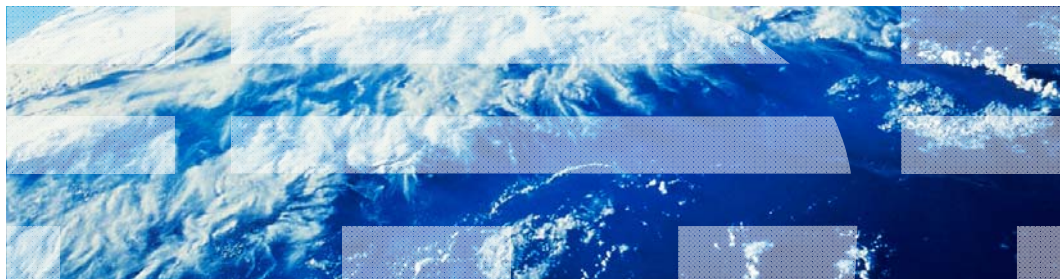# Communications Server for Data Center Deployment

Linux-specific SNA connectivity

This presentation discusses, at a high level, the types of connectivity available within Communications Server for Data Center Deployment on Linux.

SNA connectivity (1 of 2)

Communications Server for Data Center Deployment on Linux (CS Linux) connectivity includes:

- Enterprise Extender and High Performance Routing (HPR)
    - Dynamic route discovery
    - Non-disruptive session recovery
    - UDP using ports 12000 - 12004

Linux-specific SNA connectivity

Communications Server for Data Center Deployment on Linux connectivity includes Enterprise Extender and High Performance Routing functionality. These provide dynamic route discovery, non-disruptive session recovery and use UDP transport over ports 12000 through 12004.

SNA connectivity (2 of 2)

- Logical Link Control 2 (LLC2) SNA LAN
  - Ethernet or Token-Ring
    - Peer or Host connections
    - Downstream Gateway
    - Downstream Dependent Logical Unit Requester (DLUR)

- Wide Area Network (WAN)
    - Synchronous Data Link Control (SDLC) and X.25
    - Requires vendor-acquired adapters

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Communications Server also provides Logical Link Control 2 SNA over LAN functionality, using Ethernet or Token-Ring, to allow three types of connections: peer or Host connections, downstream gateway, and downstream Dependent Logical Unit Requester. Additionally, wide area network support is provided using Synchronous Data Link Control and X.25, but requires vendor-acquired adaptors.

Enterprise Extender (1 of 2)

To configure Communications Server for Linux Enterprise Extender connectivity:

1. Define the Data Link Control (DLC)

2. Define the port
   – Specify the interface (eth0, eth1, …)
   – Specify the connection network

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To configure the Communications Server Enterprise Extender connectivity, perform the following steps. First, define the Data Link Control. Next, define the port, specifying the interface and connection network that will support Enterprise Extender.

Enterprise Extender (2 of 2)

3. Define Link Station
   – Remote IP host address or name
   – Adjacent node type (Network Node, End Node)

4. Define Dependent Logical Unit Requester

5. Define Local Logical Unit (LU), Logical Unit Pool

Once the Port configuration is complete, use the Link Station configuration to select the IP interfaces and specify the adjacent node type. You should specify at least one Network Node station, but including more will allow for higher availability. Finally, define the Dependent Logical Unit Requester, followed by the Local Logical Unit and Logical Unit Pool.

LAN LLC2 (1 of 2)

To configure Communications Server for Linux LAN LLC2 connectivity:

1. Define Data Link Control

2. Define the port
   – Ethernet
   – Token-Ring

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Local area network Logical Link Control 2 definitions provide the ability to "pass through" the Physical Unit visibility to the Host. To configure this, first define the Data Link Control; then specify the type of port.

LAN LLC2 (2 of 2)

3. Define Link Station in one of three types
    –   Link station to peer or Host
    –   LAN Downstream Gateway
    –   LAN Downstream Dependent Logical Unit Requester (Pass-through DLUR)

4. Define Dependent Logical Unit Requester

5. Define Local Logical Unit , Logical Unit Pool

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Then define the link station as Host or peers, Downstream Gateway or Downstream Dependent Logical Unit Requester. Downstream Gateway provides consolidation of Logical Units on the server, whereas Downstream Dependent Logical Unit Requester provides direct pass-through capabilities. Finally, define the Dependent Logical Unit Requester, followed by the local Logical Unit and Logical Unit Pool.

Wide area network (WAN) (1 of 2)

To configure Communications Server for Linux WAN connectivity:

1. Define Data Link Control (Synchronous Data Link Control or X.25 Qualified Logical Link Control)

2. Define Port
    –   Synchronous Data Link Control
    –   X.25 Qualified Logical Link Control (QLLC)

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Like local area network, wide area network definitions provide the ability to "pass through" the Physical Unit visibility to the Host. After defining the Data Link Control, the Synchronous Data Link Control or X.25 Qualified Logical Link Control port definitions will depend upon the wide area network adapters supporting the connection.

Wide area network (WAN) (2 of 2)

3. Define Link Station as one of three types
    – Link station to peer or Host
    – LAN Downstream Gateway
    – LAN Downstream Dependent Logical Unit Requester (Pass-through DLUR)

4. Define Dependent Logical Unit Requester

5. Define Local Logical Unit, Logical Unit Pool

As with the other network types, the Link Station can be defined as peer or Host, LAN Downstream Gateway, or LAN Downstream Dependent Logical Unit Requester. Once the Link Station has been configured, then define the Dependent Logical Unit Requester, followed by Local Logical Unit and Logical Unit Pool. The Host can see the defined Physical Units downstream of the Communications Server for Linux server.

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