



# S102 Service Configuration Mode Commands

The S102 Service configuration mode is used to create and manage the configuration instance for the S102 Service which controls the S102 interface. This service works in conjunction with the MME Service.

## Command Modes

Exec > Global Configuration > Context Configuration > S102 Service

**configure > context** *context\_name* > **s102-service** *service\_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-s102-service)#
```



## Important

The commands or keywords/variables that are available are dependent on platform type, product version, and installed license(s).



## Important

The **default** command prefix is visible in the S102 Service configuration mode. However, it is not supported at this time and has been included for the purpose of future development.

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## 1xrtt

Identifies the type of CDMA2000 single-carrier radio transmission technology (1xRTT) functionality, CSFB or SRVCC, to be enabled for this S102 service.

## Product

MME

**Privilege** Security Administrator, Administrator

**Command Modes** Exec > Global Configuration > Context Configuration > S102 Service

**configure** > **context** *context\_name* > **s102-service** *service\_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-s102-service)#
```

**Syntax Description** [ no ] **1xrtt** { **csfb** | **srvcc** }

**no**

Removes the 1xRTT identification from the S102 service/interface configuration.

**csfb**

Enables CSFB for 1xRTT for the S102 service/interface.

**srvcc**

Enables SRVCC for 1xRTT for the S102 service/interface.

**Usage Guidelines**

This command determines the type of signaling and functionality to be supported on the S102 interface, either circuit-switched fallback (CSFB) or single radio voice call continuity (SRVCC). The S102 interface provides the tunnel for the MME to pass CDMA2000 messages to/from the 1xCS IWS (interworking solution function)/MSC (mobile switching center).

For details of usage and configuration, refer to either the *CSFB for 1xRTT* feature chapter or the *SRVCC for 1xRTT* feature chapter in the *MME Administration Guide*.

**Example**

Use the following command to configure the S102 interface to support CSFB for 1xRTT:

```
1xrtt csfb
```

Use the following command to remove an S102 interface configuration for SRVCC for 1xRTT:

```
no 1xrtt srvcc
```

## bind

Bind and unbind a logical IP address and port to the S102 interface.

**Product** MME

**Privilege** Security Administrator, Administrator

**Command Modes** Exec > Global Configuration > Context Configuration > S102 Service

**configure** > **context** *context\_name* > **s102-service** *service\_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-s102-service)#
```

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**Syntax Description**

**[ no ] bind ipv4-address** *ipv4\_address* [ **port** *port\_number* ]

**no**

Removes the logical interface IPv4 address binding (unbinds) from the S102 service/interface.

**ipv4-address** *ipv4\_address*

Specifies the source IPv4 address of the S102 interface in IPv4 dotted-decimal notation.

**port** *port\_number*

Including this keyword is optional. If included, it configures the numeric identification of the port to be bound to the S102 interface.

*port\_number* Enter an integer from 1 through 65535.

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**Usage Guidelines**

Bind the S102 service to a specific logical IP address. The logical IP address or interface takes on the characteristics of an S102 interface that provides the session connectivity for the MME to pass CDMA2000 messages to/from the 1xCS IWS (interworking solution function)/MSC (mobile switching center).




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**Caution**

This is a critical configuration. Any change to this configuration will cause the S102 service to restart. Removing or disabling this configuration will stop the S102 service.

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**Example**

The following command binds the logical IP interface with the IPv4 address of 192.68.10.22 to the S102 service.

