

Security Service Command Reference

MANUAL PAGE

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Contents

1	Commands	1
1.1	asp	1
1.2	asp-count	2
1.3	asp security default	2
1.4	asp group	3
1.5	asp-group	4
1.6	asp pool service	4
1.7	bulkstats ipsec schema	5
1.8	card ase	6
1.9	debug asp engine	7
1.10	debug security	9
1.11	log server	10
1.12	log source	10
1.13	maximum subscribers	11
1.14	maximum tunnels ipsec	12
1.15	pool	13
1.16	priority	13
1.17	show asp	14
1.18	show asp group	16
1.19	show asp pool	17
1.20	show asp statistics	19
	Glossary	25
	Reference List	27





1 Commands

This document provides command syntax and usage guidelines for commands used in the configuration and operation of the advanced services support available when an Advanced Service (ASE) card is installed in a SmartEdge® router. For an overview of the ASE card infrastructure, see Reference [1]. For configuration tasks, see Reference [2] or Reference [3].

1.1 asp

asp slot-id/asp-id

1.1.1 Command Mode

Advanced Services Processor (ASP) pool configuration

1.1.2 Syntax Description

slot-id

Chassis slot number where the ASE card is installed. The range of values depends on the chassis:

- SmartEdge 600: 1 to 6
- SmartEdge 800, 1200, or 1200H: 1 to 6 and 9 to 14
- SmartEdge 400: 1 to 4

asp-id

The ID of the ASP on the ASE card. Possible values are 1 and 2.

1.1.3 Usage Guidelines

Specifies the ASPs associated with the ASP pool.

1.1.4 Default

No ASPs are associated with an ASP pool.



1.1.5 Examples

The following example specifies six ASPs on four ASE cards to associate with the ASP pool being configured:

```
[local]Redback(config-asp-pool-mode)#asp 1/1
[local]Redback(config-asp-pool-mode)#asp 1/2
[local]Redback(config-asp-pool-mode)#asp 3/1
[local]Redback(config-asp-pool-mode)#asp 3/2
[local]Redback(config-asp-pool-mode)#asp 4/1
[local]Redback(config-asp-pool-mode)#asp 5/1
```

1.2 asp-count

asp-count number

1.2.1 Command Mode

ASP group configuration

1.2.2 Syntax Description

number 1 to 22

1.2.3 Default

No number of ASPs are associated with an ASP group.

1.2.4 Usage Guidelines

Specifies the number of ASPs requested by the ASP group. In conjunction with the priority assigned to the ASP group, ASPs up to the number requested will be allocated to the group from the ASP pool associated with the group.

1.2.5 Examples

The following example specifies that two ASPs are requested by the ASP group.

```
[local]Redback(config-asp-group-mode)#asp-count 2
```

1.3 asp security default

asp security default



1.3.1 Command Mode

global configuration

1.3.2 Syntax Description

This command has no keywords or arguments.

1.3.3 Default

None.

1.3.4 Usage Guidelines

Configures the ASP to provide the security service and enters the ASP security default configuration mode.

1.3.5 Examples

```
[local]Redback(config)#asp security default
```

1.4 asp group

```
asp group group-name
```

1.4.1 Command Mode

global configuration

1.4.2 Syntax Description

group-name The name of the ASP group.

1.4.3 Default

No ASP groups are configured.

1.4.4 Usage Guidelines

Creates or selects an ASP group and enters ASP group configuration mode.



1.4.5 Examples

The following example configures the ASP group `ipsec_group1`
`[local]Redback(config)#asp_group ipsec_group1`

1.5 asp-group

`asp-group group-name service service-name`

1.5.1 Command Mode

context configuration

1.5.2 Syntax Description

group-name

The name of an existing ASP group.

service service-name

The only available value is `security`. Must match the *service-name* specified for the ASP pool to which the ASP group belongs.

1.5.3 Default

No ASP groups are associated with an ASE-based service.

1.5.4 Usage Guidelines

Associates an ASP group for the specified *service* with the context in which this command is entered.

