Cisco IOS AppleTalk Commands

AppleTalk is a LAN system designed and developed by Apple Computer, Inc. It runs over Ethernet, Token Ring, and FDDI networks, in addition to LocalTalk, Apple's proprietary twisted-pair media access system. AppleTalk specifies a protocol stack comprising several protocols that direct the flow of traffic over the network.

Apple Computer uses the name *AppleTalk* to refer to the Apple networking architecture. Apple refers to the actual transmission media used in an AppleTalk network as LocalTalk (Apple's proprietary twisted-pair transmission medium for AppleTalk), TokenTalk (AppleTalk over Token Ring), EtherTalk (AppleTalk over Ethernet), and FDDITalk (AppleTalk over FDDI).

Use the commands in this book to configure and monitor AppleTalk networks. For AppleTalk configuration information and examples, see the *Cisco IOS AppleTalk Configuration Guide*.

access-list additional-zones

Note Effective with Cisco IOS Release 15.0(1)M, the **access-list additional-zones** command is not available in Cisco IOS software.

To define the default action to take for access checks that apply to zones, use the **access-list additional-zones** command in global configuration mode. To remove an access list, use the **no** form of this command.

access-list *access-list-number* {**deny** | **permit**} **additional-zones**

no access-list *access-list-number* **additional-zones**

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.
deny	Denies access if the conditions are matched.
permit	Permits access if the conditions are matched.

Defaults

No access lists are predefined.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The **access-list additional-zones** command defines the action to take for access checks not explicitly defined with the **access-list zone** command. If you do not specify this command, the default action is to deny other access.

You apply access lists defined with the **access-list additional-zones** command to outgoing routing updates and GetZoneList (GZL) filters (using the **appletalk distribute-list out**, and **appletalk getzonelist-filter** commands). You cannot apply them to data-packet filters (using the **appletalk access-group** command) or to incoming routing update filters (using the **appletalk distribute-list in** command).

Examples

The following example creates an access list based on AppleTalk zones:

```
access-list 610 deny zone Twilight
access-list 610 permit additional-zones
```

Related Commands

Command	Description
access-list cable-range	Defines an AppleTalk access list for a cable range (for extended networks only).
access-list includes	Defines an AppleTalk access list that overlaps any part of a range of network numbers or cable ranges (for both extended and nonextended networks).
access-list nbp	Defines an AppleTalk access list entry for a particular NBP named entity, class of NBP named entities, NBP packet type, or NBP named entities belonging to a specific zone.
access-list network	Defines an AppleTalk access list for a single network number (that is, for a nonextended network).
access-list other-access	Defines the default action to take for subsequent access checks that apply to networks or cable ranges.
access-list other-nbps	Defines the default action to take for access checks that apply to NBP packets from named entities not otherwise explicitly denied or permitted.
access-list within	Defines an AppleTalk access list for an extended or a nonextended network whose network number or cable range is included entirely within the specified cable range.
access-list zone	Defines an AppleTalk access list that applies to a zone.
appletalk access-group	Assigns an access list to an interface.
appletalk distribute-list in	Filters routing updates received from other routers over a specified interface.
appletalk distribute-list out	Filters routing updates sent to other routers.
appletalk getzonelist-filter	Filters GZL replies.
appletalk permit-partial-zones	Permits access to the other networks in a zone when access to one of those networks is denied.

access-list cable-range

Note Effective with Cisco IOS Release 15.0(1)M, the **access-list cable-range** command is not available in Cisco IOS software.

To define an AppleTalk access list for a cable range (for extended networks only), use the **access-list cable-range** command in global configuration mode. To remove an access list, use the **no** form of this command.

access-list *access-list-number* {**deny** | **permit**} **cable-range** *cable-range* [**broadcast-deny** | **broadcast-permit**]

no access-list *access-list-number* [{**deny** | **permit**} **cable-range** *cable-range* [**broadcast-deny** | **broadcast-permit**]]

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.
deny	Denies access if the conditions are matched.
permit	Permits access if the conditions are matched.
cable-range	Cable range value. The argument specifies the start and end of the cable range, separated by a hyphen. These values are decimal numbers from 1 to 65279. The starting network number must be less than or equal to the ending network number.
broadcast-deny	(Optional) Denies access to broadcast packets if the conditions are matched.
broadcast-permit	(Optional) Permits access to broadcast packets if the conditions are met.

Defaults

No access lists are predefined.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

When used as a routing update filter, the **access-list cable-range** command affects matching on extended networks only. The conditions defined by this access list are used only when a cable range in a routing update exactly matches that specified in the **access-list cable-range** command. The conditions are never used to match a network number (for a nonextended network).

When used as a data-packet filter, the **access-list cable-range** command affects matching on any type of network number. The conditions defined by this access list are used only when the packet's source network lies in the range defined by the access list.

You apply access lists defined with the **access-list cable-range** command to data-packet and routing-update filters (using the **appletalk access-group**, **appletalk distribute-list in**, and **appletalk distribute-list out** commands). You cannot apply them to GZL filters (using the **appletalk getzonelist-filter** command).

To delete an access list, specify the minimum number of keywords and arguments needed to delete the proper access list. For example, to delete the entire access list, use the following command:

no **access-list** *access-list-number*

To delete the access list for a specific network, use the following command:

no **access-list** *access-list-number* {**deny** | **permit**} **cable-range** *cable-range*

Priority queuing for AppleTalk operates on the destination network number, not the source network number.

Examples

The following access list forwards all packets except those from cable range 10 to 20:

```
access-list 600 deny cable-range 10-20
access-list 600 permit other-access
```

Related Commands

Command	Description
access-list additional-zones	Defines the default action to take for access checks that apply to zones.
access-list includes	Defines an AppleTalk access list that overlaps any part of a range of network numbers or cable ranges (for both extended and nonextended networks).
access-list nbp	Defines an AppleTalk access list entry for a particular NBP named entity, class of NBP named entities, NBP packet type, or NBP named entities belonging to a specific zone.
access-list network	Defines an AppleTalk access list for a single network number (that is, for a nonextended network).
access-list other-access	Defines the default action to take for subsequent access checks that apply to networks or cable ranges.
access-list other-nbps	Defines the default action to take for access checks that apply to NBP packets from named entities not otherwise explicitly denied or permitted.
access-list within	Defines an AppleTalk access list for an extended or a nonextended network whose network number or cable range is included entirely within the specified cable range.
access-list zone	Defines an AppleTalk access list that applies to a zone.
appletalk access-group	Assigns an access list to an interface.
appletalk distribute-list in	Filters routing updates received from other routers over a specified interface.
appletalk distribute-list out	Filters routing updates sent to other routers.
appletalk getzonelist-filter	Filters GZL replies.
priority-list protocol	Establishes queueing priorities based on the protocol type.

access-list includes

Note Effective with Cisco IOS Release 15.0(1)M, the **access-list includes** command is not available in Cisco IOS software.

To define an AppleTalk access list that overlaps any part of a range of network numbers or cable ranges (for both extended and nonextended networks), use the **access-list includes** command in global configuration mode. To remove an access list, use the **no** form of this command.

access-list *access-list-number* {**deny** | **permit**} **includes** *cable-range* [**broadcast-deny** | **broadcast-permit**]

no access-list *access-list-number* {**deny** | **permit**} **includes** *cable-range* [**broadcast-deny** | **broadcast-permit**]]

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.
deny	Denies access if the conditions are matched.
permit	Permits access if the conditions are matched.
cable-range	Cable range or network number. The argument specifies the start and end of the cable range, separated by a hyphen. These values are decimal numbers from 1 to 65279. The starting network number must be less than or equal to the ending network number. To specify a network number, set the starting and ending network numbers to the same value.
broadcast-deny	(Optional) Denies access to broadcast packets if the conditions are matched.
broadcast-permit	(Optional) Permits access to broadcast packets if the conditions are met.

Defaults

No access lists are predefined.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

When used as a routing update filter, the **access-list includes** command affects matching on extended and nonextended AppleTalk networks. The conditions defined by this access list are used when a cable range or network number overlaps, either partially or completely, one (or more) of those specified in the **access-list includes** command.

When used as a data-packet filter, the conditions defined by this access list are used when the packet's source network lies in the range defined in the **access-list includes** command.

You apply access lists defined with the **access-list includes** command to data-packet and routing-update filters (using the **appletalk access-group, appletalk distribute-list in**, and **appletalk distribute-list out** commands). You cannot apply them to GZL filters (using the **appletalk getzonelist-filter** command).

To delete an access list, specify the minimum number of keywords and arguments needed to delete the proper access list. For example, to delete the entire access list, use the following command:

no access-list *access-list-number*

To delete the access list for a specific network, use the following command:

no access-list *access-list-number* {**deny** | **permit**} **includes** *cable-range*

Priority queuing for AppleTalk operates on the destination network number, not the source network number.

Examples

The following example defines an access list that permits access to any network or cable range that overlaps any part of the range 10 to 20. This means, for example, that cable ranges 13 to 16 and 17 to 25 will be permitted. This access list also permits all other ranges.

```
access-list 600 permit includes 10-20
access-list 600 permit other-access
```

Related Commands

Command	Description
access-list additional-zones	Defines the default action to take for access checks that apply to zones.
access-list cable-range	Defines an AppleTalk access list for a cable range (for extended networks only).
access-list nbp	Defines an AppleTalk access list entry for a particular NBP named entity, class of NBP named entities, NBP packet type, or NBP named entities belonging to a specific zone.
access-list network	Defines an AppleTalk access list for a single network number (that is, for a nonextended network).
access-list other-access	Defines the default action to take for subsequent access checks that apply to networks or cable ranges.
access-list other-nbps	Defines the default action to take for access checks that apply to NBP packets from named entities not otherwise explicitly denied or permitted.
access-list within	Defines an AppleTalk access list for an extended or a nonextended network whose network number or cable range is included entirely within the specified cable range.
access-list zone	Defines an AppleTalk access list that applies to a zone.

Command	Description
appletalk access-group	Assigns an access list to an interface.
appletalk distribute-list in	Filters routing updates received from other routers over a specified interface.
appletalk distribute-list out	Filters routing updates sent to other routers.
appletalk getzonelist-filter	Filters GZL replies.
priority-list protocol	Establishes queueing priorities based on the protocol type.

access-list nbp

Note Effective with Cisco IOS Release 15.0(1)M, the **access-list nbp** command is not available in Cisco IOS software.

To define an AppleTalk access list entry for a particular Name Binding Protocol (NBP) named entity, class of NBP named entities, NBP packet type, or NBP named entities that belong to a specific zone, use the **access-list nbp** command in global configuration mode. To remove an NBP access list entry from the access list, use the **no** form of this command.

access-list *access-list-number* {**deny** | **permit**} **nbp** *sequence-number* {**BrRq** | **FwdRq** | **Lookup** | **LkReply** | **object** *string* | **type** *string* | **zone** *string*}

no access-list *access-list-number* {**deny** | **permit**} **nbp** *sequence-number* {**BrRq** | **FwdRq** | **Lookup** | **LkReply** | **object** *string* | **type** *string* | **zone** *string*}

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.
deny	Denies access if conditions are matched.
permit	Permits access if conditions are matched.
sequence-number	Number used to tie together two or three portions of an NBP name tuple and to keep track of the number of **access-list nbp** entries in an access list. Each command entry must have a sequence number.
BrRq	Broadcast Request packet type.
FwdRq	Forward Request packet type.
Lookup	Lookup packet type.
LkReply	Lookup Reply packet type.
object	Characterizes *string* as the portion of an NBP name that identifies a particular **object** or named entity.
string	Portion of an NBP name identifying the **object**, **type**, or **zone** of a named entity. The name string can be up to 32 characters long, and it can include special characters from the Apple Macintosh character set. To include a special character, type a colon followed by two hexadecimal characters. For an NBP name with a leading space, enter the first character as the special sequence :20.
type	Characterizes *string* as the portion of an NBP name that identifies a category or **type** of named entity.
zone	Characterizes *string* as the portion of an NBP name that identifies an AppleTalk **zone**.

Defaults

No particular access list entry for an NBP named entity is defined, and the default filtering specified by the **access-list other-nbps** command takes effect.

Command Modes

Global configuration

Command History

Release	Modification
11.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The **access-list nbp** command defines the action to take for filtering NBP packets from a particular **object** (particular named entity), **type** (class of named entities), or **zone** (AppleTalk zone in which named entities reside), or for a particular NBP packet type, superseding the default action for NBP packets from all named entities specified by the **access-list other-nbps** command. For each command that you enter, you must specify a sequence number.

The sequence number serves two purposes:

- Its principal purpose is to allow you to associate two or three portions of an NBP three-part name, referred to as an NBP tuple. To do this, you enter two or three commands having the same sequence number but each specifying a different keyword and NBP name portion: **object**, **type**, or **zone**. The same sequence number binds them together. This provides you with the ability to restrict forwarding of NBP packets at any level, down to a single named entity.
- Its second purpose is to allow you to keep track of the number of **access-list nbp** entries you have made. You must enter a sequence number even if you do not use it to associate portions of an NBP name.

Examples

The following example adds entries to access list number 607 to allow forwarding of NBP packets from specific sources and deny forwarding of NBP packets from all other sources. The first command adds an entry that allows NBP packets from all printers of type LaserWriter. The second command adds an entry that allows NBP packets from all AppleTalk file servers of type AFPServer. The third command adds an entry that allows NBP packets from all applications called HotShotPaint. For example, there might be an application with a **zone** name of Accounting and an application with a **zone** name of engineering, both having the object name of HotShotPaint. NBP packets forwarded from both applications will be allowed.

The **access-list other-nbps** command denies forwarding of NBP packets from all other sources.

```
access-list 607 permit nbp 1 type LaserWriter
access-list 607 permit nbp 2 type AFPServer
access-list 607 permit nbp 3 object HotShotPaint
access-list 607 deny other-nbps
access-list 607 permit other-access
```

The following example adds entries to access list number 608 to deny forwarding of NBP packets from two specific servers whose fully qualified NBP names are specified. It permits forwarding of NBP packets from all other sources.

```
access-list 608 deny nbp 1 object ServerA
access-list 608 deny nbp 1 type AFPServer
access-list 608 deny nbp 1 zone Bld3
access-list 608 deny nbp 2 object ServerB
access-list 608 deny nbp 2 type AFPServer
access-list 608 deny nbp 2 zone Bld3
access-list 608 permit other-nbps
access-list 608 permit other-access
```

The following example denies forwarding of NBP Lookup Reply packets for all named entities. It permits forwarding of other NBP packet types from all other sources.

```
access-list 600 deny nbp 1 LkReply
access-list 600 permit other-nbps
access-list 600 permit other-access
```

The following example creates an access list that denies forwarding of these packets:

- All NBP Lookup Reply packets
- NBP packets from the server named Bob's Server
- Packets from all AppleTalk file servers of type AFPServer
- All NBP Lookup Reply packets that contain the specified named entities belonging to the zone *twilight*

```
access-list 600 deny nbp 1 LkReply
access-list 600 deny nbp 1 object Bob's Server
access-list 600 deny nbp 1 type AFPServer
access-list 600 deny nbp 1 zone twilight
access-list 600 permit other-nbps
access-list 600 permit other-access
```

Related Commands

Command	Description
access-list additional-zones	Defines the default action to take for access checks that apply to zones.
access-list cable-range	Defines an AppleTalk access list for a cable range (for extended networks only).
access-list includes	Defines an AppleTalk access list that overlaps any part of a range of network numbers or cable ranges (for both extended and nonextended networks).
access-list network	Defines an AppleTalk access list for a single network number (that is, for a nonextended network).
access-list other-access	Defines the default action to take for subsequent access checks that apply to networks or cable ranges.
access-list other-nbps	Defines the default action to take for access checks that apply to NBP packets from named entities not otherwise explicitly denied or permitted.
access-list within	Defines an AppleTalk access list for an extended or a nonextended network whose network number or cable range is included entirely within the specified cable range.
access-list zone	Defines an AppleTalk access list that applies to a zone.
appletalk access-group	Assigns an access list to an interface.
appletalk distribute-list in	Filters routing updates received from other routers over a specified interface.
appletalk distribute-list out	Filters routing updates sent to other routers.
appletalk getzonelist-filter	Filters GZL replies.
priority-list protocol	Establishes queueing priorities based on the protocol type.

access-list network

Note Effective with Cisco IOS Release 15.0(1)M, the **access-list network** command is not available in Cisco IOS software.

