DECnet-Plus & X.25 Product Update

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Agenda

- DECnet , X.25 : Current / Supported Versions
- X.25 V1.4
  - Overview
  - GAP/LLC2/XOT
  - Configuration & Management

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Current / Supported Versions

- OpenVMS VAX
  - V6.2 (Prior Version Support)
    - DECnet/OSI 6.3-12
    - DECnet-IV
  - V7.1-2
    - DECnet-Plus V7.1-6
    - DECnet-IV
  - V7.2-1
    - DECnet-Plus V7.2-1 ECO01
    - DECnet-IV
- OpenVMS Alpha
  - V6.2 (Prior Version Support)
    - DECnet/OSI 6.3-12
    - X.25 V1.0.G-3
    - DECnet-IV
    - X25client V1.1 (end of life)
  - V7.1-2
    - DECnet-Plus V7.1-6
    - X.25 V1.3-1
    - DECnet-IV
    - X25client V1.2 (end of life)
  - V7.2-1
    - DECnet-Plus V7.2-1 ECO01
    - X.25 V1.3-1 / X.25 1.4
    - DECnet-IV

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Versions (cont …)

- Tru64 UNIX 4.0f
  - DECnet-Plus V4.0c
  - WANsupport V3.0-3
- Tru64 UNIX 5.0
  - DECnet-Plus V5.0
  - WANsupport V3.1
- DECnis 500/600
  - V4.1-7 / 4.1-8
- RouteAbout
  - Distributed Routing Software V3.0-5

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X.25 V1.4 Description

- Software Requirements
  - OpenVMS Alpha V7.2-1
  - DECnet-Plus for OpenVMS V7.2-1 ECO01
  - TCP/IP Services for OpenVMS V5.0A (optional)
- X.25 V1.4 enables OpenVMS nodes to connect to a Packet Switching Data Network (PSDN)
  - via synchronous interface as a packet-mode DTE
  - via a X.25 Relay node on the same LAN (LLC2)
  - via a DECnet X.25 connector node (GAP)
  - via a TCP/IP Relay node (XOT)

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Description (cont…)

- X.25 V1.4 enables OpenVMS nodes to act
  - as a DECnet X25 connector node (GAP server)
  - as a X.25 Relay node on the LAN
  - as a TCP/IP X.25 Relay node
- X.25 V1.4 supports
  - ISO 8208 DTE/DCE point-to-point operations
  - DECnet-Plus CONS and CLNS operations
  - DEC-HDLC point-to-point data link operations
  - WANdriver, X.25 and X.29 programming interfaces

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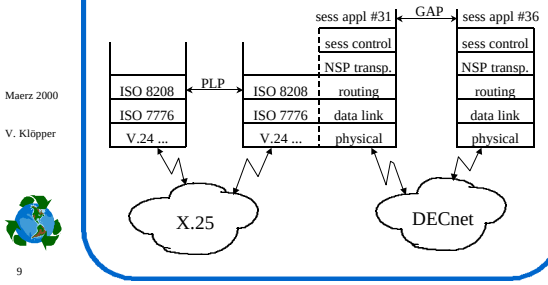
X.25 product / function matrix

	Client (GAP)	Server (GAP)	Native (LAPB)	Native (LLC2)	Relay (LLC2)	XOT
DECnet-Plus P.S.I.	x	x	x	x	-	-
Alpha-VMS X.25	x	x	x	x	x	x
D-Unix X.25	-	-	x	x	x	-
DECNIS	-	x	x	x	x	-
RouteAbout	-	-	x	x	x	-
CISCO	-	-	x	x	x	x

X.25 via DECnet (GAP)

- This function enables DECnet nodes to connect to a PSDN via a remote DECnet site.
- Applications (system/self-written) can access the remote connected PSDN the same way as a local one (its transparent to the user).
- The X25 Client (or access node) communicates with the X25 Server (or X25 gateway / connector node) using the Gateway Access Protocol (GAP) via a DECnet session connection.
- The X25 Server takes the responsibility to work conform to the configured local PSDN profile for all X25 activities requested by the X25 Client.

X.25 Server System (GAP)



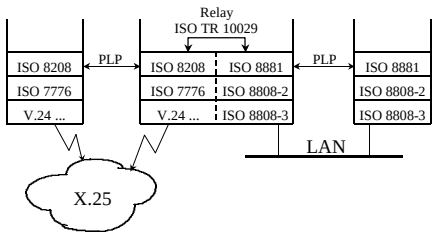
X.25 via LAN (LLC2)

- This function enables nodes to use X.25 Packet-Layer-Protocol (PLP) via LAN.
- The X.25 Relay (LLC2 Relay) function enables nodes on the same LAN to be connected to a PSDN.
- Applications (system/self-written) can access the remote connected PSDN the same way as a local one (its transparent to the user).
- The X.25 Relay Client communicates with the X.25 Relay Server using the Packet Layer Protocol (PLP) ISO 8881.

LLC2 (cont…)

- The X.25 Relay transfers all requested X.25 activities transparent from/to the PSDN. Therefore the X.25 Client has to take the responsibility to work conform to the remote configured X.25 network.

X.25 Relay System



X.25 via TCP/IP (XOT) RFC 1613

- RFC1613 - cisco systems X.25 over TCP (XOT) :
  - documents a method of sending X.25 packets over IP internets by encapsulating the X.25 packet level in TCP packets
  - discusses primarily XOT from the perspective of switching (relay) X.25 traffic
  - describes the usage of a small (4 Byte) header between TCP and X.25
  - specifies the usage of a separate TCP connections for each X.25 virtual circuit
  - specifies the usage of the TCP port number 1998 for all connections

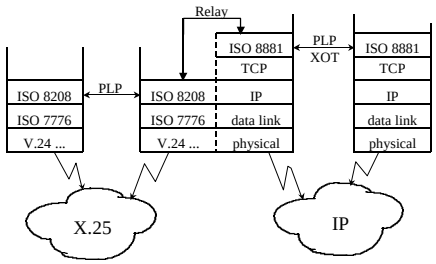
XOT (cont…)

- XOT enables nodes to use X.25 Packet Layer Protocol (PLP) via TCP/IP connections.
- The TCP/IP X.25 Relay function enables nodes in a IP network to be connected to a PSDN.
- Applications (system/self-written) can access the remote connected PSDN the same way as a local one (its transparent to the user).
- The TCP/IP X.25 Relay Client communicates with the TCP/IP X.25 Relay Server using the Packet Layer Protocol (PLP) ISO 8881.

XOT (cont…)

- The TCP/IP X.25 Relay transfers all requested X.25 activities transparent from/to the PSDN. Therefore the TCP/IP X.25 Client has to take the responsibility to work conform to the remote configured X.25 network.

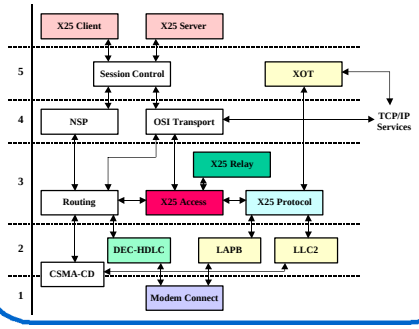
TCP/IP X.25 Relay System



X.25 V1.4 Configuration / Management

- X.25 configuration is made by using x25$configure in basic or advanced mode
- Any additional (user defined) configuration modifications can be made by editing the x25$extra_*.ncl scripts
- NCL is used to perform X.25 management tasks such as adding, modifying, showing and deleting an entity

NCL Entities (Overview)



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