



FlexConnect Commands

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- [config Commands, on page 6](#)
- [debug Commands, on page 17](#)

show Commands

show ap flexconnect

To view the details of APs in FlexConnect mode, use the **show ap flexconnect** command.

show ap flexconnect module-vlan *ap-name*

Syntax Description	module-vlan	ap-name
	Displays the status of FlexConnect local switching and VLAN ID value	Cisco AP name

Command History	Release	Modification
	8.3	This command was introduced.

show capwap reap association

To display the list of clients associated with an access point and their SSIDs, use the **show capwap reap association** command.

show capwap reap association

Syntax Description	This command has no arguments or keywords.
--------------------	--

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to display clients associated to an access point and their SSIDs:

```
(Cisco Controller) >show capwap reap association
```

Related Topics

[config flexconnect group](#)

[show capwap reap status](#), on page 2

show capwap reap status

To display the status of the FlexConnect access point (connected or standalone), use the **show capwap reap status** command.

show capwap reap status

Syntax Description	This command has no arguments or keywords.
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Command Default	None
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Command History	Release	Modification
	8.3	This command was introduced.

Usage Guidelines

The command shows only the VLAN when configured as AP-specific.

The following example shows how to display the status of the FlexConnect access point:

```
(Cisco Controller) >show capwap reap status
```

Related Topics

[config flexconnect group](#)

[show capwap reap association](#), on page 2

show flexconnect acl detailed

To display a detailed summary of FlexConnect access control lists, use the **show flexconnect acl detailed** command.

```
show flexconnect acl detailed acl-name
```

Syntax Description	<i>acl-name</i>	Name of the access control list.
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Command Default	None
-----------------	------

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to display the FlexConnect detailed ACLs:

```
(Cisco Controller) >show flexconnect acl detailed acl-2
```

Related Topics

[config flexconnect \[ipv6\] acl](#), on page 11

show flexconnect acl summary

To display a summary of all access control lists on FlexConnect access points, use the **show flexconnect acl summary** command.

```
show flexconnect acl summary
```

Syntax Description	This command has no arguments or keywords.
--------------------	--

Command Default	None
-----------------	------

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to display the FlexConnect ACL summary:

```
(Cisco Controller) >show flexconnect acl summary
ACL Name                               Status
-----
acl1                                     Modified
acl10                                    Modified
acl100                                   Modified
acl101                                   Modified
acl102                                   Modified
acl103                                   Modified
acl104                                   Modified
acl105                                   Modified
acl106                                   Modified
```

show flexconnect group detail

To display details of a FlexConnect group, use the **show flexconnect group detail** command.

show flexconnect group detail *group_name* [**module-vlan** | **aps**]

Syntax Description	
<i>group_name</i>	Name of the FlexConnect group.
module-vlan	Displays status of the FlexConnect local switching and VLAN ID in the group
aps	Displays list of APs that are part of the FlexConnect group

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to display the detailed information for a specific FlexConnect group:

```
(Cisco Controller) >show flexconnect group detail myflexgroup
Number of Ap's in Group: 1
00:0a:b8:3b:0b:c2  AP1200  Joined
Group Radius Auth Servers:
  Primary Server Index ..... Disabled
  Secondary Server Index ..... Disabled
```

Related Topics

[config flexconnect group](#)

show flexconnect group summary

To display the current list of FlexConnect groups, use the **show flexconnect group summary** command.

show flexconnect group summary

Syntax Description	This command has no arguments or keywords.
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Command Default	None
------------------------	------

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to display the current list of FlexConnect groups:

```
(Cisco Controller) >show flexconnect group summary
flexconnect Group Summary:  Count 1
Group Name          # APs
Group 1              1
```

Related Topics

[config flexconnect group](#)

config Commands

config ap flexconnect policy

To configure a policy ACL on a FlexConnect access point, use the **config ap flexconnect policy** command.

config ap flexconnect policy { **add** | **delete** } *acl_name*

Syntax Description	
add	Adds a policy ACL on a FlexConnect access point.
deletes	Deletes a policy ACL on a FlexConnect access point.
<i>acl_name</i>	Name of the ACL.

