally referred to as the subaddress (SUBD) value.

PPP   Point-to-Point Protocol.
                Synchronous protocol used to connect internet devices (e.g., personal
                computers) to an internet provider like NETCOM. Data is moved across
                the PPP link using TCP/IP. PPP is the successor to SLIP.

PSH	Packet Switched Header. Protocol used to transport native SNA device traffic across X.25 networks. The devices are normally connected via network interface adapters. PSH is the predecessor to QLLC. The PID (protocol id) for PSH is C2.
PTF	Program Temporary Fix (maintenance).
PU	Physical Unit. Indicates an SNA control unit.
PVC	Permanent Virtual Circuit. Logical channel initialized via a Data packet or auto connect timer process.
QLLC	Qualified Logical Link Control. Protocol used to transport native SNA device traffic across X.25 networks. The devices are normally connected via SNA packet assembler/disassembler equipment like the 2216 router. QLLC is the successor to PSH. The PID (protocol id) for QLLC is C3.
QPAD	QLLC Packet Assembler/Disassembler. Hardware, software or firmware device that provides the interface between SNA equipment and the X.25 network. QPAD peers pass SNA data between each other in QLLC packets.
RARP	Reverse Address Resolution Protocol. Protocol used to derive an unknown IP address using a known LAN address on an Ethernet or Token Ring network.
README	A file or member containing special instructions, additional information or supplemental documentation.
RH	Request/Response Header. The RU header portion of a PIU.
RU	Request/Response Unit. The command and/or data portion of a PIU.
SDLC	Synchronous Data Link Control. This protocol is used primarily for IBM SNA link level communications.
SLIP	Synchronous Line Interface Protocol. Synchronous protocol used to connect internet devices (e.g., personal computers) to an internet provider like USINET. Data is moved across the SLIP link using TCP/IP. SLIP is the predecessor to PPP.
SMP/E	System Modification Program Extended. An IBM program used to install and maintain operating system components. HNAS 230 and above may be installed using SMP/E

SNA   System Network Architecture.
                     The description of the logical structure, formats, protocols, and operational
                     sequences for transmitting information units through, and controlling the
                     configuration and operation of, networks.

SPU   Secondary Physical Unit.
                     HNAS REMOTE TYPE=SPU client specifically for QLLC resources.

Staging Datasets   Staging Datasets.
                     Staging datasets are sequential files that are used during the intermediate
                     steps of the HNAS installation process (see HNASRCV JOB). The staging
                     datasets are used in the process of preparing the HNAS distribution librar-
                     ies which are in partitioned dataset format.

STR (*.STR)   Stream File Type.
                     Comm-Pro refers to binary distribution file types as stream (STR) files and
                     assigns the *.STR designation to the filename extension. In HNAS 211
                     and earlier, the edistribution and CDROM distribution files were binary
                     EBCDIC (LRECL=80,RECFM=F|FB) sequential files containing the HNAS
                     object, macro, control or JCL members. In the initial release of HNAS 220
                     (prior to 12-02-2002) the distribution files were either binary EBCDIC
                     (LRECL=80,RECFM=F|FB) or TSO XMIT generated unloaded partitioned
                     dataset files.   In the current HNAS 220 release, stream files now only refer
                     to binary TSO XMIT generated unloaded partitioned dataset files. The
                     *.STR file types are used in our edistribution, CDROM product distribution
                     or product maintenance.

SUBD   Subaddress Digits.
                     The last byte of the called DTE address in an X.25 Call Request packet.
                     The SUBD byte is in packed decimal format.

SVC   Switched Virtual Circuit.
                     Logical channel initialized via Call Request packet.

symbol   Assembler language symbol.
                     A valid assembler language symbol is a string of from 1 to 8 alphanumeric
                     characters. The first character only must be alphabetic and not numeric.
                     Alphabetic characters are the letters A through Z and $, #, @. Alphanu-
                     meric characters are all of the alphabetic characters plus numerics 0
                     through 9.

SYSCONS   System Console.
                     The Operating System (z/OS, OS/390, MVS) master console.

SYSGEN   System generation process.
                     An older term referring to the process of generating the environment for a
                     mainframe system or 37xx load module.

SYSPRINT   System Print Log.
                     The primary Operating System (z/OS, OS/390, MVS) SYSOUT dataset.

TCB   Task Control Block.
The operating system element that controls the amount of CPU processor time that is given to a program or process.

TCD   Used in reference as to the date that a product distribution tape was generated or created.

TCP   Transmission Control Protocol.
One of a number of second level IP protocols that is used to transport end user data across an IP network.

TOKEN RING   A network that uses ring topology, in which tokens are passed in a circuit from node to node. A node that is ready to send can capture the token and insert data for transmission. Each machine can transmit only while it is holding the token.

TXT (*.TXT)   Text File Type.
Comm-Pro generally refers to ASCII (CR or CRLF delimited LRECL=80, RECFM=F or RECFM=V) files as ASCII text files and assigns the *.TXT designation to filename extension. An example of this is the HNAS-RCV.TXT distribution file which is suitable for viewing on a PC.

VC   Virtual Circuit.

VCB   Virtual Circuit Block.
The HNAS control block that is used to manage a Virtual Circuit session.

VCN   Virtual Circuit Number.
An identifier assigned by the X.25 network for a Virtual Circuit. See also LCN.

WAN   Wide Area Network.
A wide-area network is a set of widely separated computers connected together.

WTO   Write to operator.
Host macro used to display data on the mainframe's operator console.

WTOR   Write to operator with reply.
Host macro used to display data on the mainframe's operator console and request operator input.

X.25   Interface between DTE and DCE for terminals operating in the packet mode on public and private data networks.

X.28   DTE/DCE interface for start-stop mode DTE accessing the packet assembly/disassembly facility in a public or private network situated in the same country.

X.29	Procedures for the exchange of control information and user data between a packet assembly disassembly facility and a packet mode DTE or another PAD.
X.3	Packet assembly/disassembly facility in a public or private data network.
X.75	Terminal and transit call control procedures and the data transfer system on international circuits between packet switched data networks.
XOT	X.25 over TCP/IP. Open Cisco protocol used to transfer X.25 data across a TCP/IP router based network. HNAS REMOTE TYPE=XOT client.
XPAD	Transparent Packet Assembler/Disassembler. NPSI function that allows host applications to control ITI PAD parameters.
XTP	X.25 through TCP/IP. Proprietary IBM protocol used to transfer X.25 data across a TCP/IP router based network. HNAS REMOTE TYPE=XTP client.
ZAP	Runtime module patch.
ZIP (*.ZIP)	File type designation for a compressed archive file. Content can be ASCII, EBCDIC or Binary.

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