



Airline Product Set Commands

Use the commands in this chapter to configure and monitor the Airline Product Set (ALPS). For ALPS configuration information and examples, refer to the “Configuring the Airline Product Set” chapter in the *Cisco IOS Bridging and IBM Networking Configuration Guide*.

alps a1-map a2-map

To specify the A1 and A2 logical ASCU identification information, use the **alps a1-map a2-map** ALPS ASCU submode command. To remove the specification of the A1 and A2 logical ASCU identification information, use the **no** form of this command.

alps a1-map *a1-value* **a2-map** *a2-value*

no alps a1-map *a1-value* **a2-map** *a2-value*

Syntax Description	<i>a1-value</i>	A1 logical ASCU identification:
		<ul style="list-style-type: none"> • ALC range—Hexadecimal number in the range 0 to 0xFF. • UTS range—Hexadecimal number in the range 0 to 0xFF.
	<i>a2-value</i>	A2 logical ASCU identification:
		<ul style="list-style-type: none"> • ALC range—Hexadecimal number in the range 0 to 0xFF. • UTS range—Hexadecimal number in the range 0 to 0xFF.

Defaults No default behavior or values.

Command Modes ALPS ASCU submode

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.
	12.0(2)T	The range values were modified.
	12.0(5)T	The range values were modified.

Examples The following example specifies the A1 identification as 0x4C and the A2 identification as 0x20:

```
alps a1-map 4C a2-map 20
```

Related Commands	Command	Description
	encapsulation uts	Specifies that the P1024C UTS protocol will be used on the serial interface.

alps alias

To specify that an ALC ASCU is to operate in nonpolling mode, and to specify the parent ASCU interchange address to which this ASCU is aliased, use the **alps alias** ALPS ASCU configuration command. To return the ASCU to polled mode, use the **no** form of this command.

alps alias *alias-interchange-address*

no alps alias *alias-interchange-address*

Syntax Description	<i>alias-interchange-address</i>	Specifies the interchange address of the polled (alias) ASCU with which to associate this non-polled ASCU. Valid range is between 41 and 7E, except 43, 44, 50 to 53, and 60.
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Defaults	If you do not specify the alps alias command, the ASCU functions in normal polled mode. You must specify the alps alias command to enable non-polled handling.	
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Command Modes	ALPS ASCU configuration
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Command History	Release	Modification
	12.1(3)T	This command was introduced.

Usage Guidelines	<p>This command applies only to ALC ASCUs.</p> <p>By default, an ALC ASCU cannot send data to a remote router until it is polled by that router. However, you can use this command to configure <i>non-polled</i> ALC ASCUs.</p> <p>A non-polled ASCU must be associated with another, polled ASCU, known as the alias ASCU. When a remote router polls the alias ASCU, the router accepts data from that ASCU and from all non-polled ASCUs associated with that ASCU. The non-polled ASCUs present the same characteristics to the host as the alias ASCU, so the current ASCU configuration is maintained.</p> <p>This command does not impact the ALC send path or the circuit management code.</p>
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Examples	<p>The following example sets the ALC ASCU with interchange address 4B to operate in nonpolling mode and sets 42 as the alias interchange address:</p>
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```
Router(config-if)# alps ascu 4B
Router(config-alps-ascu)# alps alias 42
```

Related Commands	Command	Description
	alps ascu	Specifies a physical ASCU identity.
	show alps ascu	Displays the status of the ALPS ASCU.

alps ascu

To specify a physical ASCU identity, use the **alps ascu** interface configuration command. To remove the ASCU from the interface and delete any messages queued for transmission to the ASCU or the network, use the **no** form of this command.

alps ascu *id*

no alps ascu *id*

Syntax Description

id ASCU identification. Valid range is between 41 and 7E, except 43, 44, 50 to 53, and 60. The UTS valid range is between 21 and 4F.

Defaults

No default behavior or values.

Command Modes

Interface configuration

Command History

Release	Modification
11.3(6)T	This command was introduced.
12.0(1)	This command was available for general release.
12.0(2)T	This command was modified for UTS support.
12.1(2)T	The valid range values were modified.

Usage Guidelines

If an ASCU already exists on the interface, the **alps ascu** command initiates the ALPS ASCU submode for that ASCU. If the ASCU does not exist, an ASCU is created and the ALPS ASCU submode is initiated.

Examples

The following example specifies the interchange address as 4B:

```
alps ascu 4B
```

Related Commands

Command	Description
encapsulation uts	Specifies that the P1024C UTS protocol is used on the serial interface.
encapsulation alc	Specifies that the P1024B ALC protocol is used on the serial interface.

alps auto-reset

To automatically reset a non-responsive ALC ASCU in the DOWN state, use the **alps auto-reset** ALPS ASCU submode command. To disable the automatic reset, use the **no** form of this command.

alps auto-reset

no alps auto-reset

Syntax Description This command has no arguments or keywords.

Defaults Automatic ASCU reset is disabled by default.

Command Modes ALPS ASCU submode

Command History	Release	Modification
	12.1(2)T	This command was introduced.

Usage Guidelines This command applies only to ALC ASCUs.

Examples The following example configures automatic reset for all non-responsive ASCUs in the DOWN state:

```
alps auto-reset
```

Related Commands	Command	Description
	alps ascu	Specifies a physical ASCU identity.
	encapsulation alc	Specifies that the P1024B ALC protocol is used on the serial interface.

alps circuit

To specify an ALPS circuit at the remote CPE across a TCP/IP connection, use the **alps circuit** global configuration command. To remove the circuit definition from the configuration, send a close message on the ALPS circuit, and delete any queued messages for the circuit, use the **no** form of this command.

alps circuit *name*

no alps circuit *name*

Syntax Description

<i>name</i>	Name given to identify an ALPS circuit.
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Defaults

No default behavior or values.

Command Modes

Global configuration

Command History

Release	Modification
11.3(6)T	This command was introduced.
12.0(1)	This command was available for general release.

Usage Guidelines

Entering this command causes a circuit control block to be created. the command also initiates the ALPS circuit submode. If the circuit already exists, the only action is the initiation of the ALPS circuit submode.

Note that this command is used to statically create an ALPS circuit at the remote CPE. ALPS X.25 circuits (at the central CPE) are always dynamically created and are never created using this command.

Examples

The following example specifies the name of the ALPS circuit at the remote CPE as CKT1:

```
alps circuit CKT1
```

Related Commands

Command	Description
show alps circuits	Displays the status of the ALPS circuits.

alps connection-type permanent

To specify that this circuit should be established when the circuit is enabled, use the **alps connection-type permanent** ALPS circuit submode command. To remove the permanent activation behavior and return the behavior to the default dynamic activation, use the **no** form of this command.

alps connection-type permanent [*retry-timer*]

no alps connection-type permanent [*retry-timer*]

Syntax Description	<i>retry-timer</i>	(Optional) Specifies the maximum interval between consecutive attempts to establish a circuit in the event of a failure. The default for <i>retry-timer</i> is 30 seconds and the range is 1 to 180 seconds.
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Defaults	The default is 30 seconds.
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Command Modes	ALPS circuit submode
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Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples The following example specifies that the circuit is established when enabled and that the CPE will retry the connection every 30 seconds in the event of a failure:

```
alps connection-type permanent 30
```

Related Commands	Command	Description
	show alps circuits	Displays the status of the ALPS circuits.

alps default-circuit

To specify the ALPS circuit that this ASCU uses, use the **alps default-circuit** ALPS ASCU submode command. To remove the default circuit specification, use the **no** form of this command.

alps default-circuit *name*

no alps default-circuit *name*

Syntax Description	<i>name</i>	Name given to identify an ALPS circuit on the remote CPE.
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Defaults	No default behavior or values.	
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Command Modes	ALPS ASCU submode	
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Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples	The following example specifies that ALPS circuit to be used is CKT1:	
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```
alps default-circuit CKT1
```

Related Commands	Command	Description
	show alps circuits	Displays the status of the ALPS circuits.

alps enable-alarms ascu

To enable alarms for the ALPS ASCUs, use the **alps enable-alarms ascu** global configuration command at the remote CPE. To disable alarms for the ALPS ASCUs, use the **no** form of this command.

alps enable-alarms ascu [*interface id*]

no alps enable-alarms ascu

Syntax Description	<i>interface id</i> (Optional) ASCU identifier. Enable alarms for the specified ASCU.
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Defaults	If no interface and interchange address combination is specified, then alarms (SYSLOG messages and SNMP traps) are enabled for all ALPS ASCUs.
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Command Modes	Global configuration
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Command History	Release	Modification
	11.3(6)T	This command was introduced.
12.0(1)	This command was available for general release.	

