

eSE620X vESC V100R001C00 Data Configuration

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Preface

- This course describes the preparations before data configuration, including tools, software, configuration data, and hardware and software installation.
- This course describes the eSE620X vESC data configuration process.
- This course describes how to commission eSE620X vESC basic services after the eSE620X vESC is enabled.



Objectives

- **After learning this course, you will be able to:**
 - Understand the eSE620X vESC data configuration preparations and process.



Contents

- eSE620X vESC Data Configuration Preparations
- eSE620X vESC Data Configuration Process
- eSE620X vESC Basic Service Commissioning



Contents

- eSE620X vESC Data Configuration Preparations
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Preparing for Data Configuration

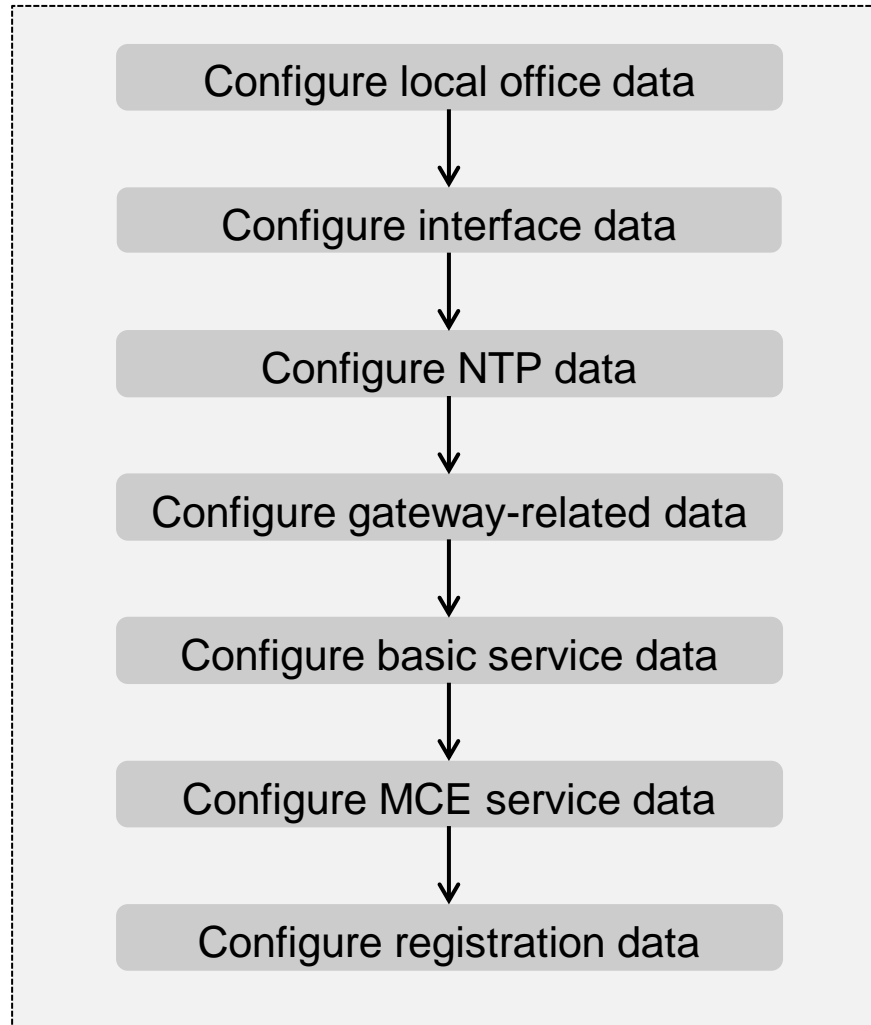
- eSE620X vESC Hardware: The hardware is installed and passes the hardware installation inspection and power-on check.
- LMT PC: The LMT PC meets the configuration requirements.
- Requirements for the network: At least one eNodeB is connected to the local eSE620X vESC. The eNodeB should have passed the commissioning and can provide basic functions. Test UEs are ready for testing and are registered in the home subscriber server (HSS).
- Software installation packages: The software installation packages that are compatible with the local office version must be ready.
- License: The license that is applicable to configuration in the local office is obtained through the Huawei technical support engineer.



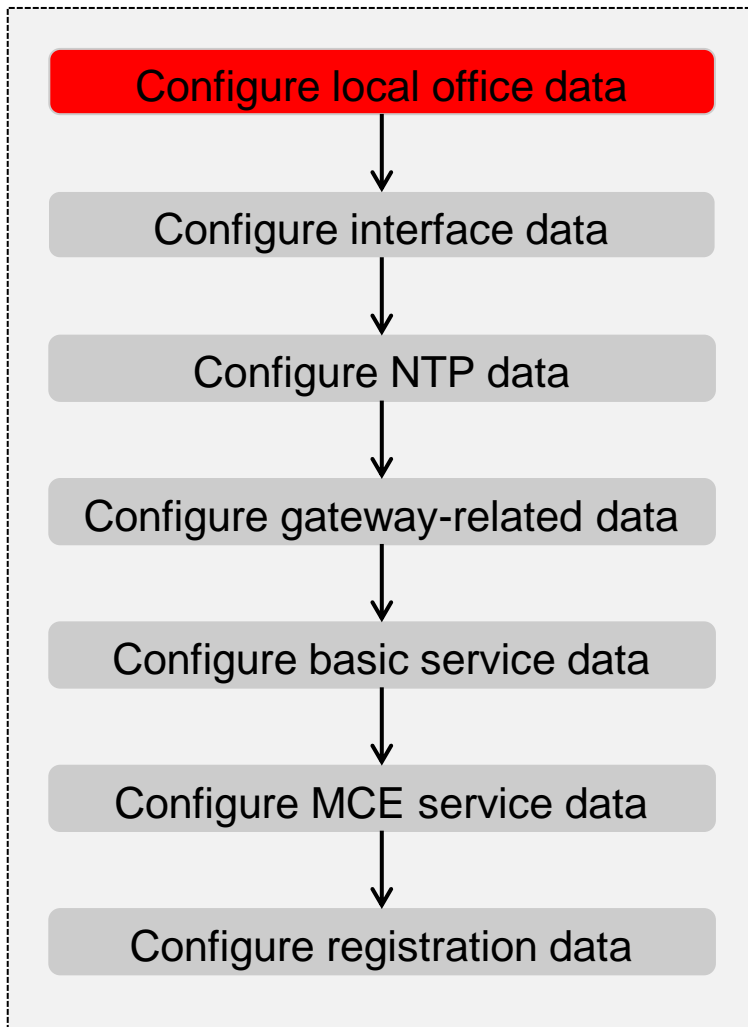
Contents

- eSE620X vESC Data Configuration Preparations
- **eSE620X vESC Data Configuration Process**
- eSE620X vESC Basic Service Commissioning

Data Configuration Process



Configuring Local Office Data



- The basic data configuration provides a basis for all the other configurations, and therefore must be determined during network planning. After the eSE620X vESC basic data configuration takes effect, do not modify it unless the network is replanned.
- Add Local PLMN (**ADD HPLMN**)
- Add MMEID Configuration (**ADD MMEID**)
- Add TA List Configuration (**ADD TALST**)
- Add Enterprise Self-defined Logo (**ADD ELOGO**)

Adding a Local PLMN

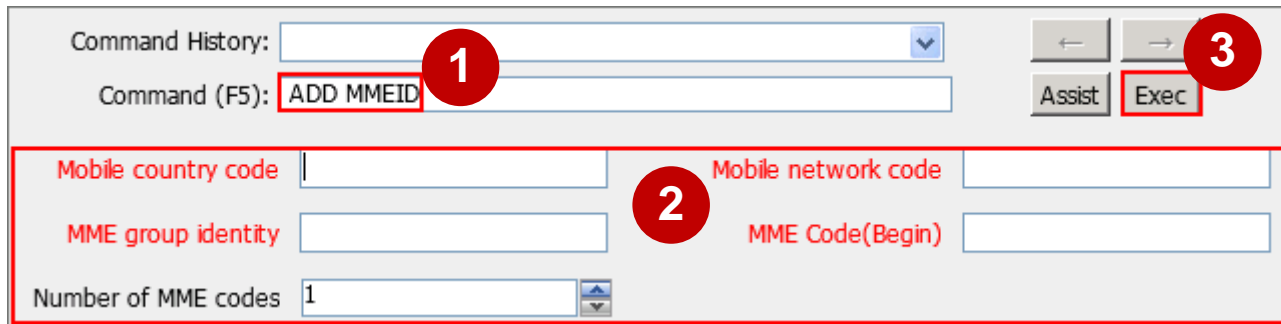
- Run the **ADD HPLMN** command to add a local public land mobile network (PLMN) to the local PLMN table.

The screenshot shows a configuration window for the 'ADD HPLMN' command. At the top, there is a 'Command History' dropdown menu (1) and a 'Command (F5):' text field containing 'ADD HPLMN'. To the right are navigation buttons: a left arrow, a right arrow, 'Assist', and 'Exec' (3). Below these is a large red-bordered box (2) containing the configuration fields: 'Mobile country code' (empty), 'Country code' (empty), 'Maximum Bearer number' (set to 11), 'Mobile network code' (empty), 'SM allowed' (set to YES(Yes)), and 'Operator Name' (set to noname).

- Example:
MCC="470", MNC="42", CC="86", SM=YES, PLMNN="eLTE-eMBMS";

Adding an MMEID Configuration

- Run the **ADD MMEID** command to add a mobility management entity (MME) ID record for identifying an MME uniquely in a PLMN.



Command History: 1

Command (F5): 1

← → 3

Assist Exec 3

Mobile country code 2 Mobile network code

MME group identity 2 MME Code(Begin)

Number of MME codes

- Example:
MCC="470", MNC="42", MMEGI="8001", MMEC="01";

Adding a TA List Configuration

- Run the **ADD TALST** command to add a tracking area (TA) list that contains a specified tracking area or add a tracking area to a tracking area list. A TA list contains several tracking areas.

The screenshot shows a configuration window for the 'ADD TALST' command. It features a 'Command History' dropdown menu (1), a 'Command (F5)' input field containing 'ADD TALST', and navigation buttons 'Assist' and 'Exec' (3). Below these, a red-bordered box highlights the 'Tracking area list ID' dropdown menu (2) and the 'TAI' input field.