Command Default None

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to add a policy ACL on a FlexConnect access point:

```
(Cisco Controller) >config ap flexconnect policy add acl1
```

Related Topics

- [config policy](#)
- [config wlan policy](#)
- [debug policy](#)
- [show policy](#)
- [show profiling policy summary](#)

config ap flexconnect vlan

To enable or disable VLAN tagging for a FlexConnect access, use the **config ap flexconnect vlan** command.

config ap flexconnect vlan { **enable** | **disable** } *cisco_ap*

Syntax Description	
enable	Enables the access point's VLAN tagging.
disable	Disables the access point's VLAN tagging.
<i>cisco_ap</i>	Name of the Cisco lightweight access point.

Command Default Disabled. Once enabled, WLANs enabled for local switching inherit the VLAN assigned at the controller.

Command History	Release	Modification
	8.3	This command was introduced.

This example shows how to enable the access point's VLAN tagging for a FlexConnect access:

```
(Cisco Controller) >config ap flexconnect vlan enable AP02
```

Related Topics

- [config ap flexconnect radius auth set](#)
- [config ap flexconnect vlan](#), on page 6
- [config ap flexconnect vlan native](#), on page 7
- [config ap flexconnect vlan wlan](#), on page 8

config ap flexconnect vlan add

To add a VLAN to a FlexConnect access point, use the **config ap flexconnect vlan add** command.

```
config ap flexconnect vlan add vlan-id acl in-acl out-acl cisco_ap
```

Syntax Description		
	<i>vlan-id</i>	VLAN identifier.
	<i>acl</i>	ACL name that contains up to 32 alphanumeric characters.
	<i>in-acl</i>	Inbound ACL name that contains up to 32 alphanumeric characters.
	<i>out-acl</i>	Outbound ACL name that contains up to 32 alphanumeric characters.
	<i>cisco_ap</i>	Name of the Cisco lightweight access point.

Command Default	None
-----------------	------

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to configure the FlexConnect access point:

```
(Cisco Controller) >config ap flexconnect vlan add 21 acl inacl1 outacl1 ap1
```

Related Topics

- [config ap flexconnect vlan](#), on page 6
- [config ap flexconnect radius auth set](#)
- [config ap flexconnect vlan native](#), on page 7
- [config ap flexconnect vlan wlan](#), on page 8

config ap flexconnect vlan native

To configure a native VLAN for a FlexConnect access point, use the **config ap flexconnect vlan native** command.

config ap flexconnect vlan native *vlan-id* *cisco_ap*

Syntax Description		
	<i>vlan-id</i>	VLAN identifier.
	<i>cisco_ap</i>	Name of the Cisco lightweight access point.
Command Default	None	
Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to configure a native VLAN for a FlexConnect access point mode:

```
(Cisco Controller) >config ap flexconnect vlan native 6 AP02
```

Related Topics

- [config ap flexconnect vlan](#), on page 6
- [config ap flexconnect radius auth set](#)
- [config ap flexconnect vlan add](#), on page 7
- [config ap flexconnect vlan wlan](#), on page 8

config ap flexconnect vlan wlan

To assign a VLAN ID to a FlexConnect access point, use the **config ap flexconnect vlan wlan** command.

config ap flexconnect vlan wlan *wlan-id* *vlan-id* *cisco_ap*

Syntax Description		
	<i>wlan-id</i>	WLAN identifier
	<i>vlan-id</i>	VLAN identifier (1 - 4094).
	<i>cisco_ap</i>	Name of the Cisco lightweight access point.
Command Default	VLAN ID associated to the WLAN.	
Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to assign a VLAN ID to a FlexConnect access point:

```
(Cisco Controller) >config ap flexconnect vlan wlan 192.12.12.1 6 AP02
```