Usage Guidelines	If an interface and interchange address combination is specified, then the alarms are enabled only for the ASCU matching that combination. Up to eight alps enable-alarms ascu commands can be entered to allow a set of ALPS ASCUs to be monitored. ALPS ASCU alarms are only generated at the remote CPE.
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Examples	The following example enables alarms for ALPS ASCU 42 on serial interface 1:
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```
alps enable-alarms ascu Serial1 42
```

Related Commands	Command	Description
	encapsulation uts	Specifies that the P1024C UTS protocol will be used on the serial interface.

alps enable-alarms circuit

To enable alarms for the ALPS circuits, use the **alps enable-alarms circuit** global configuration command. To remove the circuit definition from the configuration, use the **no** form of this command.

alps enable-alarms circuit [*name*]

no alps enable-alarms circuit [*name*]

Syntax Description	<i>name</i> (Optional) Name given to identify an ALPS circuit on the remote CPE.
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Defaults	No default behavior or values.
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Command Modes	Global configuration
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Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Usage Guidelines	If a valid circuit name is specified, then the alarms are enabled only for the circuit matching the name. Up to eight alps enable-alarms circuit commands can be entered to allow a subset of ALPS circuits to be monitored. ALPS circuit alarms are generated at both the remote ALC CPE and the central (X.25) CPE.
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Examples	The following example enables alarms for the ALPS circuit named CKT1: <pre>alps enable alarms circuit CKT1</pre>
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Related Commands	Command	Description
	show alps circuits	Displays the status of the ALPS circuits.

alps enable-alarms peer

To enable alarms for the ALPS peers, use the **alps enable-alarms peer** global configuration command. To remove the circuit definition from the configuration, send a close message on the ALPS circuit, and delete any queued messages for the circuit, use the **no** form of this command.

alps enable-alarms peer [*ip-address*]

no alps enable-alarms peer [*ip-address*]

Syntax Description	<i>ip-address</i>	(Optional) IP address of the remote peer for which alarms are enabled.
Defaults	No default behavior or values.	
Command Modes	Global configuration	
Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.
Usage Guidelines	If an IP address is specified, then the alarms are enabled only for the remote peer matching the IP address. Up to eight alps enable-alarms peer commands can be entered to allow a set of ALPS peers to be monitored. ALPS peer alarms are generated at both the remote and the central CPE.	
Examples	The following example enables alarms for the ALPS peer at IP address 172.22.0.91: <pre>alps enable alarms peer 172.22.0.91</pre>	
Related Commands	Command	Description
	show alps peers	Displays the status of the ALPS partner peers.

alps enable-ascu

To move the previously defined ASCU from the inactive poll list to the active poll list, use the **alps enable-ascu** ALPS ASCU submode command. This move results in the protocol handler polling the ASCU and rendering it ready for handling terminal traffic. To remove the ASCU from the active poll list to the inactive poll list, use the **no** form of this command. This action prevents the ASCU from being polled, rendering it not ready for handling terminal traffic.

alps enable-ascu

no alps enable-ascu

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values.

Command Modes ALPS ASCU submode

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples The following example moves the ASCU to the active poll list:

```
alps enable-ascu
```

Related Commands	Command	Description
	encapsulation uts	Specifies that the P1024C UTS protocol will be used on the serial interface.

alps enable-circuit

To enable the circuit to be activated when data is received from an ASCU, use the **alps enable-circuit** ALPS circuit submode command. To disable the circuit, use the **no** form of this command.

alps enable-circuit

no alps enable-circuit

Syntax Description This command has no arguments or keywords.

Defaults The circuit is disabled by default.

Command Modes ALPS circuit submode

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples The following example specifies the circuit to be activated when data is received from an ASCU:

```
alps enable-circuit
```

Related Commands	Command	Description
	show alps circuits	Displays the status of the ALPS circuits.

alps error-display

To specify where error messages about service availability or network problems are displayed, use the **alps error-display** ALPS ASCU submode command. To return to the default values, use the **no** form of this command.

alps error-display *number1 number2*

no alps error-display *number1 number2*

Syntax Description

<i>number1</i>	For P1024B ALC, specifies the terminal address where these service messages are sent. Valid numbers are hexadecimal numbers in the range 0x40 to 0x7F. The default address is 0x72. For P1024C UTS, specifies the screen line number where service messages are displayed. Valid numbers are hexadecimal numbers in the range 0x00 to 0x7F. The default line number is 0x37.
<i>number2</i>	For P1024B ALC, specifies the screen line number where service messages are displayed. Valid numbers are hexadecimal numbers in the range 0x40 to 0x7F. The default screen line number is 0x66. For P1024C UTS, specifies the column number where service messages are displayed. Valid numbers are hexadecimal numbers in the range 0x00 to 0x7F. The default column number is 0x20.

Defaults

The default terminal address for P1024B ALC is 0x72.
The default screen line for P1024B ALC is 0x20.
The default line number for P1024C UTS is 0x37.
The default column number for P1024C UTS is 0x20.

Command Modes

ALPS ASCU submode

Command History

Release	Modification
11.3(6)T	This command was introduced.
12.0(1)	This command was available for general release.

Examples

The following example specifies that error messages are displayed at terminal address 6d, on screen line number 78:

```
alps error-display 6d 78
```

Related Commands

Command	Description
encapsulation uts	Specifies that the P1024C UTS protocol will be used on the serial interface.

alps host-hld host-link

To enable ALPS on the X.25 interface, use the **alps host-hld host-link** interface configuration command. To disable ALPS on the X.25 interface, use the **no** form of this command.

```
alps host-hld hld host-link number {{ax25 [damp-tmr value]} | {emtox x.121 [pseudo-conv]}}
[life-tmr value] [reply-tmr value]
```

```
no alps host-hld hld host-link number {{ax25 [damp-tmr value]} | {emtox x.121
[pseudo-conv]}} [life-tmr value] [reply-tmr value]
```

Syntax Description	
<i>hld</i>	Host high-level designator. A hexadecimal number in the range 1 to 7f7f.
<i>number</i>	Host-link identifier. A number in the range 1 to 255.
ax25	Specifies airline X.25 implementation of X.25.
damp-tmr <i>value</i>	(Optional) Specifies the AX.25 PVC damping timer. The <i>value</i> argument is the length of time that a PVC can be inactive before it is destroyed and the corresponding ALPS circuits are closed. The default is 10 seconds.
emtox	Specifies EMTOX implementation of X.25.
<i>x.121</i>	X.121 address of the EMTOX host (called address on calls to the EMTOX host).
<i>pseudo-conv</i>	(Optional) Specifies the pseudo-conversational format of EMTOX packets.
life-tmr <i>value</i>	(Optional) Specifies the maximum amount of time (in seconds) that a message may be queued for sending to the host X.25 system before it is discarded. The <i>value</i> argument is time (in seconds).
reply-tmr <i>value</i>	(Optional) Specifies the duration of the no-reply timer. If the X.2 line is idle for this duration, and the X.25 transmit window is full, then ALPS sends an X.25 reset message on the virtual circuit to reset the transmit/receive windows. The no-reply timer can be configured for between 10 and 600 seconds.

Defaults

The default damping timer value is 10 seconds.
The default no-reply timer value is 60 seconds.

Command Modes Interface configuration

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Related Commands	Command	Description
	encapsulation x25	Specifies operation of a serial interface as an X.25 device.

alps hostlink

To specify information required to establish an X.25 virtual circuit at the central CPE, use the **alps hostlink** ALPS circuit submode command. To remove the circuit definition from the configuration, send a close message on the ALPS circuit, and delete any queued messages for the circuit, use the **no** form of this command.

