Advanced Peer-to-Peer Networking

Maximizes Network Performance and Availability

Maximizes Network Connectivity

Protects Investments

Advanced Peer-to-Peer Networking (APPN) is a networking architecture that enables AS/400s, OS/2-based PCs, and IBM and compatible mainframes to be interconnected and communicate efficiently across a distributed network. APPN eases the migration of SNA networks to a distributed peer-to-peer networking architecture that takes advantage of today's powerful multiprotocol enterprise internetwork. Bay Networks APPN is one of the strategic transport services supported by Bay Networks Switched Internetworking Services (BaySIS™). BaySIS, an open architecture based on standards, supports today's internetworks and their evolution to switched internetworking.

An architectural extension to SNA, APPN supports distributed processing among multiple peer systems. APPN includes distributed network services to communicate routing, connection, topology, and directory information among network nodes (NNs) throughout an APPN network. APPN NNs provide these services in support of Low Entry Networking Nodes (LENs) and End Nodes (ENs), such as AS/400s. Bay Networks APPN interacts with NNs such as ES/9000 VTAM, AS/400, 3174, and 6611.

Bay Networks Routing Services (BayRS™) provides comprehensive support for APPN. Bay Networks APPN complies with the APPN Version 2 specification, with optional function sets, and is based on Data Connection, LTD's SNAP APPN. Bay Networks routers function as a Network Node (NN) supporting standard APPN services including Configuration Services (CS), Directory Services (DS), Network Node Server (NNS), Dependent LU Requester (DLUR), Intermediate Session Routing (ISR), High-Performance Routing (HPR), and Management Services (MS). This ensures session interoperability, availability, reliability, and enables mainframe-based SNA and PC-based NetBIOS applications to share a multiprotocol network with native APPN applications.

Bay Networks APPN support of Token Ring, Ethernet, and FDDI LAN interfaces, and serial interfaces maximizes internetwork connectivity. Additionally, WAN services including Frame Relay per RFC 1490, SMDS, PPP, SDLC, and HDLC encapsulation are supported. Multiline Circuits maximizes control over traffic while optimizing bandwidth use. APPN is configured on all Bay Networks routers via Site Manager, Bay Networks node management application for Bay Networks routers.

APPN is a strategic component of Bay Networks IBM network integration capabilities. All Bay Networks multiprotocol routers support APPN. APPN is a component of BayRS. BayRS supports all major network and bridging protocols, WAN services, and IBM standards.

Bay Networks

Benefits

Maximizes Network Performance and Availability

An APPN NN ensures efficient network operation by providing routing and networking services in support of end stations and applications. APPN's directory services reduces time requirements for application-to-application route selection. High-Performance Routing (HPR) support features a routing algorithm, which minimizes processing requirements in intermediate nodes and maximizes end-to-end session performance and availability. Intermediate Session Routing (ISR) support provides reliable connection-oriented session paths in support of application sessions. Bay Networks APPN NN ensures consistent and reliable transaction performance by supporting all Class-of-Service (COS) definitions. By providing comprehensive support of standard APPN management services, Bay Networks ensures the efficient control and monitoring of a node's resources.

Maximizes Network Connectivity

Bay Networks APPN is a standards-based internetworking solution interoperable in a multivendor environment, including IBM 6611, 3174, VTAM, AS/400, and RS/6000. Multiple and parallel transmission groups (TGs) are supported to allow a node to connect to multiple adjacent nodes and to have multiple links between the adjacent nodes. Bay Networks APPN implementation allows the definition of a wide array of physical links to multiple adjacent network nodes and end nodes.

Support for a network topology database ensures that all NNs have the same network information. APPN eases the migration from SNA networks to multiprotocol enterprise networks. Bay Networks Dependent LU Requester (DLUR) supports the connection of legacy SNA devices such as 3270 terminals through an APPN network. APPN supports SDLC, SMDS, PPP, Frame Relay as per RFC 1490, and HDLC encapsulation, ensuring connectivity and interoperability. APPN is also supported by Ethernet, Token Ring, and FDDI LAN interfaces and the Synchronous, MCT1, MCE1, and HSSI serial interfaces for Bay Networks routers for enhanced configuration flexibility.

Protects Investments

APPN is supported by all Bay Networks multiprotocol routers from the remote office Access Node (AN®) to the Backbone Concentrator Node (BCN®).