- Example:
TALISTID=0, TAI="470420001";

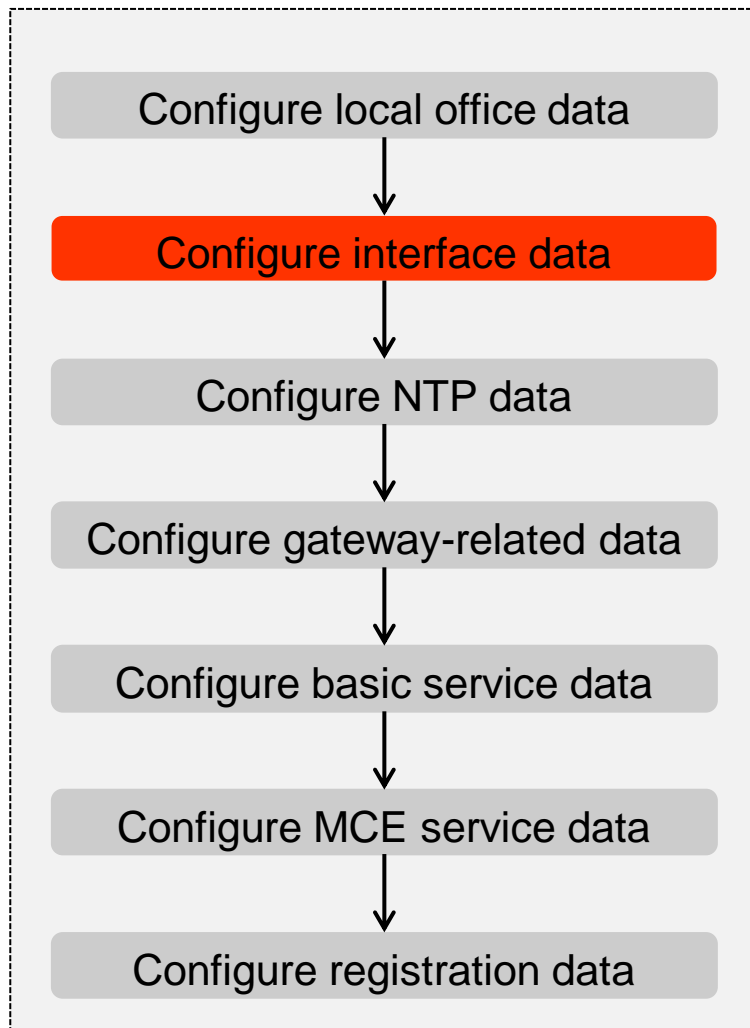
Adding an Enterprise Self-defined Logo

- Run the **ADD ELOGO** command to add the logo customized by an enterprise.

The screenshot shows a command-line interface for adding a self-defined logo. It features a 'Command History' dropdown menu (labeled 1), a 'Command (F5):' input field containing 'ADD ELOGO', and navigation buttons 'Assist' and 'Exec' (labeled 3). Below these are input fields for 'Coding scheme' (labeled 2), 'Enterprise logo full name', and 'Enterprise logo short name'.

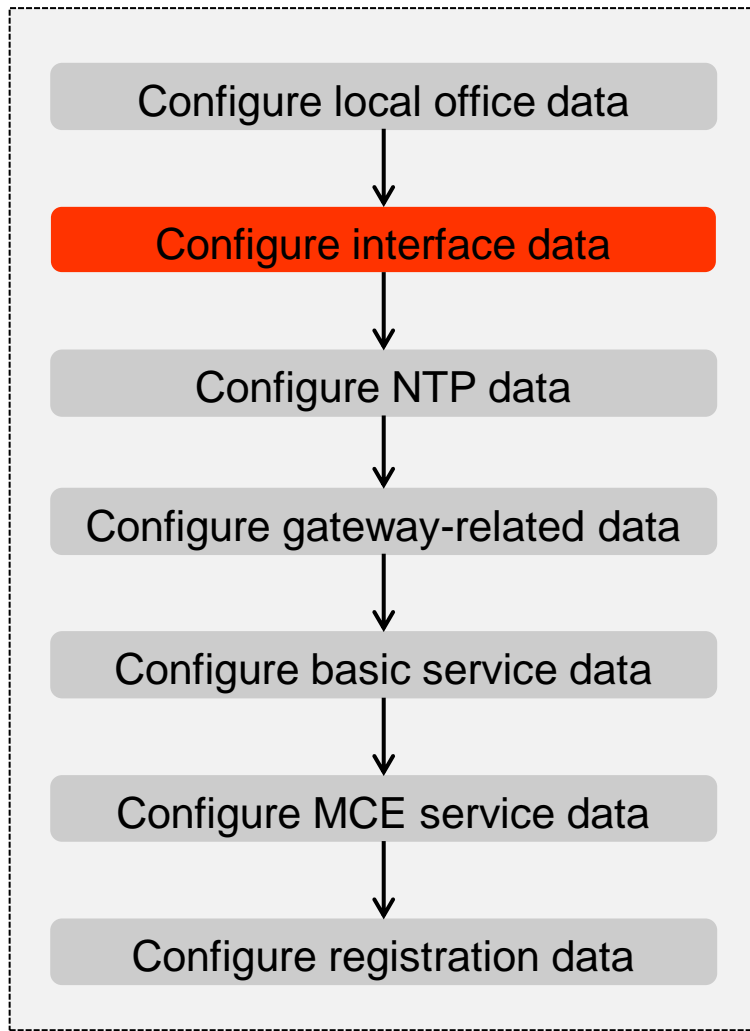
- Example:
CODESCHEME=CODE_SCHEME_7BIT, ELOGOFULLNAME="eLTE",
ELOGOSHORTNAME=" eLTE ";

Configuring Interface Data



- **Configure the S1 interface**
- **Configure the M1 interface**
- **Configure the M2 interface**
- **Configure the SGi-mb interface**
- **Configure the SGmb interface**
- **Configure the Diameter link**

Configuring Interface Data

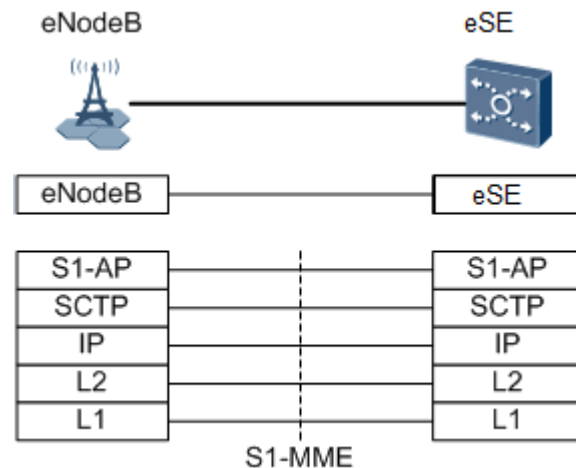


Configure the S1 interface

- Add Ethernet Link Aggregation Group (**ADD ETHTRK**)
- Add Link to Ethernet Link Aggregation Group (**ADD ETHTRKLNK**)
- Add Link to Ethernet Link Aggregation Group (**ADD ETHTRKLNK**)
- Add IP Address (**ADD IPADDR**)

S1 Interface Protocol

- The S1-MME interface is the signaling interface between the eNodeB and the eSE620X vESC.



The protocol stacks are described as follows:

S1 Application Protocol (S1-AP): It refers to the application layer protocol between the eNodeB and the eSE620X vESC.

Stream Control Transmission Protocol (SCTP): It is used to guarantee the transmission of signaling messages between the eNodeB and the eSE620X vESC.

Adding an Ethernet Link Aggregation Group

- Run the **ADD ETHTRK** command to add an Ethernet link aggregation group.

Command History: 1

Command (F5): 3

Assist Exec

Ethernet Link Aggregation Group Name 2

Maximum Transmission Unit

Aggregation Mode

Minimum Number of Activated Links

Interface Working Mode

Working Mode

Remarks

- Example:
ethTrkName="Eth-trunk1", portMode=L3, workMode=ACTIVE_STANDBY,
lacpMode=MANUAL_AGGREGATION

Adding a Link to an Ethernet Link Aggregation Group

- Run the **ADD ETHTRKLNK** command to add a link to an Ethernet link aggregation group.

The screenshot displays the Huawei CLI configuration interface. At the top, there is a 'Command History' dropdown menu (1) and a 'Command (F5):' input field containing the command 'ADD ETHTRKLNK' (2). To the right of the command input field are navigation buttons: 'Assist' and 'Exec' (3). Below the command input field is a configuration area enclosed in a red box. This area contains three fields: 'Ethernet Link Aggregation Group Name' (empty), 'Ethernet Interface Name' (empty), and 'Working Mode' set to 'LOADSHARING(Load Sh)' with a dropdown arrow.

- Example:
ethTrkName="Eth-trunk1", ethPortName="VIU-0-3.Lan0", workMode=ACTIVE_STANDBY;

Adding a Link to an Ethernet Link Aggregation Group

- Run the **ADD ETHTRKLNK** command to add a link to an Ethernet link aggregation group.

Command History: (1)

Command (F5): (2)

Assist Exec (3)

Ethernet Link Aggregation Group Name:

Ethernet Interface Name:

Working Mode:

- Example:
ethTrkName="Eth-trunk1", ethPortName="VIU-0-6.Lan0", workMode=ACTIVE_STANDBY;

Adding an IP Address

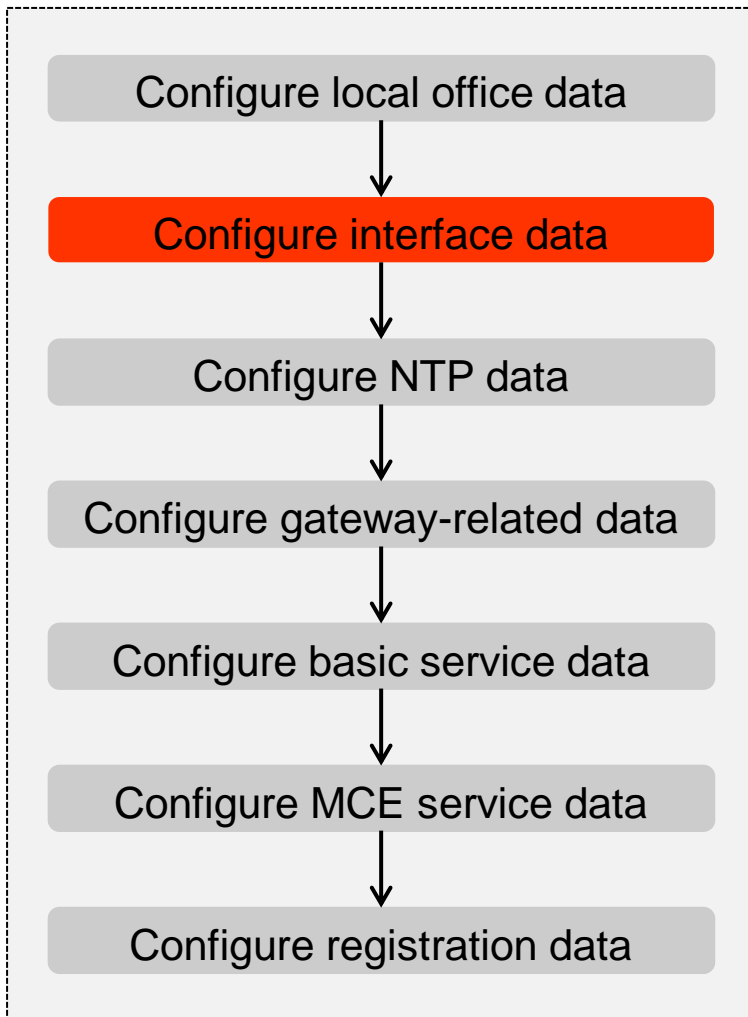
- Run the **ADD IPADDR** command to add an IP address.

The screenshot shows a web-based configuration interface for adding an IP address. It features a 'Command History' dropdown menu (1), a 'Command (F5):' input field containing 'ADD IPADDR' (2), and a 'Command' section with 'Assist' and 'Exec' buttons (3). Below the command field is a form with four input fields: 'Interface Name', 'Subnet Mask', 'IP Address', and 'IP Address Type' (dropdown). A red box highlights the entire form area, and a red circle with the number '2' is placed over the 'Interface Name' and 'Subnet Mask' fields.

