Apple Talk Phase 2 Initial Configuration

Access the AppleTalk Phase 2 configuration process from the `Config>` prompt.
Syntax: **p ap2**
All commands are now entered from the `AP2 config>` prompt.

Globally enable AppleTalk Phase 2.
Syntax: **en a**

Enable interfaces running AppleTalk Phase 2.
Syntax: **e i** *interface#*

NOTE

This is a basic configuration. Depending on the type of network, additional configuration steps may be required.

For detailed information on how to access the configuration and monitoring prompts, see the back of this card.

Enable the network range for seed routers (entered separately for each network).
Syntax: **s net** *interface# start# end#*

Set the starting node number (entered separately for each network).
Syntax: **s no** *interface# node#*

Add AppleTalk zone names (entered separately for each network).
Syntax: **a z** *interface# name*

Enable AppleTalk Phase 1/2 gateway translation for interoperability with Phase 1 networks (if necessary).
Syntax: **en t**

Configure any other protocols for your router by returning to the `Config>` prompt. If all protocols are configured, do the following:

1. Enter exit at the `AP2 config>` prompt.

2. Press <**ctrl/p**> to display the OPCON prompt (*).

3. Enter **restart** and respond **yes** to the prompt.

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AppleTalk Phase 2 Configuration Commands

This quick reference card summarizes the AppleTalk Phase 2 configuration and console commands. The front panel of this card provides the initial configuration steps for this protocol. The back panel tells you how to access the CONFIG process.

Enter the following configuration commands at the `AP2 config>` prompt. To list the configuration commands and their options, enter a **?**.

After you have configured all of the protocols, enter **restart** at the OPCON prompt (`*`), and respond **yes** after the following prompt:

```
Are you sure you want to restart the router? (Yes or No): yes
```

add

zone *interface# zonename*

> Adds the zone name to the interface zone list.

defaultzone *interface# zonename*

> Adds the zone name to the interface zone list as the default for the interface.

ip-tunnel-address *address* DEC

> Adds an IP tunnel endpoint at *address* (*n.n.n.n*, each *n* a decimal integer). DEC specifies encapsulation.

nfilter in *interface# first-network# last-network#*

> Adds a network filter to the input of the interface. The network range must match that of the interface.

nfilter out *interface# first-network# last-network#*

> Adds a network filter to the output of the interface. The network range must match that of the interface.

zfilter in   *interface# zonename*

> Adds a zone name filter to the input of the interface.

zfilter out   *interface# zonename*

> Adds a zone name filter to the output of the interface.

delete

zone *interface# zonename*

> Deletes a zone name from the interface zone list.

ip-tunnel-address *address*

> Deletes the IP-tunnel endpoint at *address*.

nfilter in *interface# first-network# last-network#*

> Deletes a network filter from the input

of the interface.

nfilter out *interface# first-network# last-network#*

> Deletes a network filter from the output of the interface.

zfilter in   *interface# zonename*

> Deletes a zone name filter from the input of the interface.

zfilter out   *interface# zonename*

> Deletes a zone name filter from the output of the interface.

interface *interface#*

> Deletes the AppleTalk 2 interface.

disable

ap2

> Disables the AppleTalk Phase 2 packet forwarder as a whole.

checksum

> Disables checksumming on packets that the specified interface generates.

interface *interface#*

> Disables AppleTalk Phase 2 functions on the specified interface.

ip-tunnel

> Disables IP tunneling.

translation

> Disables the translation process that allows Phase 2 hosts to transparently communicate with Phase 1 hosts.

nfilter in *interface# first-network# last-network#*

> Disables, but does not delete, the input network filters on this interface.

nfilter out *interface# first-network# last-network#*

> Disables, but does not delete, the output network filters on this interface.

zfilter in *interface# zonename*

> Disables, but does not delete, the input zone filters on this interface.

zfilter out *interface# zonename*

> Disables, but does not delete, the output zone filters on this interface.

enable

ap2

> Enables the AppleTalk Phase 2 packet forwarder as a whole.

checksum

> Enables checksumming on packets that the specified interface generates.

interface *interface#*

> Enables AppleTalk Phase 2 functions on the specified interface.

ip-tunnel

> Enables IP tunneling.

translation

> Enables the translation process that allows Phase 2 hosts to transparently communicate with Phase 1 hosts.

nfilter in *interface# first-network# last-network#*

> Enables network input filters and controls how the filter is applied to the interface. Inclusive forwards matches. Exclusive drops matches.

nfilter out *interface# first-network# last-network#*

> Enables network output filters and controls how the filter is applied to the interface. Inclusive forwards matches. Exclusive drops matches.

zfilter in *interface# zonename*

> Enables and controls how the zone input filter is applied to the interface. Inclusive forwards matches. Exclusive drops matches.

zfilter out *interface# zonename*

> Enables and controls how the zone output filter is applied to the interface. Inclusive forwards matches. Exclusive drops matches.

list

Displays the current AppleTalk Phase 2 configuration.