Features

Comprehensive APPN Support

The Bay Networks APPN implementation for its multiprotocol routers is developed to Version 2 of IBM's APPN specification with advanced optional APPN function sets (see Table 2) and complies with the standard APPN architecture (see Figure 1). This enables Bay Networks routers to support the full set of APPN's distributed network services for nodes participating in an APPN network, ensuring that APPN nodes can communicate and share routing, connection, topology, and directory information dynamically among all active network nodes. This simplifies the task of configuring and maintaining an accurate definition of the network (see Figure 2). By adhering to standards, Bay Networks routers interoperate with a wide variety of equipment such as 6611, 3174, VTAM, AS/400, RS/6000, and OS/2, enhancing networking capabilities while protecting investments.

Network Node (NN) Support

All multiprotocol routers from Bay Networks can function as an APPN Network Node (NN) to provide complete network node support in APPN network environments, with or without the presence of a local IBM mainframe computer. NN support enables Bay Networks routers to provide routing and network services to adjacent network nodes, end nodes (ENs), and low-entry networking (LEN) nodes. These services include Configuration, Connectivity, Directory, Route Selection, Routing, and Management. Additionally, the router's APPN implementation is based on Data Connection LTD's SNAP APPN portable product.

Dynamic Configuration and Connectivity Services Support

APPN features a dynamic, automatic network definition capability. APPN also features Configuration Services (CS), which are initialized through the node operator facility (NOF), and manage the node's local resources. CS defines the node's configuration, performs link activation and deactivation, performs link queries, and interconnects networks. Additionally, APPN features the automated updating of network topology and can optionally register resources with a central directory server. The network topology database is maintained to represent a current description of all NNs composing a network. All NNs within the network contain this "topology map." NNs learn about each others' existence and configuration as they dynamically attach or disconnect from the network. Each NN maintains a second database (a local database) that represents only its local Domain's resources.

Figure 1 | **Bay Networks APPN Support**

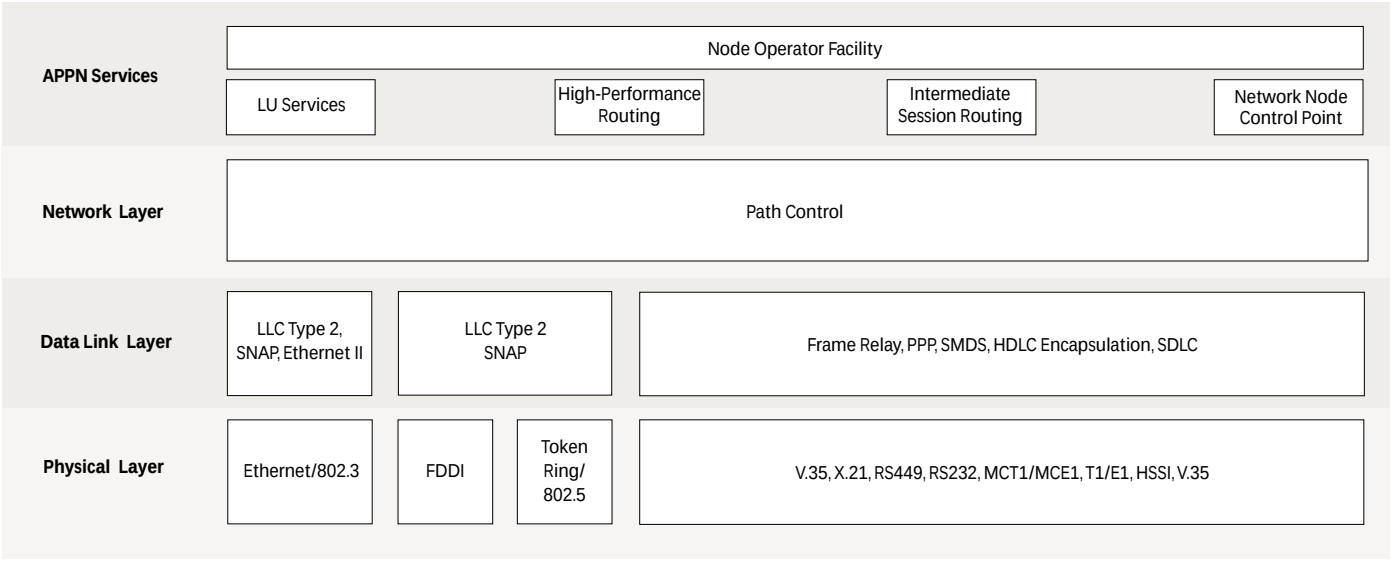
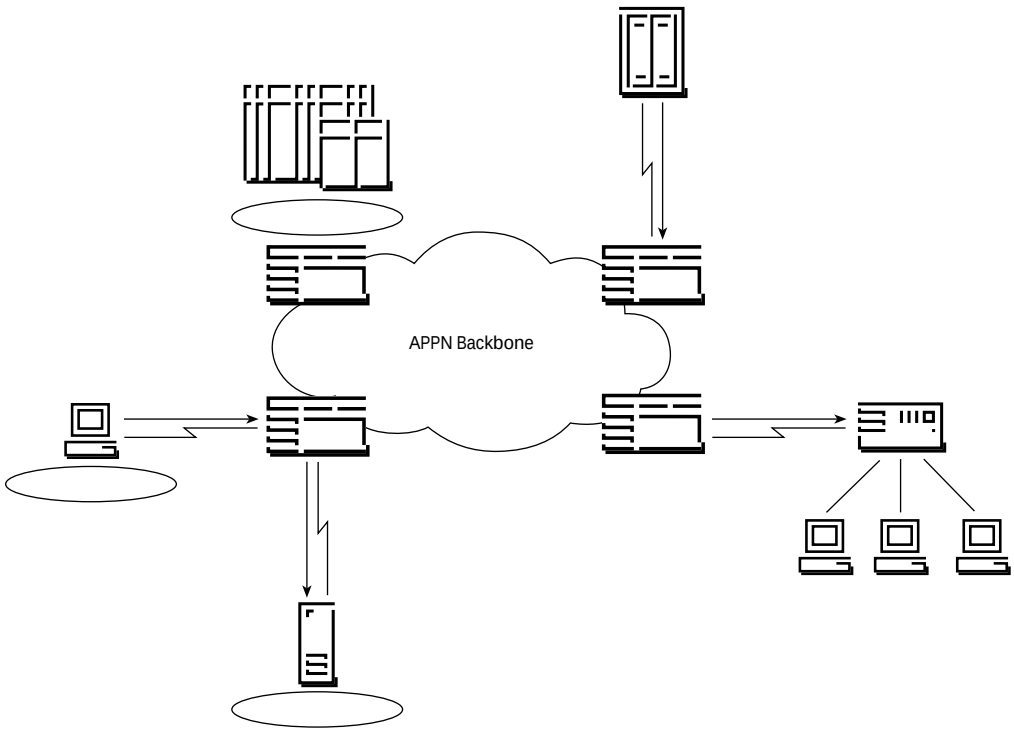


