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Guide to Configuration of BTS Environment Alarms on the BSC6000

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1 Basic Knowledge

1.1 Sensor

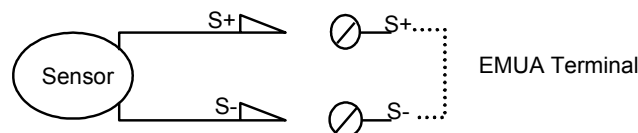
Based on different types of output signals, the sensors are categorized into the dry-contact Boolean value output sensor, the OC-output Boolean value output sensor, the voltage-output Boolean value output sensor, and the analog input sensor.

1.1.1 Dry-Contact Boolean Value Output Sensor

The dry-contact Boolean value output sensors are categorized into:

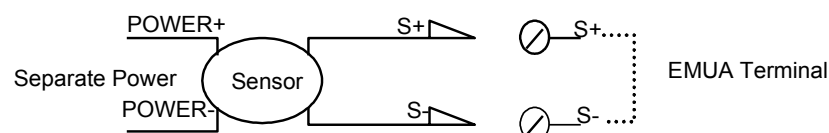
- Passive dry-contact Boolean value output sensor
A passive dry-contact Boolean value output sensor has no power input terminal, and it generally has two signal output terminals (S+/S-). Figure 1.1 shows the connection mode.

Figure 1.1 Connection mode of the passive dry-contact Boolean value output sensor



- Active dry-contact Boolean value output sensor
An active dry-contact Boolean value output sensor has two power input terminals (POWER+/POWER-) and two signal output terminals (S+/S-). Figure 1.2 shows the connection mode.

Figure 1.2 Connection mode of the active dry-contact Boolean value output sensor

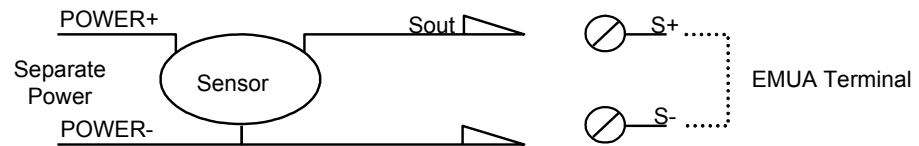


If the level is low when the loop is close, a low-voltage alarm is generated. If the level is high when the loop is open, a high-voltage alarm is generated.

1.1.2 OC-output Boolean Value Output Sensor

The OC-output Boolean value output sensor has two power input terminals (POWER+/POWER-) and one signal output terminal (Sout). Figure 1.1 shows the connection mode.

Figure 1.1 Connection mode of the OC-output Boolean value output sensor

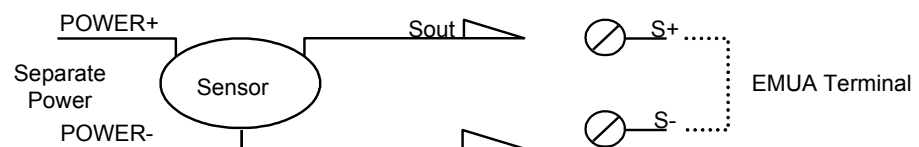


If the level is low when the loop is close, a low-voltage alarm is generated. If the level is high when the loop is open, a high-voltage alarm is generated.

1.1.3 Voltage-output Boolean Value Output Sensor

The voltage-output Boolean value output sensor has two power input terminals (POWER+/POWER-) and one signal output terminal (Sout). Figure 1.1 shows the connection mode.

Figure 1.1 The connection mode of the voltage-output Boolean value output sensor



The lower level at loop close indicates the lower voltage, while the high level at loop disconnection.

1.1.4 Analog Input Sensor

The analog input has a mathematic or linear correlation. The gradually changing current (or the voltage) corresponds to a changing value according to the correlation. For example, the sensor monitors the temperature and inputs an analog value through changing current, and the processor calculates the temperature value according to a mathematic correlation.