- Example:

interfaceName="Eth-trunk1", ipAddr="160.22.33.99", ipMask="255.255.255.0", ipType=PRI;

Configuring Interface Data



Configure the M1 interface

- Add binding between MBMS gateway interface and physical interface.
(ADD BINDMBMSPORT)

Adding Binding Between the MBMS Gateway Interface and Physical Interface

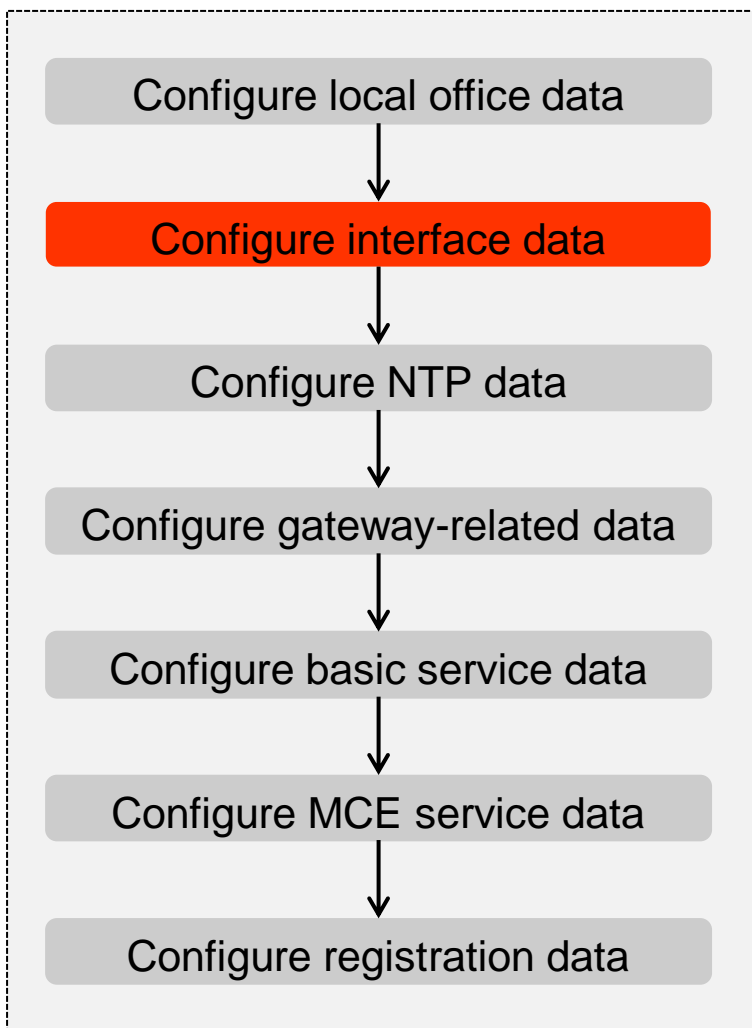
- Run the **ADD BINDMBMSPORT** command to add the binding relationship between a Multimedia Broadcast Multicast Service (MBMS) gateway interface and a physical interface.

The screenshot shows a network configuration interface with the following elements:

- Command History:** A dropdown menu with a red circle '1' next to it.
- Command (F5):** A text input field containing 'ADD BINDMBMSPORT', highlighted with a red box.
- Navigation:** Left and right arrow buttons, and 'Assist' and 'Exec' buttons. The 'Exec' button is highlighted with a red box and a red circle '3'.
- Configuration Fields:** A red-bordered box contains two dropdown menus: 'Interface Type' (highlighted with a red circle '2') and 'Port Type'.

- Example:
INTERFACETYPE=M1, PORTTYPE=Trunk, PORTNAME="Eth-trunk1";

Configuring Interface Data

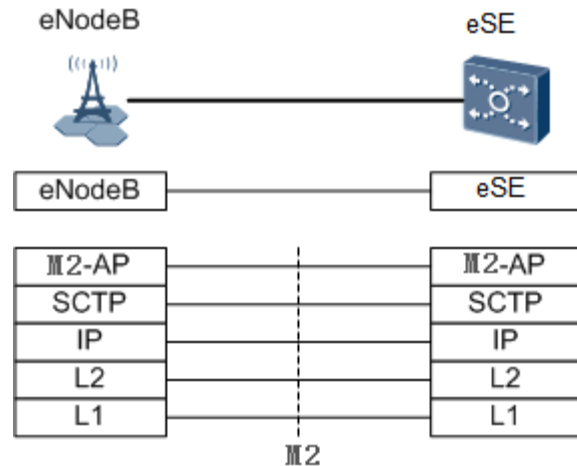


Configure the M2 interface

- Add Loopback Interface (**ADD LOOPBACKIF**)
- Add IP Address (**ADD IPADDR**)
- Add M2AP Local Entity (**ADD M2APLE**)

M2 Interface Protocol

- The M2 interface is the signaling interface between the eNodeB and the multi-cell/multicast coordination entity (MCE).



The protocol stacks are described as follows:

M2 Application Protocol (M2-AP): It refers to the application layer protocol between the eNodeB and the MCE.

SCTP: It is used to guarantee the transmission of signaling messages between the eNodeB and the MCE.

Adding a Loopback Interface

- Run the **ADD LOOPBACKIF** command to add a loopback interface.



- Example:
loopBackIfName="LoopBack4";

Adding an IP Address

- Run the **ADD IPADDR** command to add an IP address.

Command History: 1

Command (F5): Assist Exec 3

Interface Name 2 IP Address

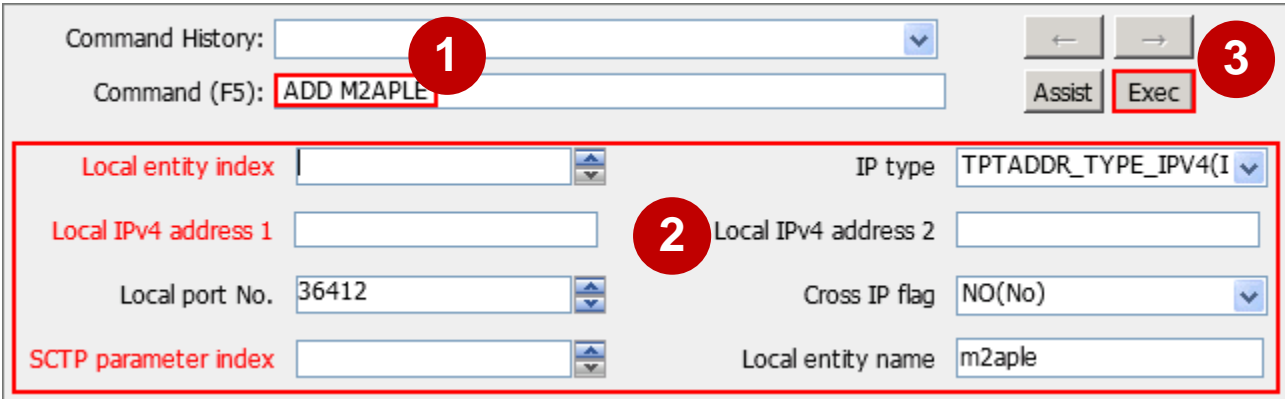
Subnet Mask IP Address Type

- Example:

```
interfaceName="LoopBack4", ipAddr="163.22.33.10", ipMask="255.255.255.255",  
ipType=PRI;
```

Adding a Local M2AP Entity

- Run the **ADD M2APLE** command to add a local M2AP entity. You must run this command to complete basic configurations for the M2 interface before the MCE connects to the eNodeB.



Command History: (1)

Command (F5):

Assist Exec (3)

Local entity index IP type TPTADDR_TYPE_IPV4(I)

Local IPv4 address 1 (2) Local IPv4 address 2

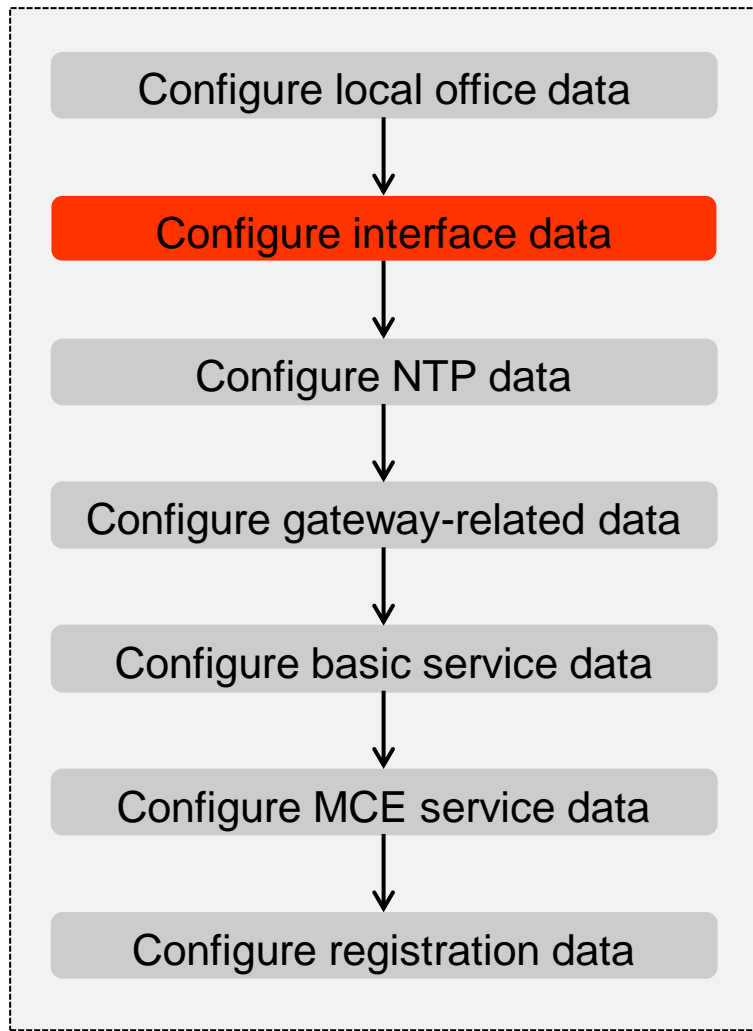
Local port No. 36412 Cross IP flag NO(No)

Sctp parameter index Local entity name m2apple

- Example:**

LLEINDEX=0, IPTYPE=TPTADDR_TYPE_IPV4, LOCALIPV4_1="163.22.33.10",
LOCALIPV4_2="255.255.255.255", LOCALPORT=36413, CROSSIPFLAG=NO,
SCTPINDEX=0, LLNAME="M2";

Configuring Interface Data

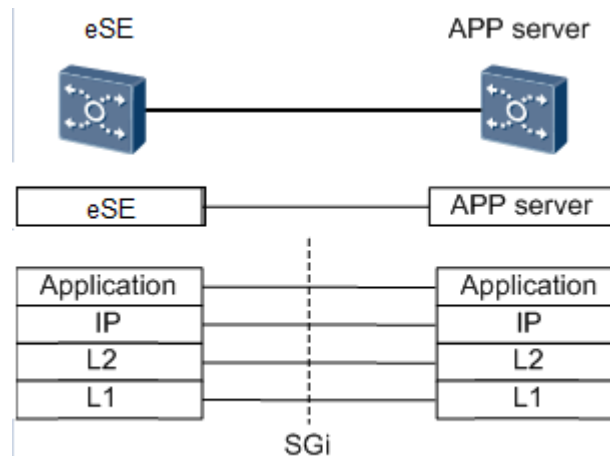


Configure the SGi-mb interface

- Add Ethernet Link Aggregation Group (**ADD ETHTRK**)
- Add Link to Ethernet Link Aggregation Group (**ADD ETHTRKLNK**)
- Add Link to Ethernet Link Aggregation Group (**ADD ETHTRKLNK**)
- Add IP Address (**ADD IPADDR**)
- Add Binding Between MBMS Gateway Interface and Physical Interface (**ADD BINDMBMSPORT**)
- Set IGMP Client Switch (**SET IGMPCLIENTSW**)

SGi Interface Protocol

- The SGi interface is an interface between the eSE620X vESC and the APP server or the external Internet. It is used to transmit PS service data.