Figure 2 | **APPN Network Example**



The Bay Networks APPN NN implementation supports architected "Connection-Networks" over shared access transport facilities such as a Token Ring LAN. This allows end nodes to directly exchange data, maximizing session throughput by eliminating the need for routing. Bay Networks also fully supports RFC 1490 *Multiprotocol Interconnect over Frame Relay* and the Frame Relay Forum FRF.3 *Multiprotocol Encapsulation Implementation Agreement, 1993*. These allow direct communications from a Bay Networks router to an IBM 3745 communications controller via a Frame Relay network. It also allows communications from a downstream Frame Relay SNA device directly to a Bay Networks router for connection to a APPN network.

Multiple and Parallel Transmission Group Support Multiple and parallel transmission groups are supported by the router's APPN implementation. The transport of data on the network is supported by Path and Data Link Control functions. Physical links in an APPN network as well as their operation are established to multiple adjacent APPN NN and EN nodes according to defined Transmission Groups (TGs) representing the session path between applications. Information provided by the source and destination nodes, coupled with information in the NN's topology database, are used to select the best route.

Mode Name Mapping Bay Networks APPN implementation supports the mapping of mode name, which indicates session characteristics to Class-of-Service (COS) and transmission priority parameters for the most appropriate route selection. The COS manager uses the mode name to obtain a COS name from its database, allowing Route Selection Services (RSS) to select an appropriate route. The ability to define a mode name at initialization provides configuration flexibility. After a route is calculated by RSS, a BIND message is sent from end-to-end to initialize the session path. All application data take the same path through the network during the APPN session.

Directory Services (DS)

Directory Services manages a directory database and locates network resources in the APPN network in support of user applications. To locate network resources, Directory Services at each node collect resource information and maintain it in a local directory database. Via a Control Point-to-Control Point (CP-to-CP) session between an APPN NN and an adjacent APPN EN, the APPN NN registers the APPN EN's resources in its local directory database. The APPN NN maintains database entries for local resources as well as EN resources within and outside of the APPN node's domain. Additionally, an APPN EN node maintains database entries for local resources on adjacent nodes that have peer-to-peer communications sessions.

Bay Networks routers support standard APPN directory services including Network Node Server (NNS) functionality, directed and broadcast services, Logical Unit (LU) registration, and Dependent LU Requester (DLUR).