```
alps hostlink number {ax25 lcn | emtox x121-address} [winout val1] [winin val2] [ops val3] [ips val4]
```

```
no alps hostlink number {ax25 lcn | emtox x121-address} [winout val1] [winin val2] [ops val3] [ips val4]
```

Syntax Description	
<i>number</i>	Interface at the host CPE. Decimal number in the range 1 to 255.
ax25	Specifies airline X.25 implementation of X.25.
<i>lcn</i>	Local channel number for AX.25 connections.
emtox	Specifies EMTOX implementation of X.25.
<i>x121-address</i>	X.121 address for EMTOX connections. This is the X.121 calling address for X.25 call packets sent from the central CPE to the EMTOX host. This address is the source address in a call to the host.
winout <i>val1</i>	(Optional) Specifies the X.25 send window. The <i>val1</i> argument is a decimal number in the range 1 to 7.
winin <i>val2</i>	(Optional) Specifies the X.25 receive window. The <i>val2</i> argument is a decimal number in the range 1 to 7.
ops <i>val3</i>	(Optional) Specifies the maximum output packet size. The <i>val3</i> argument is one of the following numbers: 128, 240, 256, 512, 1024, 2048, or 4096.
ips <i>val4</i>	(Optional) Specifies the maximum input packet size. The <i>val4</i> argument is one of the following numbers: 128, 240, 256, 512, 1024, 2048, or 4096.

Defaults If no values are specified, the default values at the X.25-attached central CPE are used.

Command Modes ALPS circuit submode

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples The following example establishes an X.25 virtual circuit at the central CPE. The configuration specifies airline X.25 implementation. The host CPE interface is 3, the local channel number for airline X.25 connections is 120, and the X.25 send window is 3.

```
alps hostlink 3 ax25 120 winout 3 winin 3
```

Related Commands	Command	Description
	alps auto-reset	Automatically resets a nonresponsive ALC ASCU in the DOWN state.
	show alps circuits	Displays the status of the ALPS circuits.

alps idle-timer

To specify (for dynamic circuits) the length of time that can elapse before an idle circuit is disabled, use the **alps idle-timer** ALPS circuit submode command. To return to the default idle-timer value, use the **no** form of this command.

alps idle-timer *timer*

no alps idle-timer *timer*

Syntax Description	<i>timer</i>	Length of time that can elapse before an idle circuit is brought down. The range is 10 to 600 seconds. The default is 60 seconds.
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Defaults The default length of time that can elapse before an idle circuit is brought down is 60 seconds.

Command Modes ALPS circuit submode

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples The following example specifies that an idle circuit is maintained for 90 seconds before it is disabled:

```
alps idle-timer 90
```

Related Commands	Command	Description
	alps auto-reset	Automatically resets a nonresponsive ALC ASCU in the DOWN state.
	show alps circuits	Displays the status of the ALPS circuits.

alps keepalive

To enable TCP keepalives for ALPS TCP peer connections, use the **alps keepalive** global configuration command. A TCP keepalive request will be sent to the remote peer if the TCP connection to the remote peer is silent for a time period larger than the interval specified. The TCP connection to the ALPS host will be closed when a count equal to the retry count specified is missed consecutively. To disable keepalives for ALPS, use the **no** form of this command.

alps keepalive [*interval time*] [*retry count*]

no alps keepalive [*interval time*] [*retry count*]

Syntax Description	Parameter	Description
	interval time	(Optional) Interval for keepalive requests. The <i>time</i> argument is the keepalive interval, in the range of 10 to 300 seconds. The default is 30 seconds.
	retry count	(Optional) Indicates how many times keepalive requests will be sent before the connection is closed. The <i>count</i> argument is the retry count, in the range 1 to 10. The default is 3 retries.

Defaults

The default keepalive interval is 30 seconds.

The default retry count is 3.

Command Modes

Global configuration

Command History

Release	Modification
11.3(6)T	This command was introduced.
12.0(1)	This command was available for general release.

Examples

The following example specifies that a TCP keepalive request will be sent to the remote peer if the TCP peer connection is idle for 60 seconds. The connection will be closed after 3 consecutive keepalive requests are sent.

```
alps keepalive interval 60 retry 8
```

Related Commands

Command	Description
alps local-peer	Specifies the IP address of the local peer.

alps lifetime-timer

To specify how long messages can be queued in the ALPS circuit queue awaiting transmission to the central CPE, use the **alps lifetime-timer** ALPS circuit submode command. To return to the default lifetime-timer value, use the **no** form of this command.

alps lifetime-timer *timer*

no alps lifetime-timer *timer*

Syntax Description	<i>timer</i>	Length of time, in seconds, that a message can be queued. The range is 1 to 20 seconds. The default is 4 seconds.
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Defaults	The default length of time that a message can be queued in the ALPS circuit queue is 4 seconds.
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Command Modes	ALPS circuit submode
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Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Usage Guidelines	Messages that exceed the timer limit are discarded.
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Examples	<p>The following example specifies that a message remains in the ALPS circuit queue for no longer than 3 seconds:</p> <pre>alps lifetime-timer 3</pre>
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Related Commands	Command	Description
	alps auto-reset	Automatically resets a nonresponsive ALC ASCU in the DOWN state.
	show alps circuits	Displays the status of the ALPS circuits.

alps local-hld remote-hld

To specify the local and remote HLDs to use for this ALPS circuit, use the **alps local-hld remote-hld** ALPS circuit submode command. To remove the definition from the configuration, use the **no** form of this command.

alps local-hld *loc-hld* **remote-hld** *rem-hld*

no alps local-hld *loc-hld* **remote-hld** *rem-hld*

Syntax Description	<i>loc-hld</i>	Local HLD to use for ALPS circuit. Hexadecimal number in the range 1 to FFFF.
	<i>rem-hld</i>	Remote HLD to use for ALPS circuit. Hexadecimal number in the range 1 to FFFF.

Defaults No default behavior or values.

Command Modes ALPS circuit submode

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.
	12.0(5)T	This command was modified and the remote-hld keyword is not applicable for MATIP.

Usage Guidelines The **remote-hld** keyword is not applicable for ALPS with MATIP.

Examples The following example specifies the local HLD as 4B10:

```
alps local-hld 4B10
```

Related Commands	Command	Description
	alps auto-reset	Automatically resets a nonresponsive ALC ASCU in the DOWN state.
	show alps circuits	Displays the status of the ALPS circuits.

alps local-peer

To specify the IP address of the local peer, use the **alps local-peer** global configuration command. To remove all subsequent ALPS configuration commands from the router, use the **no** form of this command.

alps local-peer *ip-address* [**promiscuous**]

no alps local-peer *ip-address* [**promiscuous**]

Syntax Description

<i>ip-address</i>	IP address of the local peer.
promiscuous	(Optional) Keyword specified at the central CPE to accept incoming TCP connections from any remote CPE.

Defaults

No default behavior or values.

Command Modes

Global configuration

Command History

Release	Modification
11.3(6)T	This command was introduced.
12.0(1)	This command was available for general release.

Examples

The following example specifies the local peer IP address as 172.22.0.91 and specifies that the CPE accepts incoming TCP connections from any CPE:

```
alps local-peer 172.22.0.91 promiscuous
```

Related Commands

Command	Description
show alps peers	Displays the status of the ALPS partner peers.

alps matip-close-delay

To specify the interval between the closing and reopening of MATIP circuit connections, use the **alps matip-close-delay** ALPS circuit submode command. To restore the definition to the default value, use the **no** form of this command.

alps matip-close-delay *time*

no alps matip-close-delay *time*

Syntax Description	<i>time</i>	Minimum number of seconds between the closing and reopening of an ALPS MATIP circuit. The range is 1 to 90 seconds. The default is 10 seconds.
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Defaults The default value is 10 seconds.

Command Modes ALPS circuit submode

Command History	Release	Modification
	12.0(5)T	This command was introduced.

Examples The following example specifies a close delay time of 20 seconds:

```
alps matip-close-delay 20
```

Related Commands	Command	Description
	show alps circuits	Displays the status of the ALPS circuits.

alps max-msg-length

To specify maximum input message length, use the **alps max-msg-length** ALPS ASCU submode command. To return to the default maximum input message length, use the **no** form of this command.

alps max-msg-length *value*

no alps max-msg-length *value*

Syntax Description	<i>value</i>	Maximum input message length. The range is 1 to 3840. The default is 962 characters.
---------------------------	--------------	--

Defaults	The default maximum input message length is 962 characters.
-----------------	---

Command Modes	ALPS ASCU submode
----------------------	-------------------

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples	The following example specifies that the maximum length of a message is 1000 characters:
-----------------	--

```
alps max-msg-length 1000
```

alps mpx

To specify the multiplexing and the ASCU identification header for this circuit, use the **alps mpx** ALPS circuit submode command. To remove the definition from the configuration, use the **no** form of this command.

```
alps mpx {group | single} hdr {a1a2 | none}
```

```
no alps mpx {group | single} hdr {a1a2 | none}
```

Syntax Description

group	Specifies that multiple ASCUs will be multiplexed on the ALPS circuit. This setting is the default.
single	Specifies that only one ASCU will use this circuit.
hdr	Specifies the ASCU identification header for the circuit. The default is a1a2.
a1a2	ASCU identification via A1, A2.
none	No ASCU identification.

Defaults

The default for multiplexing is **group**.

The default header is **a1a2**.

Command Modes

ALPS circuit submode

Command History

Release	Modification
11.3(6)T	This command was introduced.
12.0(1)	This command was available for general release.

Usage Guidelines

If **alps mpx group** is specified, multiple ASCUs will be multiplexed on this ALPS circuit and the **none** option is not applicable. If **alps mpx single** is specified, then only one ASCU uses this ALPS circuit. If **alps mpx single hdr none** is specified, the A1 and A2 ASCU identification information is not added to the front of data frames sent across this circuit, and it is assumed that it does not exist in frames received on this circuit. The exclusion of ASCU identification should only be specified when the EMTX protocol is used.

alps n1

To specify the threshold of consecutive errors logged before an ASCU is declared down, use the **alps n1** interface configuration command. To reassert the default number of consecutive errors before declaring an ASCU down, use the **no** form of this command.

alps n1 errors

no alps n1 errors

Syntax Description	<i>errors</i>	Error count limit. The valid range is 1 to 30 errors. The default for ALC is 30 errors. The default for UTS is 10 errors.
---------------------------	---------------	---

Defaults	The default ALC error count is 30 errors. The default UTS error count is 10 errors.
-----------------	--

Command Modes	Interface configuration
----------------------	-------------------------

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.
	12.0(2)T	The error ranges were modified.

Usage Guidelines	The error count limit is a threshold value. If the ASCU state is UP and the error count threshold is exceeded, the ASCU state changes to DOWN and it is moved to the inactive poll. If alarms are enabled for the ASCU, a SYSLOG message is displayed and an SNMP notification is sent to the SNMP network management station.
-------------------------	--

Examples	The following example specifies that an ASCU is declared down when the error count exceeds 1: <pre>alps n1 1</pre>
-----------------	---

Related Commands	Command	Description
	alps ascu	Specifies a physical ASCU identity.
	encapsulation uts	Specifies that the P1024C UTS protocol will be used on the serial interface.

alps n2

To specify the number of polls that must be correctly replied to before an ASCU is declared up, use the **alps n2** interface configuration command. To reassert the default number of polls that must be correctly replied before an ASCU is declared up, use the **no** form of this command.

alps n2 *polls*

no alps n2 *polls*

Syntax Description	<i>polls</i>	Number of polls that must be correctly replied to. The valid range is 1 to 30 polls. The default is 1 poll.
---------------------------	--------------	---

Defaults The default number of polls that must be correctly replied to is 1.

Command Modes Interface configuration

Command History	Release	Modification
	11.3(6)T	This command was introduced.
12.0(1)	This command was available for general release.	

Usage Guidelines If the ASCU state is DOWN and the reply threshold is exceeded, the ASCU state changes to UP and the ASCU is moved to the active poll list. If alarms are enabled for the ASCU, a SYSLOG message is displayed and an SNMP notification is sent to the SNMP management station.

Examples The following example specifies that 2 polls must be correctly replied to before the ASCU is declared up:

```
alps n2 2
```

Related Commands	Command	Description
	alps ascu	Specifies a physical ASCU identity.
encapsulation uts	Specifies that the P1024C UTS protocol will be used on the serial interface.	

alps n3

To specify the maximum number of retransmissions of an unacknowledged output data message to an ASCU, use the **alps n3** interface configuration command. To reassert the default, use the **no** form of this command.

alps n3 *value*

no alps n3 *value*

Syntax Description	<i>value</i>	Maximum number of times an unacknowledged output data message can be resent. When the number is exceeded the output data message is dropped. The valid range is 1 to 10 resends. The default is 3 resends.
---------------------------	--------------	--

Defaults The default number of resends is 3.

Command Modes Interface configuration

Command History	Release	Modification
	12.0(2)T	This command was introduced.

Usage Guidelines This command is valid on 1026C interfaces only.

Examples The following example specifies that 6 is the maximum number of resends of an unacknowledged output data message to an ASCU:

```
alps n3 6
```

Related Commands	Command	Description
	alps ascu	Specifies a physical ASCU identity.
	show alps ascu	Displays the status of the ALPS ASCU.

alps poll-pause

To set the minimum interval, in milliseconds, between two polls to the same ASCU, use the **alps poll-pause** interface configuration command. To the default interval, use the **no** form of this command to revert.

alps poll-pause *msec*

no alps poll-pause

Syntax Description	<i>msec</i>	Minimum interval between polls, in milliseconds. The valid range is 10 to 1000 ms. The default interval is 50 ms.
---------------------------	-------------	---

Defaults The default minimum interval is 50 ms.

Command Modes Interface configuration

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples The following example sets a 200-ms minimum interval between polls:

```
alps poll-pause 200
```

Related Commands	Command	Description
	alps ascu	Specifies a physical ASCU identity.

alps primary-peer

To specify the primary TCP peer and, optionally, a backup TCP peer for an ALPS circuit, use the **alps primary-peer** ALPS circuit submode command. To remove the definition from the configuration, use the **no** form of this command.

alps primary-peer *ip-address* [**backup-peer** *ip-address*]

no alps primary-peer *ip-address* [**backup-peer** *ip-address*]

Syntax Description		
	<i>ip-address</i>	IP address specified in the alps remote-peer command.
	backup-peer	(Optional) Backup TCP peer for the ALPS circuit.
	<i>ip-address</i>	(Optional) IP address specified in the alps remote-peer command.

Defaults No default behavior or values.

Command Modes ALPS circuit submode

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples The following example specifies a primary peer at IP address 172.22.0.91 and a backup peer at IP address 172.22.0.92:

```
alps primary-peer 172.22.0.91 backup-peer 172.22.0.92
```

Related Commands	Command	Description
	alps auto-reset	Automatically resets a nonresponsive ALC ASCU in the DOWN state.
	show alps peers	Displays the status of the ALPS partner peers.

alps remote-peer

To specify the partner IP address for an ALPS circuit, use the **alps remote-peer** global configuration command. To remove the definition from the configuration, use the **no** form of this command.

alps remote-peer *ip-address* [**protocol** {**atp** | **matip-a**}] [**status-interval** *interval*] [**status-retry** *retries*] [**dynamic** [*inact-timer*] [**no-circuit** *no-circ-timer*]] [**tcp-qlen** [*number*]]

no alps remote-peer *ip-address* [**protocol** {*atp* | *matip-a*}] [**status-interval** *interval*] [**status-retry** *retries*] [**dynamic** [*inact-timer*] [**no-circuit** *no-circ-timer*]] [**tcp-qlen** [*number*]]

Syntax Description	
<i>ip-address</i>	IP address of the peer.
protocol { atp matip-a }	(Optional) Specifies the type of encapsulation for the connection. The following options are available: <ul style="list-style-type: none"> ALPS Tunneling Protocol encapsulation. This encapsulation is the default. MATIP Type A (conversational) encapsulation.
status-interval <i>interval</i>	(Optional) Specifies amount of time, in seconds, between sending of MATIP status messages. The messages verify the integrity of the TCP connection. Number of seconds between status messages. The range is 0 to 300 seconds. The default value is 0 (off).
status-retry <i>retries</i>	(Optional) Specifies number of times to retry sending a MATIP status message before the peer connection is closed. Number of retries. The range is 0 to 100 retries. The default value is 2.
dynamic <i>inact-timer</i>	(Optional) Allows the TCP connection to the host peer to be opened only when there is data to be transferred to the host reservation system. Length of inactivity, in seconds, after which the connection is closed. The range is 0 to 300 seconds. The default is 30 seconds. A value of zero indicates that the timer is disabled.
no-circuit <i>no-circ-timer</i>	(Optional) Specifies amount of time, in seconds, that a peer will stay connected while no circuits are using the peer connection. This parameter is valid only if the dynamic parameter is first configured. Number of seconds before which the timer will expire. The range is 0 to 3600 seconds. The default is 90 seconds.
tcp-qlen <i>number</i>	(Optional) Specifies the maximum length of a TCP queue for peer connections. Number of packets allowed in the TCP queue. The range is 26 to 100 packets. The default is 50 packets.

Defaults

The default for the **status-interval** argument is 0 (off).

The default for the **status-retry** argument is 2.

The default for the **dynamic** argument is 30 seconds.

The default for the **no-circuit** argument is 90 seconds.

The default for the **tcp-qlen** argument is 50 packets.

Command Modes Global configuration

Command History	Release	Modification
	11.3(6)T	This command was introduced
	12.0(1)	This command was available for general release.
	12.0(5)T	The keyword protocol , status-interval , status-retry and the no-circuit option were added.

Usage Guidelines

When the protocol option is configured for MATIP, the peer connection is dynamic.

When the protocol option is configured for ATP, the peer connection is permanent.

The **no-circuit** option within the dynamic keyword does not apply to permanent (ALC/UTS) connections.

The **status-interval** and **status-retry** options apply only to the MATIP protocol.

Issuing the **no alps remote-peer** command does the following:

- Closes TCP connection.
- Notifies the partner TCP peer that this connection is closed.

Notifies the ALPS circuits using this TCP peer that the connection is closed.

Examples

The following example specifies a MATIP peer connection at IP address 172.22.0.92. Status messages will be sent every 20 seconds and will be 2 times before the connection is closed. The maximum TCP length is 30:

```
alps remote-peer 172.22.0.92 protocol matip-a status-interval 20 status-retry 2 tcp-qlen
30
```

Related Commands	Command	Description
	alps local-peer	Specifies the IP address of the local peer.
	show alps peers	Displays the status of the ALPS partner peers.

alps retry-option

To configure the CPE to signal the ASCU whenever an error is detected, use the **alps retry-option** ALPS ASCU submode command. To reassert the default action of no retry, use the **no** form of this command.

alps retry-option {resend | reenter}

no alps retry-option

Syntax Description	resend	reenter
	Specifies the retry option as resend. This option causes an indicator LED to signal the operator at the ASCU to resend data.	Specifies the retry option as reenter. This option causes a service message to signal the operator at the ASCU to reenter data.

Defaults The default retry option is no retry.

Command Modes ALPS ASCU submode

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Usage Guidelines This command is applicable only for P1024B ALC interfaces; it is invalid on P1024C UTS interfaces.

Examples The following example specifies that an indicator LED signals the ASCU to resend data:

```
alps retry-option resend
```

Related Commands	Command	Description
	alps ascu	Specifies a physical ASCU identity.
	encapsulation uts	Specifies that the P1024C UTS protocol will be used on the serial interface.

alps service-msg-interval

To specify the interval between consecutive transmissions of service messages from the remote CPE to the ASCU, use the **alps service-msg-interval** ALPS circuit submode command. To remove the definition from the configuration, use the **no** form of this command.

alps service-msg-interval *seconds*

no alps service-msg-interval *seconds*

Syntax Description

<i>seconds</i>	Interval, in seconds, between consecutive sendings of service messages from the remote CPE to the ASCU. The range is 1 to 20 seconds. The default interval is 4 seconds.
----------------	--

Defaults

The default interval between consecutive sendings of service messages from the remote CPE to the ASCU is 4 seconds.

Command Modes

ALPS circuit submode

Command History

Release	Modification
11.3(6)T	This command was introduced.
12.0(1)	This command was available for general release.

Usage Guidelines

The “PLEASE RETRY” message is sent only to ASCUs that use circuits with a dynamic connection type.

Examples

The following example specifies an interval of 3 seconds between sending service messages from the CPE to the ASCU:

```
alps service-msg-interval 3
```

Related Commands

Command	Description
alps auto-reset	Automatically resets a nonresponsive ALC ASCU in the DOWN state.
alps service-msg-list	Defines the service message list to be used for this circuit.

alps service-msg-list

To define the service message list to be used for this circuit, use the **alps service-msg-list** ALPS circuit submode command. To remove the list from the circuit configuration, thus issuing no service messages until another list is configured, use the **no** form of this command.

alps service-msg-list *list*

no alps service-msg-list *list*

Syntax Description	<i>list</i>	The service message list to be used for this circuit. The valid numbers are 1 to 8.
---------------------------	-------------	---

Defaults	No default behavior or values.
-----------------	--------------------------------

Command Modes	ALPS circuit submode
----------------------	----------------------

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples The following example specifies that message list 1 is used for this circuit:

```
alps service-msg-list 1
```

Related Commands	Command	Description
	alps auto-reset	Automatically resets a nonresponsive ALC ASCU in the DOWN state.
	alps service-msg-interval	Specifies the interval between consecutive transmissions of service messages from the remote CPE to the ASCU.

alps service-msg-list number

To define the service message identity and its contents for a service message list, use the **alps service-msg-list number** global configuration command. To remove a service message number from the service message list configuration, use the **no** form of this command.

alps service-msg-list *list number number message*

no alps service-msg-list *list number number message*

Syntax Description

<i>list</i>	Service message list to be used for this circuit. Valid numbers are 1 to 8.
<i>number</i>	List number. Valid numbers are 1 to 8.
<i>message</i>	Contents of a service message. Maximum number of characters allowed in a service message is 32.



Note Configuring the *message* argument with a value of \$OFF\$ disables this particular service message.

Defaults

The default service message is used if no service message list number is specified.

Table 51 shows the default service message text strings.

Table 51 Service Message Default Text Strings

Message Number	Event	Text String
1	ALPS circuit to host is opened.	CONNECTION UP
2	X.25 virtual circuit at the host is cleared.	DISC BY THE HOST
3	X.25 interface at the host is down.	HOST ISOLATED
4	No response from the host router when trying to establish a connection.	NETWORK PROBLEM
5	Connection to host was disconnected because of inactivity.	READY TO CONNECT
6	Network is congested.	CONGESTION
7	Network congestion has cleared.	PLEASE PROCEED
8	Network operator has disabled the path to the host.	DISC BY NET OPERAT

Command Modes

Global configuration

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.
	12.1(2)T	The \$OFF\$ option was added to the <i>message</i> argument and the maximum service message length was increased to 32.

Usage Guidelines To disable a particular service message, configure the *message* argument with a value of \$OFF\$.

Examples The following example specifies the text of message list 1, message number 2:

```
alps service-msg-list 1 number 2 "Turn off the terminal NOW."
```

The following example disables service message 3 from list 1:

```
alps service-msg-list 1 number 3 $OFF$
```

Related Commands	Command	Description
	alps service-msg list	Defines the service message list to be used for this circuit.

alps service-msg data-drop

To specify where to retrieve the terminal address to be used when a service message is sent to an ASCU as the result of a dropped data message, use the **alps service-msg data-drop** interface configuration command. To remove the terminal address specification, use the **no** form of this command.

```
alps service-msg data-drop { msg-term | config-term }
```

```
no alps service-msg data-drop { msg-term | config-term }
```

Syntax Description

msg-term	Specifies that the service message will be sent to the terminal address of the dropped message.
config-term	Specifies that the service message terminal address is the same address configured in the alps-error display command.

Defaults

The **config-term** option is the default.

If this command is not configured and a data message is dropped from a terminal, the resulting service message is sent to the terminal specified in the **alps error-display** command.

Command Modes

Interface configuration

Command History

Release	Modification
12.1(2)T	This command was introduced.

Usage Guidelines

This command applies to serial interfaces configured with ALC encapsulation only.

Examples

The following example specifies that service messages resulting from dropped data messages are sent to the terminal address of the dropped message:

```
alps service-msg data-drop msg-term
```

Related Commands

Command	Description
alps error-display	Specifies where error messages about service availability or network problems are displayed.
encapsulation alc	Specifies that the P1024B ALC protocol is used on the serial interface.

alps service-msg format

To specify the protocol format of service messages sent from the router to an ASCU, use the **alps service-msg format** interface configuration command. To remove the protocol format specification, use the **no** form of this command.

alps service-msg format {sita | apollo}

no alps service-msg format {sita | apollo}

Syntax Description

sita	Specifies the sita protocol format.
apollo	Specifies the apollo protocol format.

Defaults

The default protocol format is **sita**.

Command Modes

Interface configuration

Command History

Release	Modification
12.1(2)T	This command was introduced.

Usage Guidelines

This command applies to serial interfaces configured with ALC encapsulation only.

Examples

The following example specifies the apollo protocol format:

```
alps service-msg format apollo
```

Related Commands

Command	Description
encapsulation alc	Specifies that the P1024B ALC protocol is used on the serial interface.

alps service-msg status-change

To specify that service messages for ALPS circuit status changes be sent to ASCUs on the serial interface, use the **alps service-msg status-change** interface configuration command. To send service messages for ALPS circuit status changes only when ALC data messages are dropped, use the **no** form of this command.

alps service-msg status-change

no alps service-msg status-change

Syntax Description This command has no arguments or keywords.

Defaults The default is on. Unless the **no** form of this command is configured, unsolicited service messages are sent to all ASCUs multiplexed on the MATIP session when the following ALPS circuit events occur:

- MATIP session status change
- ASCU status change

Command Modes Interface configuration

Command History	Release	Modification
	12.1(2)T	This command was introduced.

Usage Guidelines This command applies to serial interfaces configured with ALC encapsulation only.

If the **no** form of this command is configured, service messages for ALPS circuit status changes are sent only when ALC data messages are dropped.

Examples The following example specifies that unsolicited service messages resulting from ALPS circuit status changes be sent to ASCUs on the serial interface:

```
alps service-msg status-change
```

Related Commands	Command	Description
	encapsulation alc	Specifies that the P1024B ALC protocol is used on the serial interface.

alps servlim

To specify the number of polls of the ASCU UP list allowed between two successive polls of the ASCU DOWN list, use the **alps servlim** interface configuration command. To reassert the default number of cycles through the normal (active) poll list allowed before the slow poll list is processed, use the **no** form of this command.

alps servlim *polls*

no alps servlim *polls*

Syntax Description	<i>polls</i>	Number of polls of the ASCU UP list. The valid range is 1 to 512 polls. The default is 30 polls.
---------------------------	--------------	--

Defaults	The default number of polls of the ASCU UP list allowed between two successive polls of the ASCU DOWN list is 30 polls.
-----------------	---

Command Modes	Interface configuration
----------------------	-------------------------

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples	The following example specifies that 5 polls of the ASCU UP list are allowed between 2 successive polls of the ASCU DOWN list.
-----------------	--

```
alps servlim 5
```

Related Commands	Command	Description
	alps n1	Specifies the threshold of consecutive errors logged before an ASCU is declared down.
	alps n2	Specifies the number of polls that must be correctly replied to before an ASCU is declared up.
	alps t1	Specifies the timeout delay between polling and response.
	alps t2	Specifies the timeout delay between receipt of the first character of an IP sequence solicited by a poll and receipt of a GA sequence.

alps t1

To specify the timeout delay between polling and response, use the **alps t1** interface configuration command. To reassert the default poll timeout value of 0.5 seconds, use the **no** form of this command.

alps t1 *delay*

no alps t1 *delay*

Syntax Description

<i>delay</i>	Timeout delay, in seconds, between polling and response. The valid range is 1 to 20 tenths of a second (0.1 to 2 seconds). The default is 5 tenths of a second (0.5 second).
--------------	--

Defaults

The default timeout delay between polling and response is 5 tenths of a second (0.5 second).

Command Modes

Interface configuration

Command History

Release	Modification
11.3(6)T	This command was introduced.
12.0(1)	This command was available for general release.
12.1(2)T	The range for the timeout delay was extended.

Examples

The following example specifies a 0.5-second timeout delay between polling and response:

```
alps t1 5
```

Related Commands

Command	Description
alps n1	Specifies the threshold of consecutive errors logged before an ASCU is declared down.
alps n2	Specifies the number of polls that must be correctly replied to before an ASCU is declared up.
alps servlim	Specifies the number of polls of the ASCU UP list allowed between two successive polls of the ASCU DOWN list.
alps t2	Specifies the timeout delay between receipt of the first character of an IP sequence solicited by a poll and receipt of a Go Ahead (GA) sequence.
encapsulation alc	Specifies that the P1024B ALC protocol is used on the serial interface.
encapsulation uts	Specifies that the P1024C UTS protocol is used on the serial interface.

alps t2

To specify the timeout delay between receipt of the first character of an I/P sequence solicited by a poll and receipt of a Go Ahead (GA) sequence, use the **alps t2** interface configuration command. To reassert the default timeout value of 6 seconds, use the **no** form of this command.

alps t2 *delay*

no alps t2 *delay*

Syntax Description	<i>delay</i>	Timeout delay, in seconds, between receipt of first character of an I/P sequence solicited by a poll and receipt of Go Ahead (GA) sequence. The valid range is 1 to 10 seconds. The default is 6 seconds.
---------------------------	--------------	---

Defaults	The default timeout delay between receipt of first character of an I/P sequence solicited by a poll and receipt of Go Ahead (GA) sequence is 6 seconds.
-----------------	---

Command Modes	Interface configuration
----------------------	-------------------------

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples	The following example specifies a timeout delay of 8 seconds between receipt of the first character of an I/P sequence solicited by a poll and receipt of a Go Ahead (GA) sequence:
-----------------	---

