

ALPS P1024B Protocol Networking

A solution for integrating traffic from IBM's Transaction Processing Facility (TPF) Airline Line Control (ALC) protocol (P1024B) into a single network also supporting TCP/IP and Systems Network Architecture (SNA) traffic is now available from Cisco Systems. This consolidated network will reduce costs for airlines and provide an infrastructure that promotes new applications, new users, and a competitive edge.

With Airline Product Set (ALPS) P1024B protocol networking, Cisco provides support for tunneling ALC (P1024B) protocol traffic on properly configured Cisco 2500, 3600, 4500, and 4700 series router serial interfaces. ALC support is added to the Cisco IOS™ software as part of the Plus feature package. ALC tunneling allows customers to transport the six-bit traffic from agent set control units (ASCUs) at remote locations across a TCP/IP network to central-site routers, where the traffic is converted to Airline X.25 (AX.25) or Extended Mixed Traffic over X.25 (EMTOX) and passed to the TPF host, as shown in Figure 1.

Network Consolidation Reduces Costs

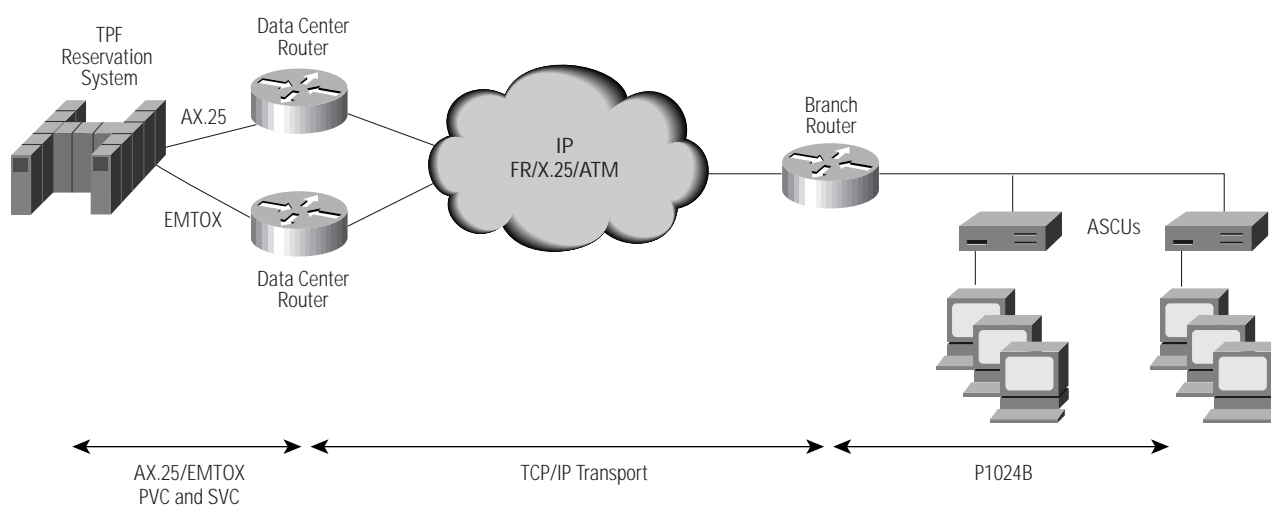
Maintaining separate networks for TPF, SNA, and TCP/IP implies overhead in costs and complexity if users have to access applications using more than one protocol. P1024B protocol networking eliminates the need for a separate

network for TPF by incorporating that traffic into the TCP/IP network. Furthermore, SNA traffic can be consolidated into a TCP/IP network, using technologies such as data-link switching (DLSw). With a single TCP/IP network, cost savings can be realized in line costs, management, and a reduction in customized software and hardware.

Cisco IOS Software Provides Enhanced Network Services

By incorporating P1024B support into the Cisco IOS software, users gain value from the network services provided. As TCP/IP messages, the ALC traffic can take advantage of security features such as encapsulation, firewall protection, and authentication, authorization, and accounting (AAA). Using weighted fair queuing (WFQ) or custom queuing, ALC traffic can be prioritized to meet response time criteria.

Figure 1 Airline Network Using P1024B Tunneling



P1024B Support Benefits

Table 1 summarizes P1024B support features and their benefits.

Table 1 P1024B Feature/Benefit Summary

Features	Benefit
Encapsulate P1024B in TCP/IP	A TCP/IP infrastructure for all enterprise traffic
Support ALC devices and ASCUs and existing host applications without modification	Investment protection, less training costs, faster network implementation
Use properly configured standard synchronous serial interfaces on the Cisco 2500, 3600, 4500, and 4700 router	Standard hardware and software, rather than customized, proprietary solutions
Support point-to-point and multidrop configurations	Network design flexibility
Security and quality of service features of the Cisco IOS software	Enhanced network services that enable new services and end users

P1024B Support Product Components

Table 2 itemizes the platforms and feature sets that support remote P1024B tunneling.