Network Node Server (NNS) Bay Networks routers function as an NNS, providing full enterprise-wide directory and routing services to other NNs, ENs, and LEN nodes. APPN ENs and LEN nodes locate remote LUs through the NNS.

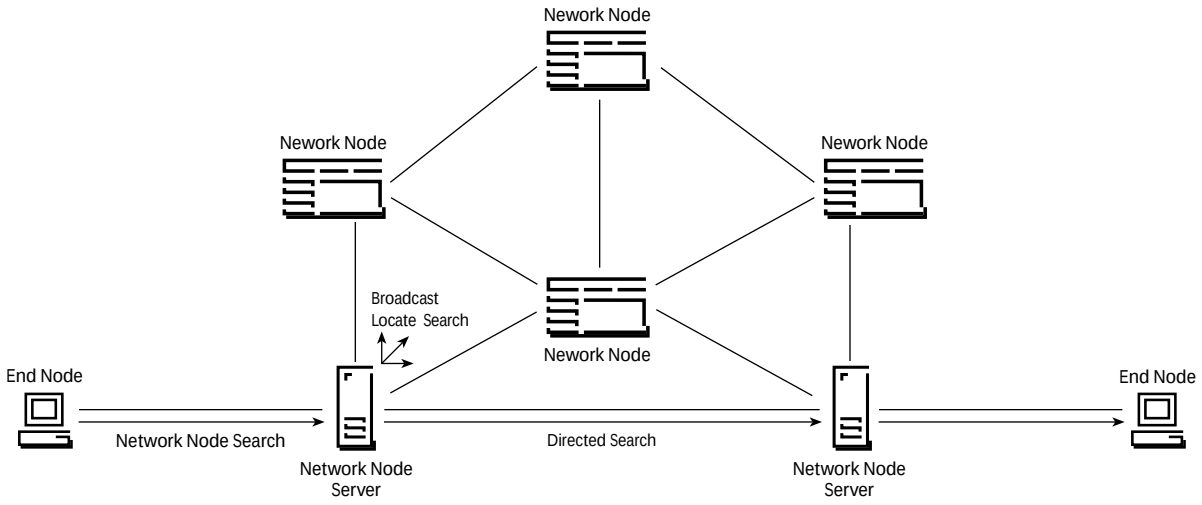
Directed and Broadcast Locate Search Requests A Bay Networks router configured as an APPN NNS supports directed and broadcast locate search requests that are used to locate a resource (see Figure 3). A directed search request is a request sent between two NNs along a path defined by the originating network node. A directed search is used by an NNS when it has a directory entry indicating that the destination is in another domain or when an NNS invokes a central directory server. A central directory server, typically VTAM in an IBM mainframe, also uses a directed search when it has a directory entry that indicates the destination is in another domain and when it queries alternate directory servers.

Broadcast locate search requests are typically used to send locate search requests to multiple CPs and are typically used when the destination application is unknown and no central directory server is present. Central directory servers use broadcast searches to locate a resource when it has no cached information about the resource. Broadcast searches are always done in parallel. This allows directory services to locate a resource quickly. There are two types of broadcast searches — Domain Broadcast and Network Broadcast. A domain broadcast search is a locate search for a destination resource sent to adjacent APPN ENs. A network broadcast search queries all APPN NNs in the network.

Directory Database Directory Services maintains a directory database in DRAM memory. This database contains all resources known to it, including configured LUs, as well as LUs added by caching the results of all successful directory searches in which it has previously participated.

Logical Unit (LU) Registration Directory Services supports its own LUs locally and on LENs and ENs within the local Domain. Directory Services is capable of registering its LU resources with a central directory server. In most cases, an IBM mainframe will be used.

Figure 3 | **APPN Directory Searches**



Dynamic Route Selection and Routing Services

Bay Networks APPN implementation provides comprehensive support for APPN's architected route selection and routing services including Class-of-Service characteristics, Session Services, the Transmission Priority Field (TPF), Intermediate Session Routing, Network Topology Exchange, and High-Performance Routing (HPR). Support for these features ensures efficient and reliable data communications.

Class of Service Support Bay Networks supports the standard defined class of service definitions. This enables the available network environment to be matched to exact application requirements. By supporting all seven APPN classes of service, Bay Networks ensures consistent and reliable transaction performance.

Session Services The session services function activates CP-to-CP sessions used to exchange network information. It is also responsible for maintaining and assigning Local Form Session Identifiers (LFSIDs) to sessions and activating and deactivating LU-to-LU sessions.