To define an AppleTalk access list for a single network number (that is, for a nonextended network), use the **access-list network** command in global configuration mode. To remove an access list, use the **no** form of this command.

access-list *access-list-number* {**deny** | **permit**} **network** *network*
[**broadcast-deny** | **broadcast-permit**]

no access-list *access-list-number* {**deny** | **permit**} **network** *network*
[**broadcast-deny** | **broadcast-permit**]]

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.
deny	Denies access if the conditions are matched.
permit	Permits access if the conditions are matched.
network	AppleTalk network number.
broadcast-deny	(Optional) Denies access to broadcast packets if the conditions are matched.
broadcast-permit	(Optional) Permits access to broadcast packets if the conditions are met.

Defaults

No access lists are predefined.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

When used as a routing-update filter, the **access-list network** command affects matching on nonextended networks only. The conditions defined by this access list are used only when the nonextended number in a routing update matches a network number specified in one of the **access-list network** commands. The conditions are never used to match a cable range (for an extended network) even if the cable range has the same starting and ending number.

When used as a data-packet filter, the conditions defined by this access list are used only when the packet's source network matches the network number specified in the **access-list network** command.

You apply access lists defined with the **access-list network** command to data-packet and routing-update filters (using the **appletalk access-group, appletalk distribute-list in**, and **appletalk distribute-list out** commands). You cannot apply access lists to GZL filters (using the **appletalk getzonelist-filter** command).

In software releases before 9.0, the syntax of this command was **access-list** *access-list-number* {**deny** | **permit**} *network*. The current version of the software is still able to interpret commands in this format if it finds them in a configuration or boot file. However, it is recommended that you update the commands in your configuration or boot files to match the current syntax.

Use the **no access-list** command with the *access-list-number* argument only to remove an entire access list from the configuration. Specify the optional arguments to remove a particular clause.

To delete an access list, specify the minimum number of keywords and arguments needed to delete the proper access list. For example, to delete the entire access list, use the following command:

no access-list *access-list-number*

To delete the access list for a specific network, use the following command:

no access-list *access-list-number* {**deny** | **permit**} **network** *network*

Priority queuing for AppleTalk operates on the destination network number, not the source network number.

Examples

The following example defines an access list that forwards all packets except those destined for networks 1 and 2:

```
access-list 650 deny network 1
access-list 650 deny network 2
access-list 650 permit other-access
```

Related Commands

Command	Description
access-list additional-zones	Defines the default action to take for access checks that apply to zones.
access-list cable-range	Defines an AppleTalk access list for a cable range (for extended networks only).
access-list includes	Defines an AppleTalk access list that overlaps any part of a range of network numbers or cable ranges (for both extended and nonextended networks).
access-list nbp	Defines an AppleTalk access list entry for a particular NBP named entity, class of NBP named entities, NBP packet type, or NBP named entities belonging to a specific zone.
access-list other-access	Defines the default action to take for subsequent access checks that apply to networks or cable ranges.
access-list other-nbps	Defines the default action to take for access checks that apply to NBP packets from named entities not otherwise explicitly denied or permitted.

Command	Description
access-list within	Defines an AppleTalk access list for an extended or a nonextended network whose network number or cable range is included entirely within the specified cable range.
access-list zone	Defines an AppleTalk access list that applies to a zone.
appletalk access-group	Assigns an access list to an interface.
appletalk distribute-list in	Filters routing updates received from other routers over a specified interface.
appletalk distribute-list out	Filters routing updates sent to other routers.
appletalk getzonelist-filter	Filters GZL replies.
priority-list protocol	Establishes queueing priorities based on the protocol type.

access-list other-access

Note Effective with Cisco IOS Release 15.0(1)M, the **access-list other-access** command is not available in Cisco IOS software.

To define the default action to take for subsequent access checks that apply to networks or cable ranges, use the **access-list other-access** command in global configuration mode. To remove an access list, use the **no** form of this command.

access-list *access-list-number* {**deny** | **permit**} **other-access**

no access-list *access-list-number* **other-access**

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.
deny	Denies access if the conditions are matched.
permit	Permits access if the conditions are matched.

Defaults

No access lists are predefined.

Command Modes

Global configuration

Command History

Release	Modification
11.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The **access-list other-access** command defines the action to take for access checks not explicitly defined with an **access-list network, access-list cable-range, access-list includes,** or **access-list within** command. If you do not specify this command, the default action is to deny other access.

You apply access lists defined with the **access-list other-access** command to data-packet and routing-update filters (using the **appletalk access-group, appletalk distribute-list in**, and **appletalk distribute-list out** commands). You cannot apply them to GZL filters (using the **appletalk getzonelist-filter** command).

In software releases before 9.0, the syntax of this command was **access-list** *access-list-number* {**deny** | **permit**} **-1**. The current version of the software is still able to interpret commands in this format if it finds them in a configuration or boot file. However, it is recommended that you update the commands in your configuration or boot files to match the current syntax.

Priority queuing for AppleTalk operates on the destination network number, not the source network number.

The following example defines an access list that forwards all packets except those destined for networks 1 and 2:

```
access-list 650 deny network 1
access-list 650 deny network 2
access-list 650 permit other-access
```

Related Commands

Command	Description
access-list additional-zones	Defines the default action to take for access checks that apply to zones.
access-list cable-range	Defines an AppleTalk access list for a cable range (for extended networks only).
access-list includes	Defines an AppleTalk access list that overlaps any part of a range of network numbers or cable ranges (for both extended and nonextended networks).
access-list nbp	Defines an AppleTalk access list entry for a particular NBP named entity, class of NBP named entities, NBP packet type, or NBP named entities belonging to a specific zone.
access-list network	Defines an AppleTalk access list for a single network number (that is, for a nonextended network).
access-list other-nbps	Defines the default action to take for access checks that apply to NBP packets from named entities not otherwise explicitly denied or permitted.
access-list within	Defines an AppleTalk access list for an extended or a nonextended network whose network number or cable range is included entirely within the specified cable range.
access-list zone	Defines an AppleTalk access list that applies to a zone.
appletalk access-group	Assigns an access list to an interface.
appletalk distribute-list in	Filters routing updates received from other routers over a specified interface.
appletalk distribute-list out	Filters routing updates sent to other routers.
priority-list protocol	Establishes queueing priorities based on the protocol type.

access-list other-nbps

Note Effective with Cisco IOS Release 15.0(1)M, the **access-list other-nbps** command is not available in Cisco IOS software.

To define the default action to take for access checks that apply to Name Binding Protocol (NBP) packets from named entities not otherwise explicitly denied or permitted, use the **access-list other-nbps** command in global configuration mode. To remove an access list, use the **no** form of this command.

access-list *access-list-number* {**deny** | **permit**} **other-nbps**

no access-list *access-list-number* {**deny** | **permit**} **other-nbps**

Syntax Description

access-list-number	Number of the access list for AppleTalk. This is a decimal number from 600 to 699.
deny	Denies access if conditions are matched.
permit	Permits access if conditions are matched.

Defaults

Access is denied.

Command Modes

Global configuration

Command History

Release	Modification
11.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The **access-list other-nbps** command defines the action to take for filtering of NBP packets from named entities not explicitly defined by an **access-list nbp** command. It allows you to implement the default AppleTalk network security state at the named entity level. Any **access-list nbp** commands you enter affect a particular named entity object, class of named entities, or all named entities within a zone. This command sets the security state for all other NBP named entities. If you do not specify this command, the default action is to deny access.

You can use this command to create an entry in an access list before or after you issue **access-list nbp** commands. The order of the command in the access list is irrelevant.

Examples

The following example permits forwarding of all NBP packets from all sources except AppleTalk file servers of type AFPServer:

```
access-list 607 deny nbp 2 type AFPServer
access-list 607 permit other-nbps
```

Related Commands

Command	Description
access-list additional-zones	Defines the default action to take for access checks that apply to zones.
access-list cable-range	Defines an AppleTalk access list for a cable range (for extended networks only).
access-list includes	Defines an AppleTalk access list that overlaps any part of a range of network numbers or cable ranges (for both extended and nonextended networks).
access-list nbp	Defines an AppleTalk access list entry for a particular NBP named entity, class of NBP named entities, NBP packet type, or NBP named entities belonging to a specific zone.
access-list network	Defines an AppleTalk access list for a single network number (that is, for a nonextended network).
access-list other-access	Defines the default action to take for subsequent access checks that apply to networks or cable ranges.
access-list within	Defines an AppleTalk access list for an extended or a nonextended network whose network number or cable range is included entirely within the specified cable range.
access-list zone	Defines an AppleTalk access list that applies to a zone.
appletalk access-group	Assigns an access list to an interface.
appletalk distribute-list in	Filters routing updates received from other routers over a specified interface.
appletalk distribute-list out	Filters routing updates sent to other routers.
appletalk getzonelist-filter	Filters GZL replies.
priority-list protocol	Establishes queueing priorities based on the protocol type.

access-list within

Note Effective with Cisco IOS Release 15.0(1)M, the **access-list within** command is not available in Cisco IOS software.

To define an AppleTalk access list for an extended or a nonextended network whose network number or cable range is included entirely within the specified cable range, use the **access-list within** command in global configuration mode. To remove this access list, use the **no** form of this command.

access-list *access-list-number* {**deny** | **permit**} **within** *cable-range*

no access-list *access-list-number* [{**deny** | **permit**} **within** *cable-range*]

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.
deny	Denies access if the conditions are matched.
permit	Permits access if the conditions are matched.
cable-range	Cable range or network number. The argument specifies the start and end of the cable range, separated by a hyphen. These values are decimal numbers from 1 to 65279. The starting network number must be less than or equal to the ending network number. To specify a network number, set the starting and ending network numbers to the same value.

Defaults

No access lists are predefined.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

When used as a routing update filter, the **access-list within** command affects matching on extended and nonextended AppleTalk networks. The conditions defined by this access list are used when a cable range or network number overlaps, either partially or completely, one (or more) of those specified in the **access-list within** command.

When used as a data-packet filter, the conditions defined by this access list are used when the packet's source network lies in the range defined in the **access-list within** command.

You apply access lists defined with the **access-list within** command to data-packet and routing-update (using the **appletalk access-group, appletalk distribute-list in**, and **appletalk distribute-list out**). You cannot apply them to GZL filters (using the **appletalk getzonelist-filter** command).

To delete an access list, specify the minimum number of keywords and arguments needed to delete the proper access list. For example, to delete the entire access list, use the following command:

no access-list *access-list-number*

To delete the access list for a specific network, use the following command:

no access-list *access-list-number* {**deny** | **permit**} **within** *cable-range*

Priority queuing for AppleTalk operates on the destination network number, not the source network number.

Examples

The following example defines an access list that permits access to any network or cable range that is completely included in the range 10 to 20. This means, for example, that cable range 13 to 16 will be permitted, but cable range 17 to 25 will not be. The second line of the access list permits all other packets.

```
access-list 600 permit within 10-20
access-list 600 permit other-access
```

Related Commands

Command	Description
access-list additional-zones	Defines the default action to take for access checks that apply to zones.
access-list cable-range	Defines an AppleTalk access list for a cable range (for extended networks only).
access-list includes	Defines an AppleTalk access list that overlaps any part of a range of network numbers or cable ranges (for both extended and nonextended networks).
access-list nbp	Defines an AppleTalk access list entry for a particular NBP named entity, class of NBP named entities, NBP packet type, or NBP named entities belonging to a specific zone.
access-list network	Defines an AppleTalk access list for a single network number (that is, for a nonextended network).
access-list other-access	Defines the default action to take for subsequent access checks that apply to networks or cable ranges.
access-list other-nbps	Defines the default action to take for access checks that apply to NBP packets from named entities not otherwise explicitly denied or permitted.
access-list zone	Defines an AppleTalk access list that applies to a zone.
appletalk access-group	Assigns an access list to an interface.
appletalk distribute-list in	Filters routing updates received from other routers over a specified interface.
appletalk distribute-list out	Filters routing updates sent to other routers.

Command	Description
appletalk getzonelist-filter	Filters GZL replies.
priority-list protocol	Establishes queueing priorities based on the protocol type.

access-list zone

Note Effective with Cisco IOS Release 15.0(1)M, the **access-list zone** command is not available in Cisco IOS software.

To define an AppleTalk access list that applies to a zone, use the **access-list zone** command in global configuration mode. To remove an access list, use the **no** form of this command.

access-list *access-list-number* {**deny** | **permit**} **zone** *zone-name*

no access-list *access-list-number* [{**deny** | **permit**} **zone** *zone-name*]

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.
deny	Denies access if the conditions are matched.
permit	Permits access if the conditions are matched.
zone-name	Name of the zone. The name can include special characters from the Apple Macintosh character set. To include a special character, type a colon followed by two hexadecimal characters. For zone names with a leading space character, enter the first character as the special sequence :20.

Defaults

No access lists are predefined.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

You apply access lists defined with the **access-list zone** command to outgoing routing update and GZL filters (using the **appletalk distribute-list out** and **appletalk getzonelist-filter** commands). You cannot apply them to data-packet filters (using the **appletalk access-group** command) or to incoming routing update filters (using the **appletalk distribute-list in** command).

To delete an access list, specify the minimum number of keywords and arguments needed to delete the proper access list. For example, to delete the entire access list, use the following command:

no access-list *access-list-number*

To delete the access list for a specific network, use the following command:

no access-list *access-list-number* {**deny** | **permit**} **zone** *zone-name*

Use the **access-list additional-zones** command to define the action to take for access checks not explicitly defined with the **access-list zone** command.

Note AppleTalk zone access lists on an Enhanced Internet Gateway Routing Protocol (Enhance IGRP) interface will not filter the distribution of Enhanced IGRP routes. When the **appletalk distribute-list out** command is applied to an Enhanced IGRP interface, any **access-list zone** commands in the specified access list will be ignored.

