



## Inherit Profiles for Non-IMS Adjacencies

Cisco Unified Border Element (SP Edition) supports Inherit Profiles for adjacencies that are not part of an IP Multimedia Subsystem (IMS) network. This feature allows Cisco Unified Border Element (SP Edition) to operate in non-IMS networks using any of three non-IMS profiles that define an adjacency as Access, Core, or Peering. Cisco Unified Border Element (SP Edition) uses this definition to process packets properly and add the correct information in the outgoing packets.

By configuring each of these different types of adjacency with a profile, you can make efficiency and occupancy gains. For example, Cisco Unified Border Element (SP Edition) does not store registration information from messages received from Peering adjacencies. When a subscriber successfully registers from an Access adjacency, Cisco Unified Border Element (SP Edition) remembers the subscriber's registration details for later use and only stores this information on Access adjacencies.

Cisco Unified Border Element (SP Edition) was formerly known as Integrated Session Border Controller and may be commonly referred to in this document as the session border controller (SBC).

For a complete description of the commands used in this chapter, refer to the *Cisco Unified Border Element (SP Edition) Command Reference: Unified Model* at:

[http://www.cisco.com/en/US/docs/ios/sbc/command/reference/sbcu\\_book.html](http://www.cisco.com/en/US/docs/ios/sbc/command/reference/sbcu_book.html).

For information about all Cisco IOS commands, use the Command Lookup Tool at <http://tools.cisco.com/Support/CLILookup> or a Cisco IOS master commands list.



**Note**

For Cisco IOS XE Release 2.4, this feature is supported in the unified model only.

### Feature History for Inherit Profiles for Non-IMS Adjacencies

| Release                  | Modification                                     |
|--------------------------|--------------------------------------------------|
| Cisco IOS XE Release 2.4 | This feature was introduced on the Cisco IOS XR. |

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## Prerequisites

The following prerequisites are required to implement Inherit Profiles for Non-IMS Adjacencies:

- Before implementing this feature, the SBC must already be configured. See the procedures described in [?\\$paratext\[CT\\_ChapTitle\]>?](#)

## Information About Inherit Profiles for Non-IMS Adjacencies

Cisco Unified Border Element (SP Edition) can be deployed in various network topologies and plays different roles depending on its location in the network. Each of the deployed roles usually has a specific set of requirements associated with it. These requirements control which headers need to be added, checked, updated, or removed, and which headers, methods, and options are permitted to be passed through.

Cisco Unified Border Element (SP Edition) can be deployed in non-IMS networks and thus takes on different roles in non-IMS networks. For example, Cisco Unified Border Element (SP Edition) can face a registrar network or end user client devices that will attempt to register through the SBC. Alternatively, you can position it on the Network-Network Interface (NNI).

To deploy in non-IMS networks, Cisco Unified Border Element (SP Edition) uses easily-configured inherit profiles that comprise a collection of related configuration appropriate to a particular network role. Inherit profiles may be configured for an application on a per-adjacency basis or at a global level as a default.

## Non-IMS Inherit Profiles Types and Behaviors

The following are the non-IMS inherit profiles that can be configured for an adjacency:

- preset-access profile—configures an Access adjacency. The Access adjacency is not part of an IMS network. This adjacency faces user equipment, such as a subscriber's telephone or other SIP device, that attempts to register through the SBC.
- preset-core profile—configures a Core adjacency. This is the default profile. The Core adjacency is not part of an IMS network. This adjacency faces a registrar network and links to the registrar.
- preset-peering profile—configures a Peering adjacency. The Peering adjacency is not part of an IMS network. This adjacency, for example, sitting at the Network-Network Interface, links one registrar to another. The SBC is not required to store subscriber information from messages received from peering adjacencies.

The following are examples of behaviors that are affected by the non-IMS inherit profiles:

- Whether various headers (such as P Charging Vector) are created.
- Which headers, methods, and options are passed through and which are stripped out.
- Whether inbound and outbound calls to a subscriber can be made before that subscriber is registered.
- Whether the SBC rewrites the contact headers during the registration process.

When you configure the SBC with a certain non-IMS profile, calls may be handled differently. For example, when a call is received on a Core adjacency, the SBC checks to see if the endpoint is registered. If the subscriber is registered and is known to be behind a Network Address Translation (NAT), the SBC configures the call to traverse the NAT. If the endpoint is not registered, the SBC applies a routing policy and routes the call to the appropriate adjacency.

## Effect of Non-IMS Inherit Profiles on Method Profiles, Header Profiles, and Option Profiles

Use of a non-IMS inherit profile dynamically assigns the following sets of profiles (method profile, header profile, and option profile) to a call based on the non-IMS inherit-profile selected. [Table 21-1](#) shows which non-IMS inherit profile has an effect on which specific method profile, header profile, and option profile.

