Cisco IOS Software Release 11.2 F Feature Packaging & Platform Support

This product bulletin describes the packaging of new features introduced in the 11.2F Early Deployment release. This will be updated with each maintenance release delivering new features to the release. This information is an addendum to Product Bulletin #531, and will focus on information specific to features introduced on the 11.2 F Early Deployment release.

Please see Product Bulleting #531, Cisco IOS Software Release 11.2(1) Ordering Procedures and Hardware Platform Support for details on memory requirements, ordering procedures and platform support.

Note: Cisco strongly recommends that customers select and deploy "General Deployment" release versions of software for fundamental network infrastructure. A software release reaches the "General Deployment" ("GD") milestone when Cisco feels it is suitable for general deployment anywhere in customer networks where the features and functionality of the release are required. These contain less unknowns and are more time proven versions of software which can be deployed broadly across a production network.

11.2 F is an Early Deployment (ED) release. This release is focused on delivering new features and platforms to market, and has greater unknowns than a more mature, Major Release. As such, it should only be used for initial "point" deployment of new features. Any ED release of software should be utilized first in a test network before being deployed in a production network.

The functionality delivered with this ED release will be incorporated in a subsequent Major Release. For more information about the Cisco IOS software release process, please see Product Bulletin #537.

11.2 F Ordering Procedures

The first two maintenance releases of 11.2 F were not released. 11.2(3)F is the first released version of 11.2 F. This release is available only via electronic downloading to upgrade existing systems. Release notes and caveats should be carefully read and understood prior to deploying this release of software.

The preferred method for obtaining Cisco IOS software upgrades is to download them from the CCO WWW online software library.

Downloading Cisco IOS Software Release 11.2 F from Cisco

- Downloading from CCO WWW Service:
 - Beginning on 10/07/96, registered CCO users may download Cisco IOS Release 11.2(1) at http://www.cisco.com. Please follow
 the instructions provided in the Cisco IOS 11.2 Software Upgrade Planner at: http://www.cisco.com/kobayashi/library/
 11.2.shtml

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- The Cisco IOS 11.2 Software Upgrade Planner can also be found in the following path within CCO: Login->Service & Support->Software Library->Cisco Software Image->Cisco IOS 11.2 Releases.
- Downloading from CCO "Classic" (text-based) Service:
 - Beginning on 10/07/96, registered CCO users may download Cisco IOS Release 11.2(1) via telnet at www.cisco.com, or dial-up 408-526-8070 or 408-526-8071 at up to 14.4k.
 - Cisco IOS Software Release 11.2(1) images can be found in the following path: SOFTWARE LIBRARY/Software Images and Utilities/
 Cisco IOS Software/A 11.1 Release--up to 11.1(1).
- Direct FTP from www.cisco.com:
 - Beginning on 10/07/96, registered CCO users may download Cisco IOS Release 11.2(1) via FTP at www.cisco.com.
 - FTP to www.cisco.com and log in using your CCO user ID and password.

11.2 F Feature Packaging Summary

11.2(1)F Feature Summary

There is one new feature in the 11.2(1)F Early Deployment release. This is:

- Kerberized Telnet

11.2(2)F Feature Summary

There are no new features introduced in the 11.2(2)F Early Deployment release.

11.2(3)F Feature Summary

There are five new feature introduced in the 11.2(1)F Early Deployment release. These are:

- AppleTalk Access List Enhancements
- Frame Relay MIB Extensions
- Leased Line ISDN at 128 Kbps
- Layer 2 Forwarding -- Fast Switching
- Tunneling of Asynchronous Security Protocols

11.2(4)F Feature Summary

There are thirteen new feature introduced in the 11.2(1)F Early Deployment release. These are:

- Per-User Configuration
- Virtual Profiles
- PPP over ATM
- X.25 on ISDN D-Channel
- Virtual Templates for Protocol Translation
- X.28 Emulation
- Packet Assembler/Disassembler (PAD) Enhancements
- IPX Named Access Lists
- IPX: SAP after RIP
- NLSP Enhancements
- IPeXchange
- TCP Intercept
- EIGRP Route Authentication

Feature Set Support for 11.2 F

Tables 1 through 8 show which feature sets support these features on a per platform basis. These are existing Feature Sets, already available for the Major Release 11.2. Please refer to Product Bulletin #531 for additional information regarding the Feature Sets and their associated memory requirements. Please refer to Product Bulletin #553 for additional information regarding Feature Sets first introduced on 11.2 P and their associated memory requirements. Table 10 provides memory requirements for Feature Sets first introduced on 11.2 F.