Adding an Ethernet Link Aggregation Group

- Run the **ADD ETHTRK** command to add an Ethernet link aggregation group.

Command History: 1

Command (F5): 3

Assist Exec

Ethernet Link Aggregation Group Name:

Maximum Transmission Unit:

Aggregation Mode:

Minimum Number of Activated Links:

Interface Working Mode: 2

Working Mode:

Remarks:

- Example:
ethTrkName="Eth-trunk2", portMode=L3, workMode=ACTIVE_STANDBY,
lacpMode=MANUAL_AGGREGATION

Adding a Link to an Ethernet Link Aggregation Group

- Run the **ADD ETHTRKLNK** command to add a link to an Ethernet link aggregation group.

Command History: 1

Command (F5): 2

Assist 3

Ethernet Link Aggregation Group Name:

Ethernet Interface Name:

Working Mode: ▾

- Example:
ethTrkName="Eth-trunk2", ethPortName="VIU-0-3.Lan1", workMode=ACTIVE_STANDBY;

Adding a Link to an Ethernet Link Aggregation Group

- Run the **ADD ETHTRKLNK** command to add a link to an Ethernet link aggregation group.

Command History: 1

Command (F5): 2

Assist Exec 3

Ethernet Link Aggregation Group Name

Ethernet Interface Name

Working Mode

- Example:
`ethTrkName="Eth-trunk2", ethPortName="VIU-0-6.Lan1", workMode=ACTIVE_STANDBY;`

Adding an IP Address

- Run the **ADD IPADDR** command to add an IP address.

Command History: 1

Command (F5): Assist Exec 3

Interface Name IP Address

Subnet Mask IP Address Type 2

- Example:
interfaceName="Eth-trunk2", ipAddr="168.22.33.1", ipMask="255.255.255.0", ipType=PRI;

Adding Binding Between the MBMS Gateway Interface and Physical Interface

- Run the **ADD BINDMBMSPORT** command to add the binding relationship between an MBMS gateway interface and a physical interface.

The screenshot shows a network configuration interface with the following elements:

- Command History:** A dropdown menu with a red circle '1' next to it.
- Command (F5):** A text input field containing the command `ADD BINDMBMSPORT`, highlighted with a red box.
- Navigation:** Left and right arrow buttons, and 'Assist' and 'Exec' buttons. A red circle '3' is next to the right arrow button.
- Configuration Fields:** A red-bordered box contains two dropdown menus: 'Interface Type' (with a red circle '2' next to it) and 'Port Type'.

- Example:
`INTERFACETYPE=SGimb, PORTTYPE= Trunk, PORTNAME="Eth-trunk2";`

Setting IGMP Client Switch

- Run the **SET IGMPCLIENTSW** command to set Internet Group Management Protocol (IGMP) Client function switch.

Command History: 1

Command (F5): 2

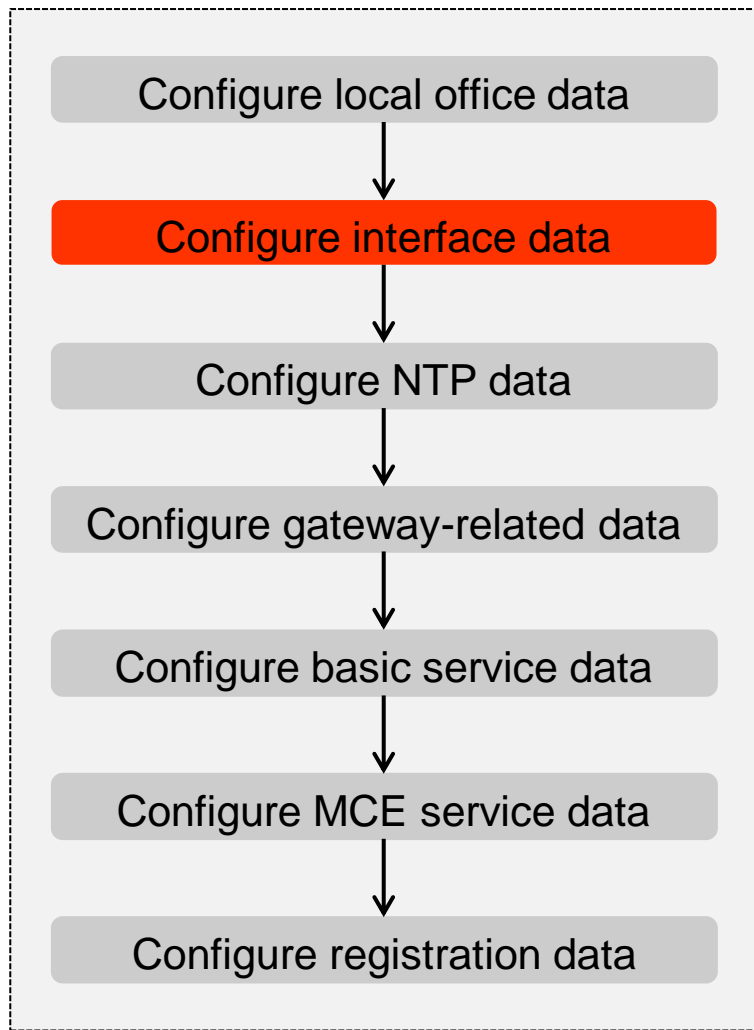
← → 3

Assist Exec

Interface Name 2 IGMP Client Switch

- Example:
interfaceName="Eth-trunk2", igmpClientSw=ON;

Configuring Interface Data

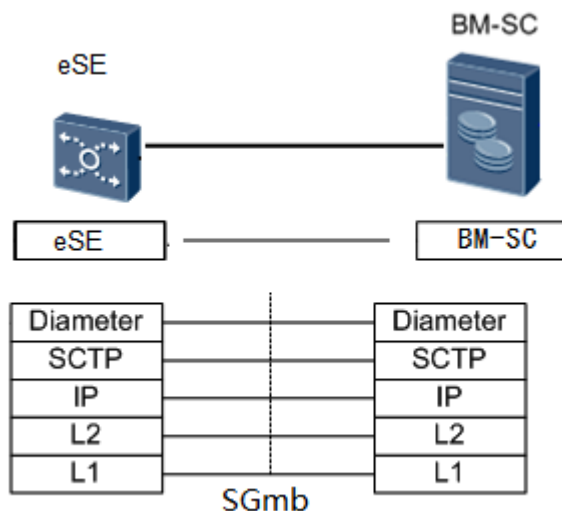


Configure the SGmb interface

- Add Loopback Interface (**ADD LOOPBACKIF**)
- Add IP Address (**ADD IPADDR**)

SGmb Interface Protocol

- The SGmb interface is the interface between S-GW/P-GW and broadcast/multicast service center (BM-SC).



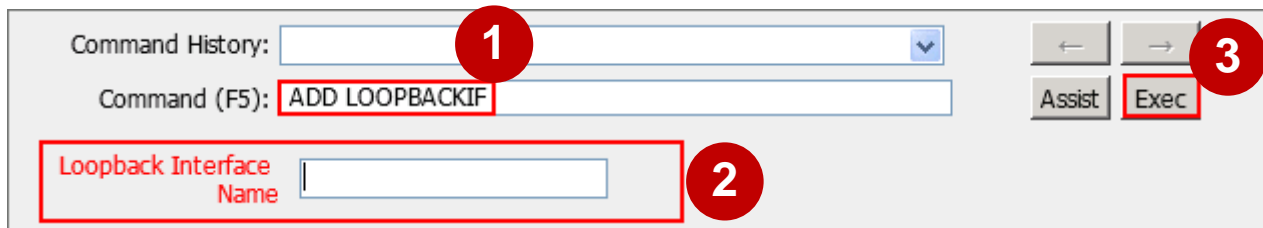
The protocol stacks are described as follows:

Diameter: It refers to the application layer protocol between S-GW/P-GW and BM-SC.

SCTP: It is used to guarantee the transmission of signaling messages between S-GW/P-GW and BM-SC.

Adding a Loopback Interface

- Run the **ADD LOOPBACKIF** command to add a loopback interface.



- Example:
loopBackIfName="LoopBack3";

Adding an IP Address

- Run the **ADD IPADDR** command to add an IP address.

Command History: 1

Command (F5): 2

Assist Exec 3

Interface Name

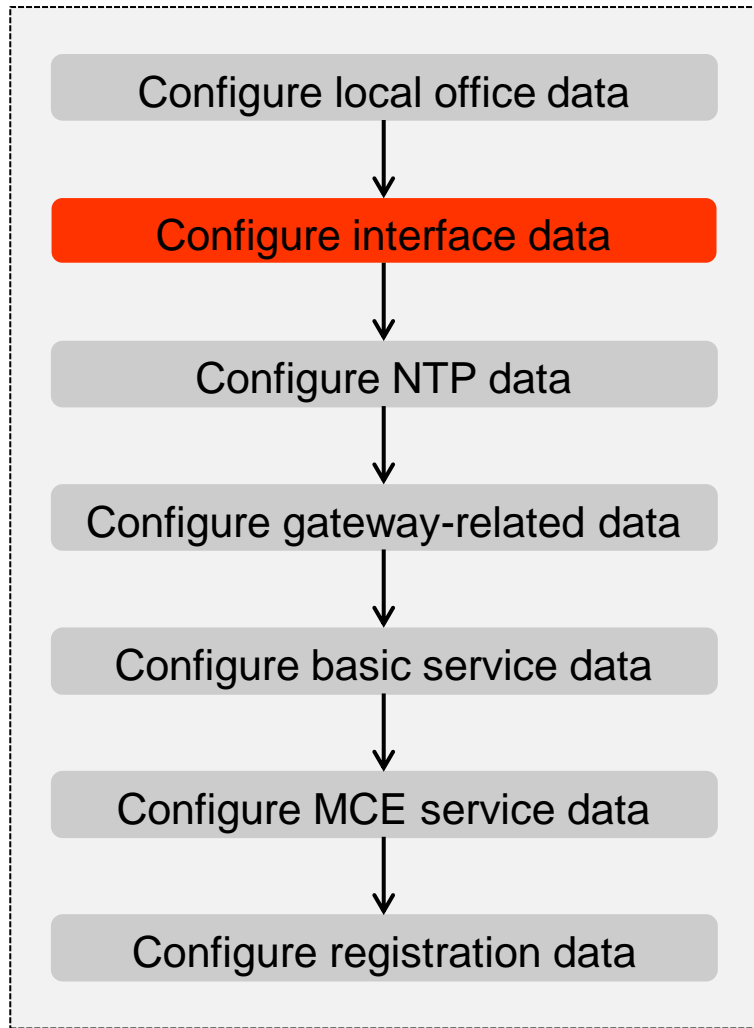
Subnet Mask

IP Address

IP Address Type

- Example:
interfaceName="LoopBack3", ipAddr="166.22.33.1", ipMask="255.255.255.255",
ipType=PRI;

Configuring Interface Data



Configure the Diameter link

- Add SCTP Protocol Parameters used for the Diameter link (**ADD SCTPPARA**)
- Configure Diameter Link for the SGmb interface
- Add Local Diameter Entity (**ADD DMLE**)
- Add Peer Diameter Entity (**ADD DMPE**)
- Add Diameter Linkset (**ADD DMLKS**)
- Add Diameter Link (**ADD DMLNK**)

Adding SCTP Protocol Parameters for the Diameter Link

- Run the **ADD SCTPPARA** command to add protocol parameters configured for IP-based broadband signaling SCTP associations.