Related Topics

- [config ap flexconnect vlan](#), on page 6
- [config ap flexconnect radius auth set](#)
- [config ap flexconnect vlan add](#), on page 7

[config ap flexconnect vlan native](#), on page 7

config ap flexconnect web-auth

To configure a FlexConnect ACL for external web authentication in locally switched WLANs, use the **config ap flexconnect web-auth** command.

```
config ap flexconnect web-auth wlan wlan_id cisco_ap acl_name { enable | disable }
```

Syntax Description

wlan	Specifies the wireless LAN to be configured with a FlexConnect ACL.
<i>wlan_id</i>	Wireless LAN identifier between 1 and 512 (inclusive).
<i>cisco_ap</i>	Name of the FlexConnect access point.
<i>acl_name</i>	Name of the FlexConnect ACL.
enable	Enables the FlexConnect ACL on the locally switched wireless LAN.
disable	Disables the FlexConnect ACL on the locally switched wireless LAN.

Command Default

FlexConnect ACL for external web authentication in locally switched WLANs is disabled.

Command History

Release	Modification
8.3	This command was introduced.

Usage Guidelines

The FlexConnect ACLs that are specific to an AP have the highest priority. The FlexConnect ACLs that are specific to WLANs have the lowest priority.

The following example shows how to enable FlexConnect ACL for external web authentication on WLAN 6:

```
(Cisco Controller) >config ap flexconnect web-auth wlan 6 AP2 flexacl2 enable
```

Related Topics

- [config ap flexconnect central-dhcp](#)
- [config ap flexconnect local-split](#)
- [config ap flexconnect radius auth set](#)
- [config ap flexconnect vlan](#), on page 6
- [config ap flexconnect vlan add](#), on page 7
- [config ap flexconnect vlan native](#), on page 7
- [config ap flexconnect vlan wlan](#), on page 8
- [config ap flexconnect policy](#), on page 6
- [config ap flexconnect web-policy acl](#), on page 10
- [config ap flexconnect wlan](#), on page 10

config ap flexconnect web-policy acl

To configure a Web Policy FlexConnect ACL on an access point, use the **config ap flexconnect web-policy acl** command.

config ap flexconnect web-policy acl { **add** | **delete** } *acl_name*

Syntax Description	add	delete	<i>acl_name</i>
	Adds a Web Policy FlexConnect ACL on an access point.	Deletes Web Policy FlexConnect ACL on an access point.	Name of the Web Policy FlexConnect ACL.
Command Default	None		
Command History	Release	Modification	
	8.3	This command was introduced.	

The following example shows how to add a Web Policy FlexConnect ACL on an access point:

```
(Cisco Controller) >config ap flexconnect web-policy acl add flexacl2
```

Related Topics

- [config ap flexconnect central-dhcp](#)
- [config ap flexconnect local-split](#)
- [config ap flexconnect radius auth set](#)
- [config ap flexconnect vlan](#), on page 6
- [config ap flexconnect vlan add](#), on page 7
- [config ap flexconnect vlan native](#), on page 7
- [config ap flexconnect vlan wlan](#), on page 8
- [config ap flexconnect policy](#), on page 6
- [config ap flexconnect web-auth](#), on page 9
- [config ap flexconnect wlan](#), on page 10

config ap flexconnect wlan

To configure a FlexConnect access point in a locally switched WLAN, use the **config ap flexconnect wlan** command.

config ap flexconnect wlan l2acl { **add** *wlan_id cisco_ap acl_name* | **delete** *wlan_id cisco_ap* }

Syntax Description	add	delete
	Adds a Layer 2 ACL to the FlexConnect access point.	
	<i>wlan_id</i>	Wireless LAN identifier from 1 to 512.
	<i>cisco_ap</i>	Name of the Cisco lightweight access point.
	<i>acl_name</i>	Layer 2 ACL name. The name can be up to 32 alphanumeric characters.

delete Deletes a Layer 2 ACL from the FlexConnect access point.