Examples

The following example creates an access list based on AppleTalk zones:

```
access-list 610 deny zone Twilight
access-list 610 permit additional-zones
```

Related Commands

Command	Description
access-list additional-zones	Defines the default action to take for access checks that apply to zones.
access-list cable-range	Defines an AppleTalk access list for a cable range (for extended networks only).
access-list includes	Defines an AppleTalk access list that overlaps any part of a range of network numbers or cable ranges (for both extended and nonextended networks).
access-list nbp	Defines an AppleTalk access list entry for a particular NBP named entity, class of NBP named entities, NBP packet type, or NBP named entities belonging to a specific zone.
access-list network	Defines an AppleTalk access list for a single network number (that is, for a nonextended network).
access-list other-access	Defines the default action to take for subsequent access checks that apply to networks or cable ranges.
access-list other-nbps	Defines the default action to take for access checks that apply to NBP packets from named entities not otherwise explicitly denied or permitted.
access-list within	Defines an AppleTalk access list for an extended or a nonextended network whose network number or cable range is included entirely within the specified cable range.
appletalk access-group	Assigns an access list to an interface.
appletalk distribute-list in	Filters routing updates received from other routers over a specified interface.
appletalk distribute-list out	Filters routing updates sent to other routers.
appletalk getzonelist-filter	Filters GZL replies.
appletalk permit-partial-zones	Permits access to the other networks in a zone when access to one of those networks is denied.

appletalk access-group

Note Effective with Cisco IOS Release 15.0(1)M, the **access-list access-group** command is not available in Cisco IOS software.

To assign an access list to an interface, use the **appletalk access-group** command in interface configuration mode. To remove the access list, use the **no** form of this command.

appletalk access-group *access-list-number* [**in** | **out**]

no appletalk access-group *access-list-number*

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.
in	(Optional) Filters on incoming packets.
out	(Optional) Filters on outgoing packets. This is the default direction.

Defaults

No access lists are predefined. The default interface direction is out.

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The **appletalk access-group** command applies data-packet filters or NBP-packet filters to an inbound or outbound interface. These filters check data packets being received or sent on an interface. If the source network of the packets has access denied, these packets are not processed and are discarded.

When you apply a data-packet filter to an interface, you should ensure that all networks or cable ranges within a zone are governed by the same filters.

Examples

The following example applies access list 601 to outbound Ethernet interface 0:

```
access-list 601 deny cable-range 1-10
access-list 601 permit other-access
interface ethernet 0
 appletalk access-group 601
```

The following example applies access list 600 to inbound Ethernet interface 0:

```
interface ethernet 0
 appletalk access-group 600 in
```

Related Commands

Command	Description
access-list cable-range	Defines an AppleTalk access list for a cable range (for extended networks only).
access-list includes	Defines an AppleTalk access list that overlaps any part of a range of network numbers or cable ranges (for both extended and nonextended networks).
access-list network	Defines an AppleTalk access list for a single network number (that is, for a nonextended network).
access-list other-access	Defines the default action to take for subsequent access checks that apply to networks or cable ranges.
access-list within	Defines an AppleTalk access list for an extended or a nonextended network whose network number or cable range is included entirely within the specified cable range.
appletalk distribute-list in	Filters routing updates received from other routers over a specified interface.
appletalk distribute-list out	Filters routing updates sent to other routers.

appletalk address

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk address** command is not available in Cisco IOS software.

To enable nonextended AppleTalk routing on an interface, use the **appletalk address** command in interface configuration mode. To disable nonextended AppleTalk routing, use the **no** form of this command.

appletalk address *network.node*

no appletalk address [*network.node*]

Syntax Description

network.node	AppleTalk network address assigned to the interface. The argument *network* is the 16-bit network number in the range 0 to 65279. The argument *node* is the 8-bit node number in the range 0 to 254. Both numbers are decimal and separated by a period.

Defaults

Disabled

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

You must enable routing on the interface before assigning zone names.

Specifying an address of 0.0, or 0.*node*, places the interface into *discovery mode*. When in this mode, the Cisco IOS software attempts to determine network address information from another router on the network. You also can enable discovery mode with the **appletalk discovery** command. Discovery mode does not run over serial lines.

Examples

The following example enables nonextended AppleTalk routing on Ethernet interface 0:

```
appletalk routing
interface ethernet 0
 appletalk address 1.129
```

Related Commands

Command	Description
access-list cable-range	Defines an AppleTalk access list for a cable range (for extended networks only).
appletalk discovery	Places an interface into discovery mode.
appletalk zone	Sets the zone name for the connected AppleTalk network.

appletalk alternate-addressing

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk alternate-addressing** command is not available in Cisco IOS software.

To display network numbers in a two-octet format, use the **appletalk alternate-addressing** command in global configuration mode. To return to displaying network numbers in the format *network.node*, use the **no** form of this command.

appletalk alternate-addressing

no appletalk alternate-addressing

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The **appletalk alternate-addressing** command displays cable ranges in the alternate format wherever applicable. This format consists of printing the upper and lower bytes of a network number as 8-bit decimal values separated by a decimal point. For example, the cable range 511-512 would be printed as 1.255-2.0.

Examples

The following example enables the display of network numbers in a two-octet format:

```
appletalk alternate-addressing
```

appletalk arp interval

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk arp interval** command is not available in Cisco IOS software.

To specify the time interval between retransmissions of Address Resolution Protocol (ARP) packets, use the **appletalk arp interval** command in global configuration mode. To restore both default intervals, use the **no** form of this command.

appletalk arp [**probe** | **request**] **interval** *interval*

no appletalk arp [**probe** | **request**] **interval** *interval*

Syntax Description

probe	(Optional) Interval to be used with AppleTalk Address Resolution Protocol (AARP) requests that are trying to determine the address of the local router when the Cisco IOS software is being configured. If you omit **probe** and **request**, **probe** is the default.
request	(Optional) Indicates that the interval specified is to be used when AARP is attempting to determine the hardware address of another node so that AARP can deliver a packet.
interval	Interval, in milliseconds, between AARP transmissions. The minimum value is 33 milliseconds. When used with the **probe** keyword, the default interval is 200 milliseconds. When used with the **request** keyword, the default interval is 1000 milliseconds.

Defaults

If you omit the keywords, probe is the default.

probe—200 milliseconds
request—1000 milliseconds

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The time interval you specify takes effect immediately.

Lengthening the interval between AARP transmissions permits responses from devices that respond slowly (such as printers and overloaded file servers) to be received.

AARP uses the **appletalk arp probe interval** value when obtaining the address of the local router. This is done when the Cisco IOS software is being configured. You should not change the default value of this interval unless absolutely necessary, because this value directly modifies the AppleTalk dynamic node assignment algorithm.

AARP uses the **appletalk arp request interval** value when attempting to determine the hardware address of another node so that it can deliver a packet. You can change this interval as desired, although the default value is optimal for most sites.

The **no appletalk arp interval** command restores both the **probe** and **request** intervals specified in the **appletalk arp interval** and **appletalk arp retransmit-count** commands to their default values.

Examples

The following example lengthens the AppleTalk ARP retry interval to 2000 milliseconds:

```
appletalk arp request interval 2000
```

Related Commands

Command	Description
appletalk arp retransmit-count	Specifies the number of ARP probe or request transmissions.
appletalk arp-timeout	Specifies the interval at which entries are aged out of the ARP table.
appletalk glean-packets	Derives ARP table entries from incoming packets.
show appletalk globals	Displays information and settings about the AppleTalk internetwork and other parameters.

appletalk arp retransmit-count

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk arp retransmit-count** command is not available in Cisco IOS software.

To specify the number of AppleTalk Address Resolution Protocol (AARP) probe or request transmissions, use the **appletalk arp retransmit-count** command in global configuration mode. To restore both default values, use the **no** form of this command.

appletalk arp [**probe** | **request**] **retransmit-count** *number*

no appletalk arp [**probe** | **request**] **retransmit-count** *number*

Syntax Description

probe	(Optional) Indicates that the number specified is to be used with AARP requests that are trying to determined the address of the local router when the Cisco IOS software is being configured. If you omit **probe** and **request**, **probe** is the default.
request	(Optional) Indicates that the number specified is to be used when AARP is attempting to determine the hardware address of another node so that AARP can deliver a packet.
number	Number of AARP retransmissions that will occur. The minimum number is 1. When used with the **probe** keyword, the default value is 10 retransmissions. When used with the **request** keyword, the default value is 5 retransmissions. Specifying 0 selects the default value.

Defaults

If you omit the keyword, probe is the default.

probe—10 transmissions
request—5 transmissions

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The value you specify takes effect immediately.

Increasing the number of retransmissions permits responses from devices that respond slowly (such as printers and overloaded file servers) to be received.

AARP uses the **appletalk arp probe retransmit-count** value when obtaining the address of the local router. This is done when the Cisco IOS software is being configured. You should not change the default value unless absolutely necessary, because this value directly modifies the AppleTalk dynamic node assignment algorithm.

AARP uses the **appletalk arp request retransmit-count** value when attempting to determine the hardware address of another node so that it can deliver a packet. You can change this interval as desired, although the default value is optimal for most sites.

The **no appletalk arp interval** command restores both the **probe** and **request** intervals specified in the **appletalk arp interval** and **appletalk arp retransmit-count** commands to their default values.

Examples

The following example specifies an AARP retransmission count of 10 for AARP packets that are requesting the hardware address of another node on the network:

```
appletalk arp request retransmit-count 10
```

Related Commands

Command	Description
appletalk arp interval	Specifies the time interval between retransmissions of ARP packets.
appletalk arp-timeout	Specifies the interval at which entries are aged out of the ARP table.
appletalk glean-packets	Derives ARP table entries from incoming packets.
show appletalk globals	Displays information and settings about the AppleTalk internetwork and other parameters.

appletalk arp-timeout

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk arp-timeout** command is not available in Cisco IOS software.

To specify the interval at which entries are aged out of the Address Resolution Protocol (ARP) table, use the **appletalk arp-timeout** command in interface configuration mode. To return to the default timeout, use the **no** form of this command.

appletalk arp-timeout *interval*

no appletalk arp-timeout *interval*

Syntax Description

interval	Time, in minutes, after which an entry is removed from the AppleTalk ARP table. The default is 240 minutes (4 hours).

Defaults

240 minutes (4 hours)

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Examples

The following example changes the ARP timeout interval on Ethernet interface 0 to 2 hours:

```
interface ethernet 0
appletalk cable-range 2-2
 appletalk arp-timeout 120
```

Related Commands

Command	Description
appletalk arp interval	Specifies the time interval between retransmissions of ARP packets.
appletalk arp retransmit-count	Specifies the number of ARP probe or request transmissions.
appletalk glean-packets	Derives ARP table entries from incoming packets.

appletalk aurp tickle-time

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk aurp tickle-time** command is not available in Cisco IOS software.

To set the Apple Update-Based Routing Protocol (AURP) last-heard-from timer value, use the **appletalk aurp tickle-time** command in interface configuration mode. To return to the default last-heard-from timer value, use the **no** form of this command.

appletalk aurp tickle-time *seconds*

no appletalk aurp tickle-time *seconds*

Syntax Description

seconds	Timeout value, in seconds. This value can be a number from 30 to infinity. The default is 90 seconds.

Defaults

90 seconds

Command Modes

Interface configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

If the tunnel peer has not been heard from within the time specified by the least-heard-from timer value, the Cisco IOS software sends tickle packets to check that the tunnel peer is still up.

You can use this command only on tunnel interfaces.

Examples

The following example changes the AURP last-heard-from timer value on tunnel interface 0 to 120 seconds:

```
interface tunnel 0
 appletalk aurp tickle-time 120
```

Related Commands

Command	Description
show appletalk interface	Displays the status of the AppleTalk interfaces configured in the Cisco IOS software and the parameters configured on each interface.

appletalk aurp update-interval

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk aurp update-interval** command is not available in Cisco IOS software.

To set the minimum interval between Apple Update-Based Routing Protocol (AURP) routing updates, use the **appletalk aurp update-interval** command in interface configuration mode. To return to the default interval, use the **no** form of this command.

appletalk aurp update-interval *seconds*

no appletalk aurp update-interval *seconds*

Syntax Description

seconds	AURP routing update interval, in seconds. This interval must be a multiple of 10. The default is 30 seconds.

Defaults

30 seconds

Command Modes

Interface configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The AURP routing update interval applies only to tunnel interfaces.

Examples

The following example changes the AURP routing update interval on tunnel interface 0 to 40 seconds:

```
interface tunnel 0
 appletalk aurp update-interval 40
```

Related Commands

Command	Description
show appletalk globals	Displays information and settings about the AppleTalk internetwork and other parameters.

appletalk cable-range

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk cable-range** command is not available in Cisco IOS software.

To enable an extended AppleTalk network, use the **appletalk cable-range** command in interface configuration mode. To disable an extended AppleTalk network, use the **no** form of this command.

appletalk cable-range *cable-range* [*network.node*]

no appletalk cable-range *cable-range* [*network.node*]

Syntax Description

cable-range	Cable range value. The argument specifies the start and end of the cable range, separated by a hyphen. These values are decimal numbers from 0 to 65279. The starting network number must be less than or equal to the ending network number.
network.node	(Optional) Suggested AppleTalk address for the interface. The argument *network* is the 16-bit network number, and the argument *node* is the 8-bit node number. Both numbers are decimal and separated by a period. The suggested network number must fall within the specified range of network numbers.

Defaults

Disabled

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

You must enable routing on the interface before assigning zone names.

Specifying a cable range value of 0-0 places the interface into *discovery mode*. When in this mode, the Cisco IOS software attempts to determine cable range information from another router on the network. You can also enable discovery mode with the **appletalk discovery** command. Discovery mode does not run over serial lines.

Examples

The following example assigns a cable range of 3 to 3 to the interface:

```
interface ethernet 0
 appletalk cable-range 3-3
```

Related Commands

Command	Description
appletalk address	Enables nonextended AppleTalk routing on an interface.
appletalk discovery	Places an interface into discovery mode.
appletalk zone	Sets the zone name for the connected AppleTalk network.

appletalk checksum

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk checksum** command is not available in Cisco IOS software.

To enable the generation and verification of checksums for all AppleTalk packets (except routed packets), use the **appletalk checksum** command in global configuration mode. To disable checksum generation and verification, use the **no** form of this command.

appletalk checksum

no appletalk checksum

Syntax Description

This command has no arguments or keywords.

Defaults

Enabled

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

When the **appletalk checksum** command is enabled, the Cisco IOS software discards incoming Datagram Delivery Protocol (DDP) packets when the checksum is not zero and is incorrect, and when the router is the final destination for the packet.

You might want to disable checksum generation and verification if you have very early devices (such as LaserWriter printers) that cannot receive packets that contain checksums.

The Cisco IOS software does not check checksums on routed packets, thereby eliminating the need to disable checksum to allow operation of some networking applications.

Examples

The following example disables the generation and verification of checksums:

```
no appletalk checksum
```

Related Commands

Command	Description
show appletalk globals	Displays information and settings about the AppleTalk internetwork and other parameters.

appletalk client-mode

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk client-mode** command is not available in Cisco IOS software.

To allow users to access an AppleTalk zone when dialing into an asynchronous line (on Cisco routers, only via the auxiliary port) use the **appletalk client-mode** command in interface configuration mode. To disable this function, use the **no** form of this command.

appletalk client-mode

no appletalk client-mode

Syntax Description

This command has no arguments or keywords.

Defaults

Client mode is disabled.

Command Modes

Interface configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The **appletalk client-mode** command allows a remote client to use an asynchronous interface to access AppleTalk zones, use networked peripherals, and share files with other Macintosh users.

This command works only on asynchronous interfaces on which Point-to-Point Protocol (PPP) encapsulation is enabled. Also, you must first create an internal network for the Macintosh client using the **appletalk virtual-net** global configuration command.