1.2 Survey of Environment Alarm

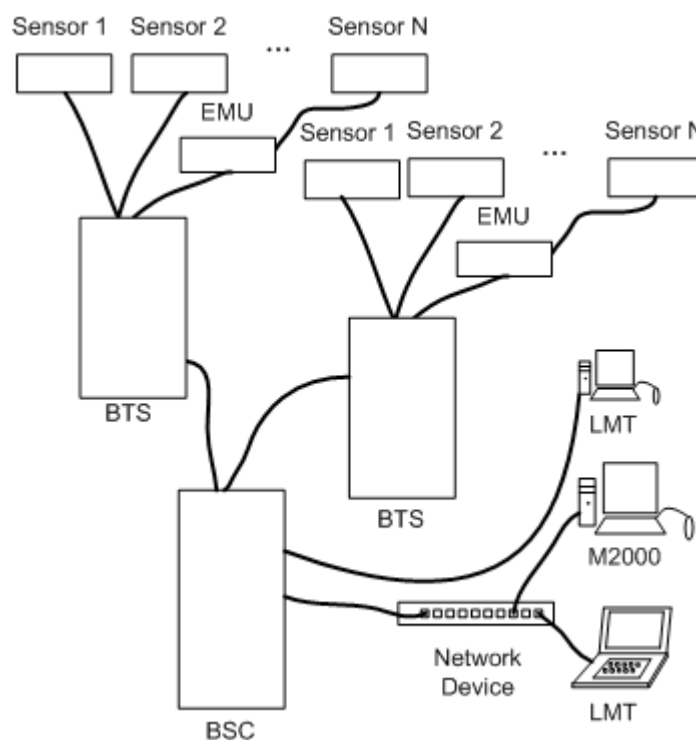
1.2.1 Introduction to the Environment Alarm

To ensure stable operation of the equipment in a mobile communication equipment room, different

sensors and software devices are used to monitor the operation of the equipment in the equipment room in real time, such as the power supply and the environment of the equipment room. The power supply monitoring refers to the monitoring of the mains supply, DC power distribution module, rectifier module, and storage battery. The environment monitoring in the equipment room involves the temperature, humidity, access control, water, smoke, distribution, and door status. With the extended alarm ports on the BTS, the auxiliary equipment of the BTS such as the power supply, switching power supply and storage battery can be monitored. With the Environment Monitoring Unit (EMU), the temperature, humidity, and smoke can be monitored and the intrusion can be detected in real time. The environment can be monitored according to the preset value and alarms are generated when the preset threshold is exceeded.

Figure 1.1 shows the networking of the environment alarm system.

Figure 1.1 Networking of BTS environment alarm equipment



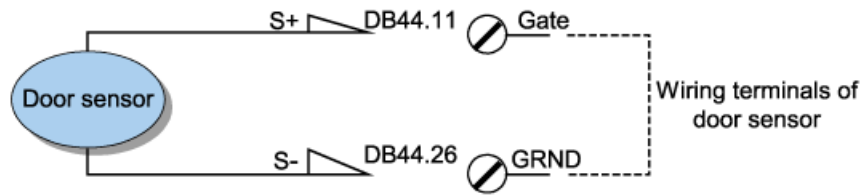
1.2.2 Sensors of the BTS

Sensors are used to detect the environment variables of the BTS and report various environment alarms. The sensors special for the BTS are classified into the door status sensor, water sensor, smoke sensor, infrared sensor, and temperature and humidity sensor.

- Door status sensor

The door status sensor is placed at the intersection of the door frame and door. It detects the opening and closing of the door. Figure 1.1 shows the wiring terminal.