The screenshot shows a configuration window for SCTP parameters. At the top, there is a 'Command History' dropdown (1) and a 'Command (F5):' field containing 'ADD SCTPPARA'. To the right are navigation buttons: 'Assist' and 'Exec' (3). The main area is a grid of parameters, with a red box (2) highlighting the entire parameter list. The parameters are as follows:

SCTP protocol parameter Index	Value	Parameter	Value
		RTO min value(ms)	220
RTO max value(ms)	800	RTO initial value(ms)	220
RTO alpha value(%)	12	RTO beta value(%)	25
Heartbeat interval(ms)	3000	Assoc max retrans (times)	20
Path max retrans (times)	4	Max in streams	17
Max out streams	17	No congestion level	40
Low congestion level	60	High congestion level	80
Calculate checksum when send msg	YES(Yes)	Check checksum when receive msg	YES(Yes)
Checksum arithmetic	CRC32(CRC32)	Bind timer value(ms)	10
Delay timer value(ms)	200	IPv4 MTU size	1500
IPv6 MTU size	1280	SCTP protocol parameter name	noname

- Example:
SCTPPARAINDEX=1, SCTPPARANAME="eMBMS";

Adding a Local Diameter Entity

- Run the **ADD DMLE** command to add local Diameter entity information such as the host name and realm name for the local entity of the Diameter link.

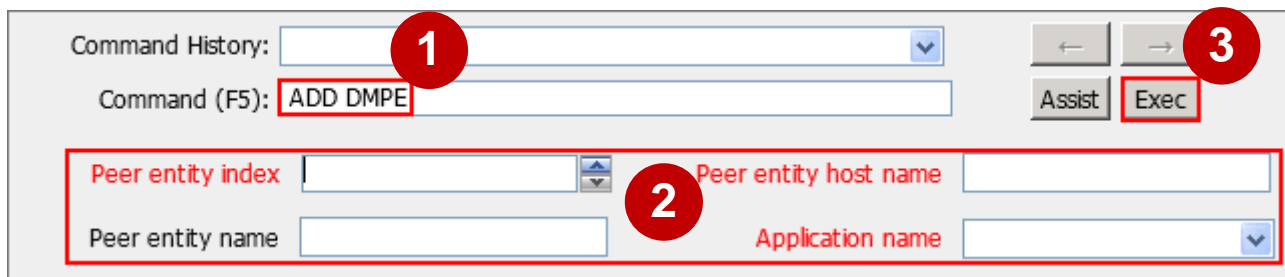
The screenshot shows a network management interface with the following elements:

- Command History:** A dropdown menu with a red circle '1' next to it, currently showing 'ADD DMLE'.
- Command (F5):** A text input field containing 'ADD DMLE'.
- Buttons:** 'Assist' and 'Exec' buttons. The 'Exec' button is highlighted with a red box and a red circle '3' next to it.
- Form Fields (enclosed in a red box):**
 - Local entity index:** A dropdown menu with a red circle '2' next to it.
 - Local entity realm name:** A text input field.
 - Local entity host name:** A text input field.
 - Local entity name:** A text input field.
 - Product name:** A text input field containing 'eSE'.
 - Application name:** A dropdown menu.

- Example:
LOINDEX=0, LOHSTNAME="mbmsgw.huawei.com", LORLMNAME="huawei.com",
PDTNAME="eSE";

Adding a Peer Diameter Entity

- Run the **ADD DMPE** command to add the configuration of a peer Diameter entity.



Command History: 1

Command (F5):

Assist Exec 3

Peer entity index 2 Peer entity host name

Peer entity name Application name

- Example:
PEERIDX=0, PEERHTNAM="emsc.s9.huawei.com", PEERNAM="s9.huawei.com";

Adding a Diameter Linkset

- Run the **ADD DMLKS** command to add a Diameter linkset.
A Diameter linkset is used to uniquely associate a local entity with a peer entity.

The screenshot shows a configuration window for the 'ADD DMLKS' command. It features several input fields and buttons. A red box highlights the 'Command (F5):' field containing 'ADD DMLKS'. A red circle with the number '1' points to the 'Command History' dropdown menu. Another red circle with the number '2' points to a group of four input fields: 'Linkset index', 'Local entity index', 'Peer entity index', and 'Linkset name'. A third red circle with the number '3' points to the 'Exec' button. The 'Mode' dropdown is set to 'SELMODE_LOAD_BALAN' and the 'Application name' dropdown is empty.

- Example:
LINKSIDX=0, LOCALIDX=0, PEERIDX=0, LSSELMODE=SELMODE_LOAD_BALAN,
LINKSNAM="SG-mb";

Adding a Diameter Link

- Run the **ADD DMLNK** command to add a Diameter link.

Command History: 1

Command (F5): Assist Exec 3

Process No. Link No.

Application name IP type TPTADDR_TYPE_IPV4(I 2

Protocol type CONN_PROTOCOL_SCTI Local IPv4 address 1

Local IPv4 address 2 Local port No. 3868

Peer IPv4 address 1 Peer IPv4 address 2

Peer port No. 3868 C/S mode DIAM_CONN_SERVER(S 3

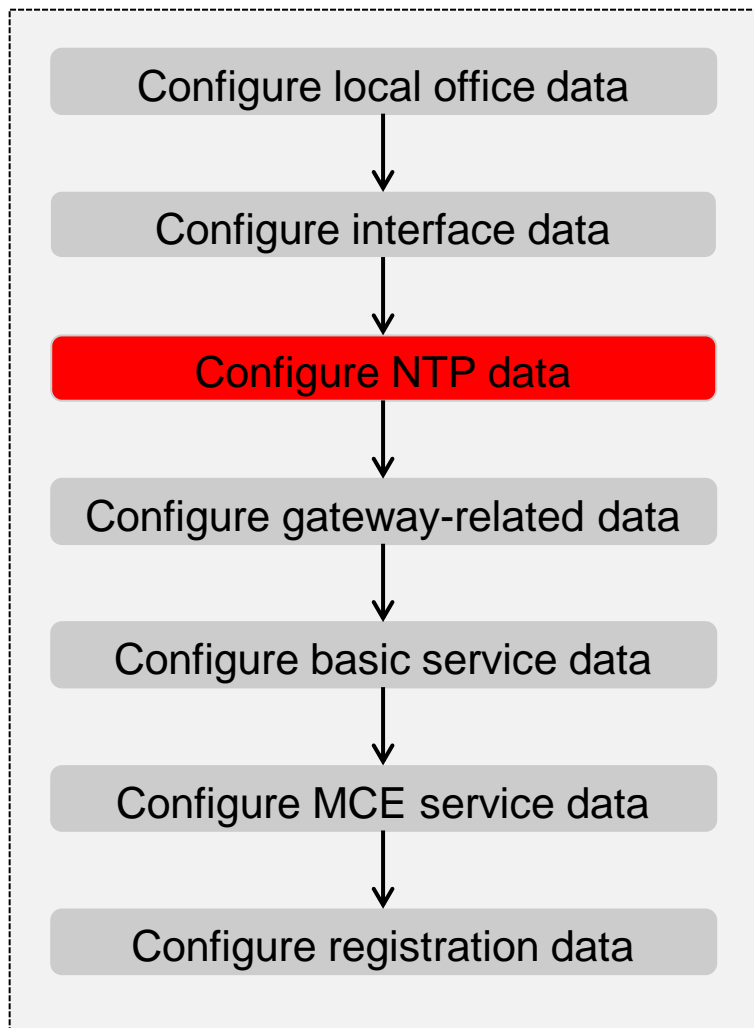
Linkset index SCTP parameter index

Link name noname Cross IP flag NO(No)

- Example:

```
PROCESSNO=0, LINKIDX=0, PROCESSTYPE=GWP,  
IPTYPE=TPTADDR_TYPE_IPV4, LOCALIPV4_1="166.22.33.1",  
LOCALIPV4_2="255.255.255.255", PEERIPV4_1="168.22.33.2",  
PEERIPV4_2="255.255.255.255", CLIORSER=DIAM_CONN_CLIENT, LINKSIDX=0,  
SCTPINDX=1, INTFTYPE=SGMB;
```

Configuring NTP Data



- Set Information About Time Zone and Daylight Saving Time (**SET TZ**)
- Set NTP Client Parameters (**SET NTPCLTPARA**)
- Add NTP Server for the Network Element (**ADD NTPSRVINFO**)

Setting the Time Zone and Daylight Saving Time

- Run the **SET TZ** command to set the time zone and daylight saving time to ensure a correct local time for the current vESC. This is a high-risk MML command. Pay attention to the following precautions before running this command.

The screenshot shows the MML command interface with the following elements:

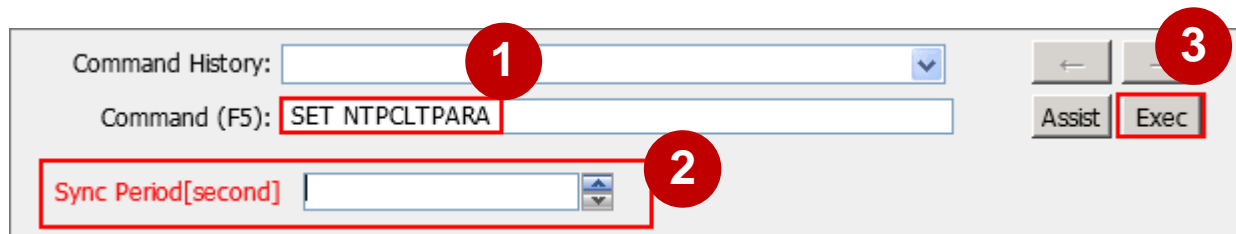
- 1**: A red circle highlighting the Command History dropdown menu.
- 2**: A red circle highlighting the Time Zone and Daylight Saving Time dropdown menus.
- 3**: A red circle highlighting the navigation arrows and the Exec button.

The Command (F5) field contains the text `SET TZ`. The Exec button is highlighted with a red box.

- Example:
zoneT=GMT+0800;

Setting NTP Client Parameters

- Run the **SET NTPCLTPARA** command to set the period of the NTP client service.