1.5.5 Examples

The following example associates ASP group `ipsec_group1` with the context `c3`.

```
[local]Redback(config)#context c3  
[local]Redback(config-ctx)#asp-group ipsec_group1 service security
```

1.6 asp pool service

`asp pool pool-name service service-name`



1.6.1 Command Mode

global configuration

1.6.2 Syntax Description

<i>pool-name</i>	The name of the ASP pool.
<i>service service-name</i>	Required. Specifies the services supported by the ASP pool. The service name can be one of the following: <ul style="list-style-type: none"> • security • media-gateway

1.6.3 Default

No ASP pool is configured by default.

1.6.4 Usage Guidelines

Creates or selects an ASP pool and enters ASP pool configuration mode.

1.6.5 Examples

The following example configures an ASP pool `ipsec_pool1` for use with the ASE-based service `security`.

```
[local]Redback(config)#asp pool ipsec_pool1 service security
```

The following example configures an ASP pool for processing media gateway services such as MSRP and TCP calls.

```
[local]Redback(config)#asp pool msrp_pool1 service media-gateway
```

1.7 bulkstats ipsec schema

```
bulkstats ipsec schema sch-prof-name policy bulk-pol-name
ctx-name
```

```
no bulkstats ipsec schema sch-prof-name policy bulk-pol-name
ctx-name
```



1.7.1 Command Mode

IPsec ASP pool configuration

1.7.2 Syntax Description

<i>sch-prof-name</i>	Name of the bulkstats schema profile. Alphanumeric string with up to 19 characters.
<i>bulk-pol-name</i>	Name of the bulkstats policy. Alphanumeric string with up to 19 characters.
<i>ctx-name</i>	Name of the context in which the bulkstats policy is configured. Alphanumeric string with up to 31 characters. Optional in context and subscriber configuration modes.

1.7.3 Default

None

1.7.4 Usage Guidelines

Use the `bulkstats ipsec schema` command with the *ctx-name* and *bulk-pol-name* arguments to collect data at asp level.

Use the `no` form of this command to remove the application of the specified IPsec bulkstats schema profile and policy from asp level.

1.7.5 Examples

The example shows command for collecting statistics for an asp pool, where schema profile is `aspstats` and context name is `local`.

```
[local]Redback(config)#asp pool ipsec_pool service security
[local]Redback(config-ctx)# bulkstats ipsec schema aspstats policy ipsec_stats local
```

1.8 card ase

`card ase slot`

1.8.1 Command Mode

global configuration



1.8.2 Syntax Description

slot

Chassis slot number where the card is installed. The range of values depends on the chassis:

- SmartEdge 600: 1 to 6
- SmartEdge 800, 1200, or 1200H: 1 to 6 and 9 to 14
- SmartEdge 400: 1 to 4

1.8.3 Usage Guidelines

Specifies an ASE card for a slot, or selects one for modification, and enters card configuration mode.

1.8.4 Examples

The following example configures an ASE card in slot 4:

```
[local]Redback(config)#card ase 4
```

1.9 debug asp engine

```
debug asp slot/asp-id engine all {trace | log} {buffer | console} [level level]
```

1.9.1 Command Mode

exec

1.9.2 Syntax Description

slot-id

Chassis slot number where the ASE card is installed. The range of values depends on the chassis:

- SmartEdge 600: 1 to 6
- SmartEdge 800, 1200, or 1200H: 1 to 6 and 9 to 14
- SmartEdge 400: 1 to 4

asp-id

The ID of the ASP on the ASE card. Possible values are 1 and 2.



<code>trace</code>	Enables generation of trace messages.
<code>log</code>	Enables generation of log messages.
<code>buffer</code>	Sends debug information to the circular buffer on the ASP.
<code>console</code>	Sends debug information to the console.
<code>level level</code>	Specifies the debug logging level, where <code>level</code> is one of the following (in descending severity order): <ul style="list-style-type: none">• emergency—Only emergency events.• alert—Alert and more severe events.• critical—Critical and more severe events.• error—Error and more severe events.• warning—Warning and more severe events.• notice—Notice and more severe events.• informational—Informational and more severe events.• debug—All events, including debug events.• all

1.9.3 Usage Guidelines

Enables the generation of debug messages for a specific ASP engine on a specific ASE card.

