

UPF Overload Control Profile Configuration Mode Commands

Overload control profile configuration commands enable the UPF to send its overload information to a peer node to adaptively balance the session load across UPFs. The overload information reflects the operating status of the resources of the UPF.

Command Modes

Exec > Global Configuration >UPF Overload Control Profile Configuration

configure > upf-overload-control-profile *profile_name*

Entering the above command results in the following prompt:

```
[local]UPF (config-ovrloadcontrolprof)#
```

Important Available commands or keywords/variables vary based on platform type, product version, and installed license(s).

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overload-threshold

Configure lower and upper limits of the overload threshold parameters (System level and VPP CPU) under the UPF Overload Control Profile.

Product

UPF

Privilege

Administrator, Security Administrator

Command Modes

Exec > Global Configuration > UPF Overload Control Profile Configuration

configure > upf-overload-control-profile *profile_name*

Entering the above command results in the following prompt:

```
[local]UPlane (config-upf-overload-control-profile)#
```

Syntax Description

overload-threshold { system { cpu | memory | session-count } lower-limit *lower_limit* **upper-limit** *upper_limit* **} | vpp-cpu lower-limit** *lower_limit* **upper-limit** *upper_limit*

overload-threshold

Configure lower and upper limits of the overload threshold parameters (System level and VPP CPU) under the Overload Control Profile.

system { cpu | memory | session-count }

Configures the overload system thresholds for CPU, Memory, and Session Count.

vpp-cpu

Configures overload system thresholds for VPP CPU.

lower-limit *lower_limit*

Configures the lower limit threshold for system and VPP CPU loads.

upper-limit *upper_limit*

Configures the upper limit threshold for system and VPP CPU loads. Following are the defined thresholds for lower and upper limits:

Overload Control Parameters	Lower Limit (Overload Control State)	Upper Limit (Self-Protection State)
System CPU	80	90
System Memory	70	80
System Session Count	80	90
VPP CPU	50	80

Note The VPP CPU usage typically remains high, ranging between 90% and 100%. To standardize this metric, the reported value from Resource Manager is scaled to a percentage range of 1%– 100%. For instance, a reported VPP CPU usage of 97% is interpreted as 70%. Thus, the configurable threshold for VPP CPU is defined within the 1% to 100% range.

Usage Guidelines

Use this command to configure the threshold values for System and VPP CPU loads under overload system thresholds.

Example

```
[local]UPlane(config-upf-overload-control-profile)# overload-threshold system cpu lower
limit 80
```

```
upper-limit 90
[local]UPlane(config-upf-overload-control-profile)# overload-threshold system memory lower
 limit 70
upper-limit 80
[local]UPlane(config-upf-overload-control-profile)# overload-threshold system session-count
 lower
limit 80 upper-limit 90
[local]UPlane(config-upf-overload-control-profile)# overload-threshold vpp-cpu lower limit
 95
upper-limit 98
```

inclusion-frequency

Configures parameters to determine the inclusion frequency of the Load Control Information IE for a UPF Overload Control Profile configuration.

Product

UPF

Privilege

Administrator, Security Administrator

Command Modes

Exec > Global Configuration > UPF Overload Control Profile Configuration

configure > upf-overload-control-profile *profile_name*

Entering this command results in the following prompt:

```
[local]UPlane (config-upf-overload-control-profile)#
```

Syntax Description

inclusion-frequency { advertisement-interval *interval_in_seconds* **| change-factor** *change_factor* **}**

inclusion-frequency

Specifies that parameters to determine the inclusion frequency of the Overload Control Information IE for a UPF Overload Control Profile is configured. This parameter specifies the frequency at which the operator wants to send this information to the peers.

advertisement-interval *interval_in_seconds*

Configures the advertisement-interval for Overload Control in seconds. It must be an integer 0–3600.

The default value is 300.

change-factor *change_factor*

Configures the change factor for the Overload Control profile configuration. This information is only sent to the peers when the load factor changes by the factor configured.

The value must be an integer 1–20.

The default value is 5%.

Usage Guidelines

Use this command to specify parameters to determine the inclusion frequency of the Load control information IE for a UPF Overload Control Profile configuration.

Example

```
[local]UPlane(config-upf-overload-control-profile)# inclusion-frequency advertisement-interval
 300
[local]UPlane(config-upf-overload-control-profile)# inclusion-frequency change-factor 5
[local]UPlane(config-upf-overload-control-profile)# validity-period 300
```

validity-period

Configures the time, in seconds, that specifies how long the overload control information is valid.

Product UPF

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > UPF Overload Control Profile Configuration

configure > upf-overload-control-profile *profile_name*

Entering this command sequence results in the following prompt:

```
[local]UPlane (config-upf-overload-control-profile)#
```

Syntax Description

validity-period *seconds*
default validity-period

validity-period *seconds*

Specifies the length of time during which the overload condition specified by the OCI IE is to be considered as valid, unless overridden by subsequent new overload control information.

The default value is 300.

Example

```
validity-period 700
```

end

Exits the current configuration mode and returns to the Global Configuration mode.

Product UPF

Privilege Security Administrator, Administrator

Syntax Description **end**

Usage Guidelines Use this command to return to the Global Configuration mode.