

IBM Communication Controller for Linux on zSeries Version 1 Release 1 Supported features cross reference

The following tables summarize which functions of the IBM Communication Controllers (IBM 3705, 3720, 3725, 3745, and 3746) and the associated software components are supported in a Communication Controller for Linux on zSeries (CCL) Version 1 Release 1 environment.

The “*Communication Controller for Linux on zSeries Implementation and User’s Guide*”, SC31-6872 has more information about CCL Release 1 and the functions it supports. The “*IBM Communication Controller Migration Guide*”, SG24-6298 redbook contains more details about IBM 3745/46 migration and identifies alternative technologies for many of the functions that are not supported in a CCL Release 1 environment. This redbook is currently being updated with CCL-specific information. A new edition of the redbook is expected to be made available late April or early May 2005.

Please note that since CCL executes on zSeries, it cannot directly support attachment of any serial lines. Selected serial line connectivity for SNA traffic can be supported by using an aggregation-layer router in which the serial lines are terminated. The aggregation-layer router uses router-specific technologies to switch or bridge the SNA traffic between the supported serial lines and a local area network to which the CCL is attached through an OSA-2 adapter or an OSA-Express adapter that operates in LCS mode.

Table 1: Quick functional overview

CCL R1 supports	CCL R1 support of serial lines via an aggregation layer router	CCL R1 does not support
Software: <ul style="list-style-type: none"> • NCP (V7R5 and above) and compatible levels of NRF • SSP, NTuneMON, NetView, and NPM continue to work as they have in the past 		Software: <ul style="list-style-type: none"> • Other IBM 3745 software products: NPSI, XI/NSF, EP, NTO, NSI, MERVA, or TPNS • Functions provided by the IBM 3746 NNP and MAE • NCP-based IP routing
Physical network interfaces: <ul style="list-style-type: none"> • OSA token-ring and Ethernet LAN (uses an LCS interface that is only supported by certain, copper-based, OSA cards) • Though NCP only supports SNA over token-ring, CCL transparently converts Ethernet frames to token-ring for the NCP 	Physical network interfaces: <ul style="list-style-type: none"> • SDLC, Frame Relay, X.25 QLLC, and ISDN serial line interfaces are not supported directly by CCL, but are supported via an aggregation layer router 	Physical network interfaces: <ul style="list-style-type: none"> • Channel, BSC, ALC, Start/Stop, and X.25 non-SNA lines

Table 2: Detailed functional support information

Communication Controller physical network interfaces	Directly Supported by CCL R1	Supported via an Aggregation Layer router	Not Supported by CCL R1	Comments
Communication lines		Some	Some	zSeries hardware does not support direct communication line attachment to CCL. Some serial lines can be terminated in an aggregation layer router and SNA data switched to a LAN to which CCL is attached using an OSA adapter. See below for more details.
Token-Ring LAN	√			4/16/100 Mb token-ring
Ethernet LAN	√			10/100/1000 Mb Ethernet (1000BASE-T)
FDDI			x	FDDI is supported by the MAE, not the NCP.
ATM			x	ATM is supported by the MAE, not the NCP.