An interface configured with the **appletalk client-mode** interface configuration and **appletalk virtual-net** global configuration commands does not support routing.

Examples

The following example allows a user to access AppleTalk functionality on an asynchronous line using PPP:

```
interface asynchronous 1
 appletalk client-mode
```

Related Commands

Command	Description
appletalk virtual-net	Adds AppleTalk users logging in on an asynchronous line and using PPP encapsulation to an internal network.
encapsulation	Sets the encapsulation method used by the interface.
interface	Defines the IP addresses of the server, configures an interface type, and enters interface configuration mode.
ppp	Starts an asynchronous connection using PPP.

appletalk discovery

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk discovery** command is not available in Cisco IOS software.

To place an interface into discovery mode, use the **appletalk discovery** command in interface configuration mode. To disable discovery mode, use the **no** form of this command.

appletalk discovery

no appletalk discovery

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

If an interface is connected to a network that has at least one other operational AppleTalk router, you can dynamically configure the interface using *discovery mode*. In discovery mode, an interface acquires network address information about the attached network from an operational router and then uses this information to configure itself.

If you enable discovery mode on an interface, when the Cisco router starts up, that interface must acquire information to configure itself from another operational router on the attached network. If no operational router is present on the connected network, the interface will not start.

If you do not enable discovery mode, the interface must acquire its configuration from memory when the router starts. If the stored configuration is not complete, the interface will not start. If there is another operational router on the connected network, the router will verify the interface's stored configuration with that router. If there is any discrepancy, the interface will not start. If there are no neighboring operational routers, the router will assume the interface's stored configuration is correct and will start.

Once an interface is operational, it can seed the configurations of other routers on the connected network regardless of whether you have enabled discovery mode on any of the routers.

If you enable **appletalk discovery** and the interface is restarted, another operational router must still be present on the directly connected network in order for the interface to start.

It is not advisable to have all routers on a network configured with discovery mode enabled. If all routers were to restart simultaneously (for instance, after a power failure), the network would become inaccessible until at least one router were restarted with discovery mode disabled.

You can also enable discovery mode by specifying an address of 0.0. in the **appletalk address** command or a cable range of 0-0 in the **appletalk cable-range** command.

Discovery mode is useful when you are changing a network configuration, or when you are adding a router to an existing network.

Discovery mode does not run over serial lines.

Use the **no appletalk discovery** command to disable discovery mode. If the interface is not operational when you issue this command (that is, if you have not issued an **access-list zone** command on the interface), you must configure the zone name next. If the interface is operational when you issue the **no appletalk discovery** command, you can save the current configuration (in running memory) in nonvolatile memory by issuing the **copy running-config startup-config** command. (The **copy running-config startup-config** command replaces the **write memory** command. Refer to the description of the **copy running-config startup-config** command for more information.)

Examples

The following example enables discovery mode on Ethernet interface 0:

```
interface ethernet 0
 appletalk discovery
```

Related Commands

Command	Description
appletalk address	Enables nonextended AppleTalk routing on an interface.
appletalk cable-range	Enables an extended AppleTalk network.
appletalk zone	Sets the zone name for the connected AppleTalk network.
show appletalk interface	Displays the status of the AppleTalk interfaces configured in the Cisco IOS software and the parameters configured on each interface.

appletalk distribute-list in

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk distribute-list in** command is not available in Cisco IOS software.

To filter routing updates received from other routers over a specified interface, use the **appletalk distribute-list in** command in interface configuration mode. To remove the routing table update filter, use the **no** form of this command.

appletalk distribute-list *access-list-number* **in**

no appletalk distribute-list [*access-list-number*] **in**

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.

Defaults

No routing filters are preconfigured.

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The **appletalk distribute-list in** command controls which networks and cable ranges in routing updates will be entered into the local routing table.

Filters for incoming routing updates use access lists that define conditions for networks and cable ranges only. They cannot use access lists that define conditions for zones. All zone information in an access list assigned to the interface with the **appletalk distribute-list in** command is ignored.

An input distribution list filters network numbers received in an incoming routing update. When AppleTalk routing updates are received on the specified interface, each network number and cable range in the update is checked against the access list. Only network numbers and cable ranges that are permitted by the access list are inserted into the Cisco IOS software AppleTalk routing table.

Examples

The following example prevents the router from accepting routing table updates received from network 10 and on Ethernet interface 3:

```
access-list 601 deny network 10
access-list 601 permit other-access
interface ethernet 3
 appletalk distribute-list 601 in
```

Syntax Description

Command	Description
access-list cable-range	Defines an AppleTalk access list for a cable range (for extended networks only).
access-list includes	Defines an AppleTalk access list that overlaps any part of a range of network numbers or cable ranges (for both extended and nonextended networks).
access-list network	Defines an AppleTalk access list for a single network number (that is, for a nonextended network).
access-list other-access	Defines the default action to take for subsequent access checks that apply to networks or cable ranges.
access-list within	Defines an AppleTalk access list for an extended or a nonextended network whose network number or cable range is included entirely within the specified cable range.
appletalk distribute-list out	Filters routing updates sent to other routers.

appletalk distribute-list out

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk distribute-list out** command is not available in Cisco IOS software.

To filter routing updates transmitted to other routers, use the **appletalk distribute-list out** command in interface configuration mode. To remove the routing table update filter, use the **no** form of this command.

appletalk distribute-list *access-list-number* **out**

no appletalk distribute-list [*access-list-number*] **out**

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.

Defaults

No routing filters are preconfigured.

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The **appletalk distribute-list out** command controls which network numbers and cable ranges are included in routing updates and which zones the local router includes in its GetZoneList (GZL) replies.

When an AppleTalk routing update is generated on the specified interface, each network number and cable range in the routing table is checked against the access list. If an undefined access list is used, all network numbers and cable ranges are added to the routing update. Otherwise, if an access list is defined, only network numbers and cable ranges that satisfy the following conditions are added to the routing update:

- The network number or cable range is not explicitly or implicitly denied.
- The network number or cable range is not a member of a zone that is explicitly or implicitly denied.
- If **appletalk permit-partial-zones** is disabled (the default), the network number or cable range is not a member of a zone that is partially obscured.

A zone is considered partially obscured when one or more network numbers or cable ranges that are members of the zone is explicitly or implicitly denied.

When a Zone Information Protocol (ZIP) GZL reply is generated, only zones that satisfy the following conditions are included:

- If **appletalk permit-partial-zones** is enabled, at least one network number or cable range that is a member of the zone is explicitly or implicitly permitted.
- If **appletalk permit-partial-zones** is disabled, all network numbers or cable ranges are explicitly or implicitly permitted.
- The zone is explicitly or implicitly permitted.

Note AppleTalk zone access lists on an Enhanced IGRP interface will not filter the distribution of Enhanced IGRP routes. When the **appletalk distribute-list out** command is applied to an Enhanced IGRP interface, any **access-list zone** commands in the specified access list will be ignored.

Examples

The following example prevents routing updates sent on Ethernet 0 from mentioning any networks in zone Admin:

```
access-list 601 deny zone Admin
access-list 601 permit other-access
interface Ethernet 0
 appletalk distribute-list 601 out
```

Related Commands

Command	Description
access-list additional-zones	Defines the default action to take for access checks that apply to zones.
access-list zone	Defines an AppleTalk access list that applies to a zone.
appletalk distribute-list in	Filters routing updates received from other routers over a specified interface.
appletalk getzonelist-filter	Filters GZL replies.
appletalk permit-partial-zones	Permits access to the other networks in a zone when access to one of those networks is denied.

appletalk domain hop-reduction

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk domain hop-reduction** command is not available in Cisco IOS software.

To reduce the hop-count value in packets that are traveling between segments of a domains, use the **appletalk domain hop-reduction** command in global configuration mode. To disable the reduction of hop-count values, use the **no** form of this command.

appletalk domain *domain-number* **hop-reduction**

no appletalk domain *domain-number* **hop-reduction**

Syntax Description

domain-number	Number of an AppleTalk domain. It can be a decimal integer from 1 to 1,000,000.

Defaults

Reduction of hop-count values is disabled.

Command Modes

Global configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Before you can specify the **appletalk domain hop-reduction** global configuration command, you must have created a domain with that domain number using the **appletalk domain name** global configuration command.

DDP and Routing Table Maintenance Protocol (RTMP) both impose a 15-hop limit when forwarding packets. A packet ages out and is no longer forwarded when its hop count reaches 16. To overcome RTMP's 15-hop limit, the domain router represents all networks accessible to routers on its local network as one hop away. This allows routers to maintain and send routing information about networks beyond the 15-hop limit and achieve full connectivity.

When you enable hop-count reduction, delivery of packets from networks that are farther than 15 hops apart is guaranteed.

When you enable hop-count reduction, the hop count in a packet is set to 1 as it passes from one domain to another. For example, if the hop count was 8 when the packet left one domain, its hop count is 1 when it enters the next segment of the domain.

Examples

The following example enables hop-count reduction for domain number 1:

```
appletalk domain 1 name Delta
appletalk domain 1 hop-reduction
```

Related Commands

Command	Description
appletalk domain name	Creates a domain and assigns it a name and number.
show appletalk domain	Displays all domain-related information.

appletalk domain name

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk domain name** command is not available in Cisco IOS software.

To create a domain and assign it a name and number, use the **appletalk domain name** command in global configuration mode. To remove a domain, use the **no** form of this command.

appletalk domain *domain-number* **name** *domain-name*

no appletalk domain *domain-number* **name** *domain-name*

Syntax Description

domain-number	Number of an AppleTalk domain. It can be a decimal integer from 1 to 1000000.
domain-name	Name of an AppleTalk domain. The name must be unique across the AppleTalk internetwork. It can be up to 32 characters long and can include special characters from the Apple Macintosh character set. To include a special character, type a colon followed by two hexadecimal characters. For zone names with a leading space character, enter the first character as the special sequence :20.

Defaults

No domain is created.

Command Modes

Global configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Examples

The following example creates domain number 1 and assigns it the domain name *Delta*:

```
appletalk domain 1 name Delta
```

Related Commands

Command	Description
appletalk routing	Enables AppleTalk routing.
show appletalk domain	Displays all domain-related information.

appletalk domain remap-range

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk domain remap-range** command is not available in Cisco IOS software.

To remap ranges of AppleTalk network numbers or cable ranges between two segments of a domain, use the **appletalk domain remap-range** command in global configuration mode. To disable remapping, use the **no** form of this command.

appletalk domain *domain-number* **remap-range** {**in** | **out**} *cable-range*

no appletalk domain *domain-number* **remap-range** {**in** | **out**} [*cable-range*]

Syntax Description

domain-number	Number of an AppleTalk domain. It can be a decimal integer from 1 to 1,000,000.
in	Specifies that the remapping is performed on inbound packets (that is, on packets arriving into the local interenterprise network). All network numbers or cable ranges coming from the domain are remapped into the specified range.
out	Specifies that the remapping is performed on outbound packets (that is, on packets exiting from the local interenterprise network). All network numbers or cable ranges going to the domain are remapped into the specified range.
cable-range	Specifies the start and end of the cable range, separated by a hyphen. The starting network must be the first AppleTalk network number or the beginning of the cable range to remap. The number must be immediately followed by a hyphen. The ending network must be the last AppleTalk network number or the end of the cable range to remap.

Defaults

No remapping is performed.

Command Modes

Global configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Before you can specify the **appletalk domain remap-range** command, you must create a domain with that domain number using the **appletalk domain name** global configuration command.

Inbound and outbound packets are relative to the domain router.

Ensure that the domain range you specify does not overlap any network addresses or cable ranges that already exist in the AppleTalk interenterprise network.

Each domain can have two domain mapping ranges to which to remap all incoming or outgoing network numbers or cable ranges. Incoming remapping ranges cannot overlap. However, outbound remapping ranges can overlap.

When an AppleTalk network in a domain becomes inactive, its remapped entry is removed from the remapping table. This frees the space for another network to be remapped.

If there are more remote domains than available remapping range numbers, the Cisco IOS software displays an error message and shuts down domains.

Examples

The following example remaps all network addresses and cable ranges for packets inbound from domain 1 into the address range 1000 to 1999. It also remaps packets inbound from domain 2.

```
appletalk domain 1 name Delta
appletalk domain 2 name Echo
appletalk domain 1 remap-range in 10000-10999
appletalk domain 2 remap-range in 20000-20999
```

Related Commands

Command	Description
appletalk domain name	Creates a domain and assigns it a name and number.
show appletalk remap	Displays domain remapping information.

appletalk domain-group

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk domain-group** command is not available in Cisco IOS software.

To assign a predefined domain number to an interface, use the **appletalk domain-group** command in interface configuration mode. To remove an interface from a domain, use the **no** form of this command.

appletalk domain-group *domain-number*

no appletalk domain-group [*domain-number*]

Syntax Description

domain-number	Number of an AppleTalk domain. It can be a decimal integer from 1 to 1,000,000.

Defaults

No domain number is assigned to the interface.

Command Modes

Interface configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Before you can assign a domain number to an interface, you must create a domain with that domain number using the **appletalk domain name** global configuration command.

One or more interfaces on a router can be members of the same domain. However, a given interface can be in only one domain.

After you assign AppleTalk interenterprise features to an AppleTalk domain, you can attribute those features to a tunnel interface configured for AURP by assigning the AppleTalk domain-group number to the tunnel interface.

Examples

The following example assigns domain group 1 to Ethernet interface 0:

```
interface ethernet 0
 appletalk domain-group 1
```

The following example assigns domain group 1 to tunnel interface 2. Assuming that domain group 1 is configured for AppleTalk interenterprise and that tunnel interface 2 is configured for AURP, any features configured for domain group 1 are ascribed to AURP on tunnel interface 2.

```
interface tunnel 2
 appletalk domain-group 1
```

Related Commands

Command	Description
appletalk domain name	Creates a domain and assigns it a name and number.
show appletalk domain	Displays all domain-related information.

appletalk eigrp active-time

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk eigrp active-time** command is not available in Cisco IOS software.

To specify the length of time for which Enhanced Interior Gateway Routing Protocol (EIGRP) routes can be active, use the **appletalk eigrp active-time** command in global configuration mode. To return to the default value of 1 minute, use the **no** form of the command.

appletalk eigrp active-time {*minutes* | **disabled**}

no appletalk eigrp active-time

Syntax Description

minutes	Enhanced IGRP active state time (in minutes). Valid values are from 1 to 4,294,967,295 minutes.
disabled	Disables the Enhanced IGRP active state time limit. Routes remain active indefinitely.

Defaults

1 minute

Command Modes

Global configuration

Command History

Release	Modification
11.1	This command was introduced.
12.2(13)T	This command is no longer supported in Cisco IOS Mainline releases or in Technology-based (T-train) releases. It might continue to appear in 12.2S-family releases.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The command allows you to configure the length of time that Enhanced IGRP routes can remain active. When a route reaches the active state time limit, the Cisco IOS software logs an error and removes the route from the routing table. You can view the current setting of the Enhance IGRP active state time by using the **show appletalk globals** command.