APL2 globally	Indicates whether AppleTalk Phase 2 is globally enabled or disabled.
Checksum	Indicates whether checksum is enabled or disabled.
Table Size	Indicates the size of the table.
Translation Gateway	Indicates whether the AppleTalk Phase II/I translation is globally enabled or disabled.
Configured Interfaces	Lists each interface number and its associated net range, node number, and zone and multi-zone name(s) as well as the default zone. The zone name is enclosed in double quotes in case there are imbedded spaces or nonprinting characters.

set

netrange *interface# start# end#*

> Assigns the network range in seed routers.

node *interface# node#*

> Specifies short DDP headers for packets sent on that interface number. Use this only for compatibility with software that does not support long DDP headers.

exit

Returns to the previous prompt level.

AppleTalk Phase 2 Console Commands

Enter these commands after the `AP2>` prompt. The back panel of this card tells you how to access the CGWCON process.

To list the AppleTalk Phase 2 console commands and their options, enter a **?** at the `AP2>` prompt.

counters
Displays the number of packet overflows on each network (interface) that sends and receives AppleTalk Phase 2 packets.

dump
Displays the routing table information about the interfaces on the router that forwards AppleTalk Phase 2 packets.

Dest net The destination network number in decimal.

Cost The number of router hops to this destination network.

State The state of the entry in the routing table.

Next hop The next hop for packets going to networks that are not directly connected. For directly connected networks, this is node number 0.

Zone(s) Specifies the user-assigned name for that network. The zone name(s) is enclosed in double quotes in case there are embedded spaces or nonprinting characters.

interface
Displays the addresses of all the interfaces in the router on which AppleTalk Phase 2 is enabled.

exit
Returns to the previous prompt level.

Further Configuration Considerations

To allow Phase 1 hosts to transparently communicate with Phase 2 hosts, you must enter the AppleTalk Phase 2 configuration process on the router running AP2 and enable the AppleTalk Phase 1/2 translation function via that router's AP2 enable translation configuration command.

In addition to providing the gateway translation function, this router now acts as both a Phase 1 and Phase 2 router on whatever interfaces these protocols are configured. Routing information is passed between Phase 1 and Phase 2 networks by the gateway resulting in a (logically) single internet.

For more information on the enable translation command and AppleTalk Phase 2, refer to the chapter "Configuring and Monitoring AppleTalk Phase 2" in the *Routing Protocols User's Guide*.

Accessing the CONFIG Process

Use the CONFIG process to display and change the current configuration in static RAM (SRAM).
To display the CONFIG prompt (Config>):

1. After the router boots, the console displays the * prompt. Enter **status** to display the pid (process ID) of CONFIG, which is usually 6.

2. Enter **talk** and the pid (6) for CONFIG. This displays the following information:

   ```
   Gateway user configuration
   Config>
   ```

   If the Config> prompt does not appear, press Return again. You can now enter the configuration commands.

3. When you are done entering the configuration commands, do the following to make the new configuration active:

   a. Press **Ctrl/P** after the Config> prompt.

   ```
   Config> ^p
   *
   ```

   b. Enter **restart** after the * prompt.

   c. Respond **yes** to the following prompt:

   ```
   Are you sure you want to restart the gateway? (Yes or No): yes
   ```

   The new configuration is loaded when the console displays the following information:

   ```
   Copyright 1995–1996 Digital Equipment Corp.

   MOS Operator Control
   *
   ```

Accessing the CGWCON Process

Use the CGWCON (also known as GWCON) process to monitor protocols, network interfaces, and system messages. You cannot access the CGWCON process if the router is in configuration–only mode (the prompt is Config only>). To display the CGWCON prompt (+):

1. After the router boots, the console displays the * prompt. Enter **status** to display the pid (process ID) of CGWCON, which is usually 5.

2. Enter **talk** and the pid (5) for CGWCON. This displays the CGWCON prompt (+). You can now enter the monitoring commands.

   To return to the * prompt, press Ctrl/P.

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