



SMF IPAM CLI Commands

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ipam address-pool

Configures IPAM address pools.

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > IPAM Configuration

Syntax Description

address-pool *pool_name* [**static** | **offline** | **vrf-name** *vrf_name*]

pool_name

Specify the address pool's name.

Must be a string.

static

Specify the pool as a static pool.

offline

Specify the pool as an offline pool.

vrf-name *vrf_name*

Specify the VRF name.

Must be a string.

Usage Guidelines

Use this command to configure IPAM address pools.

ipam address-pool ipv4 address-range

Configures IPv4 address ranges.

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > IPAM Configuration > Address Pool Configuration

Syntax Description

address-range *start_ipv4_address end_ipv4_address* [**offline**]

start_ipv4_address

Specify the start address of the IPv4 address range.

Must be an IPv4 address.

end_ipv4_address

Specify the end address of the IPv4 address range.

Must be an IPv4 address.

offline

Specify the IPv4 address range as offline.

Usage Guidelines

Use this command to configure IPv4 address ranges.

ipam address-pool ipv4 split-size

Configures chunk split size.

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > IPAM Configuration

Syntax Description

split-size [**per-cache** *number_of_addresses*] [**per-dp** *number_of_addresses*]

per-cache number_of_addresses

Specify the number of addresses per chunk for IPAM cache allocation. Specify in power of 2.
Must be an integer in the range of 2-262144.

per-dp number_of_addresses

Specify the number of addresses per chunk for data-plane allocation. Specify in power of 2.
Must be an integer in the range of 2-262144.

no-split

Specify not to split the address range into smaller chunks.

Usage Guidelines

Use this command to configure chunk split sizes.

ipam address-pool ipv4 threshold

Configures pool thresholds.

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > IPAM Configuration

Syntax Description

threshold upper-threshold *upper_threshold*

upper-threshold upper_threshold

Specify the upper threshold value in percentage.
Must be an integer in the range of 1-100.

Usage Guidelines

Use this command to configure pool thresholds.

ipam address-pool ipv6 address-ranges address-range

Configures IPv6 address ranges.

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > IPAM Configuration > Address Pool Configuration > Address Ranges Configuration

Syntax Description

address-range *start_ipv6_address end_ipv6_address* [**offline**]

start_ipv6_address

Specify the start address of the IPv6 address range.
Must be an IPv6 address.

end_ipv6_address

Specify the end address of the IPv6 address range.

Must be an IPv6 address.

offline

Specify the IPv6 address range as offline.

Usage Guidelines Use this command to configure IPv6 address ranges.

ipam address-pool ipv6 address-ranges split-size

Configures chunk split size.

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > IPAM Configuration

Syntax Description **split-size** [**per-cache** *number_of_addresses*] [**per-dp** *number_of_addresses*]

per-cache number_of_addresses

Specify the number of addresses per chunk for IPAM cache allocation. Specify in power of 2.

Must be an integer in the range of 2-262144.

per-dp number_of_addresses

Specify the number of addresses per chunk for data-plane allocation. Specify in power of 2.

Must be an integer in the range of 2-262144.

no-split

Specify not to split the address range into smaller chunks.

Usage Guidelines Use this command to configure chunk split sizes.

ipam address-pool ipv6 address-ranges threshold

Configures pool thresholds.

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > IPAM Configuration

Syntax Description **threshold** **upper-threshold** *upper_threshold*

upper-threshold *upper_threshold*

Specify the upper threshold value in percentage.

Must be an integer in the range of 1-100.

Usage Guidelines

Use this command to configure pool thresholds.

ipam address-pool ipv6 prefix-ranges prefix-range

Configures IPv6 prefix ranges.

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > IPAM Configuration > Address Pool Configuration > Prefix Ranges Configuration

Syntax Description

prefix-range *prefix_value* **length** *prefix_length* [**offline**]

prefix-range *prefix_value*

Specify the IPv6 prefix range.

Must be an IPv6 address.

length *prefix_length*

Specify the prefix length.

Must be an integer in the range of 1-63.

offline

Specify the IPv6 prefix range as offline.

Usage Guidelines

Use this command to configure IPv6 prefix ranges.

ipam address-pool ipv6 prefix-ranges split-size

Configures chunk split size.

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > IPAM Configuration

Syntax Description

split-size [**per-cache** *number_of_addresses*] [**per-dp** *number_of_addresses*]

per-cache *number_of_addresses*

Specify the number of addresses per chunk for IPAM cache allocation. Specify in power of 2.