Examples

The following example shows the current setting of the Enhanced IGRP active state time using the **show appletalk globals** command, changes the setting using the **appletalk eigrp active-time** command, and then displays the changed setting (using the **show appletalk globals** command again):

```
Router# show appletalk globals

AppleTalk global information:
  Internet is incompatible with older, AT Phase1, routers.
  There are 4 routes in the internet.
  There are 7 zones defined.
  Logging of significant AppleTalk events is disabled.
  ZIP resends queries every 10 seconds.
  RTMP updates are sent every 10 seconds.
  RTMP entries are considered BAD after 20 seconds.
  RTMP entries are discarded after 60 seconds.
  AARP probe retransmit count: 10, interval: 200 msec.
  AARP request retransmit count: 5, interval: 1000 msec.
  DDP datagrams will be checksummed.
  RTMP datagrams will be strictly checked.
  RTMP routes may not be propagated without zones.
  Routes will be distributed between routing protocols.
  Routing between local devices on an interface will not be performed.
  EIGRP router id is: 1
  EIGRP maximum active time is 1 minutes
  IPTalk uses the udp base port of 768 (Default).
  Alternate node address format will not be displayed.
  Access control of any networks of a zone hides the zone.
Router#
Router# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)# appletalk eigrp active-time 5
Router(config)# end
Router#

Router# show appletalk globals

AppleTalk global information:
  Internet is incompatible with older, AT Phase1, routers.
  There are 4 routes in the internet.
  There are 7 zones defined.
  Logging of significant AppleTalk events is disabled.
  ZIP resends queries every 10 seconds.
  RTMP updates are sent every 10 seconds.
  RTMP entries are considered BAD after 20 seconds.
  RTMP entries are discarded after 60 seconds.
  AARP probe retransmit count: 10, interval: 200 msec.
  AARP request retransmit count: 5, interval: 1000 msec.
  DDP datagrams will be checksummed.
  RTMP datagrams will be strictly checked.
  RTMP routes may not be propagated without zones.
  Routes will be distributed between routing protocols.
  Routing between local devices on an interface will not be performed.
  EIGRP router id is: 1
  EIGRP maximum active time is 5 minutes
  IPTalk uses the udp base port of 768 (Default).
  Alternate node address format will not be displayed.
  Access control of any networks of a zone hides the zone.
```

Related Commands

Command	Description
show appletalk globals	Displays information and settings about the AppleTalk internetwork and other parameters.

appletalk eigrp log-neighbor-changes

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk eigrp log-neighbor-changes** command is not available in Cisco IOS software.

To enable the logging of changes in Enhanced Interior Gateway Protocol (EIGRP) neighbor adjacencies, use the **appletalk eigrp log-neighbor-changes** command in global configuration mode. To disable this function, use the **no** form of this command.

appletalk eigrp log-neighbor-changes

no appletalk eigrp log-neighbor-changes

Syntax Description

This command has no arguments or keywords.

Defaults

No adjacency changes are logged.

Command Modes

Global configuration

Command History

Release	Modification
11.2	This command was introduced.
12.2(13)T	This command is no longer supported in Cisco IOS Mainline releases or in Technology-based (T-train) releases. It might continue to appear in 12.2S-family releases.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

This command enables the logging of neighbor adjacency changes to monitor the stability of the routing system and to help detect problems. Log messages are of the form:

```
%DUAL-5-NBRCHANGE: AT/EIGRP 1: Neighbor address (interface) is state: reason
```

The arguments have the following meanings:

- *address*—Neighbor address
- *state*—Up or down
- *reason*—Reason for change

Examples

The following configuration will log neighbor changes for AppleTalk Enhanced IGRP:

```
appletalk eigrp log-neighbor-changes
```

Related Commands

Command	Description
appletalk routing	Enables AppleTalk routing.

appletalk eigrp-bandwidth-percentage

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk eigrp-bandwidth-percentage** command is not available in Cisco IOS software.

To configure the percentage of bandwidth that may be used by Enhanced Interior Gateway Routing Protocol (EIGRP) on an interface, use the **appletalk eigrp-bandwidth-percentage** command in interface configuration mode. To restore the default value, use the **no** form of this command.

appletalk eigrp-bandwidth-percentage *router-number percent*

no appletalk eigrp-bandwidth-percentage

Syntax Description

router-number	Router ID.
percent	Percentage of bandwidth that Enhanced IGRP may use.

Defaults

50 percent

Command Modes

Interface configuration

Command History

Release	Modification
11.2	This command was introduced.
12.2(13)T	This command is no longer supported in Cisco IOS Mainline releases or in Technology-based (T-train) releases. It might continue to appear in 12.2S-family releases.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Enhanced IGRP will use up to 50 percent of the bandwidth of a link, as defined by the **bandwidth** interface configuration command. This command may be used if some other fraction of the bandwidth is desired. Note that values greater than 100 percent may be configured; this may be useful if the bandwidth is set artificially low for other reasons.

Examples

The following example allows Enhanced IGRP to use up to 75 percent (42 kbps) of a 56-kbps serial link:

```
interface serial 0
 bandwidth 56
 appletalk eigrp-bandwidth-percentage 1 75
```

Related Commands

Command	Description
appletalk routing	Enables AppleTalk routing.
bandwidth (interface)	Sets a bandwidth value for an interface.

appletalk eigrp-splithorizon

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk eigrp-splithorizon** command is not available in Cisco IOS software.

To enable split horizon, use the **appletalk eigrp-splithorizon** command in interface configuration mode. To disable split horizon, use the **no** form of this command.

appletalk eigrp-splithorizon

no appletalk eigrp-splithorizon

Syntax Description

This command has no arguments or keywords.

Defaults

Enabled

Command Modes

Interface configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(13)T	This command is no longer supported in Cisco IOS Mainline releases or in Technology-based (T-train) releases. It might continue to appear in 12.2S-family releases.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

If you enable split horizon on an interface, AppleTalk Enhanced Interior Gateway Protocol (EIGRP) update and query packets are not sent if this interface is the next hop to that destination. This reduces the number of Enhanced IGRP packets of the network.

Split horizon blocks information about routes from being advertised by a router out any interface from which that information originated. This behavior usually optimizes communication among multiple routers, particularly when links are broken. However, with nonbroadcast networks, such as Frame Relay and Switched Multimegabit Data Service (SMDS), situations can arise for which this behavior is less than ideal. For these situations, you may wish to disable split horizon.

Examples

The following example disables split horizon on serial interface 0:

```
interface serial 0
 no appletalk eigrp-splithorizon
```

appletalk eigrp-timers

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk eigrp-timers** command is not available in Cisco IOS software.

To configure the AppleTalk Enhanced Interior Gateway Protocol (EIGRP) hello packet interval and the route hold time, use the **appletalk eigrp-timers** command in interface configuration mode. To return to the default values for these timers, use the **no** form of this command.

appletalk eigrp-timers *hello-interval hold-time*

no appletalk eigrp-timers *hello-interval hold-time*

Syntax Description

hello-interval	Interval between hello packets, in seconds. The default interval is 5 seconds. It can be a maximum of 30 seconds.
hold-time	Hold time, in seconds. The hold time is advertised in hello packets and indicates to neighbors the length of time they should consider the sender valid. The hold time can be in the range 15 to 90 seconds.

Defaults

hello-interval argument:
For low-speed NBMA networks: 60 seconds
For all other networks: 5 seconds

hold-time argument:
For low-speed NBMA networks: 180 seconds
For all other networks: 15 seconds

Command Modes

Interface configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(13)T	This command is no longer supported in Cisco IOS Mainline releases or in Technology-based (T-train) releases. It might continue to appear in 12.2S-family releases.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

If the current value for the hold time is less than two times the hello interval, the hold time is reset to three times the hello interval.

If the Cisco IOS software does not receive a hello packet within the specified hold time, routes through this device are considered available.

Increasing the hold time delays route convergence across the network.

Note Do not adjust the hold time without advising technical support.

The default of 180 seconds for the *hold-time* argument applies only to low-speed, nonbroadcast, multiaccess (NBMA) media. Low speed is considered to be a rate of T1 or slower, as specified with the **bandwidth** interface configuration command.

The default of 60 seconds for the *hello-interval* argument applies only to low-speed NBMA media. Low speed is considered to be a rate of T1 or slower, as specified with the **bandwidth** interface configuration command. Note that for purposes of Enhanced IGRP, Frame Relay and SMDS networks may or may not be considered to be NBMA. These networks are considered NBMA if the interface has not been configured to use physical multicasting; otherwise they are considered not to be NBMA.

Examples

The following example changes the hello interval to 10 seconds:

```
interface ethernet 0
 appletalk eigrp-timers 10 45
```

Related Commands

Command	Description
bandwidth (interface)	Sets a bandwidth value for an interface.

appletalk event-logging

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk event-logging** command is not available in Cisco IOS software.

To log significant network events, use the **appletalk event-logging** command in global configuration mode. To disable this function, use the **no** form of this command.

appletalk event-logging

no appletalk event-logging

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The **appletalk event-logging** command logs a subset of messages produced by **debug appletalk** command. These messages include routing changes, zone creation, port status, and address.

Examples

The following example enables logging of AppleTalk events:

```
appletalk routing
appletalk event-logging
```

Related Commands

Command	Description
debug appletalk	Displays information about routing changes, zone creation, port status, and address.
show appletalk globals	Displays information and settings about the AppleTalk internetwork and other parameters.

appletalk free-trade-zone

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk free-trade-zone** command is not available in Cisco IOS software.

To establish a free-trade zone, use the **appletalk free-trade-zone** command in interface configuration mode. To disable a free-trade zone, use the **no** form of this command.

appletalk free-trade-zone

no appletalk free-trade-zone

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

A *free-trade zone* is a part of an AppleTalk internetwork that is accessible by two other parts of the internetwork, neither of which can access the other. You might want to create a free-trade zone to allow the exchange of information between two organizations that otherwise want to keep their internetworks isolated from each other or that do not have physical connectivity with one another.

You apply the **appletalk free-trade-zone** command to each interface attached to the common-access network. This command has the following effect on the interface:

- All incoming RTMP updates are ignored.
- All outgoing RTMP updates contain no information.
- NBP conversion of BrRq packets to FwdReq packets is not performed.

The GZL for free-trade zone nodes will be empty.

Examples

The following example establishes a free-trade zone on Ethernet interface 0:

```
interface ethernet 0
 appletalk cable-range 5-5
 appletalk zone FreeAccessZone
 appletalk free-trade-zone
```

appletalk getzonelist-filter

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk getzonelist-filter** command is not available in Cisco IOS software.

To filter GetZoneList (GZL) replies, use the **appletalk getzonelist-filter** command in interface configuration mode. To remove a filter, use the **no** form of this command.

appletalk getzonelist-filter *access-list-number*

no appletalk getzonelist-filter [*access-list-number*]

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.

Defaults

No filters are preconfigured.

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

GZL filters define conditions for zones only. They cannot use access lists that define conditions for network numbers or cable ranges. All network number and cable range information in the access list assigned to an interface with the **appletalk getzonelist-filter** command is ignored.

Using a GZL filter is not a complete replacement for anonymous network numbers. In order to prevent users from seeing a zone, all routers must implement the GZL filter. If there are any routers from other vendors on the network, the GZL filter will not have a consistent effect.

The Macintosh Chooser uses ZIP GZL requests to compile a list of zones from which the user can select services. Any router on the same network as the Macintosh can respond to these requests with a GZL reply. You can create a GZL filter on the router to control which zones the router mentions in its GZL replies. This has the effect of controlling the list of zones that are displayed by the Chooser.

When defining GZL filters, you should ensure that all routers on the same network filter GZL reply identically. Otherwise, the Chooser will list different zones depending upon which router responded to the request. Also, inconsistent filters can result in zones appearing and disappearing every few seconds

when the user remains in the Chooser. Because of these inconsistencies, you should normally use the **appletalk getzonelist-filter** command only when all routers in the internetwork are our routers, unless the routers from other vendors have a similar feature.

Replies to GZL requests are also filtered by any **appletalk distribute-list out** filter that has been applied to the same interface. You must specify an **appletalk getzonelist-filter** command only if you want additional filtering to be applied to GZL replies. This filter is rarely needed except to eliminate zones that do not contain user services.

Examples

The following example does not include the zone Engineering in GZL replies sent out Ethernet interface 0:

```
access-list 600 deny zone Engineering
interface ethernet 0
 appletalk getzonelist-filter 600
```

Related Commands

Command	Description
access-list additional-zones	Defines the default action to take for access checks that apply to zones.
access-list zone	Defines an AppleTalk access list that applies to a zone.
appletalk distribute-list out	Filters routing updates sent to other routers.
appletalk permit-partial-zones	Permits access to the other networks in a zone when access to one of those networks is denied.

appletalk glean-packets

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk glean-packets** command is not available in Cisco IOS software.

To derive AppleTalk Address Resolution Protocol (AARP) table entries from incoming packets, use the **appletalk glean-packets** command in interface configuration mode. To disable this function, use the **no** form of this command.

appletalk glean-packets

no appletalk glean-packets

Syntax Description

This command has no arguments or keywords.

Defaults

Enabled

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command wsa removed.

Usage Guidelines

The Cisco IOS software automatically derives AARP table entries from incoming packets. This process, referred to as *gleaning*, speeds up the process of populating the AARP table.

Our implementation of AppleTalk does not forward packets with local source and destination network addresses. This behavior does not conform with the definition of AppleTalk in Apple Computer's *Inside AppleTalk* publication. However, this behavior is designed to prevent any possible corruption of the AARP table in any AppleTalk node that is performing MAC-address gleaning.

Examples

The following example disables the building of the AARP table using information derived from incoming packets:

```
interface ethernet 0
 appletalk address 33
 no appletalk glean-packets
```

appletalk ignore-verify-errors

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk ignore-verify-errors** command is not available in Cisco IOS software.

To allow the Cisco IOS software to start functioning even if the network is misconfigured, use the **appletalk ignore-verify-errors** command in global configuration mode. To disable this function, use the **no** form of this command.

appletalk ignore-verify-errors

no appletalk ignore-verify-errors

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Use this command only under the guidance of a customer engineer or other service representative. A router that starts routing in a misconfigured network will serve only to make a bad situation worse; it will not correct other misconfigured routers.

Examples

The following example allows a router to start functioning without verifying network misconfiguration:

```
appletalk ignore-verify-errors
```

appletalk iptalk

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk iptalk** command is not available in Cisco IOS software.

To enable IPTalk encapsulation on a tunnel interface, use the **appletalk iptalk** command in interface configuration mode. To disable IPTalk encapsulation, use the **no** form of this command.

appletalk iptalk *network zone*

no appletalk iptalk [*network zone*]

Syntax Description

network	AppleTalk network address assigned to the interface. The argument *network* is the 16-bit network number in decimal.
zone	Name of the zone for the connected AppleTalk network.

Defaults

Disabled

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Use the **appletalk iptalk** command to enable IPTalk encapsulation on a tunnel interface. This command encapsulates AppleTalk in IP packets in a manner compatible with the Columbia AppleTalk Package (CAP) IPTalk and the Kinetics IPTalk implementations. IPTalk is configured on a tunnel interface.

This command allows AppleTalk communication with UNIX hosts running older versions of CAP that do not support native AppleTalk EtherTalk encapsulations. Typically, Apple Macintosh users wishing to communicate with these servers would have their connections routed through a Kinetics FastPath router running Kinetics IPTalk software.

This command is provided as a migration command; newer versions of CAP provide native AppleTalk EtherTalk encapsulations, and the IPTalk encapsulation is no longer required. Our implementation of IPTalk assumes that AppleTalk is already being routed on the backbone; there is currently no LocalTalk hardware interface for our routers.