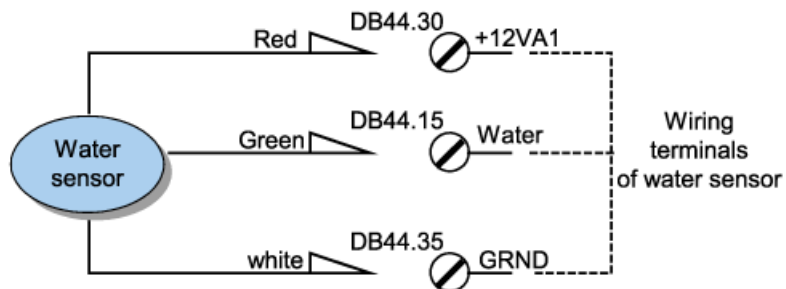
Figure 1.1 Wiring terminal of the door status sensor



- Water sensor

The water sensor is horizontally placed at the places that are subject to be immersed in water in the equipment room. It detects whether the BTS is immersed in water. Figure 1.2 shows the wiring terminal.

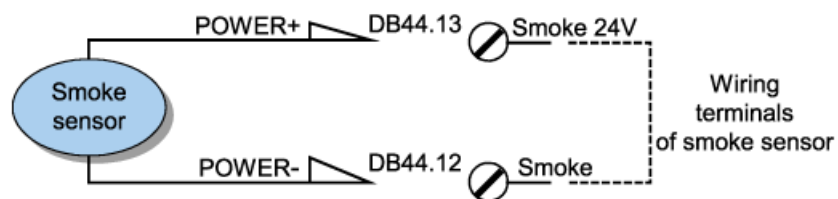
Figure 1.2 Wiring terminal of the water sensor



- Smoke sensor

The smoke sensor is placed at the center of the ceiling. It detects whether the BTS or the equipment room is on fire. Figure shows the wiring terminal.

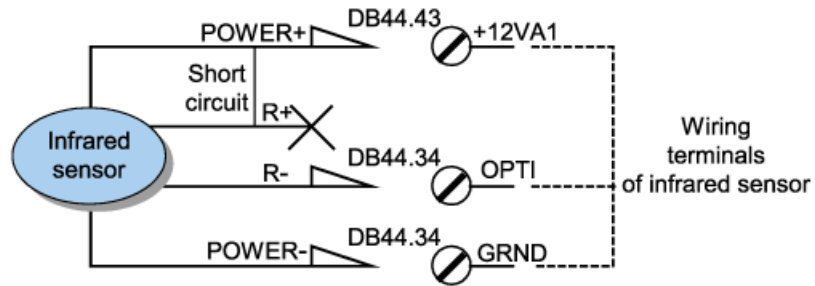
Figure 1.3 The wiring terminal of the smoke sensor



- Infrared sensor

The infrared sensor is placed on the wall, 1.5 m above the floor. It detects whether there is illegal intrusion. Figure 1.4 shows the wiring terminal.

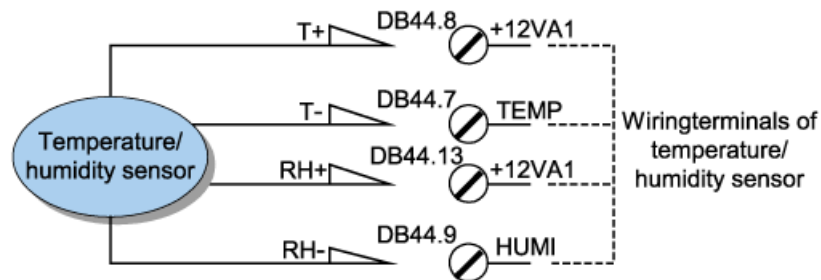
Figure 1.4 Wiring terminal of the infrared sensor



- Humidity and temperature sensor

The temperature and humidity sensor is placed on the wall, 1.5 m above the floor. It detects whether the temperature or humidity exceeds the threshold. Figure 1.5 shows the wiring terminal.