Caution!

Risk of performance loss. Enabling the generation of debug messages can severely affect system performance. To reduce the risk, exercise caution when enabling the generation of debug messages on a production system.

1.9.4 Examples

Enables the generation of debug messages for the ASP engine of a specific ASP on a specific ASE card.

```
[local]Redback #debug asp 2/1 engine all
```



1.10 debug security

```
debug security {all | asp | config | general | ppa | rcm | service |
state | tunnel}
```

1.10.1 Command Mode

exec

1.10.2 Syntax Description

<code>all</code>	Debug all security
<code>asp</code>	Debug security ASP interaction
<code>config</code>	Debug security configuration download interaction
<code>general</code>	Debug general operation
<code>ppa</code>	Debug Packet Processing ASIC (PPA) interaction
<code>rcm</code>	Debug Router Configuration Manager (RPM) interaction
<code>rib</code>	Debug Routing Information Base (RIB) interaction
<code>service</code>	Debug security service processing
<code>state</code>	Debug security state
<code>tunnel</code>	Debug tunnel manager interaction

1.10.3 Usage Guidelines

Enables the generation of debug messages for the ASE-based security service.

Caution!

Risk of performance loss. Enabling the generation of debug messages can severely affect system performance. To reduce the risk, exercise caution when enabling the generation of debug messages on a production system.

1.10.4 Examples

The following example enables the generation of all debug messages for the ASE-based security service.

```
[local]Redback#debug security all
```



1.11 log server

```
log server server-ip [transport transport-protocol] [port port]
```

1.11.1 Command Mode

ASP security default configuration

1.11.2 Syntax Description

<i>server-ip</i>	IP address of the default log server.
<i>transport-protocol</i>	Specifies the transport protocol used for logs. Only UDP is supported.

1.11.3 Default

No log server is configured by default.

1.11.4 Usage Guidelines

Configures the IP address and destination port of the log server. The log server should be reachable through context local.

1.11.5 Examples

```
[local]Redback(config)#asp security default  
[local]Redback(config-asp-security-default)#log server  
10.1.1.2 udp 514 10.1.0.5
```

1.12 log source

```
log source source-ip [context context-name]
```

1.12.1 Command Mode

ASP security default configuration



1.12.2 Syntax Description

<i>source-ip</i>	IP address of the default log source.
<i>context-name</i>	Context through which the log source is reachable.

1.12.3 Default

No log source is configured by default.

1.12.4 Usage Guidelines

Configures the IP address and the context through which the log source is reachable.

1.12.5 Examples

```
[local]Redback(config-asp-security-default)#log source
10.1.1.2 udp 514 10.1.0.5
```

1.13 maximum subscribers

maximum subscribers max-subscribers

1.13.1 Command Mode

ASP pool configuration

1.13.2 Syntax Description

<i>max-subscribers</i>	Maximum number of subscribers per ASP. Possible values are 1 to 32,768.
------------------------	---

1.13.3 Default

The default number of subscribers admitted per ASP is 8,124.

1.13.4 Usage Guidelines

Specifies the maximum number of subscribers admitted for all ASPs associated with an ASP pool. Each ASP added to the pool can support a maximum of 32,768 units. Subscribers consume a load of 1 unit, so each ASP supports



32,768 subscribers, or a combination of subscribers and tunnels with a maximum load within 32,768 units.

1.13.5 Examples

The following example specifies a limit of 16,384 subscribers for each ASP associated with ASP pool `p1`.

```
[local]Redback(config)#asp pool p1 service security
[local]Redback(config-asp-pool-mode)#maximum subscribers 16384
```

1.14 maximum tunnels ipsec

`maximum tunnels ipsec max-tunnels`

1.14.1 Command Mode

ASP pool configuration

1.14.2 Syntax Description

max-tunnels

Maximum number of IPsec tunnels per ASP. Possible values are 1 to 4,096.