Table 1 Standard Feature Sets for 1003, 1004, 1005

Feature	Initial Release	IP	IP/IPX	IP/ AppleTalk	IP/IPX/ AppleTalk	Plus ¹	Plus ¹ 40	Plus ¹ 56
Kerberized Telnet	11.2(1)F	-	-	-	-	-	-	-
AppleTalk ACL Enhancements	11.2(3)F	-	-	X	X	-	-	-
Frame Relay MIB Extensions	11.2(3)F	1005 only	1005 only	1005 only	1005 only	-	-	-
Leased Line ISDN at 128 Kbps	11.2(3)F	1003/4 only	1003/4 only	1003/4 only	1003/4 only	-	-	-
L2F Fast Switching	11.2(3)F	-	-	-	-	-	-	-
Tunneling of ASP	11.2(3)F	-	-	-	-	-	-	-
Per-User Configuration	11.2(4)F	X	X	X	X	-	-	-
Virtual Profiles	11.2(4)F	X	X	X	X	-	-	-
PPP over ATM	11.2(4)F	-	-	-	-	-	-	-
X.25 on ISDN D-Channel	11.2(4)F	1003/4 only	1003/4 only	1003/4 only	1003/4 only	-	-	-
Virtual Templates for Protocol Translation	11.2(4)F	-	-	-	-	-	-	-
X.28 Emulation	11.2(4)F	-	-	-	-	-	-	-
PAD Enhancements	11.2(4)F	-	-	-	-	-	-	-
IPX Named Access Lists	11.2(4)F	-	-	-	-	-	-	-
IPX: SAP after RIP	11.2(4)F	-	X	-	X	-	-	-
NLSP Enhancements	11.2(4)F	-	X with Plus, Plus 40 or Plus 56	-	X with Plus, Plus 40 or Plus 56	X with IP/IPX or IP/IPX/AT	X with IP/IPX or IP/IPX/AT	X with IP/IPX or IP/IPX/AT
IPeXchange	11.2(4)F	-	-	-	-	-	-	-
TCP Intercept	11.2(4)F	-	-	-	-	-	-	-
EIGRP Route Authentication	11.2(4)F	X	X	X	X	-	-	-

^{1.} Indicated as a "plus" feature only if the capability is not available without "plus". If the feature is available as part of a basic feature set, then it will also be a part of the "plus" variant of that feature set.

Table 2 Special Feature Sets for 1005

Feature	Initial Release	IP/OSPF	IP/Asynch	IP/IPX/ Asynch
Kerberized Telnet	11.2(1)F	-	-	-
AppleTalk ACL Enhancements	11.2(3)F	-	-	-
Frame Relay MIB Extensions	11.2(3)F	X	X	X
Leased Line ISDN at 128 Kbps	11.2(3)F	-	-	-
L2F Fast Switching	11.2(3)F	-	-	-
Tunneling of ASP	11.2(3)F	-	-	-
Per-User Configuration	11.2(4)F	X	X	X
Virtual Profiles	11.2(4)F	-	-	-
PPP over ATM	11.2(4)F	-	-	-
X.25 on ISDN D-Channel	11.2(4)F	-	-	-
Virtual Templates for Protocol Translation	11.2(4)F	-	-	-
X.28 Emulation	11.2(4)F	-	-	-
PAD Enhancements	11.2(4)F	-	-	-
IPX Named Access Lists	11.2(4)F	-	-	-
IPX: SAP after RIP	11.2(4)F	-	-	X
NLSP Enhancements	11.2(4)F	-	-	-
IPeXchange	11.2(4)F	-	-	-
TCP Intercept	11.2(4)F	-	-	-
EIGRP Route Authentication	11.2(4)F	X	X	X