Figure 1.5 Wiring terminal of the humidity and temperature sensor



1.2.3 Cables Related to BTS Alarms

Different BTS may have different interfaces. For details, see section “Correlation Between Expanded Boolean Value Alarms and Cables of BTS” in the *BTS Alarm Reference*.

1.2.4 BTS Monitoring Unit

Figure 1.1 lists the monitoring units and BTS alarm IDs supported by the BTSs of different models.

Figure 1.1 Mapping between BTSs and monitoring units

Site Type	Monitoring Unit	Number of Supported Extended Alarms
BTS30	TMU	24
	EAC	32
BTS312	TMU	24
	EAC	32



Site Type	Monitoring Unit	Number of Supported Extended Alarms
BTS3006A	TMU	24
	EAC	32
BTS3012A	TMU	24
	EAC	32
BTS3002C	IOMU	4
	EAC	32
BTS3012	DTMU	24
	DPMU	14
	EAC	32
	DEMU	40
BTS3012AE	DTMU	24
	DPMU	7
	DEMU	40
BTS3006C	DTMU	32
	APMU	3
	DPMU	7
	DEMU	32
BTS3002E	DTMU	32
	APMU	3
	DPMU	7
	DEMU	40
BTS3012_II	DTMU	24
	DPMU	14
	EAC	32
	DEMU	40
DBS3036	GTMU	16
	APMU	3
	DPMU	7
	DEMU	40
BTS3036A	GTMU	16

Site Type	Monitoring Unit	Number of Supported Extended Alarms
	APMU	3
	DPMU	7
	DEMU	40
	FMUA	4
BTS3036A	GTMU	16
	APMU	3
	DPMU	7
	DEMU	40
	FMUA	4

1.2.5 Mapping between cables and monitoring units

For more details, refer to the accessory as below.



alarmport-alarmid

2 Configuring BTS Environment Alarms

2.1 Purpose

In the BSC6000 products, the BTS environment alarm IDs are managed in two modes, that is, the decentralized management mode and the centralized management mode.

- Decentralized management mode

In the BSC6000 V900R001 (V9R1 for short), the environment alarms of the BTS and BSC are managed in the decentralized management mode. The discontinuous environment alarm IDs for different BTS types are not suitable for the centralized management and are not easy to use.

- Centralized management mode

In the BSC6000 V900R003 (V9R3 for short), the environment alarm function is optimized. The environment alarm baseline of Huawei is used to unify environment alarm IDs to one fixed range and the binding correlation between the alarm ID and the BTS monitoring port is established through the M2000 or directly with the MML.

In the meantime, to keep the product inheritance, the V9R3 or later versions are compatible with the uncentralized management mode.

2.1.1 Decentralized Management of Environment Alarm IDs

In the V9R1, you need to modify the alarm names of the default BTS alarm IDs on the BSC6000 Local Maintenance Terminal (LMT) and the M2000. After modification, the new alarm names are displayed on the M2000 and the BSC.

The alarms generated from the same port of the board in the same slot and frame of the same type of BTSs have the same alarm ID. Therefore, in the V9R1 version, after the names of the environment alarm of a BTS is changed, you do not need change the names of the environment alarms that are reported from the same type of BTS deployed during the cutover.

In the V9R1 version, a certain type of external environment alarm equipment is connected only to

a fixed port of the BTS to satisfy the planning requirement. The alarm IDs are respectively bound with the ports. When the alarm is connected to an idle port due to the port fault, the BTS reports a different alarm ID, which leads to an unidentified alarm.

2.1.2 Centralized Management of Environment Alarm IDs

In V9R3 or later versions, the environment alarm IDs in centralized management are planned as follows:

The valid range of the BSC environment alarm IDs is from 65334 to 65383.

The valid range of the BTS environment alarm IDs is from 65384 to 65533.

The BTS environment alarm ports can be bound to the previously defined alarm ID range through the M2000 (before binding, the port of V9R1 is bound with a fixed environment alarm ID to report the alarm), and the alarm names can be changed on the M2000. After the settings, the environment alarms reported by the BTS are represented by the modified environment alarm ID and alarm name.