1.14.3 Default

The default number of IPsec tunnels admitted per ASP is 2,048.

1.14.4 Usage Guidelines

Specifies the maximum number of IPsec tunnels for all ASPs associated with an ASP pool. Each ASP added to the pool supports a maximum of 32,768 units. IPsec tunnels consume a load of 8 units, so each ASP supports 4,096 tunnels, or a combination of tunnels and subscribers with a maximum load within 32,768 units.

1.14.5 Examples

The following example specifies a limit of 1,024 IPsec tunnels for each ASP associated with ASP pool `p1`.

```
[local]Redback(config)#asp pool p1 service security
[local]Redback(config-asp-pool-mode)#maximum tunnels ipsec 1024
```



1.15 pool

pool pool-name

1.15.1 Command Mode

ASP group configuration

1.15.2 Syntax Description

pool-name The name of an existing ASP pool.

1.15.3 Default

No ASP pool is identified for an ASP group by default.

1.15.4 Usage Guidelines

Specifies the ASP pool associated with the ASP group.

1.15.5 Examples

The following example specifies that the existing ASP pool `ipsec_pool1` is associated with this ASP group.

```
[local]Redback(config)#asp group ipsec_group1
[local]Redback(config-asp-group-mode)#pool ipsec_pool1
```

1.16 priority

priority number

1.16.1 Command Mode

ASP group configuration

1.16.2 Syntax Description

number 1..1024. The lower the value the higher the priority.



1.16.3 Default

No priority for an ASP group is configured by default.

1.16.4 Usage Guidelines

Configures the priority for the ASP group. Priority is used to determine the order in which ASPs are allocated to the ASP groups.

1.16.5 Examples

The following example configures a priority of 100 for the ASP group. This ASP group will be allocated ASPs before ASP groups with lower priority.

```
[local]Redback(config-asp-group-mode)#priority 100
```

1.17 show asp

```
show asp [slot-id/asp-id | detail | logs]
```

1.17.1 Command Mode

All modes

1.17.2 Syntax Description

<i>slot-id</i>	Optional. Chassis slot number where the ASE card is installed. The range of values depends on the chassis: <ul style="list-style-type: none">• SmartEdge 600: 1 to 6• SmartEdge 800, 1200, or 1200H: 1 to 6 and 9 to 14• SmartEdge 400: 1 to 4
<i>asp-id</i>	Optional. The ID of the ASP on the ASE card. Possible values are 1 and 2.
detail	Optional. Displays detailed information of each configured ASP.
logs	Optional. Displays the log information of each configured ASP.



1.17.3 Usage Guidelines

Displays information about ASPs configured to a pool. With no parameters, a one-line summary for each ASP providing the pool name and the group name to which the ASP belongs, the operational state of the ASP, whether the ASP is acting as an active or backup ASP, and the service the ASP provides is displayed. With an ASP specified, the same information along with load and flag information for the specified ASP is displayed.

1.17.4 Examples

The following example illustrates the use of show ASP command without slot id/ASP ID:

```
[local]Ericsson#show asp
ASP-Name  Oper-State  Active/Backup Pool          Group          Service
-----
1/1      up          active      pool1         group1         security
1/2      up          active      pool2         group2         security
2/1      up          active      pool_1        ha-grp1        security
11/1     down        active      ipsec_pool1  ipsec_group1  security
```

The following example illustrates the use of show ASP command with slot id/ASP ID:

```
[local]Ericsson#show asp 11/1
ASP ID : 11/1
  Operating State : up
  Active or Backup : active
  Pool : ipsec_pool1
  Group : ipsec_group1
  Service : security
```