- Example:
syncPeriod=10;

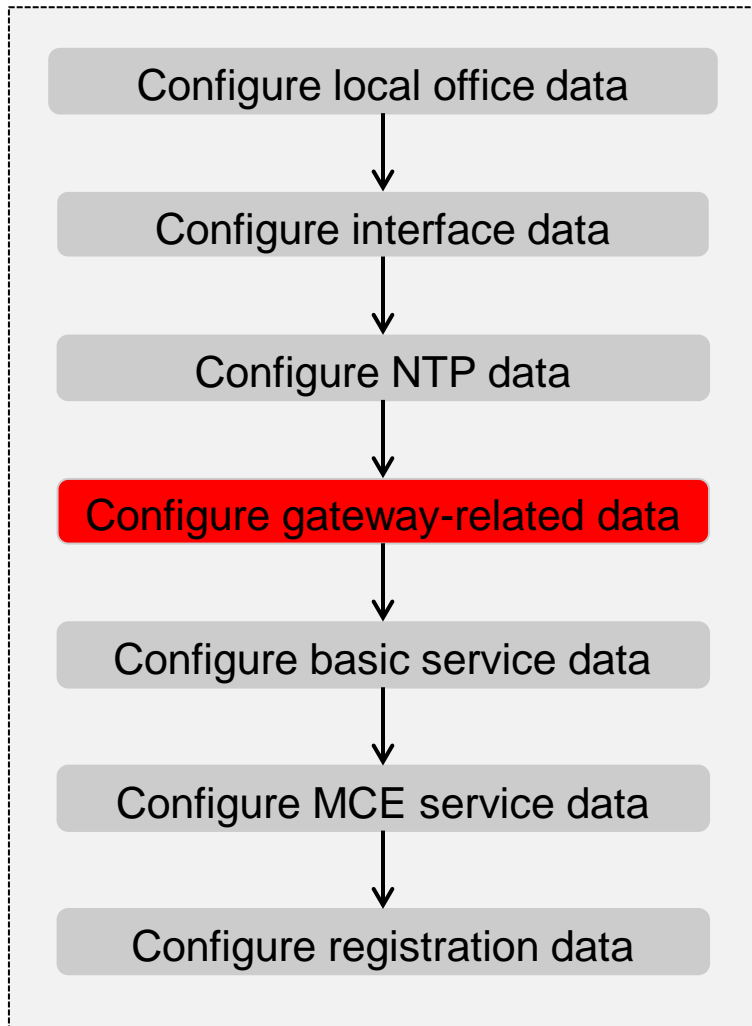
Adding NTP Server Information for the Network Element

- Run the **ADD NTPSRVINFO** command to add the information of the NTP server connected to the network element.

The screenshot displays a configuration window for adding NTP server information. It features a 'Command History' dropdown menu (1), a 'Command (F5):' input field containing 'ADD NTPSRVINFO' (2), and a 'Port' dropdown menu (3). Below the command field, there are input fields for 'IP Address', 'NTP Authentication Mode', and 'Port'. The 'Exec' button is highlighted with a red box.

- Example:
ip="66.10.202.192", port=123, authMode=PLAIN;

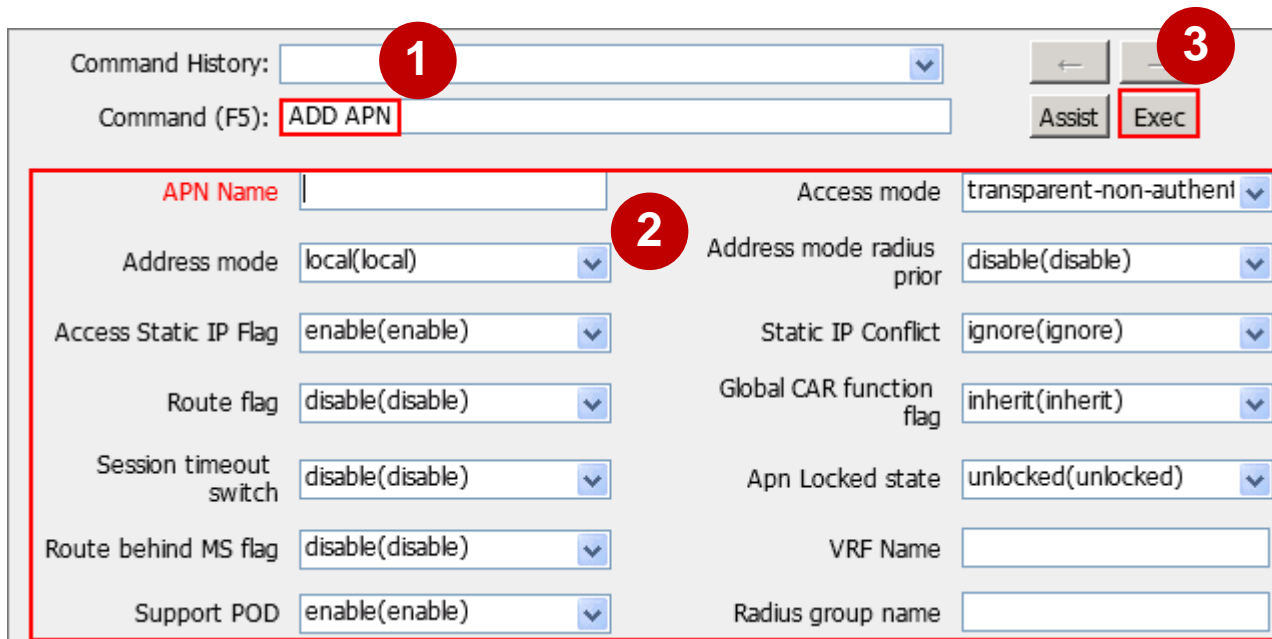
Configuring Gateway-related Data



- Add APN (**ADD APN**)
- Add IP Address Pool (**ADD IPPOOL**)
- Add Address Section (**ADD SECTION**)
- Add Binding Between APN and Address Pool (**ADD APNADDRPOOL**)

Adding an APN

- Run the **ADD APN** command to add an access point name (APN) instance.



Command History: 1

Command (F5): Assist Exec 3

APN Name	<input type="text"/>	Access mode	transparent-non-authen
Address mode	local(local)	Address mode radius prior	disable(disable)
Access Static IP Flag	enable(enable)	Static IP Conflict	ignore(ignore)
Route flag	disable(disable)	Global CAR function flag	inherit(inherit)
Session timeout switch	disable(disable)	Apn Locked state	unlocked(unlocked)
Route behind MS flag	disable(disable)	VRF Name	<input type="text"/>
Support POD	enable(enable)	Radius group name	<input type="text"/>

- Example:
APNNI="huawei.com.cn", TRANSACCESS=transparent-non-authentication,
ADDRMOD=local, ACCESSSTATICIPFLAG=enable, SESSIONSWITCH=disable;

Adding an IP Address Pool

- Run the **ADD IPPOOL** command to add an IP address pool.

The screenshot shows the configuration interface for the **ADD IPPOOL** command. It features a 'Command History' dropdown menu (1), a 'Command (F5)' input field containing 'ADD IPPOOL' (2), and a set of configuration options (3) including 'Poolname', 'Iptype' (set to 'IPV4(IPV4)'), 'VRF Name', 'Pooltype' (set to 'LOCAL(LOCAL)'), and 'Ippool locked state' (set to 'unlocked(unlocked)'). Navigation buttons like 'Assist' and 'Exec' are also visible.

- Example:
POOLNAME="huawei.com.cn", POOLTYPE=LOCAL;

Adding an Address Section

- Run the **ADD SECTION** command to add an IPv4 address section to a local IP address pool.

Command History: 1

Command (F5):

Assist Exec 3

Poolname

SectionNo

Section type 2

Section start IP

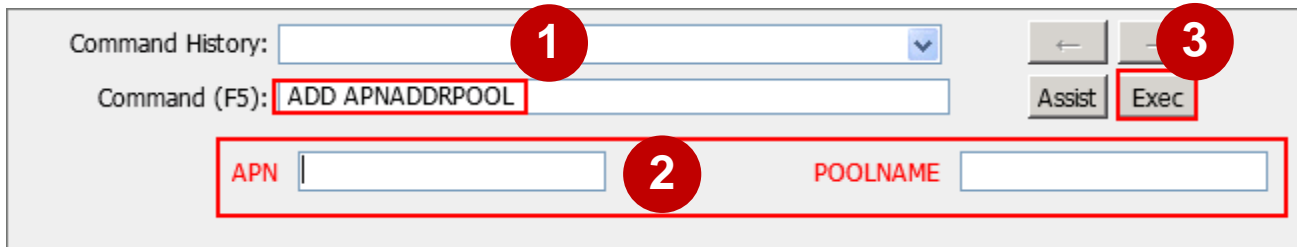
Section end IP

- Example:

POOLNAME="huawei.com.cn", SECTIONNO=0, SECTIONTYPE=STATIC,
STARTIP="61.61.61.1", ENDIP="61.61.61.254";

Add Binding Between the APN and Address Pool

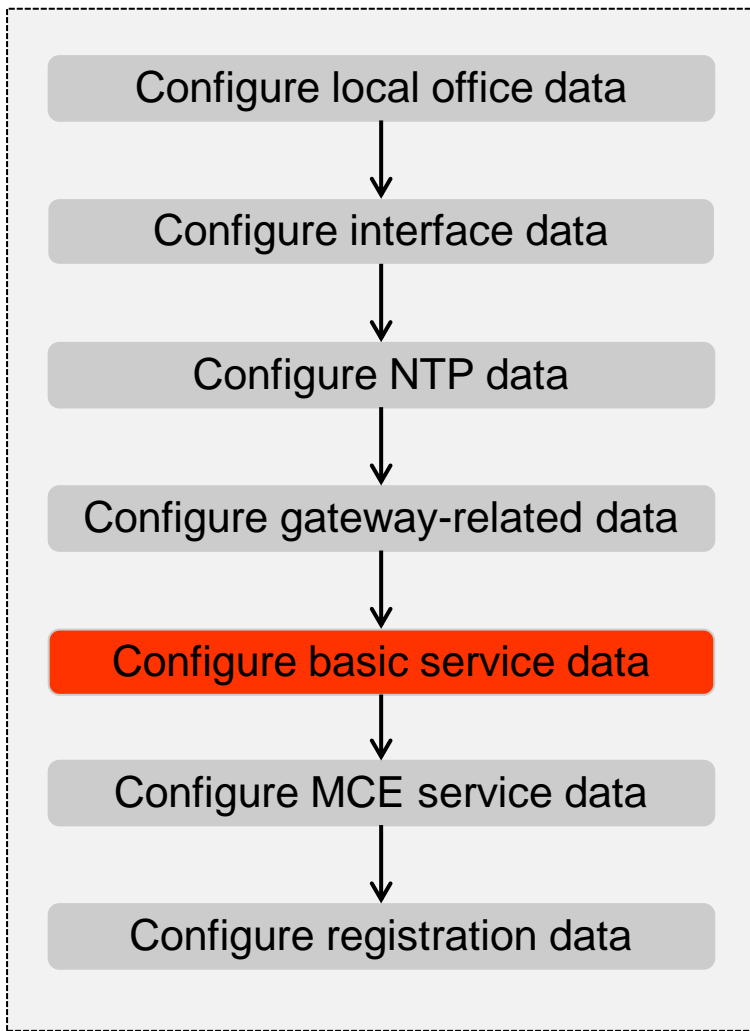
- Run the **ADD APNADDRPOOL** command to add the binding relationship between an APN and an address pool.