 $Table\ 3\ \ \text{Standard Feature Sets for 2500, AS5100, 4000, 4500, 4700}$

Feature	Initial Release	IP	IP/IPX/ AT/ DEC	IP/IPX/ AT/ DEC IP eXchange ¹	Enterprise	Enterprise/ APPN	Plus ²	Plus ¹ 40	Plus ¹ 56
Kerberized Telnet	11.2(1)F	-	-	-	X with Plus 56	X with Plus 56	-	-	X with Ent.
AppleTalk ACL Enhancements	11.2(3)F	-	X	X	X	X	-	-	-
Frame Relay MIB Extensions	11.2(3)F	X	X	X	X	X	-	-	-
Leased Line ISDN at 128 Kbps	11.2(3)F	4000, 4500/ 4700 only	4000, 4500/ 4700 only	4000, 4500/ 4700 only	4000, 4500/ 4700 only	4000, 4500/ 4700 only	-	-	-
L2F Fast Switching	11.2(3)F	-	X	X	X	X	-	-	-
Tunneling of ASP	11.2(3)F	X	X	X	X	X	-	-	-

Table 3 Standard Feature Sets for 2500, AS5100, 4000, 4500, 4700

Per-User	11.2(4)E	X	X	X	X	X			
Configuration	11.2(4)F	Λ	Λ	Λ	Λ	Λ	-	-	-
Virtual Profiles	11.2(4)F	X	X	X	X	X	-	-	-
PPP over ATM	11.2(4)F	4500/4700 only	4500/4700 only	4500/4700 only	4500/4700 only	4500/4700 only	-	-	-
X.25 on ISDN D-Channel	11.2(4)F	X	X	X	X	X	-	-	-
Virtual Templates for Protocol Translation	11.2(4)F	-	-	-	X	X	-	-	-
X.28 Emulation	11.2(4)F	-	-	-	X	X	-	-	-
PAD Enhancements	11.2(4)F	-	-	-	X	X	-	-	-
IPX Named Access Lists	11.2(4)F	-	X	X	X	X	-	-	-
IPX: SAP after RIP	11.2(4)F	-	X	X	X	X	-	-	-
NLSP Enhancements	11.2(4)F	-	-	-	X	X	-	-	-
IPeXchange	11.2(4)F	-	-	X	-	-	-	-	-
TCP Intercept	11.2(4)F	-	-	-	X	X	-	-	-
EIGRP Route Authentication	11.2(4)F	X	X	X	X	X	-	-	-

^{1.} The IP/IPX/AT/DEC IPeXchange feature set is first supported in 11.2(4)F.

 $Table\ 4\ \ Special\ Feature\ Sets\ for\ 2500,\ AS\ 5100,\ 4000,\ 4500,\ 4700$

Feature	Initial Release	IP/IPX/ IBM/ APPN ¹	CFRAD ²	LANFRAD ¹	$ISDN^1$	Remote Access Server ³
Kerberized Telnet	11.2(1)F	-	-	-	-	-
AppleTalk ACL Enhancements	11.2(3)F	-	-	-	X	X
Frame Relay MIB Extensions	11.2(3)F	X	X	X	-	X
Leased Line ISDN at 128 Kbps	11.2(3)F	4000, 4500/ 4700 only	-	-	-	-
L2F Fast Switching	11.2(3)F	-	-	-	-	X
Tunneling of ASP	11.2(3)F	X	X	X	-	-
Per-User Configuration	11.2(4)F	-	-	-	-	-
Virtual Profiles	11.2(4)F	X	X	X	X	X
PPP over ATM	11.2(4)F	4500/4700 only	-	-	-	-
X.25 on ISDN D-Channel	11.2(4)F	X	-	-	X	-
Virtual Templates for Protocol Translation	11.2(4)F	-	X	-	-	-
X.28 Emulation	11.2(4)F	-	-	-	-	-

^{2.} Indicated as a "plus" feature only if the capability is not available without "plus". If the feature is available on the basic feature set, then it will also be a part of the "plus" variant.

Table 4 Special Feature Sets for 2500, AS 5100, 4000, 4500, 4700

PAD Enhancements	11.2(4)F	-	X	-	-	-
IPX Named Access Lists	11.2(4)F	X	-	X	X	X
IPX: SAP after RIP	11.2(4)F	X	-	X	X	X
NLSP Enhancements	11.2(4)F	-	-	-	-	-
IPeXchange	11.2(4)F	-	-	-	-	-
TCP Intercept	11.2(4)F	-	-	-	-	-
EIGRP Route Authentication	11.2(4)F	X	X	X	X	X

^{1.} IP/IPX/IBM/APPN is supported on the Cisco 2500, 4000, 4500 and 4700 series, only.