The effect is not visible in the adjacency configuration for header-profile, method-profile or option profiles, and can be overridden by explicit configuration of header, method, option profiles as needed.

**Table 21-1** *Effect of Non-IMS Inherit Profiles on Method, Header and Option Profiles*

| Non-IMS Inherit Profile | Method Profile                                                                                    | Header Profile                                                                                                                   | Option Profile                                                                                |
|-------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| preset-access           | preset-std-in-mth<br>preset-std-out-mth<br>Type: Whitelist<br>Actions: Passes INFO, Passes UPDATE | preset-std-in-hdr<br>preset-std-out-hdr<br>Type: Whitelist<br>Actions: Passes Server, Passes Diversion, Passes Resource-Priority | preset-std-in-opt<br>preset-std-out-opt<br>Type: Whitelist<br>Actions: Passes Replaces (only) |
| preset-core             | preset-std-in-mth<br>preset-std-out-mth<br>Type: Whitelist<br>Actions: Passes INFO, Passes UPDATE | preset-std-in-hdr<br>preset-std-out-hdr<br>Actions: Passes Server, Passes Diversion, Passes Resource-Priority                    | preset-std-in-opt<br>preset-std-out-opt<br>Type: Whitelist<br>Actions: Passes Replaces (only) |
| preset-peering          | preset-std-in-mth<br>preset-std-out-mth<br>Type: Whitelist<br>Actions: Passes INFO, Passes UPDATE | preset-std-in-hdr<br>preset-std-out-hdr<br>Actions: Passes Server, Passes Diversion, Passes Resource-Priority                    | preset-std-in-opt<br>preset-std-out-opt<br>Type: Whitelist<br>Actions: Passes Replaces (only) |

## CLI Support for Inherit Profiles for Non-IMS Adjacencies

The **inherit profile** command has the following three keywords that allow you to configure a preset-access, preset-core, or preset-peer profile for an adjacency that is not part of an IMS network:

preset-access—Specifies a preset access profile for an adjacency that faces an access device on a User-Network Interface (UNI) location.

preset-core—Specifies a preset core profile for an adjacency that faces a core device on a UNI location. This is the default.

preset-peering—Specifies a preset peering profile for an adjacency that faces a peer device on a Network-Network Interface (NNI) location.

The adjacency-specific command configuration overrides any global configuration of the adjacency that was configured using the **sip inherit profile** command.

The following example shows all the profiles available with the **inherit profile** command:

```
Router(config)# sbc test
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip sipa
Router(config-sbc-sbe-adj-sip)# inherit profile ?
preset-access                preset-access profile
preset-core                   preset-core profile
preset-ibcf-ext-untrusted     preset-ibcf-ext-untrusted profile
preset-ibcf-external          preset-ibcf-external profile
preset-ibcf-internal          preset-ibcf-internal profile
preset-p-cscf-access          preset-p-cscf-access profile
preset-p-cscf-core            preset-p-cscf-core profile
preset-peering                preset-peering profile
preset-standard-non-ims       preset-standard-non-ims profile
```

## Configuration Examples

The following example displays detailed output for adjacency client, including the “Inherit profile:” field that shows that the adjacency has been configured with the non-IMS preset-access profile:

```
Router# show sbc mySBC sbe adjacencies client detail
```

```
SBC Service "mySBC"
Adjacency client (SIP)
  Status:                Attached
  Signaling address:      200.0.0.12:5062, VRF Admin
  Signaling-peer:         200.0.0.30:5062
  Remote address:         200.0.0.0 255.255.255.0
  Force next hop:         No
  Account:
  Group:                  None
  In header profile:      Default
  Out header profile:     Default
  In method profile:      Default
  Out method profile:     Default
  In UA option prof:      Default
  Out UA option prof:     Default
  In proxy opt prof:      Default
  Out proxy opt prof:     Default
  Priority set name:      None
  Local-id:               None
  Rewrite REGISTER:       On
  Target address:         None
  NAT Status:             Auto Detect
  Reg-min-expiry:         3000 seconds
  Fast-register:          Enabled
  Fast-register-int:      30 seconds
  Authenticated mode:     None
  Authenticated realm:    None
  Auth. nonce life time:  300 seconds
  IMS visited NetID:      None
  Inherit profile:       preset-access
  Force next hop:         No
  Home network Id:        None
  UnEncrypt key data:     None
  SIPI passthrough:       No
  Rewrite from domain:    Yes
  Rewrite to header:      Yes
  Media passthrough:      No
  Preferred transport:    UDP
```

```
Hunting Triggers:      Global Triggers
Redirect mode:         Pass-through
Security:              Untrusted
Outbound-flood-rate:   None
Ping-enabled:          No
Signaling Peer Status: Not Tested
```