The screenshot shows the Huawei CLI interface for configuring the **ADD APNADDRPOOL** command. The interface includes a Command History dropdown menu (1), a Command (F5) input field containing the command **ADD APNADDRPOOL** (2), and an APN/POOLNAME input section (2). The Exec button is highlighted (3).

- Example:
APN="huawei.com.cn", POOLNAME="huawei.com.cn";

Configuring Basic Service Data



- Set HSS IMSI Segment (**SET HIMSISEG**)
- Add IMSI Segment (**ADD IMSISEGMENT**)
- Set VoPS Configuration (**SET IMSVOPS**)
- Add S1 Mode User Security Configuration (**ADD S1USRSECPARA**)
- Set HSS Authentication Parameter (**SET HAUTHPARA**)

Setting an HSS IMSI Segment

- Run the **SET HIMISEG** command to set the international mobile subscriber identity (IMSI) segment range used by enterprise network(HSS Integrated) UEs.

The screenshot shows a configuration interface for the **SET HIMISEG** command. It features a 'Command History' dropdown menu (1), a 'Command (F5):' input field containing 'SET HIMISEG' (2), and two input fields for 'IMSI prefix segment begin' and 'IMSI prefix segment end' (3). Navigation buttons like 'Assist' and 'Exec' are also visible.

- Example:
IMSIPREBEGIN="47042000000000", IMSIPREEND="47042999999999";

Adding an IMSI Segment

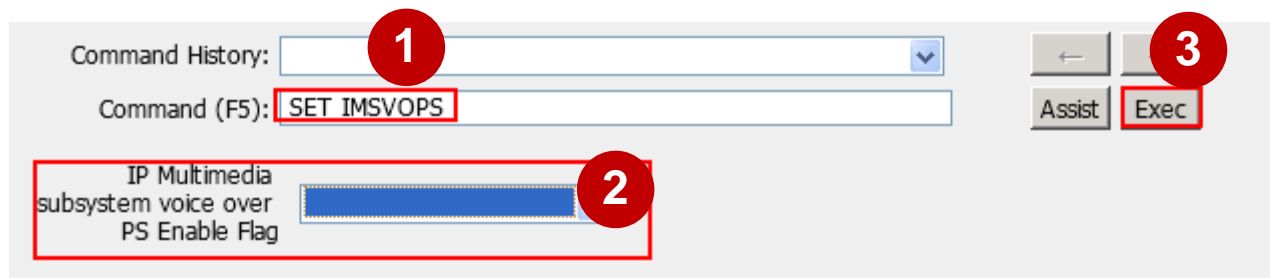
- Run the **ADD IMSISEGMENT** command to add an IMSI segment.

The screenshot shows a command-line interface for adding an IMSI segment. It features a 'Command History' dropdown menu (callout 1), a 'Command (F5):' input field containing 'ADD IMSISEGMENT', and 'Assist' and 'Exec' buttons (callout 3). Below these are three input fields for 'IMSI Segment Name', 'IMSI Segment Start', and 'IMSI Segment End', which are grouped by a red box and labeled with callout 2.

- Example:
NAME="47042", IMSISTART="47042000000000", IMSIEND="470429999999999";

Setting the VoPS Configuration

- Run the **SET IMSVOPS** command to set the VoPS capability of the MME.



- Example:
MMEHOMO=SUPPORT;

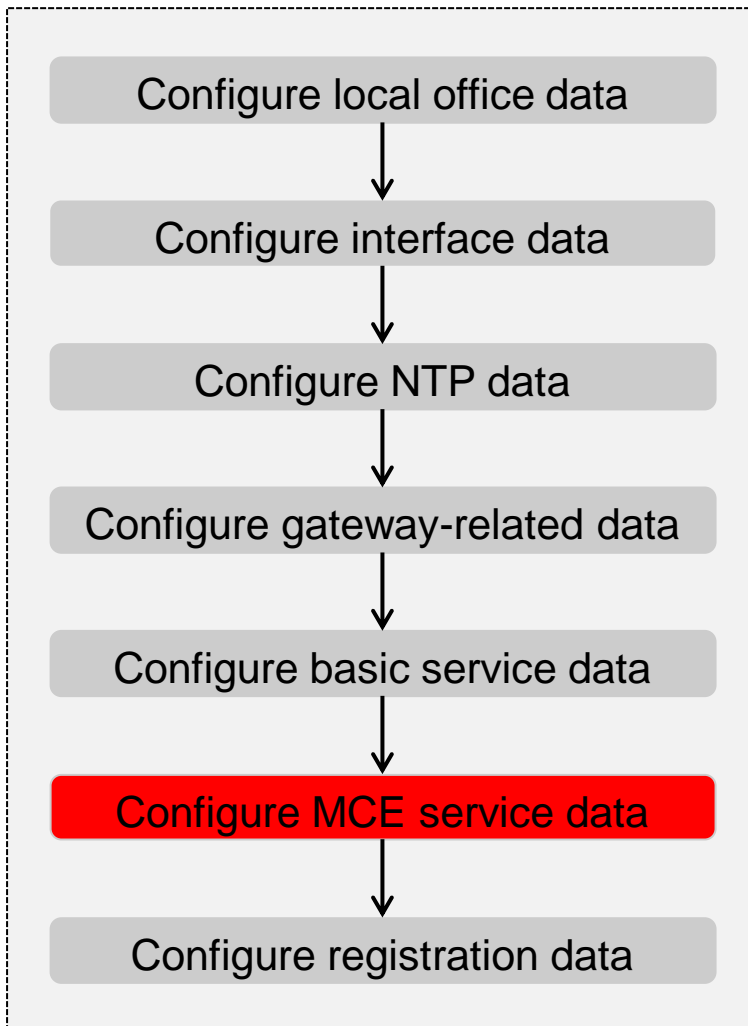
Adding S1 Mode User Security Configurations

- Run the **ADD S1USRSECPARA** command to add security configurations for subscribers in a specified number series. The security configurations involve authentication, encryption, and integrity protection.

The screenshot shows the configuration interface for the **ADD S1USRSECPARA** command. It includes a Command History dropdown (1), a Command (F5) input field containing **ADD S1USRSECPARA**, and navigation buttons (2) for Assist and Exec. The configuration parameters are as follows:

IMSI Prefix	<input type="text"/>	Security Policy	AUTHANDPROTECTED(!)
Integrity Algorithm	<input type="text"/>	Ciphering Algorithm	<input type="text"/>
IMEI function option	NO(NO)	Advanced Options	<input type="text"/>

Configuring MCE Service Data



- Add Basic MCE Information (**ADD MCEBASICINFO**)
- Add QoS Scheduling Configuration (**ADD QCISCHEDULECFG**)
- Add MBSFN Common Configuration (**ADD MBSFNCOMCFG**)
- Add MCCH Info (**ADD MCCHINFO**)
- Add MBSFN Area Cell (**ADD MBSFNAREACELL**)
- Add MBMS Multicast IP Section (**ADD MBMSMLCSTIP**)
- Modify Basic MCE Information (**MOD MCEBASICINFO**)

Adding Basic MCE Information

- Run the **ADD MCEBASICINFO** command to add basic information of an MCE.

The screenshot displays a configuration interface for adding basic MCE information. It features a 'Command History' dropdown menu (1) and a 'Command (F5)' input field containing 'ADD MCEBASICINFO'. To the right are 'Assist' and 'Exec' buttons (3). Below the command field, a red box highlights the configuration parameters (2): 'MCE ID' (empty), 'Leap Second Adjustment' (16), 'Leap Second Get Mode' (MANUAL_CONFIGURE(M)), and 'MCH Update Time Offset' (0).

- Example:
MCEID=0;

Adding QoS Scheduling Configurations

- Run the **ADD QCISCHEDULECFG** command to add quality of service (QoS) scheduling parameters.

The screenshot shows the Huawei CLI configuration interface. At the top, there is a 'Command History' dropdown menu (1) and a 'Command (F5):' input field containing 'ADD QCISCHEDULECFG'. To the right of the command field are 'Assist' and 'Exec' buttons (3). Below the command field, a red box highlights the configuration parameters: 'QCI' (2) is set to an empty field, 'PMCH Data MCS' is set to '27', and 'PMCH Schedule Period' is set to 'MULTIPLE1(1)'.

- Example:
QCI=1, PMCHDATAMCS=7;

Adding MBSFN Common Configurations

- Run the **ADD MBSFNCOMCFG** command to add Multimedia Broadcast multicast service Single Frequency Network (MBSFN) common configurations.

The screenshot shows a configuration window for MBSFN. At the top, there is a 'Command History' dropdown menu (1) and a 'Command (F5):' text box containing 'ADD MBSFNCOMCFG'. To the right of the command box are 'Assist' and 'Exec' buttons (3). Below the command box is a large red-bordered area (2) containing several configuration fields: 'MBSFN Area ID' (a dropdown menu), 'Cell Duplex Mode' (a dropdown menu), 'Cell Downlink BandWidth' (a dropdown menu), 'Common Subframe Allocation Period' (a dropdown menu with 'ALLOC_PERIOD_ENUM3I' selected), and 'Subframe Usage Percent' (a text box with '100').

- Example:
MBSFNAREAID=1, FDDTDDIND=CELL_TDD, DLBANDWIDTH=DLBW_N25,
TDDSFASSIGNMENT=SA2, COMMONSFALLOCPERIOD=ALLOC_PERIOD_ENUM3;

Adding MCCH Information

- Run the **ADD MCCHINFO** command to add multicast control channel (MCCH) information.

Command History: 1

Command (F5): Assist Exec 3

MBSFN Area ID 2 PDCCH OFDM Number

MCCH Modify Period MCCH Repetition Period

MCS

- Example:

MBSFNAREAID=1, MCS=SCHEME2;

Adding an MBSFN Area Cell

- Run the **ADD MBSFNAREACELL** command to add a cell to an MBSFN area.

The screenshot shows a configuration window for adding an MBSFN area cell. It features a 'Command History' dropdown menu (1), a 'Command (F5):' input field containing 'ADD MBSFNAREACELL', and 'Assist' and 'Exec' buttons (3). Below these are four input fields: 'MBSFN Area ID', 'eNodeB ID', 'Cell ID', and 'Cell Reserved Indication', all enclosed in a red box (2).

- Example:
MBSFNAREAID=1, ENODEBID=133, CELLID=131, CELLRESVIND=NONRESERVED;

Adding an MBMS Multicast IP Section

- Run the **ADD MBMSMLCSTIP** command to add the multicast IP address range assigned by the MBMS gateway.