Command Default None

Command History

Release	Modification
8.3	This command was introduced.

Usage Guidelines

- You can create a maximum of 16 rules for a Layer 2 ACL.
- You can create a maximum of 64 Layer 2 ACLs on a controller.
- A maximum of 16 Layer 2 ACLs are supported per AP because an AP supports a maximum of 16 WLANs.
- Ensure that the Layer 2 ACL names do not conflict with the FlexConnect ACL names because an AP does not support the same Layer 2 and Layer 3 ACL names.

The following example shows how to configure a Layer 2 ACL on a FlexConnect AP.

```
(Cisco Controller) >config ap flexconnect wlan add 1 AP1600_1 acl_12_1
```

Related Topics

[config acl counter](#)
[config acl layer2](#)
[config wlan layer2 acl](#)
[show acl](#)
[show client detail](#)
[show wlan](#)

config flexconnect [ipv6] acl

To apply access control lists that are configured on a FlexConnect access point, use the **config flexconnect [ipv6] acl** command. Use the **ipv6** keyword to configure IPv6 FlexConnect ACLs .

config flexconnect [ipv6] acl {apply | create | delete} acl_name

Syntax Description	
ipv6	Use this option to configure IPv6 FlexConnect ACLs. If you don't use this option, then IPv4 FlexConnect ACLs will be configured.
apply	Applies an ACL to the data path.
create	Creates an ACL.
delete	Deletes an ACL.
<i>acl_name</i>	ACL name that contains up to 32 alphanumeric characters.

Command History

Release	Modification
8.3	This command was introduced.

The following example shows how to apply the IPv4 ACL configured on a FlexConnect access point:

```
(Cisco Controller) >config flexconnect acl apply acl1
```

config flexconnect [ipv6] acl rule

To configure access control list (ACL) rules on a FlexConnect access point, use the **config flexconnect [ipv6] acl rule** command.

```
config flexconnect [ipv6] acl rule {action rule_name rule_index {permit | deny} | add rule_name rule_index | change index rule_name old_index new_index | delete rule_name rule_index | destination address rule_name rule_index ip_address netmask | destination port range rule_name rule_index start_port end_port | direction rule_name rule_index {in | out | any} | dscp rule_name rule_index dscp | protocol rule_name rule_index protocol | source address rule_name rule_index ip_address netmask | source port range rule_name rule_index start_port end_port | swap index rule_name index_1 index_2}
```

Syntax Description

ipv6	Use this option to configure IPv6 FlexConnect ACL rules. If you don't use this option, then IPv4 FlexConnect ACL rules will be configured.
action	Configures whether to permit or deny access.
<i>rule_name</i>	ACL name that contains up to 32 alphanumeric characters.
<i>rule_index</i>	Rule index between 1 and 32.
permit	Permits the rule action.
deny	Denies the rule action.
add	Adds a new rule.
change	Changes a rule's index.
index	Specifies a rule index.
delete	Deletes a rule.
destination address	Configures a rule's destination IP address and netmask.
<i>ip_address</i>	IP address of the rule.
<i>netmask</i>	Netmask of the rule.
<i>start_port</i>	Start port number (between 0 and 65535).
<i>end_port</i>	End port number (between 0 and 65535).
direction	Configures a rule's direction to in, out, or any.
in	Configures a rule's direction to in.
out	Configures a rule's direction to out.

any	Configures a rule's direction to any.
dscp	Configures a rule's DSCP.
<i>dscp</i>	Number between 0 and 63, or any .
protocol	Configures a rule's DSCP.
<i>protocol</i>	Number between 0 and 255, or any .
source address	Configures a rule's source IP address and netmask.
source port range	Configures a rule's source port range.
swap	Swaps two rules' indices.
<i>index_1</i>	The rule first index to swap.
<i>index_2</i>	The rule index to swap the first index with.

Command Default None

Command History	Release	Modification
	8.3	This command was introduced.