Transmission Priority Field (TPF) This feature provides a mechanism for specifying the priority of all outgoing messages. Messages can be assigned a high, medium, or low priority. This dictates the order in which messages are relayed to data link control. Network priority is reserved for CP-to-CP traffic between NNs. With TPF, selection algorithms can be varied and an aging mechanism can be chosen that ensures a minimum bandwidth for lower priority traffic.

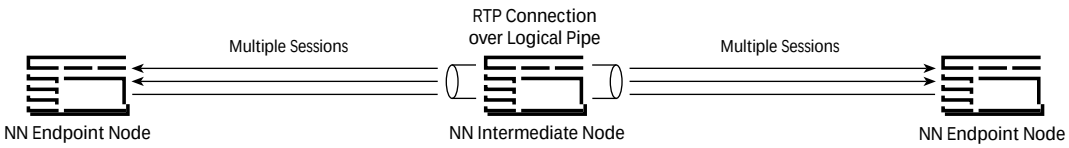
Network Topology Exchange Bay Networks routers exchange network information with other network nodes, enabling them to maintain up-to-date topology information. Each NN maintains information about all NNs and all intermediate routing transmission groups within the APPN network in a database. The information contained in the database includes data on NNs and their connections to virtual routing nodes and other NNs. The topology database is fully replicated on all APPN NNs. Bay Networks support of APPN for the distribution of network topology information ensures that every NN is provided with a complete view of the network backbone topology. Each network node contains a topology database manager that creates and broadcasts topology database updates to adjacent NNs via CP-to-CP sessions. The database manager stores information obtained from updates received from adjacent network nodes and forwards a Topology Database Update (TDU) to adjacent network nodes. This allows every database manager in the network to maintain an up-to-date network topology view.

Intermediate Session Routing (ISR) Bay Networks supports reliable connection-oriented networks via ISR. ISR supports the routing of LEN and EN LU sessions between end points, via a session connector. ISR routes session traffic at the Path Information Unit (PIU) level and is also responsible for adaptive and fixed session pacing as well as for segmenting and reassembling application Request Units (RUs).

High-Performance Routing (HPR)

An addition to APPN architecture, HPR enhances APPN data routing performance and reliability by providing functions that

Figure 4 | **HPR RTP Connection Supporting APPN Sessions**



nondisruptively route sessions around failed links and nodes, provide enhanced congestion control, reduce the amount of storage required in APPN intermediate nodes, and allow multiple sessions using a wide range of packet sizes to share the connection.

Rapid Transport Protocol (RTP) RTP is a connection-oriented full-duplex protocol designed to support data in high-speed networks. RTP connections are established within an HPR subnet and are used to carry session traffic (see Figure 4). These connections can carry data at very high speeds by using low-level intermediate routing and minimizing the number of flows over the link for error recovery and flow control.

RTP also provides a nondisruptive path switch, end-to-end segmentation and reassembly, end-to-end error recovery, and an end-to-end flow control and congestion control function that improves performance and reduces traffic congestion. The nondisruptive path switch function enables an RTP connection's physical path to be automatically switched to reroute sessions around a failure in the network. Segmentation and reassembly is done on an end-to-end basis, ensuring fast data transfers by eliminating processing at each intermediate hop. The end-to-end error recovery function significantly reduces the amount of error recovery overhead on individual lines by concentrating error processing in RTP endpoints. End-to-end error recovery is selective in that it only retransmits the gaps that are detected in the sequence of transmitted bytes. RTP's end-to-end flow control and congestion control function regulates the flow of traffic by predicting congestion in the network and reducing the node's sending rate into the network by using Adaptive Rate Based congestion control (ARB), which prevents congestion rather than reacting to it after it occurs.

Automatic Network Routing (ANR) HPR's ANR routing mechanism is a source routing technique that carries routing information for each packet in the network header of the packet. Each intermediate node removes the routing information it uses in the packet header before forwarding it onto the link. This results in the routing information for the next node being in a fixed place. Via this method, packets can be processed quickly and network overhead reduced.

Bay Networks also supports the HPR/ISR boundary function that allows sessions to pass from an APPN ISR-based subnet to an HPR subnet. All protocols used between the HPR node and APPN nodes are base APPN protocols. All protocols used between HPR nodes in the HPR subnet are HPR protocols.

Because HPR does error recovery on an end-to-end basis, there is no link-level error recovery required for network layer packets using ANR. Link-level error recovery is a user-selectable option. This improves performance by reducing the number of flows required for error recovery on every link.

All Bay Networks routers support APPN and HPR to provide a seamless migration to HPR from an installed APPN network.