Command History: 1

Command (F5): 2

Start Multicast IP Address 2

End Multicast IP Address

← → 3

Assist Exec

- Example:
STARTMLCSTIP="226.1.1.1", ENDMLCSTIP="226.1.1.5";

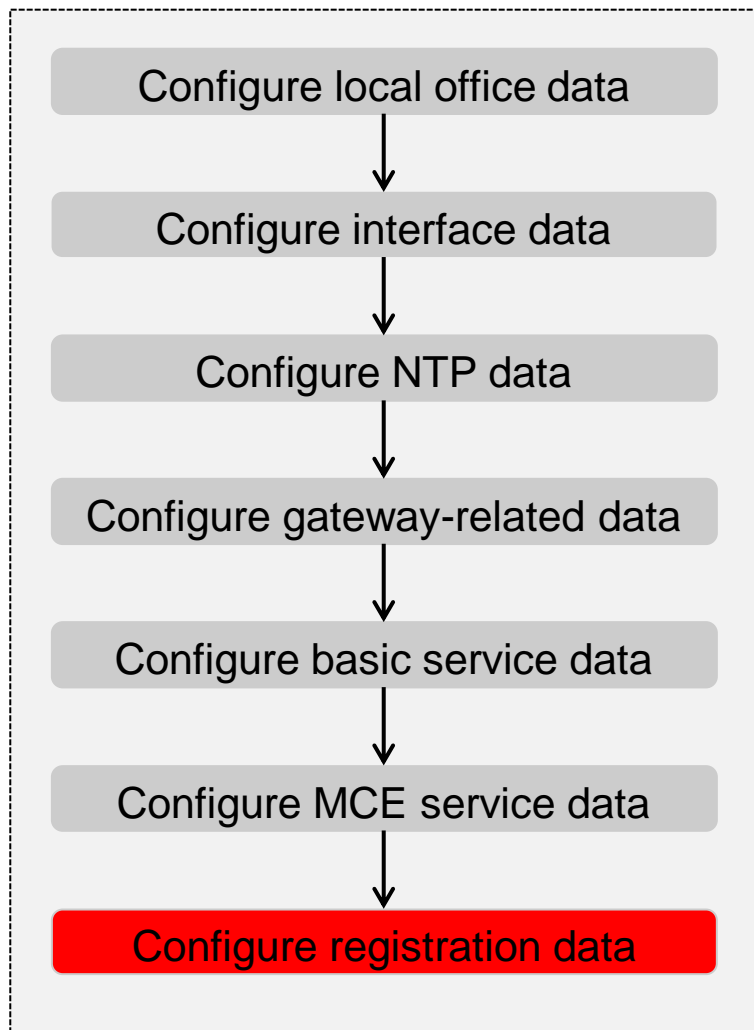
Modifying Basic MCE Information

- Run the **MOD MCEBASICINFO** command to modify the basic information of an MCE.

The screenshot shows a configuration interface for MCE. At the top, there is a 'Command History' dropdown menu (1) and a 'Command (F5):' text box containing 'MOD MCEBASICINFO'. To the right of the command box are 'Assist' and 'Exec' buttons (3). Below the command box, a red box highlights the configuration parameters: 'MCE ID' (2), 'Leap Second Get Mode', and 'MCH Update Time Offset'.

- Example:
MCEID=0, LEAPSECONDDADJ=18;
The value of **Leap Second Adjustment** is 18s by January 5, 2017.

Configuring Registration Data



- Add HSS USIM Card (**ADD HUSIM**)
- Add HSS Subscribers (**ADD HSUB**)
- Modify HSS Subscribers' Context (**MOD HSUBCNTX**)

Adding an HSS USIM Card

- Run the **ADD HUSIM** command to add universal subscriber identity module (USIM) data required for UE registration.

The screenshot shows a software interface for entering commands. At the top, there is a 'Command History' dropdown menu with a red circle '1' next to it. Below it, the 'Command (F5):' field contains the text 'ADD HUSIM', which is highlighted with a red box. To the right of this field are 'Assist' and 'Exec' buttons, with a red circle '3' next to the 'Exec' button. Below the command field, there are two dropdown menus: 'ADDKITYPE' (with a red box around it and a red circle '2' next to it) and 'LOCKSTATUS' (set to 'UNBLOCK(Unblock)').

- Example:
IMSI="470421234561048", AUTHTYPE=OP,
KIVALUE="11111111111111111111111111111111", LOCKSTATUS=UNBLOCK;

Adding HSS Subscribers

- Run the **ADD HSUB** command to register an enterprise UE with an HSS by binding the UE to a USIM card, allocating an MSISDN, and configuring subscription data.

Command History: 1

Command (F5): 1

Assist 3

Configuration Fields (2):

IMSI	<input type="text"/>	MSISDN	<input type="text"/>
Number of subscribers	<input type="text" value="1"/>	UE Level APN-O-I replacement	<input type="text"/>
RAT Frequency Selection Priority	<input type="text"/>	UE level MAX Upload Bandwidth(bps)	<input type="text"/>
UE level MAX Download Bandwidth (bps)	<input type="text"/>	Context template ID	<input type="text"/>
Lock status of subscribers	<input type="text" value="UNLOCK(UNLOCK)"/>	Layer 2 VPN Switch	<input type="text" value="DISABLE(DISABLE)"/>

- Example:

IMSI="470421234561048", ISDN="470421234561048", UEAMBRMAXUL=100000000,
UEAMBRMAXDL=100000000;

Modifying the HSS Subscribers' Context

- Run the **MOD HSUBCNTX** command to add, modify, or remove the packet data network (PDN) subscription context for a UE.

The screenshot shows a software interface for configuring HSS subscribers' context. At the top, there is a 'Command History' dropdown menu (1) and a 'Command (F5):' input field containing 'MOD HSUBCNTX'. To the right of the input field are 'Assist' and 'Exec' buttons (3). Below the input field, a red box highlights the configuration area (2), which includes a 'Subscribers' selection style' dropdown menu, an 'Operation type' dropdown menu, and a 'Number of subscribers' input field with a spinner control.

- Example:
SELECTBY=IMSI, IMSI="470421234561048", PROV=ADDPDNCNTX, CNTXID=1,
DEFAULTAPNFLAG=YES, UEPDNTYPE=IPV4, UEADDIND=STATIC,
UEPDNADDIPV4="61.61.61.48", APNNI="huawei.com.cn",
PDNGWALLOCTYPE=DYNAMIC, QOSCLASUID=6, PRILEVEL=1,
AMBRMAXREQBWUL=100000000, AMBRMAXREQBWDL=100000000;

Setting the UE to UE Function

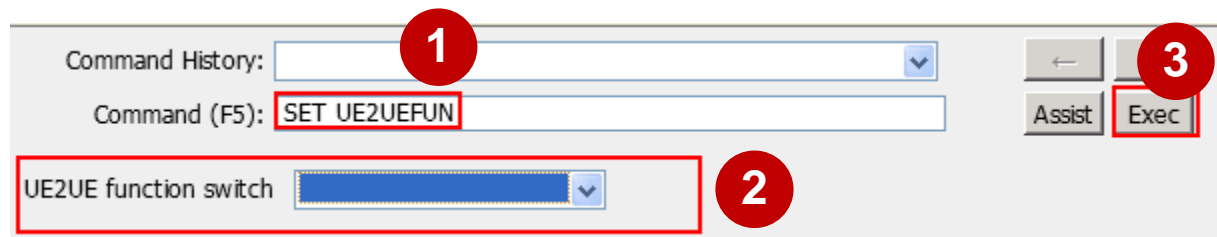
Set UE to UE function



- Set UE to UE Function Switch (**SET UE2UEFUN**)

Setting UE to UE Function Switch

- Run the **SET UE2UEFUN** command to set UE to UE function switch. UE To UE functions include the direct UE communication function.



- Example:
UE2UEFLAG=enable;

Activating the License

Activate the license



- Set FTP Client Security Policy (**SET FTPSCLT**)
- Download License File (**DLD LICENSE**)
- Activate License File (**ACT LICENSE**)

Setting an FTP Client Security Policy

- Run the **SET FTPSCLT** command to set the security policy of the File Transfer Protocol (FTP) client.

Command History: 1

Command (F5): 1

Assist 3

The Encrypted Mode 2 Support Stateful Inspection Firewall

Support SSL Certificate Authentication

- Example:
encryMode=AUTO, supportStateFirewall=NO, sslCertAuth=NO;

Downloading a License File

- Run the **DLD LICENSE** command to download a license file from an FTP server to an NE.

Command History: 1

Command (F5): 2

Assist Exec 3

FTP Server IP Address

FTP Server User Name

FTP Server User Password 2

Directory Name

File Name

Resume Disconnected Download Flag

- Example:
IP="66.10.202.233", USR="admin", PWD="admin123", DIR="\data ",
FN="eSE620XvESCV100R001_20170105104824389.xml";

Activating a License File

- Run the **ACT LICENSE** command to activate a license file.

The screenshot shows a software interface for license activation. It features a 'Command History' dropdown menu (1), a 'Command (F5)' input field containing 'ACT LICENSE' (2), and a 'File Name' input field (2). To the right, there are 'Assist' and 'Exec' buttons (3). The 'Activation Type' is set to 'FORCE(Force activation)' via a dropdown menu.

- Example:
FN="eSE620XvESCV100R001_20170105104824389.xml";

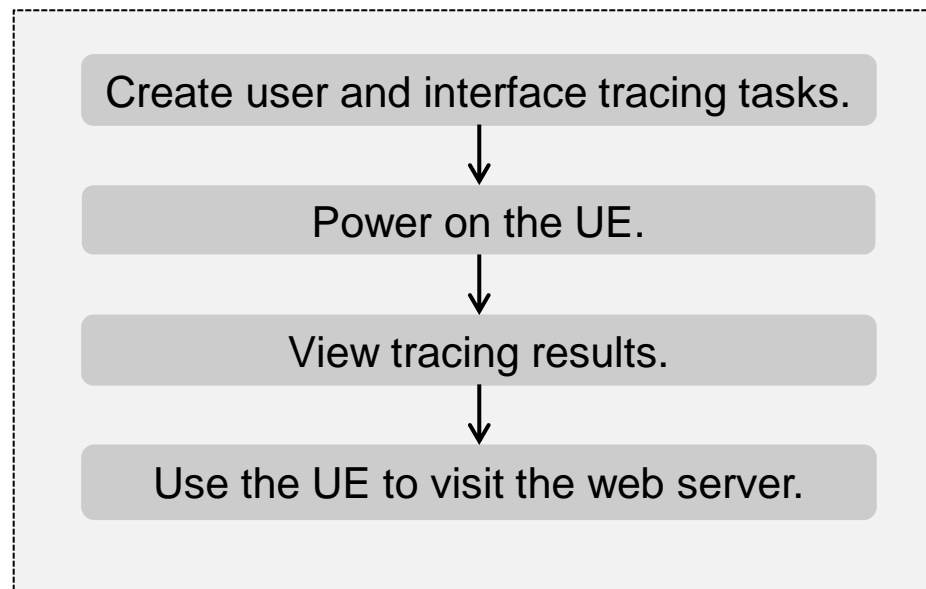


Contents

- eSE620X vESC Data Configuration Preparations
- eSE620X vESC Data Configuration Process
- eSE620X vESC Basic Service Commissioning

Basic Service Commissioning

- Basic services are commissioned to check that the basic data of the eSE620X vESC services are configured correctly and that the cooperation between NEs is functioning. This ensures that basic services run normally.





Summary

- We have mainly learned the following knowledge from this course:
- **eSE620X vESC Data Configuration Preparations**
- **eSE620X vESC Data Configuration Process**
- **eSE620X vESC Basic Service Commissioning**



More Information

- Huawei official websites
 - Enterprise business: <http://enterprise.huawei.com/en/>
 - Technical support: <http://support.huawei.com/enterprise/>
 - Online learning: <http://learning.huawei.com/en/>
- Documentation tool **HedEx Lite**
 - HedEx Lite

Thank You

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