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Channel attachment			x	VTAM connects to a CCL NCP over a shared LAN.
NCP link-level protocol functions	Directly Supported by CCL R1	Supported via an Aggregation Layer router	Not Supported by CCL R1	Comments
Air Lines Control (ALC)			x	See SG24-6298 for alternative technologies.
SNA BSC lines for access to SNA 3270 applications			x	See SG24-6298 for alternative technologies.
Frame Relay		√		Works via an aggregation layer router. Has been tested for both peripheral and subarea links.
Integrated Services Digital Network (ISDN)		(√)		Is expected to work via an aggregation layer router, but has not yet been tested.
X.21		(√)		Is expected to work via an aggregation layer router, but has not yet been tested
Token-Ring LAN and Ethernet LAN	√			Supported by CCL using an OSA copper-based port operating in LCS mode.
Start/Stop lines connected to TCAM			x	See SG24-6298 for alternative technologies.
Synchronous Data Link Control (SDLC)		√		Works with an aggregation layer router. Has been tested for both peripheral and subarea links.
X.25 SNA QLLC (with licensed support feature on IBM 3746)		√		Works with an aggregation layer router. Has been tested for both peripheral and subarea links.
NCP advanced functions	Directly Supported by CCL R1	Supported via an Aggregation Layer router	Not Supported by CCL R1	Comments
SNA Class of Service (COS)	√			
Multi-Link Transmission Group (MLTG)	√			MLTG over multiple LAN adapters is supported. Please note that MLTG is not supported by DLSw technology.
SNA subarea addressing, routing, and boundary functions (BF)	√			
SNA Network Interconnect	√			
APPN (and LEN) Composite Network Node (CNN)	√			CNN is an APPN node that is composed of the combined functions of an NCP and VTAM.
IP Routing			x	These functions are better handled by a traditional IP router.
EXtended Recovery Facility (XRF)	√			
NTuneMON	√			
Network Performance Analyzer PU/LU	√			Network management products based on the NPA LU will for most functions work as today. Some data items are not reported by the NPA LU when operating in a CCL environment.
NCP Packet Switching Interface (NPSI), X.25 Interconnect (XI), and Network Supervisory Function (NSF)	Directly Supported by CCL R1	Supported via an Aggregation Layer router	Not Supported by CCL R1	Comments
NPSI SNA (PSH and QLLC) communication over X.25		(√)		If the current NPSI QLLC attachment is replaced by an aggregation layer router that switches or bridges the X.25 QLLC traffic to a LAN, the NCP will be able to communicate with those devices via the aggregation layer router. Please note that this does not mean that the CCL R1 environment supports NPSI.
NPSI non-SNA (PCNE, GATE, DATE, and PAD) communication over X.25			x	See SG24-6298 for alternative technologies.
XI and NSF transport of X.25 traffic			x	See SG24-6298 for alternative technologies.

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NSF-based charge-back for X.25 transport services			x	See SG24-6298 for alternative technologies.
Emulation Program (EP), Partitioned Emulation Program (PEP), and Network Terminal Option (NTO)	Directly Supported by CCL R1	Supported via an Aggregation Layer router	Not Supported by CCL R1	Comments
EP/PEP BSC 3270 terminal connection to non-SNA applications			x	See SG24-6298 for alternative technologies.
EP/PEP BSC RJE connection to non-SNA applications			x	See SG24-6298 for alternative technologies.
EP/PEP Start/Stop terminal connection to non-SNA applications			x	See SG24-6298 for alternative technologies.
NTO Start/Stop terminal connection to SNA applications			x	See SG24-6298 for alternative technologies.
NTO BSC RJE connection to SNA applications			x	See SG24-6298 for alternative technologies.
NTO peer-to-peer connection of non-SNA devices			x	See SG24-6298 for alternative technologies.
Network Routing Facility (NRF) and non-SNA Interconnect (NSI), MERVA, and TeleProcessing Network Simulator (TPNS)	Directly Supported by CCL R1	Supported via an Aggregation Layer router	Not Supported by CCL R1	Comments
NRF peer-to-peer connection of SNA devices (before SNA PU Type 2.1)	√			
NRF peer-to-peer connections involving non-SNA devices			x	This function requires NTO, and NTO is not supported by the CCL Release 1 environment.
NSI non-SNA NJE to NJE connections between hosts			x	See SG24-6298 for alternative technologies.
NSI transport of BSC traffic			x	See SG24-6298 for alternative technologies.
MERVA connection to the S.W.I.F.T network			x	See SG24-6298 for alternative technologies.
TPNS NCP			x	TPNS traffic through a CCL NCP is supported, but the TPNS NCP itself is not supported in a CCL environment.
Network Node Processor (NNP) and Multi-Access Enclosure (MAE) functions	Directly Supported by CCL R1	Supported via an Aggregation Layer router	Not Supported by CCL R1	Comments
NNP or MAE APPN Network Node including HPR and DLUR support			x	These functions can optionally be migrated to Communications Server for Linux on zSeries. See SG24-6298 for additional alternative technologies.
NNP or MAE IP routing			x	These functions are better handled by a traditional IP router.
MAE TN3270 server			x	These functions can optionally be migrated to Communications Server for Linux on zSeries or directly to z/OS, z/VM, or z/VSE. See SG24-6298 for additional alternative technologies.
MAE Network Dispatcher			x	These functions can optionally be migrated to an external load balancer or to z/OS itself using the Sysplex Distributor functions. See SG24-6298 for additional alternative technologies.