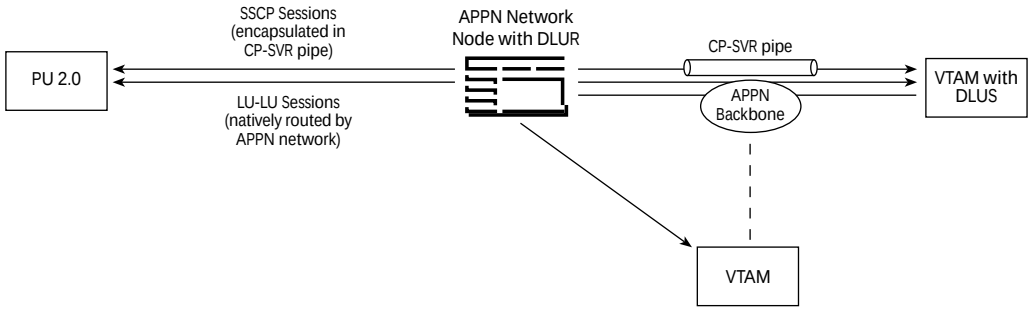
Management Services (MS)

Bay Networks support of APPN Management Services (MS) functions allows for efficient control and monitoring of a node's resources. A Bay Networks NN supports SNA Network Management Services (SNA/MS) for all connected APPN ENs. Configuration and management tools for efficient and reliable operation are provided including: Site Manager, Network Management Vector Transport (NMVT) Pass-Through support, and Multiple Domain Support (MDS).

Bay Networks routers are configured and managed via Site Manager, Bay Networks node management application, and SNMP. Configuring a Bay Networks router as a NN is accomplished by creating a Management Information Base (MIB) that defines the characteristics of the NN as well as the APPN resources it controls. SNMP support is typically through an IP network to Site Manager using platforms such as an RS/6000. Optionally SNMP to SNA/MS capabilities are supported to provide alternative management paths to NetView/MVS.

Network Management Vector Transport (NMVT) Pass-Through The Bay Networks NN supports SNA/MS Network Management Vector Transport (NMVT) pass-through functionality, which transports management services encoded information in the APPN network. With

Figure 5 **DLUR and DLUS in an APPN Network**



NMVT pass-through, management services data generated by a device, such as a 3174 Cluster Controller, can be routed through a Bay Networks NN. This ensures reliable service operation of management services data. Additionally, Bay Networks APPN has an Alert MIB capability that allows the mapping of SNMP traps to SNA/MS alerts for transmission to a specified management platform, such as NetView/MVS. If an error condition occurs, APPN receives or generates alert messages about resources and conditions.

Multiple Domain Support (MDS) Bay Networks MDS management services support allows the transfer of management services data to a defined focal point. This transport uses a Multiple Domain Support Message Unit (MDS-MU) for transporting nonbulk management services data in APPN networks. MDS consists of a router and multiple service transaction programs. The MDS router routes message units between MDS Service Transaction Programs (STPs) to route alert information to a defined management focal point.

Dependent LU Requester (DLUR)

Bay Networks DLUR feature allows the attachment of traditional "legacy" SNA devices to the APPN network. Device traffic is routed over the APPN network to a known IBM or compatible mainframe containing target applications. Bay Networks DLUR feature enables a Bay Networks NN to support the device "client" in cooperation with IBM's Dependent Logical Unit Server (DLUS), which is typically implemented in the mainframe.

DLUR provides a remote boundary function in support of dependent logical units (LUs). Bay Networks DLUR supports a variety of dependent LU types, including Types 0, 1, 2, 3, and 6.2. To establish communications, the DLUR and DLUS form a CP-SVR pipe consisting of a pair of LU6.2 sessions that encapsulates control data.

This pipe allows the control point at the DLUS side to send control data to the end station at the DLUR (router) end of the pipe (see Figure 5). DLUR can terminate the CP-SVR pipe when it is no longer needed.

Local Area Network Support

APPN is supported on all Token Ring, Ethernet, and FDDI interfaces for Bay Networks routers. Token Ring interfaces can be easily configured to support either 4-Mbps or 16-Mbps ring speeds. This capability increases network performance while eliminating equipment obsolescence.

Wide Area Networking

Serial interfaces including Synchronous, MCT1, MCE1, and HSSI for Bay Networks routers support APPN. These interfaces operate at rates ranging from 1200 bps to 52 Mbps, full duplex. The Synchronous interface supports either internal or external clocking and a range of physical connections including V.35, RS232, RS449/RS442 balanced, and X.21. Networks can also be interconnected via a variety of WAN services including RFC 1490-compliant Frame Relay bridge/routed format, SMDS, PPP, SDLC, and HDLC encapsulation.