The following example illustrates the use of show ASP command with the detail keyword:



```
[local]Ericsson#show asp detail
ASP ID : 2/1
  Operating State : up
  Active or Backup : active
  Load : 0
  Flag : 0x0
  Pool : dpi_pool
  Group : dpi_grp
  Service : security
```

```
ASP ID : 2/2
  Operating State : up
  Active or Backup : shared backup
  Load : 0
  Flag : 0x0
  Pool : dpi_pool
  Group : (none)
  Service : security
```

The following example illustrates the use of show ASP command with the logs keyword

```
[local]Ericsson#show asp logs
show_ha_log_mesgs

Dump logged HA messages (63 entries):

Oct 7 00:34:14  CFG-EVT-CREATE-POOL

  pool DUMMY, id 1, num_cp_cores=0

  asp-list=

Oct 7 00:42:43  CFG-EVT-CREATE-POOL

  pool dpi_pool, id 2, num_cp_cores=0

  asp-list=
```

1.18 show asp group

```
show asp group [group-name | detail]
```



1.18.1 Command Mode

all modes

1.18.2 Syntax Description

<i>group-name</i>	The name of an existing ASP group.
detail	Displays detailed information for each configured ASP group.

1.18.3 Usage Guidelines

Displays information about ASP groups. With no parameters, a one-line summary for each ASP group providing the name of the ASP pool that is referenced by the group, number of configured ASPs for the group and the priority configured for the group is displayed. With an ASP group name specified, the same information is provided for the specified ASP group, and a one line summary for each physical ASP in the ASP group is displayed. With the detail keyword, the same information provided for a single ASP group is displayed for all configured ASP groups.

1.18.4 Examples

```
[local]Redback#show asp group
```

ID	Name	Service-Type	Prio	Num-ASPs	Num-ASPs-Assigned
2	ipsec_group1	1	0	1	1

```
[local]Redback#show asp group ipsec_group1
```

```
Group Name : ipsec_group1
  Service Name :
  Group ID : 2
  Priority : 0
  Associated Pool : ipsec_pool1
  Configured ASP Count : 1
  Assigned ASP Count : 1
  Assigned ASPs :
    1. 11/1 (up/active)
```

1.19 show asp pool

```
show asp pool [pool-name | detail]
```



1.19.1 Command Mode

all modes

1.19.2 Syntax Description

<i>pool-name</i>	The name of an existing ASP pool.
detail	Displays detailed information for each configured ASP pool.

1.19.3 Usage Guidelines

Displays information about ASP pools. With no parameters, a one-line summary for each ASP pool providing the pool name, number of configured ASPs for the pool and the service to which the pool belongs is displayed. With an ASP pool name specified, the service which is being provided by the ASP pool, the ASP groups that are referencing it and the set of physical ASPs that belong to the ASP pool and a one line summary for each ASP group and physical ASP is displayed. With the detail keyword, the same information provided for a single ASP pool is displayed for all configured ASP pools.



1.19.4 Examples

```
[local]Redback#show asp pool
Pool-Name      Service-Name  Number-of-ASPs
ipsec_pool1    security      2
ipsec_pool2    security      0
```

```
[local]Redback#show asp pool ipsec_pool1
```

```
Pool Name : ipsec_pool1
  Service Name : security
  Pool ID : 2
  ASP Groups :
  1. ipsec_group1

  Configured ASPs :
  1. 11/1 (up/active)
```

```
[local]Redback#show asp pool detail1
```

```
Pool Name : ipsec_pool1
  Service Name : security
  Pool ID : 1
  ASP Groups :
  1. ipsec_group1
  Configured ASPs :

  1. 11/1 (up/active)
```

```
Pool Name : ipsec_pool2
  Service Name : security
  Pool ID : 2
  ASP Groups :
  1. group2
  Configured ASPs :

  1. 1/2 (up/active)
```

1.20 show asp statistics

```
show asp slot-id/asp-id statistics packet {asp|card
slot-no|xcrp} [detail]
```