Must be an integer in the range of 2-262144.

per-dp *number_of_addresses*

Specify the number of addresses per chunk for data-plane allocation. Specify in power of 2.

Must be an integer in the range of 2-262144.

no-split

Specify not to split the address range into smaller chunks.

Usage Guidelines Use this command to configure chunk split sizes.

ipam address-pool ipv6 prefix-ranges threshold

Configures pool thresholds.

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > IPAM Configuration

Syntax Description **threshold upper-threshold** *upper_threshold*

upper-threshold *upper_threshold*

Specify the upper threshold value in percentage.

Must be an integer in the range of 1-100.

Usage Guidelines Use this command to configure pool thresholds.

ipam dp

Displays IPAM data-plane allocations.

Privilege Security Administrator, Administrator

Command Modes Exec

Syntax Description **show ipam dp**

dp-name

Displays name of the data plane.

Must be a string.

ipv4-total

Displays the IPv4 total addresses.

Must be an integer.

ipv4-used

Displays the IPv4 used addresses.

Must be an integer.

ipv4-threshold

Displays the IPv4 usage threshold.

Must be an integer.

ipv6-addr-total

Displays the IPv6 total addresses.

Must be an integer.

ipv6-addr-used

Displays the IPv6 used addresses.

Must be an integer.

ipv6-addr-threshold

Displays the IPv6 address usage threshold.

Must be an integer.

ipv6-pfx-total

Displays the IPv6 total prefixes.

Must be an integer.

ipv6-pfx-used

Displays IPv6 used prefixes.

Must be an integer.

ipv6-pfx-threshold

Displays IPv6 prefix usage threshold.

Must be an integer.

Usage Guidelines

Use this command to view IPAM data-plane allocations.

ipam pool

Displays pool allocation information.

Privilege

Security Administrator, Administrator

Command Modes Exec

Syntax Description `show ipam pool`

pool-name

Displays the pool name.

Must be a string.

ipv4-total

Displays the IPv4 total addresses.

Must be an integer.

ipv4-used

Displays the IPv4 used addresses.

Must be an integer.

ipv4-threshold

Displays the IPv4 usage threshold.

Must be an integer.

ipv6-addr-total

Displays total IPv6 addresses.

Must be an integer.

ipv6-addr-used

Displays used IPv6 addresses.

Must be an integer.

ipv6-addr-threshold

Displays IPv6 address usage threshold.

Must be an integer.

ipv6-pfx-total

Displays total IPv6 prefixes.

Must be an integer.

ipv6-pfx-used

Displays used IPv6 prefixes.

Must be an integer.

ipv6-pfx-threshold

Displays IPv6 prefix usage threshold.

Must be an integer.

Usage Guidelines Use this command to view pool allocation information.

ipam source

Configures pool-datastore source selection.

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration

Syntax Description `ipam source local`

local

Specify to use local address pool datastore.

Usage Guidelines Use this command to configure pool-datastore source selection.";

ipam source external ipam

Configures external IPAM server for pool information.

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration

Syntax Description `ipam source external ipam [host ip_address | port port_number | vendor vendor_id]`

host *ip_address*

Specify the IPAM server's IP address.

Must be an IP address.

port *port_number*

Specify the IPAM server's port number.

Must be an integer in the range of 1-65535.

vendor *vendor_id*

Specify the IPAM server's vendor ID. Default: cisco.

Must be a vendor ID.

Usage Guidelines Use this command to configure external IPAM server for pool information.

ipam threshold

Configures global thresholds.

Privilege Security Administrator, Administrator

Command Modes Exec > Global Configuration > IPAM Configuration

Syntax Description **threshold** [[**ipv4-addr** *ipv4_address_threshold*] | [**ipv6-addr** *ipv6_address_threshold*] | [**ipv6-prefix** *ipv6_prefix_threshold*]]

ipv4-addr *ipv4_address_threshold*

Specify the IPv4 address threshold in percentage.

Must be an integer in the range of 1-100.

ipv6-addr *ipv6_address_threshold*

Specify the IPv6 address threshold in percentage.

Must be an integer in the range of 1-100.

ipv6-prefix *ipv6_prefix_threshold*

Specify the IPv6 prefix threshold in percentage.

Must be an integer in the range of 1-100.

Usage Guidelines Use this command to configure global thresholds.