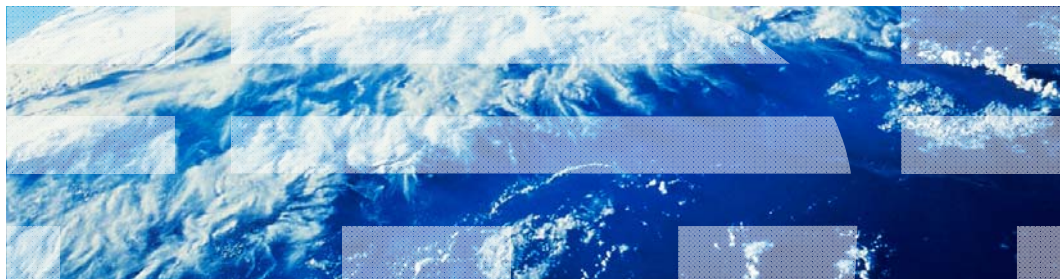


Communications Server for Data Center Deployment

Linux on System z-specific SNA connectivity



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This presentation will discuss, at a high level, the types of connectivity available within the Communications Server for Data Center Deployment on Linux on System z product.

SNA connectivity (1 of 2)

Communications Server for Data Center Deployment on Linux on System z connectivity includes:

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

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

Communications Server for Data Center Deployment on Linux on System z 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.

Communications Server also provides Logical Link Control 2 SNA over local area network functionality, using Ethernet or Token-Ring. This allows three types of connections: peer or Host connections, downstream gateway, and downstream Dependent Logical Unit Requester.

SNA connectivity (2 of 2)

- Channel-to-Channel Multi-Path Channel (CTCMPC)
 - Virtual channel-to-channel connection
 - For additional information, see the CTCMPC readme documentation, available online at

<http://www.ibm.com/support/docview.wss?uid=swg27006164>

Communications Server provides virtual channel-to-channel connectivity using Channel-to-Channel Multi-Path Channel, or CTCMPC. For additional information, the URL provided takes you to the related readme documentation.

Enterprise Extender

To configure Communications Server for Linux Enterprise Extender connectivity:

1. Define Data Link Control (DLC)
2. Define the port
 - Specify Interface (eth0, eth1, ...)
 - Specify Connection Network
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

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. Then, 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.

Local area network (LAN) LLC2

To configure Communications Server for Linux on System z LAN LLC2 connectivity:

1. Define Data Link Control (DLC)
2. Define the port
 - Open Systems Adapter (OSA) - Ethernet
 - Open Systems Adapter (OSA) - Token-Ring
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

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 and the type of port.

Then define the link station as Host or peer, 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. The Host can see the defined Physical Units downstream of the Communications Server for Linux on System z server.

Channel-to-Channel Multi-Path Channel (CTCMPC)

To configure Communications Server for Linux on System z Channel-to-Channel Multi-Path Channel:

1. Follow the README-CTCMPC instructions for setting up VTAM®, VM and Linux
2. Define Data Link Control
3. Define the port
4. Define Link Station to APPN adjacent node
 - At least one node (peer or local node) should be Network Node server
5. Define Dependent Logical Unit Requester
6. Define Local Logical Unit, Logical Unit Pool

The steps for configuring Channel-to-Channel Multi-Path Channel are similar. See the readme instructions for setting up VTAM, VM and Linux.

CTCMPC: VTAM and Linux system configuration

- Channel-to-Channel Multi-Path Channel must be defined in the TRL definition of VTAM and Linux system configuration
- The VTAM TRL will look like this:

```
LNXTRE  VBUILD TYPE=TRL
LNXTRE  TRLE LNCTL=MPC,
        MAXBFRU=7,
        READ=(BC1),
        WRITE=(BC0),
        REPLYTO=3.0
```
- The Linux side will define a READ port and WRITE port(BC0, BC1)
- VTAM will define the matching WRITE port and READ port(BC1, BC0)

Channel-to-Channel Multi-Path Channel must be defined in the TRL definition of VTAM and Linux system configuration.

CTCMPC: To activate ports

- On Communications Server for Linux:
snaadmin init_node
snaadmin start_port, port_name=MPCP0
- And on VTAM:
V BC0-BC1,ONLINE
V NET,ID=LNXTL,ACT
V NET,ID=LNXLCL,ACT

Here are the commands for activating ports on Communications Server for Linux and on VTAM.



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