1.20.1 Command Mode

All modes



1.20.2 Syntax Description

<code>slot-id</code>	Optional. Chassis slot number where the ASE card is installed. The range of values depends on the chassis: <ul style="list-style-type: none">• SmartEdge 600: 1 to 6• SmartEdge 800, 1200, or 1200H: 1 to 6 and 9 to 14• SmartEdge 400: 1 to 4
<code>asp-id</code>	Optional. The ID of the ASP on the ASE card. Possible values are 1 and 2.
<code>statistics</code>	Optional. Displays ASP Ingress and Egress statistics.
<code>packet</code>	Optional. Displays packet statistics.
<code>asp</code>	Optional. Displays packet statistics between the specified ASP and other ASP on the same card.
<code>card</code>	Optional. Displays packet statistics between the line card and the ASP.
<code>slot-no</code>	Optional. The ID of the slot where the line card is installed.
<code>xcrp</code>	Optional. Display packet statistics between XCRP and asp.
<code>detail</code>	Optional. Displays detailed packet statistics between the ASPs, line card and the specified ASP, or XCRP and the specified ASP.

1.20.3 Usage Guidelines

Displays information about ASPs configured to a pool. With no parameters, a one-line summary for each ASP providing the pool name and the group name to which the ASP belongs, the operational state of the ASP, whether the ASP is acting as an active or backup ASP, and the service the ASP provides is displayed. With an ASP specified, the same information for the specified ASP is displayed.

1.20.4 Examples

The following example shows the packet statistics between the specified ASP and the other ASP:



```
[local]Ericsson#show asp 9/1 statistics packet asp detail
Statistics between ASP: 9/1 and other ASP
```

Ingress:

```
Packets: 5245
Error Packets: 0
Packets QOS Dropped: 0
Bytes Processed: 5799712
QOS Bytes Dropped: 0
```

Packet Distribution:

Packet-Length(Bytes)	Number-of-Packets
64	5
65-127	1011
128-255	325
256-511	0
512-1023	16
1024-1518	3888
Greater than 1518	0

Egress:

```
Packets: 4219
Bytes: 1474711
Packets QOS Dropped: 0
```

The following example shows the packet statistics between the line card and the specified asp:



```
[local]Ericsson#show asp 9/1 statistics packet card 6 detail
Statistics between ASP: 9/1 and Slot : 6
```

Ingress:

```
Packets: 21930976
Error Packets: 0
Packets QOS Dropped: 0
Bytes Processed: 28675516516
QOS Bytes Dropped: 0
```

Packet Distribution:

Packet-Length(Bytes)	Number-of-Packets
64	0
65-127	1995261
128-255	40000
256-511	0
512-1023	0
1024-1518	19895715
Greater than 1518	0

Egress:

```
Packets: 10972556
Bytes: 12785496524
Packets QOS Dropped: 0
```

The following example shows the packet statistics between the XCRP and the specified ASP:



```
[local]Ericsson#show asp 9/1 statistics packet xcrp detail
Statistics between ASP: 9/1 and XCRP
```

Ingress:

```
Packets: 21574
Error Packets: 0
Packets QOS Dropped: 0
Bytes Processed: 31382429
QOS Bytes Dropped: 0
```

Packet Distribution:

Packet-Length(Bytes)	Number-of-Packets
64	0
65-127	1092
128-255	236
256-511	58
512-1023	1290
1024-1518	854
Greater than 1518	18044

Egress:

```
Packets: 18213
Bytes: 3894758
Packets QOS Dropped: 0
```





Glossary

ASE

Advanced Service

ASP

Advanced Services Processor

PPA

Packet Processing ASIC

RCM

Router Configuration Manager

XCRP

Cross-Connect Routing Processor





Reference List

- [1] *Advanced Services Infrastructure Overview*, 1/221 02-CRA 119 1170/1-V1
- [2] *Advanced Services Configuration and Operation Using the SmartEdge OS CLI*, 1/1543-CRA 119 1170/1-V1
- [3] *Advanced Services Configuration and Operation Using the NetOp EMS Software*, 1553-CRA 119 1170/1