Our implementation of IPTalk does not support manually configured AppleTalk-to-IP address mapping (atab). The address mapping provided is the same as the Kinetics IPTalk implementation when the atab facility is not enabled. This address mapping functions as follows: The IP subnet mask used on the Ethernet interface on which IPTalk is enabled is inverted (ones complement). This result is then masked against 255 (0xFF hexadecimal). This is then masked against the low-order 8 bits of the IP address to obtain the AppleTalk node number.

Examples

The following example configuration illustrates how to configure IPTalk:

```
interface Ethernet0
 ip address 172.31.255.118 255.255.255.0
 interface Tunnel0
 tunnel source Ethernet0
 tunnel mode iptalk
 appletalk iptalk 30 UDPZone
```

In this configuration, the IP subnet mask would be inverted:

```
255.255.255.0 inverted yields: 0.0.0.255
```

Masked with 255 it yields 255, and masked with the low-order 8 bits of the interface IP address it yields 118.

This means that the AppleTalk address of the Ethernet 0 interface seen in the UDPZone zone is 30.118. This caveat should be noted, however: Should the host field of an IP subnet mask for an interface be more than 8 bits wide, it will be possible to obtain conflicting AppleTalk node numbers. For instance, consider a situation where the subnet mask for the Ethernet 0 interface above is 255.255.240.0, meaning that the host field is 12 bits wide.

Related Commands

Command	Description
appletalk iptalk-baseport	Specifies the UDP port number when configuring IPTalk.
tunnel mode	Sets the encapsulation mode for the tunnel interface.
tunnel source	Sets the source address of a tunnel interface.

appletalk iptalk-baseport

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk iptalk-baseport** command is not available in Cisco IOS software.

To specify the User Datagram Protocol (UDP) port number when configuring IPTalk, use the **appletalk iptalk-baseport** command in global configuration mode. To return to the default UDP port number, use the **no** form of this command.

appletalk iptalk-baseport *port-number*

no appletalk iptalk-baseport [*port-number*]

Syntax Description

port-number	First UDP port number in the range of UDP ports used in mapping AppleTalk well-known Datagram Delivery Protocol (DDP) socket numbers to UDP ports.

Defaults

768

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Implementations of IPTalk prior to April 1988 mapped well-known DDP socket numbers to privileged UDP ports starting at port number 768. In April 1988, the Network Information Center (NIC) assigned a range of UDP ports for the defined DDP well-known sockets starting at UDP port number 200 and assigned these ports the names at-nbp, at-rtmp, at-echo, and at-zis. Release 6 and later of the CAP program dynamically decides which port mapping to use. If there are no AppleTalk service entries in the UNIX system's */etc/services* file, CAP uses the older mapping starting at UDP port number 768.

The default UDP port mapping supported by our implementation of IPTalk is 768. If there are AppleTalk service entries in the UNIX system's */etc/services* file, you should specify the beginning of the UDP port mapping range with the **appletalk iptalk-baseport** command.

Examples

The following example sets the base UDP port number to 200, which is the official NIC port number, and configures IPTalk on Ethernet interface 0:

```
appletalk routing
appletalk iptalk-baseport 200
!
interface Ethernet 0
ip address 172.31.255.118 255.255.255.0
appletalk address 20.129
appletalk zone Native AppleTalk
appletalk iptalk 30.0 UDPZone
```

Related Commands

Command	Description
appletalk iptalk	Enables IPTalk encapsulation on a tunnel interface.

appletalk lookup-type

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk lookup-type** command is not available in Cisco IOS software.

To specify which Name Binding Protocol (NBP) service types are retained in the name cache, use the **appletalk lookup-type** command in global configuration mode. To disable the caching of services, use the **no** form of this command.

appletalk lookup-type *service-type*

no appletalk lookup-type *service-type*

Syntax Description

service-type	AppleTalk service types. The name of a service type can include special characters from the Apple Macintosh character set. To include a special character, type a colon followed by two hexadecimal numbers. For zone names with a leading space character, enter the first character as the special sequence :20. For a list of possible types, see Table 1 in the "Usage Guidelines" section.

Defaults

The entries from active adjacent Cisco routers are retained in the name cache.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

You can issue multiple **appletalk lookup-type** commands. The Cisco IOS software does not query the entire zone, but instead polls only the connected networks. This reduces network overhead and means that the name cache contains entries only for selected services that are in a directly connected network or zone, not for all the selected services in a network or zone.

Table 8 lists some AppleTalk service types.

Table 8 AppleTalk Service Types

Service Type[1]	Description
Services for Cisco Routers	
ciscoRouter	Active adjacent Cisco routers. This service type is initially enabled by default.
IPADDRESS	Addresses of active MacIP server.
IPGATEWAY	Names of active MacIP server.
Services for Other Vendors' Routers	
AppleRouter	Apple internetwork router.
FastPath	Shiva LocalTalk gateway.
GatorBox	Cayman LocalTalk gateway.
systemRouter	Cisco's OEM router name.
Workstation	Macintosh running System 7. The machine type also is defined, so it is possible to easily identify all user nodes.

1. Type all service names exactly as shown. Spaces are valid. Do not use leading or trailing spaces when entering service names.

If you omit the *service-type* argument from the **no appletalk lookup-type** command, no service types except those relating to our devices are cached.

To display information that is stored in the name cache about the services being used by our routers and other vendors' routers, use the **show appletalk name-cache** command.

If a neighboring router is not our device or is running our software that is earlier than Release 9.0, it is possible our device will be unable to determine the name of the neighbor. This is normal behavior, and there is no workaround.

If AppleTalk routing is enabled, enabling Simple Network Management Protocol (SNMP) will automatically enable SNMP over DDP.

Name cache entries are deleted after several interval periods expire without being refreshed. (You set the interval with the **appletalk name-lookup-interval** command.) At each interval, a single request is sent via each interface that has valid addresses.

Examples

The following example caches information about GatorBox services, Apple internetwork routers, MacIP services, and workstations. Information about our devices is automatically cached.

```
appletalk lookup-type GatorBox
appletalk lookup-type AppleRouter
appletalk lookup-type IPGATEWAY
appletalk lookup-type Workstation
```

Related Commands

Command	Description
appletalk name-lookup-interval	Sets the interval between service pollings by the router on its AppleTalk interfaces.
show appletalk name-cache	Displays a list of NBP services offered by nearby routers and other devices that support NBP.
show appletalk nbp	Displays the contents of the NBP name registration table.

appletalk macip dynamic

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk macip dynamic** command is not available in Cisco IOS software.

To allocate IP addresses to dynamic MacIP clients, use the **appletalk macip dynamic** command in global configuration mode. To delete a MacIP dynamic address assignment, use the **no** form of this command.

appletalk macip dynamic *ip-address* [*ip-address*] **zone** *server-zone*

no appletalk macip dynamic *ip-address* [*ip-address*] **zone** *server-zone*

Syntax Description

ip-address	IP address, in four-part, dotted decimal notation. To specify a range, enter two IP addresses, which represent the first and last addresses in the range.
zone *server-zone*	Zone in which the MacIP server resides. The argument *server-zone* can include special characters from the Apple Macintosh character set. To include a special character, specify a colon followed by two hexadecimal characters. For zone names with a leading space character, enter the first character as the special sequence :20. For a list of Macintosh characters, refer to Apple Computer's *Inside AppleTalk* publication.

Defaults

No IP addresses are allocated.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Use the **appletalk macip dynamic** command when configuring MacIP.

Dynamic clients are those that accept *any* IP address assignment within the dynamic range specified.

In general, it is recommended that you do not use fragmented address ranges in configuring ranges for MacIP. However, if this is unavoidable, use the **appletalk macip dynamic** command to specify as many addresses or ranges as required and use the **appletalk macip static** command to assign a specific address or address range.

To shut down all running MacIP services, use the following command:

no appletalk macip

To delete a particular dynamic address assignment from the configuration, use the following command:

no appletalk macip dynamic *ip-address* [*ip-address*] **zone** *server-zone*

Examples

The following example illustrates MacIP support for dynamically addressed MacIP clients with IP addresses in the range 172.16.1.28 to 172.16.1.44:

```
! This global statement specifies the MacIP server address and zone:
appletalk macip server 172.16.1.27 zone Engineering
!
! This global statement identifies the dynamically addressed clients:
appletalk macip dynamic 172.16.1.28 172.16.1.44 zone Engineering
!
! These statements assign the IP address and subnet mask for Ethernet interface 0:
interface ethernet 0
ip address 172.16.1.27 255.255.255.0
!
! This global statement enables AppleTalk routing on the router.
appletalk routing
!
! These statements enable AppleTalk routing on the interface and
! set the zone name for the interface
interface ethernet 0
 appletalk cable-range 69-69 69.128
 appletalk zone Engineering
```

Related Commands

Command	Description
appletalk macip server	Establishes a MacIP server for a zone.
appletalk macip static	Allocates an IP address to be used by a MacIP client that has reserved a static IP address.
ip address	Sets a primary or secondary IP address for an interface.
show appletalk macip-servers	Displays status information about related servers.

appletalk macip server

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk macip server** command is not available in Cisco IOS software.

To establish a MacIP server for a zone, use the **appletalk macip server** command in global configuration mode. To shut down a MacIP server, use the **no** form of this command.

appletalk macip server *ip-address* **zone** *server-zone*

no appletalk macip server *ip-address* **zone** *server-zone*

Syntax Description

ip-address	IP address, in four-part dotted decimal notation. It is suggested that this address match the address of an existing IP interface.
zone *server-zone*	Zone in which the MacIP server resides. The argument *server-zone* can include special characters from the Apple Macintosh character set. To include a special character, specify a colon followed by two hexadecimal characters. For zone names with a leading space character, enter the first character as the special sequence :20. For a list of Macintosh characters, refer to Apple Computer's *Inside AppleTalk* publication.

Defaults

No MacIP server is established.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Use the **appletalk macip server** command when configuring MacIP.

You can configure only one MacIP server per AppleTalk zone, and the server must reside in the default zone. A server is not registered via NBP until at least one MacIP resource is configured.

You can configure multiple MacIP servers for a router, but you can assign only one MacIP server to a particular zone and only one IP interface to each MacIP server. In general, you must be able to establish an alias between the IP address you assign with the **appletalk macip server** command and an existing IP interface. For implementation simplicity, it is suggested that the address specified in this command match an existing IP interface address.

To shut down all active MacIP servers, use the following command:

no appletalk macip

To delete a specific MacIP server from the MacIP configuration, use the following command:

no appletalk macip server *ip-address* **zone** *server-zone*

Examples

The following example establishes a MacIP server on Ethernet interface 0 in AppleTalk zone Engineering. It then assigns an IP address to the Ethernet interface and enables AppleTalk routing on a router and its Ethernet interface.

```
appletalk macip server 172.19.1.27 zone Engineering
ip address 172.19.1.27 255.255.255.0
appletalk routing
interface ethernet 0
 appletalk cable-range 69-69 69.128
 appletalk zone Engineering
```

Related Commands

Command	Description
appletalk macip dynamic	Allocates IP addresses to dynamic MacIP clients.
appletalk macip static	Allocates an IP address to be used by a MacIP client that has reserved a static IP address.
ip address	Sets a primary or secondary IP address for an interface.
show appletalk macip-servers	Displays status information about related servers.

appletalk macip static

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk macip static** command is not available in Cisco IOS software.

To allocate an IP address to be used by a MacIP client that has reserved a static IP address, use the **appletalk macip static** command in global configuration mode. To delete a MacIP static address assignment, use the **no** form of this command.

appletalk macip static *ip-address* [*ip-address*] **zone** *server-zone*

no appletalk macip static *ip-address* [*ip-address*] **zone** *server-zone*

Syntax Description

ip-address	IP address, in four-part, dotted decimal format. To specify a range, enter two IP addresses, which represent the first and last addresses in the range.
zone *server-zone*	Zone in which the MacIP server resides. The argument *server-zone* can include special characters from the Apple Macintosh character set. To include a special character, specify a colon followed by two hexadecimal characters. For zone names with a leading space character, enter the first character as the special sequence :20. For a list of Macintosh characters, refer to Apple Computer's *Inside AppleTalk* publication.

Defaults

No IP address is allocated.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Use the **appletalk macip static** command when configuring MacIP.

Static addresses are for users who require fixed addresses for IP name domain name service and for administrators who do want addresses to change so they can always know who has what IP address.

In general, it is recommended that you do not use fragmented address ranges in configuring ranges for MacIP. However, if this is unavoidable, use the **appletalk macip dynamic** command to specify as many addresses or ranges as required, and then use the **appletalk macip static** command to assign a specific address or address range.

To shut down all running MacIP services, use the following command:

no appletalk macip

To delete a particular static address assignment from the configuration, use the following command:

no appletalk macip static *ip-address* [*ip-address*] **zone** *server-zone*

Examples

The following example illustrates MacIP support for MacIP clients with statically allocated IP addresses. The IP addresses range is from 172.31.1.50 to 172.31.1.66. The three nodes that have the specific addresses are 172.31.1.81, 172.31.1.92, and 172.31.1.101.

```
! This global statement specifies the MacIP server address and zone:
appletalk macip server 172.31.1.27 zone Engineering
!
! These global statements identify the statically addressed clients:
appletalk macip static 172.31.1.50 172.31.1.66 zone Engineering
appletalk macip static 172.31.1.81 zone Engineering
appletalk macip static 172.31.1.92 zone Engineering
appletalk macip static 172.31.1.101 zone Engineering
!
! These statements assign the IP address and subnet mask for Ethernet interface 0:
interface ethernet 0
 ip address 172.31.1.27 255.255.255.0
!
! This global statement enables AppleTalk routing on the router.
appletalk routing
!
! These statements enable AppleTalk routing on the interface and
! set the zone name for the interface
interface ethernet 0
 appletalk cable-range 69-69 69.128
 appletalk zone Engineering
```

Related Commands

Command	Description
appletalk macip dynamic	Allocates IP addresses to dynamic MacIP clients.
appletalk macip server	Establishes a MacIP server for a zone.
ip address	Sets a primary or secondary IP address for an interface.
show appletalk macip-servers	Displays status information about related servers.

appletalk maximum-paths

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk maximum-paths** command is not available in Cisco IOS software.

To define the maximum number of equal-cost paths that the router should use when balancing the traffic load, use the **appletalk maximum-paths** command in global configuration mode. To restore the default value, use the **no** form of this command.

appletalk maximum-paths [*paths*]

no appletalk maximum-paths [*paths*]

Syntax Description

paths	(Optional) Maximum number of equal-cost paths to be used for balancing the traffic load. The *paths* argument is a decimal number in the range of 1 to 16.

Defaults

The default value is 1.

Command Modes

Global configuration

Command History

Release	Modification
11.2	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Use the **appletalk maximum-paths** command when configuring AppleTalk load balancing.

The **appletalk maximum-paths** command increases throughput by allowing the software to choose among several equal-cost, parallel paths. (Note that when paths have differing costs, the software chooses lower-cost routes in preference to higher-cost routes.)

When the value of *paths* is greater than 1, packets are distributed over the multiple equal-cost paths in round-robin fashion on a packet-by-packet basis.