This example shows how to configure an ACL to permit access:

```
(Cisco Controller) >config flexconnect acl rule action lab1 4 permit
```

config flexconnect arp-caching

To save an ARP entry for a client in the cache with locally switched WLAN on FlexConnect APs or in a software-defined access (Fabric) deployment, use **config flexconnect arp-caching** command.

```
config flexconnect arp-caching {enable } disable}
```

Syntax Description	
arp-caching enable	Instructs the access point to save the ARP entry for a client in the cache and reply on its behalf of the client for locally switched WLAN.
arp-caching disable	Disables ARP caching.

Command Default None

Command History	Release	Modification
	8.3	This command was introduced.

Example

The following example shows how to apply the proxy ARP with locally switched WLAN on FlexConnect APs.

```
(Cisco Controller) >config flexconnect arp-caching enable
```

config flexconnect group vlan

To configure VLAN for a FlexConnect group, use the **config flexconnect group vlan** command.

```
config flexconnect group group_name vlan {add vlan-id acl in-aclname out-aclname | delete vlan-id}
```

Syntax Description

<i>group_name</i>	FlexConnect group name.
add	Adds a VLAN for the FlexConnect group.
<i>vlan-id</i>	VLAN ID.
acl	Specifies an access control list.
<i>in-aclname</i>	In-bound ACL name.
<i>out-aclname</i>	Out-bound ACL name.
delete	Deletes a VLAN from the FlexConnect group.

Command History

Release	Modification
8.3	This command was introduced.

The following example shows how to add VLAN ID 1 for the FlexConnect group myflexacl where the in-bound ACL name is in-acl and the out-bound ACL is out-acl:

```
(Cisco Controller) >config flexconnect group vlan myflexacl vlan add 1 acl in-acl out-acl
```

Related Topics

- [debug flexconnect group](#), on page 22
- [show flexconnect group detail](#), on page 4
- [show flexconnect group summary](#), on page 5

config flexconnect group web-auth

To configure Web-Auth ACL for a FlexConnect group, use the **config flexconnect group web-auth** command.

```
config flexconnect group group_name web-auth wlan wlan-id acl acl-name {enable | disable}
```

Syntax Description

<i>group_name</i>	FlexConnect group name.
<i>wlan-id</i>	WLAN ID.

<i>acl-name</i>	ACL name.
enable	Enables the Web-Auth ACL for a FlexConnect group.
disable	Disables the Web-Auth ACL for a FlexConnect group.

Command History

Release	Modification
8.3	This command was introduced.

The following example shows how to enable Web-Auth ACL `webauthacl` for the FlexConnect group `myflexacl` on WLAN ID 1:

```
(Cisco Controller) >config flexconnect group myflexacl web-auth wlan 1 acl webauthacl enable
```

Related Topics

- [debug flexconnect group](#), on page 22
- [show flexconnect group detail](#), on page 4
- [show flexconnect group summary](#), on page 5

config flexconnect group web-policy

To configure Web Policy ACL for a FlexConnect group, use the **config flexconnect group web-policy** command.

```
config flexconnect group group_name web-policy acl {add | delete} acl-name
```

Syntax Description

<i>group_name</i>	FlexConnect group name.
add	Adds the Web Policy ACL.
delete	Deletes the Web Policy ACL.
<i>acl-name</i>	Name of the Web Policy ACL.

Command History

Release	Modification
8.3	This command was introduced.

The following example shows how to add the Web Policy ACL `mywebpolicyacl` to the FlexConnect group `myflexacl`:

```
(Cisco Controller) >config flexconnect group myflexacl web-policy acl add mywebpolicyacl
```

Related Topics

- [debug flexconnect group](#), on page 22
- [show flexconnect group detail](#), on page 4
- [show flexconnect group summary](#), on page 5

config flexconnect join min-latency

To enable or disable the access point to choose the controller with the least latency when joining, use the **config flexconnect join min-latency** command.

config flexconnect join min-latency { **enable** | **disable** } *cisco_ap*

Syntax Description	enable	disable	<i>cisco_ap</i>
	Enables the access point to choose the controller with the least latency when joining.	Disables the access point to choose the controller with the least latency when joining.	Cisco lightweight access point.