```
bind ipv4-address 192.68.10.22
```

## do show

Executes all **show** commands while in Configuration mode.

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**Product**

All

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**Privilege**

Security Administrator, Administrator

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**Syntax Description**

**do show**

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**Usage Guidelines**

Use this command to run all Exec mode **show** commands while in Configuration mode. It is not necessary to exit the Config mode to run a **show** command.

The pipe character | is only available if the command is valid in the Exec mode.

**Caution**

There are some Exec mode **show** commands which are too resource intensive to run from Config mode. These include: **do show support collection**, **do show support details**, **do show support record** and **do show support summary**. If there is a restriction on a specific **show** command, the following error message is displayed:

```
Failure: Cannot execute 'do show support' command from Config mode.
```

## end

Exits the current configuration mode and returns to the Exec mode.

**Product**

All

**Privilege**

Security Administrator, Administrator

**Syntax Description**

**end**

**Usage Guidelines**

Use this command to return to the Exec mode.

## exit

Exits the current mode and returns to the parent configuration mode.

**Product**

All

**Privilege**

Security Administrator, Administrator

**Syntax Description**

**exit**

**Usage Guidelines**

Use this command to return to the parent configuration mode.

## ip

This command configures the IP parameters on the S102 interface.

**Product**

MME

**Privilege**

Security Administrator, Administrator

**Command Modes**

Exec > Global Configuration > Context Configuration > S102 Service

**configure > context** *context\_name* > **s102-service** *service\_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-s102-service)#
```

---

**Syntax Description**    `[ no ] ip qos-dscp dscp_value`

**no**

Removes IP parameter configuration from the S102 service/interface.

**qos-dscp dscp\_value**

The **qos-dscp** keyword designates the Quality of Service - Differentiated Services Code Point value to the packet leaving through the S102 interface.

*dscp\_value* is a value assigned to the packet for DSCP marking. The value can be a pre-defined DSCP value or an arbitrary value ranging from 0x01 to 0x3F.

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**Usage Guidelines**

S102 interface allows Differentiated Services Code Point (DSCP) marking functionality. DSCP marking helps in packet traffic management. DSCP marking can be performed only on IPv4 packets leaving the S102 interface.

Either the pre-defined DSCP values can be used for marking, or any arbitrary value ranging from 0x01 to 0x3F can be assigned. The default DSCP value is 0x00 or be (Best Effort). The default DSCP value is automatically set when the configuration is disabled.

**Example**

The following command shows the IP configuration for DSCP marking on the S102 service.

```
ip qos-dscp ef
```

## msc

Command creates a configuration instance for a single mobile switching center (1x RTT MSC) in the S102 service configuration. The MSCs are used by the SRVCC and CSFB functions when the MME handles CDMA2000 messages from/to UEs.

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**Product**                    MME

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**Privilege**                 Security Administrator, Administrator

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**Command Modes**         Exec > Global Configuration > Context Configuration > S102 Service

**configure > context** *context\_name* > **s102-service** *service\_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-s102-service)#
```

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**Syntax Description**    `[ no ] msc msc_name`

**no**

Erases the MSC configuration from the S102 service configuration.

***msc\_name***

Identifies a specific MSC. The name must be a string of 1 through 63 alphanumeric characters. We recommend that each defined MSC name be unique on the system.

**Usage Guidelines**

This command creates an instance of an MSC configuration for the S102 service configuration and it provides access to the S102 MSC configuration mode commands to configure parameters related to the MSC.

The MSC(s) configured with this command can be identified in the **pool-area** and **non-pool-area** configurations to setup MSC selection. For more details about MSC selection, refer to the *SRVCC for 1xRTT* or *CSFB for 1xRTT* feature chapters in the *MME Administration Guide*.

It is possible to associate up to 10 MSCs with the S102 interface/service configuration. Repeat the **msc**, **ipv4-address**, and **exit** commands sequence as often as needed to identify all MSCs.

**Example**

Use a command similar to the following one to assign a unique name to identify an MSC in the S102 service configuration:

```
msc msc1
```

## non-pool-area

This command configures a non-pool-area instance to be used by the MME for MSC selection for CDMA2000 message handling in either a CSFB for 1xRTT or SRVCC for 1xRTT scenario.

**Important**

**Prerequisite:** Each of the MSCs to be included in the non-pool-area configuration must have been configured and associated with the S102 service before the MSC can be identified in the non-pool-area configuration.

**Product**

MME

**Privilege**

Administrator

**Command Modes**

Exec > Global Configuration > Context Configuration > S102 Service

**configure** > **context** *context\_name* > **s102-service** *service\_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-s102-service)#
```

**Syntax Description****Important**

The **plmn** option that is visible in the code is not supported at this time and so it is not included in the following syntax description. This option is included in the code for future development.

```
non-pool-area non_pool_area_name msc msc_name msc-id msc_id cell-id cell_id +  
no non-pool-area non_pool_area_name cell-id cell_id +
```

**no**

Erases the configured non-pool-area information.