Table 2 Remote P1024B Tunneling Support

Router Platform	Feature Set	Image Name
Cisco 2520, 2521, 2522, 2523	IP Plus	c2500-is-1
	IP Plus 40	c2500-is40-a
	IP Plus 56	c2500-is56-a
	Enterprise Plus	c2500-js-1
	Enterprise Plus 40	c2500-js40-1
	Enterprise Plus 56	c2500-js56-1
	Enterprise/APPN Plus	c2500-ajs-1
	Enterprise/APPN Plus 40	c2500-ajs40-a
	Enterprise/APPN Plus 56	c2500-ajs56-a
Cisco 2600	IP Plus	c2600-is-mz
	IP Plus 40	c2600-is40-mz
	IP Plus 56	c2600-is56-mz
	IP Plus IPsec 56	c2600-is56l-mz
	Enterprise Plus	c2600-js-mz
	Enterprise Plus 40	c2600-js40-mz
	Enterprise Plus 56	c2600-js56-mz
	Enterprise Plus IPsec 56	c2600-js56l-mz
	Enterprise/APPN Plus	c2600-ajs-mz
	Enterprise/APPN Plus 40	c2600-ajs40-mz
	Enterprise/APPN Plus 56	c2600-ajs56-mz
	Enterprise/APPN Plus IPsec 56	c2600-ajs56l-mz
Cisco 3620	Enterprise Plus	c3620-js-mz
	Enterprise Plus 40	c3620-js40-mz
	Enterprise Plus 56	c3620-js56-mz
	Enterprise/APPN Plus	c3620-ajs-mz
	Enterprise/APPN Plus 40	c3620-ajs40-mz
	Enterprise/APPN Plus 56	c3620-ajs56-mz

Router Platform	Feature Set	Image Name
Cisco 3640	Enterprise Plus	c3640-js-mz
	Enterprise Plus 40	c3640-js40-mz
	Enterprise Plus 56	c3640-js56-mz
	Enterprise/APPN Plus	c3640-ajs-mz
	Enterprise/APPN Plus 40	c3640-ajs40-mz
	Enterprise/APPN Plus 56	c3640-ajs56-mz
Cisco 4500,4700	Enterprise Plus	c4500-js-mz
	Enterprise Plus 40	c4500-js40-mz
	Enterprise Plus 56	c4500-js56-mz
	Enterprise/APPN Plus	c4500-ajs-mz
	Enterprise/APPN Plus 40	c4500-ajs40-mz
	Enterprise/APPN Plus 56	c4500-ajs56-mz

Table 3 itemizes the platforms and feature sets that support data center P1024B tunneling and conversion to AX.25 or EMTOX.

Table 3 Data Center P1024B Tunneling and Conversion to AX.25 or EMTOX Support

Router Platform	Feature Set	Image Name
Cisco 2500—any platform	IP Plus	c2500-is-1
	IP Plus 40	c2500-is40-a
	IP Plus 56	c2500-is56-a
	Enterprise Plus	c2500-js-1
	Enterprise Plus 40	2500-js40-1
	Enterprise Plus 56	2500-js56-1
	Enterprise/APPN Plus	c2500-ajs-1
	Enterprise/APPN Plus 40	c2500-ajs40-a
	Enterprise/APPN Plus 56	c2500-ajs56-a
Cisco 2600	IP Plus	c2600-is-mz
	IP Plus 40	c2600-is40-mz
	IP Plus 56	c2600-is56-mz
	IP Plus IPsec 56	c2600-is56l-mz
	Enterprise Plus	c2600-js-mz
	Enterprise Plus 40	c2600-js40-mz
	Enterprise Plus 56	c2600-js56-mz
	Enterprise Plus IPsec 56	c2600-js56l-mz
	Enterprise/APPN Plus	c2600-ajs-mz
	Enterprise/APPN Plus 40	c2600-ajs40-mz
	Enterprise/APPN Plus 56	c2600-ajs56-mz
Enterprise/APPN Plus IPsec 56	c2600-ajs56l-mz	

Router Platform	Feature Set	Image Name
Cisco 3620	Enterprise Plus	c3620-js-mz
	Enterprise Plus 40	c3620-js40-mz
	Enterprise Plus 56	c3620-js56-mz
	Enterprise/APPN Plus	c3620-ajs-mz
	Enterprise/APPN Plus 40	c3620-ajs40-mz
	Enterprise/APPN Plus 56	c3620-ajs56-mz
Cisco 3640	Enterprise Plus	c3640-js-mz
	Enterprise Plus 40	c3640-js40-mz
	Enterprise Plus 56	c3640-js56-mz
	Enterprise/APPN Plus	c3640-ajs-mz
	Enterprise/APPN Plus 40	c3640-ajs40-mz
	Enterprise/APPN Plus 56	c3640-ajs56-mz
Cisco 4500, 4700	Enterprise Plus	c4500-js-mz
	Enterprise Plus 40	c4500-js40-mz
	Enterprise Plus 56	c4500-js56-mz
	Enterprise/APPN Plus	c4500-ajs-mz
	Enterprise/APPN Plus 40	c4500-ajs40-mz
	Enterprise/APPN Plus 56	c4500-ajs56-mz

Router Platform	Feature Set	Image Name
Cisco 7200	Desktop/IBM	c7200-ds-mz
	Desktop/IBM 40	c7200-ds40-mz
	Desktop/IBM 56	c7200-ds56-mz
	Enterprise	c7200-js-mz
	Enterprise 40	c7200-js40-mz
	Enterprise 56	c7200-js56-mz
	Enterprise/APPN	c7200-ajs-mz
	Enterprise/APPN 40	c7200-ajs40-mz
	Enterprise/APPN 56	c7200-ajs56-mz
Cisco 7500	Desktop/IBM	rsp-dsv-mz
	Desktop/IBM 40	rsp-dsv40-mz
	Desktop/IBM 56	rsp-dsv56-mz
	Enterprise	rsp-jsv-mz
	Enterprise 40	rsp-jsv40-mz
	Enterprise 56	rsp-jsv56-mz
	Enterprise/APPN	rsp-ajsv-mz
	Enterprise/APPN 40	rsp-ajsv40-mz
Enterprise/APPN 56	rsp-ajsv56-mz	



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