Command Default The access point cannot choose the controller with the least latency when joining.

Command History	Release	Modification
	8.3	This command was introduced.

Usage Guidelines When you enable this feature, the access point calculates the time between the discovery request and discovery response and joins the controller that responds first.

This configuration overrides the HA setting on the controller, and is applicable only for OEAP access points.

The following example shows how to enable the access point to choose the controller with the least latency when joining:

```
(Cisco Controller) >config flexconnect join min-latency enable CISCO_AP
```


debug Commands

debug capwap reap

To configure the debugging of Control and Provisioning of Wireless Access Points (CAPWAP) settings on a FlexConnect access point, use the **debug capwap reap** command.

debug capwap reap [**mgmt** | **load**]

Syntax Description	mgmt	(Optional) Configures the debugging for client authentication and association messages.
	load	(Optional) Configures the debugging for payload activities, which is useful when the FlexConnect access point boots up in standalone mode.
Command Default	None	
Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to configure the debugging of FlexConnect client authentication and association messages:

```
(Cisco Controller) >debug capwap reap mgmt
```

debug dot11 mgmt interface

To configure debugging of 802.11 management interface events, use the **debug dot11 mgmt interface** command.

debug dot11 mgmt interface

Syntax Description	This command has no arguments or keywords.	
Command Default	None	
Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to debug 802.11 management interface events:

```
(Cisco Controller) >debug dot11 mgmt interface
```

debug dot11 mgmt msg

To configure debugging of 802.11 management messages, use the **debug dot11 mgmt msg** command.

debug dot11 mgmt msg

Syntax Description This command has no arguments or keywords.

Command Default None

Command History	Release	Modification
	8.3	This command was introduced.

This example shows how to debug dot11 management messages:

```
(Cisco Controller) >debug dot11 mgmt msg
```

debug dot11 mgmt ssid

To configure debugging of 802.11 SSID management events, use the **debug dot11 mgmt ssid** command.

debug dot11 mgmt ssid

Syntax Description This command has no arguments or keywords.

Command Default None

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to configure the debugging of 802.11 SSID management events:

```
(Cisco Controller) >debug dot11 mgmt ssid
```

debug dot11 mgmt state-machine

To configure debugging of the 802.11 state machine, use the **debug dot11 mgmt state-machine** command.

debug dot11 mgmt state-machine

Syntax Description This command has no arguments or keywords.

Command Default None

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to configure the debugging of 802.11 state machine:

```
(Cisco Controller) >debug dot11 mgmt state-machine
```

debug dot11 mgmt station

To configure the debugging of the management station settings, use the **debug dot11 mgmt station** command.

debug dot11 mgmt station

Syntax Description	This command has no arguments or keywords.
---------------------------	--

Command Default	None
------------------------	------

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to configure the debugging of the management station settings:

```
(Cisco Controller) >debug dot11 mgmt station
```

debug flexconnect aaa

To configure debugging of FlexConnect backup RADIUS server events or errors, use the **debug flexconnect aaa** command.

debug flexconnect aaa {event | error} {enable | disable}

Syntax Description	event	Configures the debugging for FlexConnect RADIUS server events.
	error	Configures the debugging for FlexConnect RADIUS server errors.
	enable	Enables the debugging of FlexConnect RADIUS server settings.
	disable	Disables the debugging of FlexConnect RADIUS server settings.