```
alps t2 8
```

Related Commands	Command	Description
	alps n1	Specifies the threshold of consecutive errors logged before an ASCU is declared down.
	alps n2	Specifies the number of polls that must be correctly replied to before an ASCU is declared up.
	alps servlim	Specifies the number of polls of the ASCU UP list allowed between two successive polls of the ASCU DOWN list.
	alps t1	Specifies the timeout delay between polling and response.

alps translate

To map an X.121 address to an IP address of a remote peer, use the **alps translate** interface configuration command. To remove mapping from the configuration, use the **no** form of this command.

alps translate *x.121-address ip-address*

no alps translate *x.121-address ip-address*

Syntax Description	<i>x.121-address</i>	X.121 address to be mapped to an IP address of a remote peer.
	<i>ip-address</i>	IP address of the remote peer.

Defaults No default behavior or values.

Command Modes Interface configuration

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Usage Guidelines The X.121 address is compared to the Called Address on inbound X.25 call packets to determine if the call should be accepted. The X.121 address may have an asterisk (*) at the end to indicate “all X.121 addresses prefixed with the address before the *.”

Examples The following example maps all X.121 addresses prefixed with the address 88845 to the remote peer IP address 172.22.0.90:

```
alps translate 88845* 172.22.0.90
```

Related Commands	Command	Description
	encapsulation x25	Specifies operation of a serial interface as an X.25 device.

alps update-circuit

To update one or more ALPS circuits, use the **alps update-circuit** EXEC command. If a circuit name is specified, then only that circuit will be updated; otherwise, all circuits will be updated.

alps update-circuit [*name*]

Syntax Description	<i>name</i> (Optional) Specifies name of circuit to update.
---------------------------	---

Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	12.0(5)T	This command was introduced.

Usage Guidelines If the **alps update-circuit** command is issued for a circuit that is using the ATP protocol, the circuit will be closed and reopened.

If the **alps update-circuit** command is issued for a circuit that is using the MATIP protocol, a configuration update will be sent in the form of a MATIP Session Open command.

The **alps update-circuit** command is effective only for ALPS circuits that are enabled and active (opening or opened state).

There is not a no form for this command.

Examples The following example specifies that circuit 1 has been updated:

```
alps update-circuit CKT-1
```

Related Commands	Command	Description
	alps auto-reset	Automatically resets a nonresponsive ALC ASCU in the DOWN state.
	alps enable-circuit	Enables the circuit to be activated when data is received from an ASCU.
	show alps circuits	Displays the status of the ALPS circuits.

clear alps circuits

To remove configured ALPS circuits, use the **clear alps circuits** EXEC command.

clear alps circuits [**ipaddr** *address* / **name** *string*]

Syntax Description	
ipaddr <i>address</i>	(Optional) Clear ALPS circuits for peer with specified IP address.
name <i>string</i>	(Optional) Clear ALPS circuits for peer with specified name.

Defaults If no IP address or name is specified, the command clears all ALPS circuits.

Command Modes EXEC

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples The following example clears the ALPS circuit named CKT1:

```
clear alps circuits name CKT1
```

Related Commands	Command	Description
	alps auto-reset	Automatically resets a nonresponsive ALC ASCU in the DOWN state.
	show alps circuits	Displays the status of the ALPS circuits.

clear alps counters

To clear all counters relevant to the ALPS feature, use the **clear alps counters** EXEC command.

clear alps counters

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Examples The following example clears all counters for the ALPS feature:

```
clear alps counters
```

Related Commands	Command	Description
	encapsulation uts	Specifies that the P1024C UTS protocol will be used on the serial interface.
	show alps circuits	Displays the status of the ALPS circuits.
	show alps peers	Displays the status of the ALPS partner peers.

encapsulation alc

To specify that the P1024B Airline Control (ALC) protocol will be used on the serial interface, use the **encapsulation alc** interface configuration command. To remove ALC protocol handling from the serial interface, and return the default encapsulation (HDLC) to the interface, use the **no** form of this command.

encapsulation alc

no encapsulation alc

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values.

Command Modes Interface configuration

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.

Usage Guidelines The **encapsulation alc** command causes any ASCU configuration to be removed from the interface. As each ASCU defined on the interface is removed it is also unlinked from the ASCU circuit it belongs to. All data frames queued for sending to the ASCU are destroyed.

This encapsulation command must be entered prior to any ASCU configuration. Note that all timer and counter values are applicable to all ASCUs on the interface.

Examples The following example specifies that the ALC protocol is used:

```
encapsulation alc
```

Related Commands	Command	Description
	show interfaces	Displays statistics for the interfaces configured on a router or access server.

encapsulation uts

To specify that the P1024C Universal Terminal Support (UTS) protocol will be used on the serial interface, use the **encapsulation uts** interface configuration command. To remove P1024C UTS protocol handling from the serial interface and return the default encapsulation (HDLC) to the interface, use the **no** form of this command.

encapsulation uts

no encapsulation uts

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values.

Command Modes Interface configuration

Command History	Release	Modification
	12.0(2)T	This command was introduced.

Usage Guidelines The **encapsulation uts** command causes any ASCU configuration to be removed from the interface. As each ASCU defined on the interface is removed it is also unlinked from the ASCU circuit it belongs to. All data frames queued for sending to the ASCU are destroyed.

This encapsulation command must be entered prior to any ASCU configuration. Note that all timer and counter values are applicable to all ASCUs on the interface.

Examples The following example specifies that the P1024C UTS protocol is used:

```
encapsulation uts
```

Related Commands	Command	Description
	show interfaces	Displays statistics for all interfaces configured on a router or access server.

show alps ascu

To display the status of the ALPS ASCU, use the **show alps ascu EXEC** command.

show alps ascu [*interface* [*id*]] [**detail**]

Syntax Description	
<i>interface</i> [<i>id</i>]	(Optional) Combined interface and ASCU interchange address (IA). If the interface and ASCU are specified, the status for only the ASCU on that interface is displayed. If only the interface is specified, all ASCUs defined on that interface are displayed. If the interface and ASCU are not specified, then all ASCUs defined are displayed.
detail	(Optional) Displays detailed output.

Command Modes	
	EXEC

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.
	12.0(5)T	This command was modified.
	12.1(2)T	The output for the detail version of this command was modified.

Examples

The following example shows output from the **show alps ascu** command:

```
router# show alps ascu
interface dlc id a1 a2 circuit      pkt_tx    pkt_rx    state
-----
Serial1/2  ALC 5F 41 42 MATIP-ALC          0          0          DOWN
Serial1/3  UTS 21 23 4A MATIP              0          0          DOWN
Serial1/6  ALC 5F 41 45 MATIP-ALC          0          0          DOWN
Serial1/6  ALC 6F 41 44 MATIP-ALC          0          0          DOWN
Total number of ASCUs: 4
Total number of up ASCUs: 0
```

The following example shows output from the **show alps ascu detail** command for ASCUs 4F and 6F on interface Serial1/6:

```
Router# show alps ascu detail

ascu 4F on i/f Serial1/6, dlc = ALC, state = UP
  default-circuit = MATIP-ALC, a1 = 41, a2 = 45
  max_msg_len = 962, retry_option = none, alias = 6F
  err_disp_terminal = 114, err_disp_line = 102
  pkt_tx = 0, byte_tx = 0, pkt_rx = 0, byte_rx = 0
  bad_CCC = 0, garbledMsgs = 0, T1Timeouts = 0

ascu 6F on i/f Serial1/6, dlc = ALC, state = DOWN
  default-circuit = MATIP-ALC, a1 = 41, a2 = 44
  max_msg_len = 962, retry_option = none
  err_disp_terminal = 114, err_disp_line = 102
  pkt_tx = 0, byte_tx = 0, pkt_rx = 0, byte_rx = 0
  bad_CCC = 0, garbledMsgs = 0, T1Timeouts = 14
```

Table 52 describes significant fields in the display:

Table 52 *show alps ascu Field Descriptions*

Field	Description
dlc	Data link control.
state	Status of connection; UP, DOWN or DISABLED.
default-circuit	Name of the default circuit.
a1	Logical ASCU identification information for A1.
a2	Logical ASCU identification information for A2.
max_msg_len	Maximum input message length. Protocol level count that includes all protocol overhead plus data. The valid range is 1 to 3840 bytes. The default is 962 bytes. Anything over the maximum is discarded and the interface giant counter is incremented. This does not apply to the GarbledMsg for the ASCU.
retry_option	<p>Retry option. When a message with a bad cycle check character (CCC) is received from an ASCU, a retry option can be configured using the alps retry-option command. The retry option configures the customer premise equipment (CPE) to send a message to the ASCU. The following retry options are available:</p> <ul style="list-style-type: none"> • resend—Indicator LED signals the operator at the ASCU to resend data. • reenter—Service messages signal the operator at the ASCU to reenter data. <p>The default retry option is no retry.</p>
err_disp_terminal	Terminal address to which error service messages are sent.
alias	Parent ASCU interchange address to which this nonpolling ALC ASCU is aliased.
err_disp_line	Screen line number where error service messages are sent.
pkt_tx	Packets sent.
byte_tx	Bytes sent.
pkt_rx	Packets received.
byte_rx	Bytes received.

Table 52 *show alps ascu Field Descriptions (continued)*

Field	Description
bad_CCC	Number of bad CCCs. A bad_CCC occurs when the proper control characters were received, the characters did not exceed the maximum length, and the CCC calculation fails.
garbledMsgs	Number of garbled messages. Garbled messages are a result of a range of different errors, including the following: <ul style="list-style-type: none"> • An unexpected character is received • The maximum interface buffer size is exceeded • The maximum message length is exceeded
T1Timeouts	Number of response timeouts.

Related Commands

Command	Description
alps ascu	Specifies a physical ASCU identity.

show alps circuits

To display the status of the ALPS circuits, use the **show alps circuits EXEC** command. If a circuit name is specified, then only the status of that circuit will be displayed; otherwise, the status of all circuits will be displayed.

show alps circuits [*peer *ipaddress**] [*name *name**] [*detail*]

Syntax Description	peer <i>ipaddress</i>	(Optional) Displays the status of the circuits connected to the specified peer.
	name <i>name</i>	(Optional) Displays only the status of that circuit.
	detail	(Optional) Displays detailed output.

Command Modes EXEC

Command History	Release	Modification
	11.3T	This command was introduced.
	12.0(1)	This command was available for general release.
	12.0(5)T	This command was modified.

Examples

The following example shows output from the **show alps circuits** command:

```
router# show alps circuits
name          pri_peer      curr_peer      dlc   state  pkt_tx  pkt_rx
-----
CKT1          172.18.60.201 0.0.0.0        NONE DISC   0       0
CKT2          172.18.60.201 0.0.0.0        NONE DISC   0       0
MATIP         10.100.1.2    0.0.0.0        UTS  DISC   0       0
MATIP-ALC     10.100.1.2    0.0.0.0        ALC  INOP   0       0
Total number of circuits: 4
Total number of connected circuits: 0
```

The following example shows output from the **show alps circuits** command using the **detail** keyword:

```
router# show alps circuit name matip-alc detail
MATIP-ALC: dlc = ALC, conn_type = PERM, state = INOP, uptime = 00:00:00
  down reason = noReason
  pri_peer = 10.100.1.2, sec_peer = 0.0.0.0
  curr_peer = 0.0.0.0,
  local_hld = 4D02, remote_hld = 7F7F
  emtox: hostlink = 255, x121 = 1234
  lifetime_tmr = 4, idle_tmr = 60, retry_tmr = 30
  pkt_tx = 0, byte_tx = 0, pkt_rx = 0, byte_rx = 0
  src_corr = 0, dst_corr = 0
  drops_q_overflow = 0, drops_ckt_disabled = 0
  drops_lifetime_tmr = 0, drops_invalid_ascu = 0
  ascus: (41,42)U, (41,44)U, (41,45)U
Total number of ASCUs: 3
```

■ show alps circuits

Related Commands

Command	Description
alps auto-reset	Automatically resets a nonresponsive ALC ASCU in the DOWN state.

show alps peers

To display the status of the ALPS partner peers, use the **show alps peers EXEC** command. If an IP address is specified, then only the status of that peer will be displayed; otherwise, the status of all peers will be displayed.

show alps peers [*ipaddress address*] [*detail*]

Syntax Description	
ipaddress address	(Optional) Displays only the status of that ASCU.
detail	(Optional) Displays detailed output.

Command Modes EXEC

Command History	Release	Modification
	11.3(6)T	This command was introduced.
	12.0(1)	This command was available for general release.
	12.0(5)T	This command was modified.

Examples

The following example shows output from the **show alps peers detail** command:

```
router# show alps peers detail

TCP:10.227.50.106, conn_id = MATIP_A_CKT-2
  protocol = MATIP_A, fport = 350, lport = 11592
  type = DYN, create = ADMIN, state = OPENED, uptime = 00:00:53
  down reason = unknown
  pkt_tx = 1071, byte_tx = 37264, pkt_rx = 1066, byte_rx = 36010
  Drops:giants = 0, q_overflow = 0, peer_down = 0, ver_mismatch = 0
```

Table 53 *show alps peers detail* Field Descriptions

Field	Description
TCP	Remote peer IP address.
conn_id	Configured circuit name.
protocol	Protocol can be one of the following: <ul style="list-style-type: none"> ATP = This protocol is used when two routers form peers. MATIP = This protocol is used when one router directly communicates with the mainframe. UNKNOWN = This protocol implies that the peer is down.
fport	Foreign TCP port.
lport	Local TCP port.

Table 53 show alps peers detail Field Descriptions (continued)

Field	Description
type	Type can either be PERM or DYN. <ul style="list-style-type: none"> • PERM =Permanent; this peer will always be connected. • DYN =Dynamic; this peer will go up and down based on traffic. If there is no traffic, the peer will go down.
create	Create can either be ADMIN or LEARN. <ul style="list-style-type: none"> • ADMIN = This peer was configured on this router, and the peer was started from this router. • LEARN = This is an incoming connection.
state	State can be one of the following: <ul style="list-style-type: none"> • DISCONN = Peer is not connected. • OPENING = Peer is in the process of opening. • OPENED = Peer is connected and is ready to exchange data. • WAN_BUSY = There is traffic on our end of the TCP connection.
uptime	Time for which the peer is up and running.
down reason	It can assume the following 8 values : idle, noCircuits, destUnreachable, foreignReset, localReset, noMemory, openingTimeout, unknown.
pkt_tx	Number of packets transmitted.
pkt_rx	Number of packets received.
byte_tx	Number of bytes transmitted.
byte_rx	Number of bytes received.
drops_giant	Number of packets that are dropped. A giant is counted when the ALPS process receives a packet from TCP that exceeds the maximum ALPS packet size of 4096 bytes.
q_overflow	This counter is incremented whenever an attempt to send a packet to the TCP peer fails.
peer_down	This counter is incremented when the peer is not reachable.
ver_mismatch	This counter is incremented because of mismatch between the local ALPS version and the ones received from TCP.
active_ckts	Configured names of the circuits that are active over this peer.

Related Commands

Command	Description
alps primary-peer	Specifies the primary TCP peer and, optionally, a backup TCP peer for this ALPS circuit.
alps remote-peer	Specifies the partner IP address.

■ show alps peers