Table 5 Standard Feature Sets for AS5200

Feature	Initial Release	IP	IP/IPX/AT/ DEC	Enterprise	Plus ¹
Kerberized Telnet	11.2(1)F	-	-	-	-
AppleTalk ACL Enhancements	11.2(3)F	-	X	X	-
Frame Relay MIB Extensions	11.2(3)F	X	X	X	-
Leased Line ISDN at 128 Kbps	11.2(3)F	-	-	-	-
L2F Fast Switching	11.2(3)F	-	X	X	-
Tunneling of ASP	11.2(3)F	X	X	X	-
Per-User Configuration	11.2(4)F	X	X	X	-
Virtual Profiles	11.2(4)F	X	X	X	-
PPP over ATM	11.2(4)F	-	-	-	-
X.25 on ISDN D-Channel	11.2(4)F	X	X	X	-
Virtual Templates for Protocol Translation	11.2(4)F	-	-	X	-
X.28 Emulation	11.2(4)F	-	-	X	-
PAD Enhancements	11.2(4)F	-	-	X	-
IPX Named Access Lists	11.2(4)F	-	X	X	-
IPX: SAP after RIP	11.2(4)F	-	X	X	-
NLSP Enhancements	11.2(4)F	-	-	X	-
IPeXchange	11.2(4)F	-	-	-	-
TCP Intercept	11.2(4)F	-	-	X	-
EIGRP Route Authentication	11.2(4)F	X	X	X	-

^{1.} Indicated as a "plus" feature only if the capability is not available without "plus". If the feature is available on the basic feature set, then it will also be a part of the "plus" variant.

^{2.} CFRAD, LANFRAD, and ISDN are supported on the Cisco 2500 series, only.

^{3.} Remote Access Server is supported on the Cisco 2500 series and AS5100, only.

Table 6 Standard Feature Sets for RP7000

Feature	Initial Release	IP	Desktop/ IBM	Enterprise	Enterprise/ APPN	DeskTop/ IBM/APPN
Kerberized Telnet	11.2(1)F	-	-	-	-	-
AppleTalk ACL Enhancements	11.2(3)F	-	X	X	X	X
Frame Relay MIB Extensions	11.2(3)F	X	X	X	X	X
Leased Line ISDN at 128 Kbps	11.2(3)F	-	-	-	-	-
L2F Fast Switching	11.2(3)F	-	-	-	-	-
Tunneling of ASP	11.2(3)F	X	X	X	X	X
Per-User Configuration	11.2(4)F	X	X	X	X	X
Virtual Profiles	11.2(4)F	X	X	X	X	X
PPP over ATM	11.2(4)F	-	-	-	-	-
X.25 on ISDN D-Channel	11.2(4)F	-	-	-	-	-
Virtual Templates for Protocol Translation	11.2(4)F	-	-	X	X	-
X.28 Emulation	11.2(4)F	-	-	X	X	-
PAD Enhancements	11.2(4)F	-	-	X	X	-
IPX Named Access Lists	11.2(4)F	-	X	X	X	X
IPX: SAP after RIP	11.2(4)F	-	X	X	X	X
NLSP Enhancements	11.2(4)F	-	-	X	X	-
IPeXchange	11.2(4)F	-	-	-	-	-
TCP Intercept	11.2(4)F	-	-	X	X	-
EIGRP Route Authentication	11.2(4)F	X	X	X	X	X

Table 7 Standard Feature Sets for 7500 and RSP7000

Feature	Initial Release	IP	Desktop/ IBM	Enterprise	Enterprise/ APPN	Encryption 40	Encryption 56
Kerberized Telnet	11.2(1)F	-	-	X with Encr 56	-	-	X with Ent.
AppleTalk ACL Enhancements	11.2(3)F	-	X	X	X	-	-
Frame Relay MIB Extensions	11.2(3)F	X	X	X	X	-	-
Leased Line ISDN at 128 Kbps	11.2(3)F	-	-	-	-	-	-
L2F Fast Switching	11.2(3)F	-	-	-	-	-	-
Polled Async Tunneling	11.2(3)F	X	X	X	X	-	-