**non\_pool\_area\_name**

Enter a string of 1 to 63 alphanumeric characters to uniquely identify this non-pool-area configuration to be used for MSC selection.

**msc msc\_name**

Identify a 1x RTT mobile switching center (MSC) that is associated with the S102 service/interface configuration.

*msc\_name* Enter a string of 1 to 63 alphanumeric characters to identify one of the MSCs previously configured in the S102 service configuration.

**msc-id msc\_id**

*msc\_id* Enter an integer from 1 through 16777215 to identify the unique numeric ID for the MSC.

**cell-id cell\_id+**

*cell\_id* Enter an integer from 1 through 65535 to identify a CDMA2000 sector cell ID that you are assigning to this non-pool area configuration.

+ Indicates that more than one cell ID can be included in the command. Enter up to 24 cell IDs, separated by a single blank space, in the same command.

**Usage Guidelines**

Up to 10 MSC pool or non-pool areas can be configured per S102 service in support of MSC selection for the MME handling either SRVCC or CSFB 1xRTT CDMA2000 messages from a UE. Both the MSC-Id and the Cell-Id are used to locate the pool or non-pool area for the MSC selection process.

For information about the pool-area, refer to the **pool-area** command sheet also in the S102 Service configuration mode.

For more information about MSC selection and how it works, refer to either the *SRVCC for 1xRTT* feature chapter or the *CSFB for 1xRTT* feature chapter in the *MME Administration Guide*.

**Example**

Use a command similar to the following to setup a non-pool-area definition. The following command configures a non-pool-area named *npoolLondon1* and includes an MSC named *mscLondon* that has a numeric ID of *2443* and includes cells *5, 6, 7, and 22*:

```
non-pool-area npoolLondon1 msc mscLondon msc-id 2443 cell-id 5 6 7 22
```

## pool-area

This command creates a pool-area instance to be used by the MME for MSC selection for CDMA2000 message handling in either a CSFB for 1xRTT or SRVCC for 1xRTT scenario.

**Product**

MME

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**Privilege** Administrator

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**Command Modes** Exec > Global Configuration > Context Configuration > S102 Service

**configure > context** *context\_name* > **s102-service** *service\_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-s102-service)#
```

---

**Syntax Description** [ **no** ] **pool-area** *pool\_area\_name*

**no**

Erases the pool-area instance from the S102 service configuration.

***pool\_area\_name***

Enter a string of 1 to 63 alphanumeric characters to uniquely identify this pool-area configuration to be used for MSC selection.

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**Usage Guidelines**

Up to 10 MSC pool and/or non-pool areas can be configured per S102 service in support of MSC selection for the MME handling either SRVCC or CSFB 1xRTT CDMA2000 messages from a UE. Both the MSC-Id and the Cell-Id are used to locate the pool or non-pool area for the MSC selection process.

Issuing this command also takes the MME into the S102 Pool Area configuration mode for the commands to configure the pool-area characteristics: Cell ID, hash-value, and MSC ID. Refer to the *S102 Pool Area Configuration Mode Commands* in this document.

For information about the non-pool-area, refer to the **non-pool-area** command section also in the *S102 Service Configuration Mode Commands* chapter.

For more information about MSC selection and how it works, refer to either the *SRVCC for 1xRTT* feature chapter or the *CSFB for 1xRTT* feature chapter in the *MME Administration Guide*.

### Example

The following command creates the S102 pool-area instance named *s102pool-1*:

```
pool-area s102pool-1
```