Traffic Management

APPN is provided with comprehensive traffic management capabilities through Multiline Circuits.

Multiline Circuits Multiline Circuits allows a single circuit to be composed of up to 16 individual serial network data paths, ensuring circuit availability in the event of a single data path failure. Multiline Circuits also increases bandwidth between two sites without the circuit management complexities associated with multiple circuits. Following initial configuration, the use of multiple data paths to form a single circuit is completely transparent.

Multiline Circuits provides two methods for transmitting traffic over its data path — address-based selection and random selection. Address-based selection determines the path a packet takes based on its source and destination addresses. Once a path has been established for a given address pair, subsequent packets will follow the same path. This ensures the sequentiality of packets and is a valuable feature for protocols that cannot tolerate packets received out of order.

Random selection determines the path each packet takes based on a randomly assigned number, which corresponds to a particular data path in the circuit. This provides for even distribution across the circuit to avoid congestion and is intended for use with protocols that can accept packets received out of sequence. The ability to select the method of transmitting data across the circuit enables Multiline Circuits to maximize the performance of a wide range of applications.

Network Management

Bay Networks offers comprehensive router and network management capabilities to ensure the efficient operation of mission-critical internetworks. Features increase diagnostic capabilities across the internetwork, simplify node and network configuration management, and interoperate with third-party solutions for increased interoperability.

APPN is configured via Site Manager, Bay Networks node management application for Bay Networks routers. Site Manager is a platform-independent, SNMP-based application developed expressly for simplifying the configuration and management of Bay Networks routers. It provides an intuitive point-and-click user interface that streamlines the configuration process and eliminates cryptic commands. Site Manager offers central configuration management that simplifies network setup and expansion, real-time operations and monitoring, and real-time event and fault monitoring for efficient problem identification and isolation. Site Manager is available for MS Windows, Sun SPARC, HP/9000, and IBM RS/6000 platforms.

Standards

The APPN implementation described in this data sheet supports major IETF RFCs, Frame Relay Forum (FRF) specifications, and IBM specifications (see Table 1).

Table 1 **Standards**

IETF	RFC 1490, Multiprotocol Interconnect over Frame Relay
	RFC 1434, Data Link Switching: Switch-to-Switch Protocol
FRF	FRF.3, Multiprotocol Encapsulation Implementation Agreement, 1993
IBM	IBM Systems Network Architecture: APPN Architecture Reference, SC30 - 3422

APPN Functions

Bay Networks APPN provides numerous APPN function sets, ensuring support for the full set of APPN's network services (see Table 2).

Table 2 **Supported APPN-Base Function Sets**

No.	Name
001	LEN-Level XID3
002	All XID3 States
003	Link Station Role Negotiation
006	CP Name on XID3
007	TG Number Negotiation
008	Multiple TGs
010	Single-Link TG
011	LFSID Addressing
013	Priority Queuing for Transmission
020	Extended BIND and UNBIND
021	Adaptive Pacing for Independent LU BINDs

Table 2 **Supported APPN-Base Function Sets (continued)**

No.	Name
023	BIND Segmenting and Reassembly
024	Adaptive Pacing for Dependent LU BINDs
030	CP-CP Sessions
031	CP Capabilities Exchange
033	FQPCID Generation
034	CD-Initiate
035	Reconstruct CD-Initiate Reply
036	COS/TPF
037	BIND (ILU = PLU)
038	Limited Resource
039	BIND without RSCV from any LEN or APPN Node
040	Propagate Unrecognized CVs
041	Session RU Segmenting and Reassembly
042	Interleaved Segments
050	Register EN Resources
051	Locate/Find/Found
052	Reconstruct GDS Variables for Locate Reply and CD-Initiate Reply
053	Participate in Network Searches
054	Send Wildcard Reply
055	Broadcast and Directed Searches
056	ENCP Search Control
057	Partial Directory Entries
059	Accept Unqualified LU Name
060	Locate Chains - Locate (keep)
061	Sending Locate to a Gateway
062	Cache Resource Locations
063	Favor Explicit Replies
064	Network Qualified LU Name
065	Central Directory Client
066	Abbreviated Resource Hierarchy
068	Authentic Net Id Indicators
069	DS Support for Domain LEN Resources
070	Process Local Resource Change
073	Initial Topology Exchange
074	Flow Reduction Sequence Numbers
075	Resource Sequence Numbers
076	Topology Broadcast
077	Garbage Collection
078	Topology Isolation at Net Id Boundaries