Table 7 Standard Feature Sets for 7500 and RSP7000

Per-User Configuration	11.2(4)F	X	X	X	X	-	-
Virtual Profiles	11.2(4)F	X	X	X	X	-	-
PPP over ATM	11.2(4)F	X	X	X	X	-	-
X.25 on ISDN D-Channel	11.2(4)F	-	-	-	-	-	-
Virtual Templates for Protocol Translation	11.2(4)F	-	-	X	X	-	-
X.28 Emulation	11.2(4)F	-	-	X	X	-	-
PAD Enhancements	11.2(4)F	-	-	X	X	-	-
IPX Named Access Lists	11.2(4)F	-	X	X	X	-	-
IPX: SAP after RIP	11.2(4)F	-	X	X	X	-	-
NLSP Enhancements	11.2(4)F	-	-	X	X	-	-
IPeXchange	11.2(4)F	-	-	-	-	-	-
TCP Intercept	11.2(4)F	-	-	X	X	-	-
EIGRP Route Authentication	11.2(4)F	X	X	X	X	-	-

Table 8 Standard Feature Sets for 7200

Feature	Initial Release	IP	Desktop/ IBM	Enterprise	Enterprise/ APPN
Kerberized Telnet	11.2(1)F	-	-	-	-
AppleTalk ACL Enhancements	11.2(3)F	-	X	X	X
Frame Relay MIB Extensions	11.2(3)F	X	X	X	X
Leased Line ISDN at 128 Kbps	11.2(3)F	-	-	-	-
L2F Fast Switching	11.2(3)F	-	-	-	-
Polled Async Tunneling	11.2(3)F	X	X	X	X
Per-User Configuration	11.2(4)F	X	X	X	X
Virtual Profiles	11.2(4)F	X	X	X	X
PPP over ATM	11.2(4)F	-	-	-	-
X.25 on ISDN D-Channel	11.2(4)F	-	-	-	-
Virtual Templates for Protocol Translation	11.2(4)F	-	-	X	X
X.28 Emulation	11.2(4)F	-	-	X	X
PAD Enhancements	11.2(4)F	-	-	X	X
IPX Named Access Lists	11.2(4)F	-	X	X	X

Table 8 Standard Feature Sets for 7200

IPX: SAP after RIP	11.2(4)F	-	X	X	X
NLSP Enhancements	11.2(4)F	-	-	X	X
IPeXchange	11.2(4)F	-	-	-	-
TCP Intercept	11.2(4)F	-	-	X	X
EIGRP Route Authentication	11.2(4)F	X	X	X	X

Table 9 Special Feature Sets for the 7200, 7500 and RSP7000

Feature	Initial Release	DeskTop/ IBM/APPN	Layer 3 Switching ¹
Kerberized Telnet	11.2(1)F	-	-
AppleTalk ACL Enhancements	11.2(3)F	X	-
Frame Relay MIB Extensions	11.2(3)F	X	X
Leased Line ISDN at 128 Kbps	11.2(3)F	-	-
L2F Fast Switching	11.2(3)F	-	-
Polled Async Tunneling	11.2(3)F	X	X
Per-User Configuration	11.2(4)F	X	X
Virtual Profiles	11.2(4)F	X	X
PPP over ATM	11.2(4)F	X	-
X.25 on ISDN D-Channel	11.2(4)F	-	-
Virtual Templates for Protocol Translation	11.2(4)F	-	-
X.28 Emulation	11.2(4)F	-	-
PAD Enhancements	11.2(4)F	-	-
IPX Named Access Lists	11.2(4)F	X	X
IPX: SAP after RIP	11.2(4)F	X	X
NLSP Enhancements	11.2(4)F	-	-
IPeXchange	11.2(4)F	-	-
TCP Intercept	11.2(4)F	-	-
EIGRP Route Authentication	11.2(4)F	X	X

^{1.} Layer 3 Switching is supported on the 7200 series, only.

Table 10 Memory Requirements for Feature Sets Introduced in 11.2 F

Platform	Feature Set	Image	11.2 Flash Req't	11.2 DRAM Req't
2500 Series	IP/IPX/AT/DEC IPeXchange	c2500-de-l	8MB	16MB

Table 10 Memory Requirements for Feature Sets Introduced in 11.2 F

Platform	Feature Set	Image	11.2 Flash Req't	11.2 DRAM Req't
2500 Series	IP/IPX/AT/DEC IPeXchange Plus	c2500-des-l	8MB	16MB
2500 Series	IP/IPX/AT/DEC IPeXchange Plus 40	c2500-des40-l	8MB	16MB
2500 Series	IP/IPX/AT/DEC IPeXchange Plus 56	c2500-des56-l	8MB	16MB



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