



# GRE Tunnel Interface Commands

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This module describes the command line interface (CLI) commands for configuring GRE tunnel interfaces on the Cisco 8000 Series Routers.

For information on configuring GRE tunnels, see the *Interface and Hardware Component Configuration Guide for Cisco 8000 Series Routers*.

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## hw-module profile cef ttl tunnel-ip decrement disable

To disable the decrement of TTL value of inner payload header of an IP-in-IP packet, use the **hw-module profile cef ttl tunnel-ip decrement disable** command in XR Config mode.

```
hw-module profile cef ttl tunnel-ip decrement disable
```

<b>Syntax Description</b>	This command has no keywords or arguments.
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<b>Command Default</b>	None
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<b>Command Modes</b>	XR Config
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 7.0.14	This command was introduced.

<b>Usage Guidelines</b>	No specific guidelines impact the use of this command.
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### Example

The following example shows how you can disable the decrement of TTL value of inner payload header of an IP-in-IP packet.

```
Router# configure
Router(config)# hw-module profile cef ttl tunnel-ip decrement disable
Router(config)# commit
Thu Jun 11 08:43:52.343 UTC
LC/0/0/CPU0:Jun 11 08:43:52.505 UTC: npu_drvr[204]:
%FABRIC-NPU_DRV-3-HW_MODULE_PROFILE_TTL_CHASSIS_CFG_CHANGED : Hw-module profile ttl config
changed. Behaviour of IPinIP tunnel's inner header ttl decrement will be changed.
```

# interface tunnel-ip

Configures an IP-in-IP tunnel interface.

To remove this configuration, use the **no** prefix of the command.

```
interface tunnel-ip id
no interface tunnel-ip id
```

<b>Syntax Description</b>	<i>id</i> Specifies the tunnel interface identifier. Range is from 0 to 131070.
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<b>Command Default</b>	None
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<b>Command Modes</b>	XR Config mode
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 7.0.12	This command was introduced.

<b>Usage Guidelines</b>	No specific guidelines impact the use of this command.
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## Example

The following example shows how you can configure an IP-in-IP tunnel interface.

```
RP/0/RP0/CPU0:router(config)# interface tunnel-ip 10
RP/0/RP0/CPU0:router(config-if)# ipv4 unnumbered loopback 20
RP/0/RP0/CPU0:router(config-if)# tunnel mode ipv4 decap
RP/0/RP0/CPU0:router(config-if)# tunnel source loopback 0
RP/0/RP0/CPU0:router(config-if)# tunnel destination 50.10.1.2/32
```

# tunnel mode

Configures the mode of encapsulation for the tunnel interface.

To remove this configuration, use the **no** prefix of the command.

```
tunnel mode { gre { ipv4 | ipv6 } [ decap ] | ipv4 [ decap ] | ipv6 [ decap ] }
no tunnel mode { gre { ipv4 | ipv6 } [ decap ] | ipv4 [ decap ] | ipv6 [ decap ] }
}
```

Syntax Description	
<b>tunnel mode gre</b>	Configures IP-over-GRE encapsulation for the tunnel interface.
<b>tunnel mode ipv4</b>	Configures generic packet tunneling over IPv4 encapsulation for the tunnel interface.
<b>tunnel mode ipv6</b>	Configures generic packet tunneling over IPv6 encapsulation for the tunnel interface.
<b>tunnel mode gre ipv4</b>	Configures GRE-over-IPv4 encapsulation for the tunnel interface.
<b>tunnel mode gre ipv6</b>	Configures GRE-over-IPv6 encapsulation for the tunnel interface.
<b>decap</b>	Configures the IP-in-IP or GRE tunnel to be used only for decapsulation.

**Command Default** None

**Command Modes** Tunnel interface configuration mode

Command History	Release	Modification
	Release 7.0.12	This command was introduced.

**Usage Guidelines** No specific guidelines impact the use of this command.

## Example

The following example shows how you can configure the tunnel mode for an IP-in-IP tunnel interface.

```
RP/0/RP0/CPU0:router(config)# interface tunnel-ip 10
RP/0/RP0/CPU0:router(config-if)# ipv4 unnumbered loopback 20
RP/0/RP0/CPU0:router(config-if)# tunnel mode ipv4 decap
RP/0/RP0/CPU0:router(config-if)# tunnel source loopback 0
RP/0/RP0/CPU0:router(config-if)# tunnel destination 50.10.1.2/32
```

# tunnel source

Configures the source IP address for a tunnel interface.

To remove this configuration, use the **no** prefix of the command.

```
tunnel source {ipv4-address | interface-type interface-number }
no tunnel source {ipv4-address | interface-type interface-number }
```

<b>Syntax Description</b>	<i>ipv4-address</i>	Configures the specified IPv4 address as the source IP for the tunnel interface.
	<i>interface-type interface-number</i>	Configures the specified interface type as the source for the tunnel interface.

**Command Default** None

**Command Modes** Tunnel interface configuration mode

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 7.0.12	This command was introduced.

**Usage Guidelines** No specific guidelines impact the use of this command.

## Example

The following example shows how you can configure the Loopback 0 interface as the tunnel source for an IP-in-IP tunnel interface.

```
RP/0/RP0/CPU0:router(config)# interface tunnel-ip 10
RP/0/RP0/CPU0:router(config-if)# ipv4 unnumbered loopback 20
RP/0/RP0/CPU0:router(config-if)# tunnel mode ipv4 decap
RP/0/RP0/CPU0:router(config-if)# tunnel source loopback 0
RP/0/RP0/CPU0:router(config-if)# tunnel destination 50.10.1.2/32
```

# tunnel destination

Configures the tunnel destination for the tunnel interface.

To remove this configuration, use the **no** prefix of the command.

**tunnel destination** { *ipv4-address* | *ipv4 address/subnet-mask* | *ipv6-address* }

**no tunnel destination** { *ipv4-address* | *ipv4 address/subnet-mask* | *ipv6-address* }

## Syntax Description

<i>ipv4-address</i>	Configures the specified IPv4 address as the destination IP for the tunnel interface.
<i>ipv4-address/subnet mask</i>	Configures the specified IPv4 address with subnet mask as the destination IP for the tunnel interface.
<i>ipv6-address</i>	Configures the specified IPv6 address as the destination IP for the tunnel interface.

## Command Default

None

## Command Modes

Tunnel interface configuration mode

## Command History

Release	Modification
Release 7.0.12	This command was introduced.

## Usage Guidelines

No specific guidelines impact the use of this command.

## Example

The following example shows how you can configure an IPv4 address with subnet mask as the tunnel destination for an IP-in-IP tunnel interface.

```
RP/0/RP0/CPU0:router(config)# interface tunnel-ip 10
RP/0/RP0/CPU0:router(config-if)# ipv4 unnumbered loopback 20
RP/0/RP0/CPU0:router(config-if)# tunnel mode ipv4 decap
RP/0/RP0/CPU0:router(config-if)# tunnel source loopback 0
RP/0/RP0/CPU0:router(config-if)# tunnel destination 50.10.1.2/32
```