Examples

The following example defines four equal-cost paths:

```
! Sets the maximum number of equal-cost paths to 4.
appletalk maximum-paths 4
```

The following example restores the default value:

```
! Restores the default value.
no appletalk maximum-paths 4
```

appletalk name-lookup-interval

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk name-lookup-interval** command is not available in Cisco IOS software.

To set the interval between service pollings by the router on its AppleTalk interfaces, use the **appletalk name-lookup-interval** command in global configuration mode. To purge the name cache and return to the default polling interval, use the **no** form of this command.

appletalk name-lookup-interval *seconds*

no appletalk name-lookup-interval [*seconds*]

Syntax Description

seconds	Interval, in seconds, between NBP lookup pollings. This can be any positive integer; there is no upper limit. It is recommended that you use an interval between 300 seconds (5 minutes) and 1200 seconds (20 minutes). The smaller the interval, the more packets are generated to handle the names. Specifying an interval of 0 purges all entries from the name cache and disables the caching of service type information that is controlled by the **appletalk lookup-type** command, including the caching of information about our routers.

Defaults

The default is 0, which purges all entries from the name cache and disables the caching of service type information.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The Cisco IOS software collects name information only for entities on connected AppleTalk networks. This reduces overhead.

If you enter an interval of 0, all polling for services (except ciscoRouter) is disabled. If you reenter a nonzero value, the configuration specified by the **appletalk lookup-type** command is reinstated. You cannot disable the lookup of ciscoRouter.

Examples

The following example sets the lookup interval to 20 minutes:

```
appletalk name-lookup-interval 1200
```

Related Commands

Command	Description
appletalk lookup-type	Specifies which NBP service types are retained in the name cache.
show appletalk name-cache	Displays a list of NBP services offered by nearby routers and other devices that support NBP.

appletalk permit-partial-zones

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk permit-partial-zones** command is not available in Cisco IOS software.

To permit access to the other networks in a zone when access to one of those networks is denied, use the **appletalk permit-partial-zones** command in global configuration mode. To deny access to all networks in a zone if access to one of those networks is denied, use the **no** form of this command.

appletalk permit-partial-zones

no appletalk permit-partial-zones

Syntax Description

This command has no arguments or keywords.

Defaults

Access is denied.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The permitting of partial zones provides IP-style access control.

When you enable the use of partial zones, the NBP protocol cannot ensure the consistency and uniqueness of name bindings.

If you enable the use of partial zones, access control behavior is compatible with that of Cisco IOS Release 8.3.

Examples

The following example allows partial zones:

```
appletalk permit-partial-zones
```

Related Commands

Command	Description
access-list additional-zones	Defines the default action to take for access checks that apply to zones.
access-list zone	Defines an AppleTalk access list that applies to a zone.
appletalk distribute-list out	Filters routing updates sent to other routers.
appletalk getzonelist-filter	Filters GZL replies.

appletalk pre-fdditalk

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk pre-fdditalk** command is not available in Cisco IOS software.

To enable the recognition of pre-FDDITalk packets, use the **appletalk pre-fdditalk** command in global configuration mode. To disable this function, use the **no** form of this command.

appletalk pre-fdditalk

no appletalk pre-fdditalk

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Use this command to have the Cisco IOS software recognize AppleTalk packets sent on the FDDI ring from routers that are running Cisco software releases prior to Release 9.0(3) or Release 9.1(2).

Examples

The following example disables the recognition of pre-FDDITalk packets:

```
no appletalk pre-fdditalk
```

appletalk protocol

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk protocol** command is not available in Cisco IOS software.

To specify the routing protocol to use on an interface, use the **appletalk protocol** command in interface configuration mode. To disable a routing protocol, use the **no** form of this command.

appletalk protocol {**aurp** | **rtmp**}

no appletalk protocol {**aurp** | **rtmp**}

Syntax Description

aurp	Specifies that the routing protocol to use is AppleTalk Update-Based Routing Protocol (AURP). You can enable AURP only on tunnel interfaces.
rtmp	Specifies that the routing protocol to use is Routing Table Maintenance Protocol (RTMP), which is enabled by default.

Defaults

RTMP

Command Modes

Interface configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(13)T	The **eigrp** keyword was removed.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

You can configure an interface to use RTMP. The Cisco IOS software will continue to send out RTMP routing updates.

You cannot disable RTMP without first enabling AURP.

Enabling AURP automatically disables RTMP.

You can enable AURP only on tunnel interfaces.

Examples

The following example enables AURP on tunnel interface 1:

```
interface tunnel 1
 appletalk protocol aurp
```

The following example disables RTMP on serial interface 0:

```
interface serial 0
 no appletalk protocol rtmp
```

Related Commands

Command	Description
appletalk routing	Enables AppleTalk routing.

appletalk proxy-nbp

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk proxy-nbp** command is not available in Cisco IOS software.

To assign a proxy network number for each zone in which there is a router that supports only nonextended AppleTalk, use the **appletalk proxy-nbp** command in global configuration mode. To delete the proxy, use the **no** form of this command.

appletalk proxy-nbp *network-number zone-name*

no appletalk proxy-nbp [*network-number zone-name*]

Syntax Description

network-number	Network number of the proxy. It is a 16-bit decimal number and must be unique on the network. This is the network number that will be advertised by the Cisco IOS software as if it were a real network number.
zone-name	Name of the zone that contains the devices that support only nonextended AppleTalk. The name can include special characters from the Apple Macintosh character set. To include a special character, type a colon followed by two hexadecimal characters. For zone names with a leading space character, enter the first character as the special sequence :20.

Defaults

No proxy network number is assigned.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The **appletalk proxy-nbp** command provides compatibility between AppleTalk Phase 1 and AppleTalk Phase 2 networks.

Proxy routes are included in outgoing RTMP updates as if they were directly connected routes, although they are not really directly connected, since they are not associated with any interface. Whenever an NBQ BrRq for the zone in question is generated by anyone anywhere in the internetwork, an NBP

FwdReq is directed to any router connected to the proxy route. The Phase 2 router, which is the only router directly connected, converts the FwdReq to LkUps, which are understood by Phase 1 routers, and sends them to every network in the zone.

In an environment in which there are Phase 1 and Phase 2 networks, you must specify at least one **appletalk proxy-nbp** command for each zone that has a nonextended-only AppleTalk router.

The proxy network number you assign with the **appletalk proxy-nbp** command cannot also be assigned to a router, nor can it also be associated with a physical network.

You must assign only one proxy network number for each zone. However, you can define additional proxies with different network numbers to provide redundancy. Each proxy generates one or more packets for each forward request it receives. All other packets sent to the proxy network address are discarded. Defining redundant proxy network numbers increases the NBP traffic linearly.

Examples

The following example defines network number 60 as an NBP proxy for the zone *Twilight*:

```
appletalk proxy-nbp 60 Twilight
```

Related Commands

Command	Description
show appletalk route	Displays all entries or specified entries in the AppleTalk routing table.

appletalk require-route-zones

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk require-route-zones** command is not available in Cisco IOS software.

To prevent the advertisement of routes (network numbers or cable ranges) that have no assigned zone, use the **appletalk require-route-zones** command in global configuration mode. To disable this option and allow the Cisco IOS software to advertise to its neighbors routes that have no network-zone association, use the **no** form of this command.

appletalk require-route-zones

no appletalk require-route-zones

Syntax Description

This command has no arguments or keywords.

Defaults

Enabled

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The **appletalk require-route-zones** command ensures that all networks have zone names prior to advertisement to neighbors.

The **no appletalk require-route-zones** command enables behavior compatible with Cisco IOS Release 8.3.

Using this command helps prevent ZIP protocol storms. ZIP protocol storms can arise when corrupt routes are propagated and routers broadcast ZIP requests to determine the network/zone associations.

When the **appletalk require-route-zones** command is enabled, the Cisco IOS software will not advertise a route to its neighboring routers until it has obtained the network-zone associations. This effectively limits the storms to a single network rather than the entire internet.

As an alternative to disabling this option, use the **appletalk getzonelist-filter** interface configuration command to filter *empty* zones from the list presented to users.

You can configure different zone lists on different interfaces. However, you are discouraged from doing this because AppleTalk users expect to have the same user zone lists at any end node in the internet.

The filtering provided by the **appletalk require-route-zones** command does not prevent explicit access via programmatic methods, but should be considered a user optimization to suppress unused zones. You should use other forms of AppleTalk access control lists to actually *secure* a zone or network.

Examples

The following example configures a router to prevent the advertisement of routes that have no assigned zone:

```
appletalk require-route-zones
```

appletalk route-cache

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk route-cache** command is not available in Cisco IOS software.

To enable fast switching on all supported interfaces, use the **appletalk route-cache** command in interface configuration mode. To disable fast switching, use the **no** form of this command.

appletalk route-cache

no appletalk route-cache

Syntax Description

This command has no arguments or keywords.

Defaults

Enabled on all interfaces that support fast switching.

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Fast switching allows higher throughput by switching a packet using a cache created by previous packets. Fast-switching is enabled by default on all interfaces that support fast switching, including Token Ring, Frame Relay, PPP, High-Level Data Link Control (HDLC), SMDS, and ATM. Note that fast switching is not supported over X.25 and Link Access Procedure, Balanced (LAPB), encapsulations, or on the CSC-R16, CSC-1R, or CSC-2R STR Token Ring adapters.

Packet transfer performance is generally better when fast switching is enabled. However, you may want to disable fast switching in order to save memory space on interface cards and to help avoid congestion when high-bandwidth interfaces are writing large amounts of information to low-bandwidth interfaces.

Fast switching of extended AppleTalk is supported on serial lines with several encapsulation types (for example, SMDS and HDLC). Fast switching of nonextended AppleTalk is not supported on serial lines.

Examples

The following example disables fast switching on an interface:

```
interface ethernet 0
 appletalk cable-range 10-20
```

```
appletalk zone Twilight
no appletalk route-cache
```

Related Commands

Command	Description
show appletalk cache	Displays the routes in the AppleTalk fast-switching table on an extended AppleTalk network.

appletalk route-redistribution

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk route-redistribution** command is not available in Cisco IOS software.

To redistribute Routing Table Maintenance Protocol (RTMP) routes into AppleTalk Enhanced Interior Gateway Routing Protocol (EIGRP) and vice versa, use the **appletalk route-redistribution** command in global configuration mode. To keep Enhanced IGRP and RTMP routes separate, use the **no** form of this command.

appletalk route-redistribution

no appletalk route-redistribution

Syntax Description

This command has no arguments or keywords.

Defaults

Enabled when Enhanced IGRP is enabled.

Command Modes

Global configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(13)T	This command is no longer supported in Cisco IOS Mainline releases or in Technology-based (T-train) releases. It might continue to appear in 12.2S-family releases.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Redistribution allows routing information generated by one protocol to be advertised in another.

In the automatic redistribution of routes between Enhanced IGRP and RTMP, an RTMP hop is treated as having a slightly worse metric than an equivalent Enhanced IGRP hop on a 9.6-kbps link. This allows Enhanced IGRP to be preferred over RTMP except in the most extreme of circumstances. Typically, you will see this only when using tunnels. If you want an Enhanced IGRP path in a tunnel to be preferred over an alternate RTMP path, you should set the interface delay and bandwidth parameters on the tunnel to bring the metric of the tunnel down to being better than a 9.6-kbps link.

Examples

In the following example, RTMP routing information is not redistributed:

```
appletalk routing eigrp 23
no appletalk route-redistribution
```

appletalk routing

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk routing** command is not available in Cisco IOS software.

To enable AppleTalk routing, use the **appletalk routing** command in global configuration mode. To disable AppleTalk routing, use the **no** form of this command.

appletalk routing

no appletalk routing

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
10.3	The **eigrp** keyword was added.
12.2(13)T	The **eigrp** keyword and *router-number* argument were removed.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

If you do not specify the optional keyword and argument, this command enables AppleTalk routing using the RTMP routing protocol.

Examples

The following example enables AppleTalk protocol processing:

```
appletalk routing
```

Related Commands

Command	Description
appletalk address	Enables nonextended AppleTalk routing on an interface.
appletalk cable-range	Enables an extended AppleTalk network.

Command	Description
appletalk protocol	Specifies the routing protocol to use on an interface.
appletalk zone	Sets the zone name for the connected AppleTalk network.

appletalk rtmp jitter

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk rtmp jitter** command is not available in Cisco IOS software.

To set the interval timer on a router between subsequent AppleTalk Routing Table Maintenance Protocol (RTMP) routing updates, use the **appletalk rtmp jitter** command in global configuration mode. To disable this mode, use the **no** form of the command.

appletalk rtmp jitter *percent*

no appletalk rtmp jitter *percent*

Syntax Description

percent	Ranges from 0 to 100.

Defaults

0 percent

Command Modes

Global configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The interval between subsequent routing updates is randomized to reduce the probability of synchronization with the routing updates from other routers on the same link. This is done by maintaining a separate transmission interval timer for each advertising interface.

The **appletalk rtmp jitter** command allows the user to stagger the routing updates and to avoid sending the updates every 10 seconds.

Examples

The following example sets AppleTalk RTMP updates to fluctuate 20 percent of the update interval time:

```
appletalk rtmp jitter 20
```

Related Commands

Command	Description
show appletalk globals	Displays information and settings about the AppleTalk internetwork and other parameters.

appletalk rtmp-stub

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk rtmp-stub** command is not available in Cisco IOS software.

To enable AppleTalk Routing Table Maintenance Protocol (RTMP) stub mode, use the **appletalk rtmp-stub** command in interface configuration mode. To disable this mode, use the **no** form of the command.

appletalk rtmp-stub

no appletalk rtmp-stub

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Interface configuration

Command History

Release	Modification
11.1	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

This command enables routers running RTMP to reduce the amount of CPU processing that RTMP modules use. RTMP modules send "stub" packets instead of full RTMP packets when you enable stub mode.

A stub packet is only the first tuple of an RTMP packet. The first tuple indicates the network number range assigned to that network. End nodes use stub packets to determine if their node number is in the right network range.

Upon startup, an end node on an extended network uses stub packets to verify that its previous node number is still within the segment's network number range. If it is, the end node reuses the previous node number and stores the network number range information. If an end node learns upon startup that its previous node number does not fall within the segment's new network number range, the end node picks a new node number based on the new network number range and stores the new network number range information.

After startup, end nodes use subsequent stub packets to verify that the network number range sent in the stub packets precisely matches its stored network number range. In this way, stub packets keep end nodes alive.

When routers that have stub mode enabled receive full RTMP packets, they discard these packets. Discarding full RTMP packets when stub mode is enabled saves the overhead processing of RTMP routes.

You can also use stub mode on "end" networks. End networks are those to which no other routers attach. Because no other routers are listening for routes on these end segments, there is no need for the end router to send full RTMP packets to these end segments. The end router can send stub packets to keep end nodes alive.

Examples

The following example turns on AppleTalk RTMP stub mode:

```
appletalk rtmp-stub
```

Related Commands

Command	Description
show appletalk interface	Displays the status of the AppleTalk interfaces configured in the Cisco IOS software and the parameters configured on each interface.

appletalk send-rtmps

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk send-rtmps** command is not available in Cisco IOS software.

To allow the Cisco IOS software to send routing updates to its neighbors, use the **appletalk send-rtmps** command in interface configuration mode. To block updates from being sent, use the **no** form of this command.

appletalk send-rtmps

no appletalk send-rtmps

Syntax Description

This command has no arguments or keywords.