Table 2 **Supported APPN-Base Function Sets (continued)**

No.	Name
079	Build RSCV
080	Calculate Route Using Connection Networks
081	Class-of-Service Manager
082	Route Randomization
083	Member of Connection Network
084	Select One-Hop Routes
085	Select Network Routes
090	Common Node Operator Command Set
091	Network Node Operator Command Set
100	Extend/Unextend BIND and UNBIND
101	Fixed Session Level Pacing
102	Adaptive Session Level Pacing
103	Intermediate Session Segmenting/Reassembly
104	Routing BIND and UNBIND
105	Intermediate Session Routing for Dependent LU Sessions
106	Intermediate Session Routing for Independent LU Sessions
1001	Secondary-Initiated Non-Activation XID
1004	Adjacent Node Name-Change
1013	Interoperability with Peripheral Border Node
1103	Retry Referred Search
1104	Topology-Based Directory Non-Verify
1105	PCID Modifier
1109	Surrogate Owner
Optional Function Sets	
1002	Adjacent Link Station Name
1007	Parallel TGs
1011	Multiple Local LUs, Session Manager for Local Independent LU 6.2, and Intra-node Routing
1012	LU Name = CP Name
1018	Delete EN Resources Before Registering
1067	Dependent LU Requester
1107	Central Resource Registration (of LUs)
1200	Tree Caching and TG Caching
1301	Nonpaced Intermediate Session Traffic
1400	High-Performance Routing (HPR) Base
1401	Rapid Transport Protocol (RTP) Tower

Table 2 **Supported APPN-Base Function Sets (continued)**

No.	Name
Management Services	
Multiple-Domain Support (MDS) Function Set	
150	SNA/MS MDS Common Base
152	SNA/MS MDS Network Node Support
153	SNA/MS MDS High-Performance Option
154	SNA/MS MDS Transport Confirmation Option
Entry Point Alert Function Set	
170	SNA/MS EP Alert Base Subset
171	SNA/MS Problem Diagnosis Data in Alert
177	SNA/MS LAN Alert
178	SNA/MS SDLC/LAN LLC Alert

System Requirements

Bay Networks APPN implementation described in this data sheet is currently included in software Version 10.0 for the Bay Networks BayStack Access Node (AN®), BayStack Access Node Hub (ANH™), Access Stack Node (ASN™), Link Node (LN®), Concentrator Node (CN®), Backbone Link Node (BLN®), and Backbone Concentrator Node (BCN®), unless otherwise indicated in this document.

Operation

A set of APPN-specific parameters must be configured for each router supporting APPN (see Table 3).

Table 3 **APPN Configuration Parameters**

Parameter	Function	Action
Enable	Enables/disables APPN on the router.	Default is Enabled; set to Disable to deactivate APPN support on the interface.
Local Node Name	Identifies the unique name of the network and the router node name.	Enter up to an 8-character name in network section and an 8-character control point name.
Local ID Block	Identifies the APPN product in the NN.	Enter three hexadecimal digits.
Local ID Number	Identifies local APPN NN.	Enter five hexadecimal digits.
Route Addition Resistance	Indicates the relative desirability of using this NN for session routing.	Enter value between 0 and 255.
Endpoint Session Storage	Enables the storage of route selection control vector.	Default is Enabled; set to Disable to deactivate storage.
Max Directory Entries	Specifies maximum number of entries that can be stored in NN's directory database.	Enter value large enough for the network being managed. Set to 0 for an unlimited number of entries.
Network Locate Time Out	Specifies maximum time in seconds for a network search.	Default is 60; set to 0 for no timeout.
Max. TGs in Topology	Specifies the number of TGs in database.	Enter 0 to include all.

Table 3 | **APPN Configuration Parameters (continued)**

Parameter	Function	Action
Max. Number of ISR Sessions	Specifies the maximum number of ISR sessions that the local NN can support.	Default is 100; enter value of 100 or greater.
DLUR Support	Enables/disables DLUR on router.	Default is enabled; set to Disable to deactivate DLUR on the router.
HPR Support	Enables/disables HPR on router.	Default is enabled; set to Disable to deactivate HPR on the router.

Ordering Information

APPN is available in the Corporate software suite for the Bay Networks BayStack AN, BayStack ANH, ASN, BLN, BCN, LN, and CN (see Table 4).

Table 4 | **Ordering Information**

Model Number	Description
AE0008005	AN/ANH BayRS Corporate Software Suite
AF0008004	ASN BayRS Corporate Software Suite
AG0008004	BLN and BCN BayRS Corporate Software Suite
42020V### *	Corporate software suite for LN and CN

* ### = Software version number (e.g., Version 10.0 = 010).

Bay Networks

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