Command Default	None
------------------------	------

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to enable the debugging of FlexConnect RADIUS server events:

```
(Cisco Controller) >debug flexconnect aaa event enable
```

debug flexconnect acl

Configures debugging of FlexConnect access control lists (ACLs), use the **debug flexconnect acl** command.

debug flexconnect acl {enable | disable}

Syntax Description	enable	disable
	Enables the debugging of FlexConnect ACLs.	Disables the debugging of FlexConnect ACLs.
Command Default	None	
Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to enable the debugging of FlexConnect ACLs:

```
(Cisco Controller) >debug flexconnect acl enable
```

debug flexconnect cckm

Configure debugging of FlexConnect Cisco Centralized Key Management (CCKM) fast roaming, use the **debug flexconnect cckm** command.

debug flexconnect cckm {enable | disable}

Syntax Description	enable	disable
	Enables the debugging of FlexConnect CCKM fast roaming settings.	Disables the debugging of FlexConnect CCKM fast roaming settings.
Command Default	None	
Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to enable the debugging of FlexConnect CCKM fast roaming events:

```
(Cisco Controller) >debug flexconnect cckm event enable
```

debug flexconnect client ap

To debug FlexConnect client access point MAC addresses, use the **debug flexconnect client ap** command.

debug flexconnect client ap *ap-name* {add | delete} *MAC-address1* *MAC-address2* *MAC-address3* *MAC-address4*

Syntax Description	add	Adds the MAC address to the group.
	delete	Deletes the MAC address from the group.
	<i>MAC-address</i>	MAC address of the client

Command Default None

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to debug FlexConnect client ap 'room' MAC addresses:

```
(Cisco Controller) >debug flexconnect client ap room add 00.0c.41.07.33.a6 0A.0c.52.17.97.b6
```

debug flexconnect client ap syslog

To configure debug logging of the syslog server for a FlexConnect client AP, use the **debug flexconnect client ap** command.

```
debug flexconnect client ap ap-name syslog {ip-address | disable}
```

Syntax Description	<i>ip-address</i>	Configures the syslog server ip-address for debug logging.
	disable	Disables the debug logging to the syslog server.

Command Default None

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to configure syslog server for debug log for the FlexConnect client AP 'room':

```
(Cisco Controller) >debug flexconnect client ap room syslog 192.168.1.1
```

debug flexconnect client group

To debug FlexConnect client group MAC addresses, use the **debug flexconnect client group** command.

```
debug flexconnect client group group-name {add | delete} MAC-address1 MAC-address2 MAC-address3 MAC-address4
```

Syntax Description	add	Adds the MAC address to the group.
	delete	Deletes the MAC address from the group.

MAC-address MAC address of the client.

Command Default None

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to debug FlexConnect client group MAC addresses:

```
(Cisco Controller) >debug flexconnect client group school add 00.0c.41.07.33.a6
0A.0c.52.17.97.b6
```

debug flexconnect client group syslog

To debug FlexConnect group access point syslog, use the **debug flexconnect client group** command.

debug flexconnect client group *group-name* **syslog** *ip-address* | *disable*

Syntax Description	ip-address	Configures the syslog server ip-address for debug logging.
	disable	Disables the debug logging to the syslog server.

Command Default None

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to configure FlexConnect client group 'school' for debug logging purposes:

```
(Cisco Controller) >debug flexconnect client group school syslog 192.168.1.1
```

debug flexconnect group

To configure debugging of FlexConnect access point groups, use the **debug flexconnect group** command.

debug flexconnect group { **enable** | **disable** }

Syntax Description	enable	Enables the debugging of FlexConnect access point groups.
	disable	Disables the debugging of FlexConnect access point groups.

Command Default None

Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to enable the debugging of FlexConnect access point groups:

```
(Cisco Controller) >debug flexconnect group enable
```

debug pem

To configure debugging of the access policy manager, use the **debug pem** command.

```
debug pem {events | state} {enable | disable}
```

Syntax Description	events	Configures the debugging of the policy manager events.
	state	Configures the debugging of the policy manager state machine.
	enable	Enables the debugging of the access policy manager.
	disable	Disables the debugging of the access policy manager.

Command Default	None
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Command History	Release	Modification
	8.3	This command was introduced.

The following example shows how to enable the debugging of the access policy manager:

```
(Cisco Controller) >debug pem state enable
```

debug pem