Defaults

Routing updates are sent.

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

If you block the sending of routing updates, an interface on the network that has AppleTalk enabled is not “visible” to other routers on the network.

Examples

The following example prevents a router from sending routing updates to its neighbors:

```
no appletalk send-rtmps
```

Related Commands

Command	Description
appletalk require-route-zones	Prevents the advertisement of routes (network numbers or cable ranges) that have no assigned zone.
appletalk strict-rtmp-checking	Performs maximum checking of routing updates to ensure their validity.
appletalk timers	Changes the routing update timers.

appletalk static cable-range

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk static-range** command is not available in Cisco IOS software.

To define a static route or a floating static route on an extended network, use the **appletalk static cable-range** command in global configuration mode. To remove a static route, use the **no** form of this command.

appletalk static cable-range *cable-range* **to** *network.node* [**floating**] **zone** *zone-name*

no appletalk static cable-range *cable-range* **to** *network.node* [**floating**] [**zone** *zone-name*]

Syntax Description

cable-range	Cable range value. The argument specifies the start and end of the cable range, separated by a hyphen. These values are decimal number from 0 to 65,279. The starting network number must be less than or equal to the ending network number.
to *network.node*	AppleTalk network address of the remote router. The argument *network* is the 16-bit network number in the range 0 to 65,279. The argument *node* is the 8-bit node number in the range 0 to 254. Both numbers are decimal.
floating	(Optional) Specifies that this route is a floating static route, which is a static route that can be overridden by a dynamically learned route.
zone *zone-name*	Name of the zone on the remote network. The name can include special characters from the Apple Macintosh character set. To include a special character, type a colon followed by two hexadecimal characters. For zone names with a leading space character, enter the first character as the special sequence :20.

Defaults

No static routes are defined.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

You cannot delete a particular zone from the zone list without first deleting the static route.

When links associated with static routes are lost, traffic may stop being forwarded even though alternative paths might be available. For this reason, you should be careful when assigning static routes.

Floating static routes are a kind of static route that can be overridden by dynamically learned routes. Floating static routes allow you to switch to another path whenever routing information for a destination is lost. One application of floating static routes is to provide back-up routes in topologies where dial-on-demand routing is used.

If you configure a floating static route, the Cisco IOS software checks to see if an entry for the route already exists in its routing table. If a dynamic route already exists, the floating static route is placed in reserve as part of a floating static route table. When the software detects that the dynamic route is no longer available, it replaces the dynamic route with the floating static route for that destination. If the route is later relearned dynamically, the dynamic route replaces the floating static route and the floating static route is again placed in reserve.

To avoid the possibility of a routing loop occurring, by default floating static routes are not redistributed into other dynamic protocols.

Examples

The following example creates a static route to the remote router whose address is 1.2 on the remote network 100-110 that is in the remote zone *Remote*:

```
appletalk static cable-range 100-110 to 1.2 zone Remote
```

The following example creates a floating static route to the remote router whose address is 1.3 on the remote network 100-110 that is in the remote zone *Remote*:

```
appletalk static cable-range 100-110 to 1.3 floating zone Remote
```

Related Commands

Command	Description
appletalk static network	Defines a static route or a floating static route on a nonextended network.
show appletalk route	Displays all entries or specified entries in the AppleTalk routing table.
show appletalk static	Displays information about the statically defined routes.

appletalk static network

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk static network** command is not available in Cisco IOS software.

To define a static route or a floating static route on a nonextended network, use the **appletalk static network** command in global configuration mode. To remove a static route, use the **no** form of this command.

appletalk static network *network-number* **to** *network.node* [**floating**] **zone** *zone-name*

no appletalk static network *network-number* **to** *network.node* [**floating**] [**zone** *zone-name*]

Syntax Description

network-number	AppleTalk network number assigned to the interface. It is a 16-bit decimal number and must be unique on the network. This is the network number that will be advertised by the Cisco IOS software as if it were a real network number.
to *network.node*	AppleTalk network address of the remote router. The argument *network* is the 16-bit network number in the range 0 to 65279. The argument *node* is the 8-bit node number in the range 0 to 254. Both numbers are decimal.
floating	(Optional) Specifies that this route is a floating static route, which is a static route that can be overridden by a dynamically learned route.
zone *zone-name*	Name of the zone on the remote network. The name can include special characters from the Apple Macintosh character set. To include a special character, type a colon followed by two hexadecimal characters. For zone names with a leading space character, enter the first character as the special sequence :20.

Defaults

No static routes are defined.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

You cannot delete a particular zone from the zone list without first deleting the static route.

When links associated with static routes are lost, traffic may stop being forwarded even though alternative paths might be available. For this reason, you should be careful when assigning static routes.

Floating static routes are a kind of static route that can be overridden by dynamically learned routes. Floating static routes allow you to switch to another path whenever routing information for a destination is lost. One application of floating static routes is to provide back-up routes in topologies where dial-on-demand routing is used.

If you configure a floating static route, the Cisco IOS software checks to see if an entry for the route already exists in its routing table. If a dynamic route already exists, the floating static route is placed in reserve as part of a floating static route table. When the Cisco IOS software detects that the dynamic route is no longer available, it replaces the dynamic route with the floating static route for that destination. If the route is later relearned dynamically, the dynamic route replaces the floating static route and the floating static route is again placed in reserve.

To avoid the possibility of a routing loop occurring, by default floating static routes are not redistributed into other dynamic protocols.

Examples

The following example creates a static route to the remote router whose address is 1.2 on the remote network 200 that is in the remote zone *Remote*:

```
appletalk static network 200 to 1.2 zone Remote
```

The following example creates a floating static route to the remote router whose address is 1.3 on the remote network 200 that is in the remote zone *Remote*:

```
appletalk static network 200 to 1.3 floating zone Remote
```

Related Commands

Command	Description
appletalk static cable-range	Defines a static route or a floating static route on an extended network.
show appletalk route	Displays all entries or specified entries in the AppleTalk routing table.
show appletalk static	Displays information about the statically defined routes.

appletalk strict-rtmp-checking

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk strict-rtmp-checking** command is not available in Cisco IOS software.

To perform maximum checking of routing updates to ensure their validity, use the **appletalk strict-rtmp-checking** command in global configuration mode. To disable the maximum checking, use the **no** form of this command.

appletalk strict-rtmp-checking

no appletalk strict-rtmp-checking

Syntax Description

This command has no arguments or keywords.

Defaults

Maximum checking is provided.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Strict Routing Table Maintenance Protocol (RTMP) checking discards any RTMP packets arriving from routers that are not directly connected to the local router. This means that the local router does not accept any routed RTMP packets. Note that RTMP packets that need to be forwarded are not discarded.

Examples

The following example disables strict checking of RTMP routing updates:

```
no appletalk strict-rtmp-checking
```

Related Commands

Command	Description
appletalk require-route-zones	Prevents the advertisement of routes (network numbers or cable ranges) that have no assigned zone.
appletalk send-rtmps	Allows the Cisco IOS software to send routing updates to its neighbors.
appletalk timers	Changes the routing update timers.

appletalk timers

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk timers** command is not available in Cisco IOS software.

To change the routing update timers, use the **appletalk timers** command in global configuration mode. To return to the default routing update timers, use the **no** form of this command.

appletalk timers *update-interval valid-interval invalid-interval*

no appletalk timers [*update-interval valid-interval invalid-interval*]

Syntax Description

update-interval	Time, in seconds, between routing updates sent to other routers on the network. The default is 10 seconds.
valid-interval	Time, in seconds, that the Cisco IOS software will consider a route valid without having heard a routing update for that route. The default is 20 seconds (two times the update interval).
invalid-interval	Time, in seconds, that the route is retained after the last update. The default is 60 seconds (three times the valid interval).

Defaults

update-interval argument: 10 seconds
valid-interval argument: 20 seconds
invalid-interval argument: 60 seconds

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

Routes older than the time specified by the *update-interval* argument are considered suspect. Once the period of time specified by the *valid-interval* argument has elapsed without having heard a routing update for a route, the route becomes bad and is eligible for replacement by a path with a higher (less favorable) metric. During the period for the *invalid-interval* argument, routing updates include this route with a special “notify neighbor” metric. If this timer expires, the route is deleted from the routing table.

Note that you should not attempt to modify the routing timers without fully understanding the ramifications of doing so. Many other AppleTalk router vendors provide no facility for modifying their routing timers; should you adjust the Cisco IOS software AppleTalk timers such that routing updates do not arrive at these other routers within the normal interval, it is possible to degrade or destroy AppleTalk network connectivity.

If you change the routing update interval, be sure to do so for *all* routers on the network.

In rare instances, you might want to change this interval, such as when a device is busy and cannot send routing updates every 10 seconds or when slower routers are incapable of processing received routing updates in a large network.

Examples

The following example increases the update interval to 20 seconds and the route-valid interval to 40 seconds:

```
appletalk timers 20 40 60
```

appletalk virtual-net

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk virtual-net** command is not available in Cisco IOS software.

To add AppleTalk users who are logging in on an asynchronous line and using PPP encapsulation to an internal network, use the **appletalk virtual-net** command in global configuration mode. To remove an internal network, use the **no** form of this command.

appletalk virtual-net *network-number zone-name*

no appletalk virtual-net *network-number zone-name*

Syntax Description

network-number	AppleTalk network address assigned to the interface. This is a 16-bit decimal network number in the range 0 to 65279. The network address must be unique across your AppleTalk internetwork.
zone-name	Name of a new or existing zone to which the AppleTalk user will belong.

Defaults

No virtual networks are predefined.

Command Modes

Global configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

A virtual network is a logical network that exists only within the Cisco IOS software. It enables you—and by extension anyone who dials into the router—to add an asynchronous interface to either a new or an existing AppleTalk zone.

Virtual networks work with both extended and nonextended AppleTalk networks. On Cisco routers, you can only set a virtual network on an asynchronous line on the auxiliary port.

If you issue the **appletalk virtual-net** command and specify a new AppleTalk zone name, the network number you specify is the only one associated with this zone. If you issue this command and specify an existing AppleTalk zone, the network number you specify is added to the existing zone.

The selected AppleTalk zone (either new or existing) is highlighted when you open the Macintosh Chooser window. From this window, you can access all available zones.

Examples

The following example adds a user to the virtual network number 3 and specifies the zone name renegade:

```
apple virtual-net 3 renegade
```

Related Commands

Command	Description
appletalk address	Enables nonextended AppleTalk routing on an interface.
appletalk cable-range	Enables an extended AppleTalk network.
appletalk client-mode	Allows users to access an AppleTalk zone when dialing into an asynchronous line (on Cisco routers, only via the auxiliary port).
appletalk zone	Sets the zone name for the connected AppleTalk network.
show appletalk zone	Displays all entries or specified entries in the zone information table.

appletalk zip-query-interval

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk zip-query-interval** command is not available in Cisco IOS software.

To specify the interval at which the Cisco IOS software sends ZIP queries, use the **appletalk zip-query-interval** command in global configuration mode. To return to the default interval, use the **no** form of this command.

appletalk zip-query-interval *interval*

no zip-query-interval

Syntax Description

interval	Interval, in seconds, at which the software sends ZIP queries. It can be any positive integer. The default is 10 seconds.

Defaults

10 seconds

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

The software uses the information received in response to its ZIP queries to update its zone table.

Examples

The following example changes the ZIP query interval to 40 seconds:

```
appletalk zip-query-interval 40
```

appletalk zip-reply-filter

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk zip-reply-filter** command is not available in Cisco IOS software.

To configure a ZIP reply filter, use the **appletalk zip-reply-filter** command in interface configuration mode. To remove a filter, use the **no** form of this command.

appletalk zip-reply-filter *access-list-number*

no appletalk zip-reply-filter [*access-list-number*]

Syntax Description

access-list-number	Number of the access list. This is a decimal number from 600 to 699.

Defaults

No access lists are predefined.

Command Modes

Interface configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

ZIP reply filters limit the visibility of zones from routers in unprivileged regions throughout the internetwork. These filters filter the zone list for each network provided by a router to neighboring routers to remove restricted zones.

ZIP reply filters apply to downstream routers, not to end stations on networks attached to the local router. With ZIP reply filters, when downstream routers request the names of zones in a network, the local router replies with the names of visible zones only. It does not reply with the names of zones that have been hidden with a ZIP reply filter. To filter zones from end stations, use GZL filters.

ZIP reply filters determine which networks and cable ranges the Cisco IOS software sends out in routing updates. Before sending out routing updates, the software excludes the networks and cable ranges whose zones have been completely denied access by ZIP reply filters. Excluding this information ensures that routers receiving these routing updates do not send unnecessary ZIP requests.

Examples

The following example assigns a ZIP reply filter to Ethernet interface 0:

```
interface ethernet 0
 appletalk zip-reply-filter 600
```

Related Commands

Command	Description
access-list additional-zones	Defines the default action to take for access checks that apply to zones.
access-list zone	Defines an AppleTalk access list that applies to a zone.
show appletalk interface	Displays the status of the AppleTalk interfaces configured in the Cisco IOS software and the parameters configured on each interface.

appletalk zone

Note Effective with Cisco IOS Release 15.0(1)M, the **appletalk zone** command is not available in Cisco IOS software.

To set the zone name for the connected AppleTalk network, use the **appletalk zone** command in interface configuration mode. To delete a zone, use the **no** form of this command.

appletalk zone *zone-name*

no appletalk zone [*zone-name*]

Syntax Description

zone-name	Name of the zone. The name can include special characters from the Apple Macintosh character set. To include a special character, type a colon followed by two hexadecimal characters. For zone names with a leading space character, enter the first character as the special sequence :20.

Defaults

No zone name is set.

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.0(1)M	This command was removed.

Usage Guidelines

If discovery mode is not enabled, you can specify the **appletalk zone** command only after an **appletalk address** or **appletalk cable-range** command. You can issue it multiple times if it follows the **appletalk cable-range** command.

On interfaces that have discovery mode disabled, you must assign a zone name in order for AppleTalk routing to begin.

If an interface is using extended AppleTalk, the first zone specified in the list is the default zone. The Cisco IOS software always uses the default zone when registering NBP names for interfaces. Nodes in the network will select the zone in which they will operate from the list of zone names valid on the cable to which they are connected.

If an interface is using nonextended AppleTalk, repeated execution of the **appletalk zone** command will replace the interface's zone name with the newly specified zone name.

The **no** form of the command deletes a zone name from a zone list or deletes the entire zone list if you do not specify a zone name. For nonextended AppleTalk interfaces, the zone name argument is ignored. You should delete any existing zone-name list using the **no appletalk zone** interface subcommand before configuring a new zone list.

The zone list is cleared automatically when you issue an **appletalk address** or **appletalk cable-range** command. The list also is cleared if you issue the **appletalk zone** command on an *existing* network; this can occur when adding zones to a set of routers until all routers are in agreement.

Examples

The following example assigns the zone name Twilight to an interface:

```
interface Ethernet 0
 appletalk cable-range 10-20
 appletalk zone Twilight
```

The following example uses AppleTalk special characters to set the zone name to *Cisco*:*A5Zone*:

```
appletalk zone Cisco:A5Zone
```

Related Commands

Command	Description
appletalk address	Enables nonextended AppleTalk routing on an interface.
appletalk cable-range	Enables an extended AppleTalk network.
show appletalk zone	Displays all entries or specified entries in the zone information table.