Table 1.1 describes the settings related to the centralized management mode of the environment alarm IDs.

Table 1.1 Setting items related to the centralized management of the environment alarm IDs

Setting Item	Details	Method
Setting the binding relation between the alarm ID and the port	The setting is to bind the vector consisting of the BTS, the cabinet number, frame number, slot number, and the port number with the environment alarm ID to set up a correlation.	Make the setting on the M2000 or directly using the MML (that is, the SET ALMPORT command).
Setting related to the port	<ol style="list-style-type: none"> 1. The setting is to define the condition for generating the alarm (indicating whether the alarm is generated for receiving the high level or the low level) 2. Enable the port (the alarm can be reported only after the port is enabled). 	
Modifying the alarm attribute	The setting is to modify the alarm name and alarm level of an environment alarm ID.	Make the setting on the M2000.

2.2 Configuring BTS Environment Alarm in BSC6000 V900R001+M2000 V2R3

The BTS V9R1 environment alarm IDs are managed in the decentralized management mode. Do as follows to configure the environment alarms:

- Step 1** Modify the names and definitions of BTS environment alarms on the BSC6000.
- Step 2** Modify the names and definitions of BTS environment alarms on the M2000V2R3.

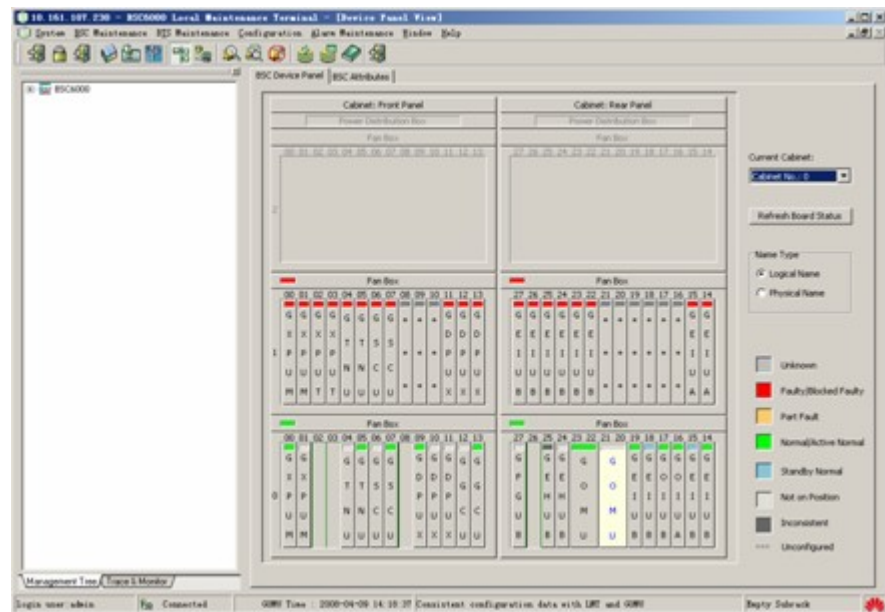
To ensure the name consistency of the same environment alarm IDs on the BSC6000 and the M2000, you need to plan the modification solution for the BTS environment alarm IDs.

2.2.2 Modifying the NE Environment Alarm Name Through the BSC6000 Local Maintenance Terminal

You can change the names of BTS V9R1 environment alarms through the BSC6000 Local Maintenance Terminal by doing as follows:

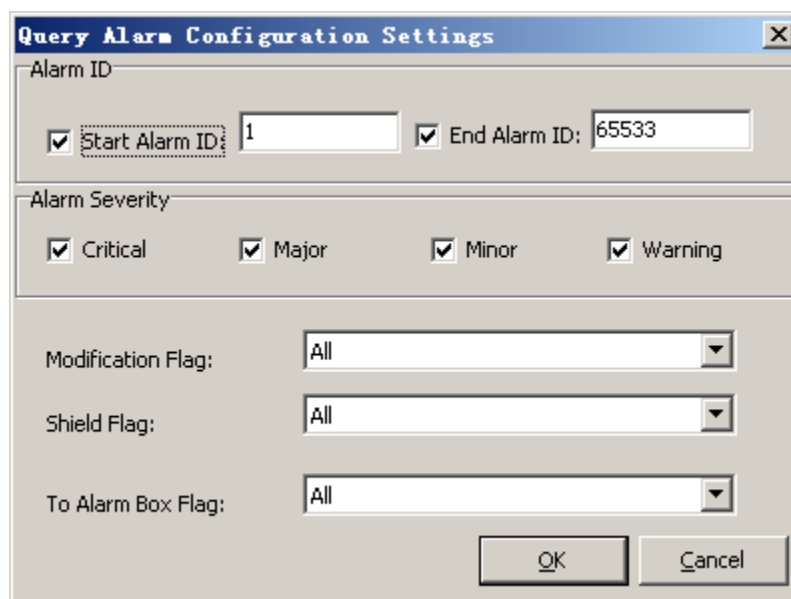
- Step 1** Log in to the BSC6000 Local Maintenance Terminal. A window as shown in Figure 1.1 is displayed.

Figure 1.1 Login window of BSC6000 local maintenance terminal



- Step 2** Choose **Alarm Maintenance > Query Alarm Configuration Settings**. The **Query Alarm Configuration Settings** dialog box is displayed, as shown in Figure 1.1.

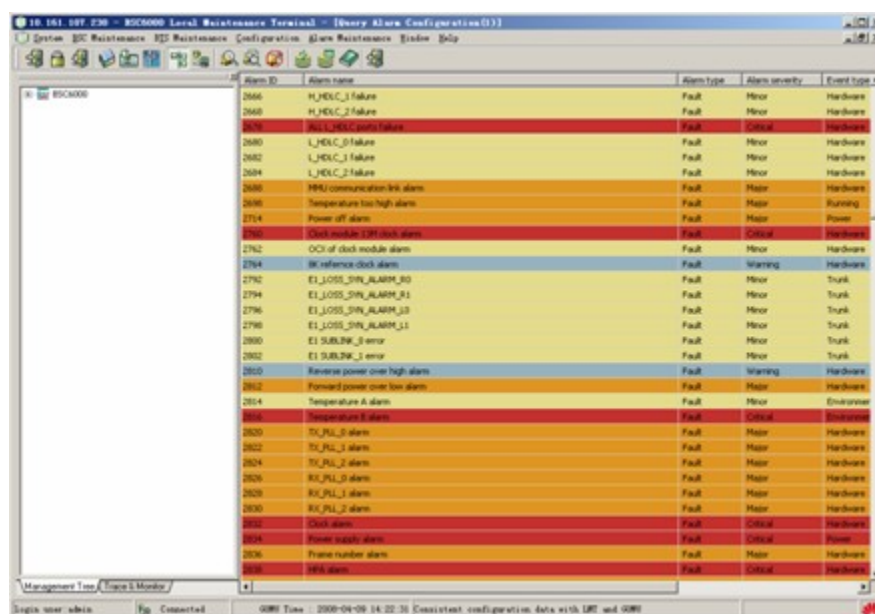
Figure 1.1 Setting the condition for querying the alarm configuration



Step 3 Select **Start Alarm ID** or **End Alarm ID** in the **Alarm ID** area and select the alarm level from the **Alarm Severity** area as required, and select the values from the **Modification Flag**, **Shield Flag** and **To Alarm Box Flag** drop-down lists according to the actual condition. Then, click **OK**.

The query result is displayed in the BSC local maintenance terminal, as shown in Figure 1.1.

Figure 1.1 Alarm query result

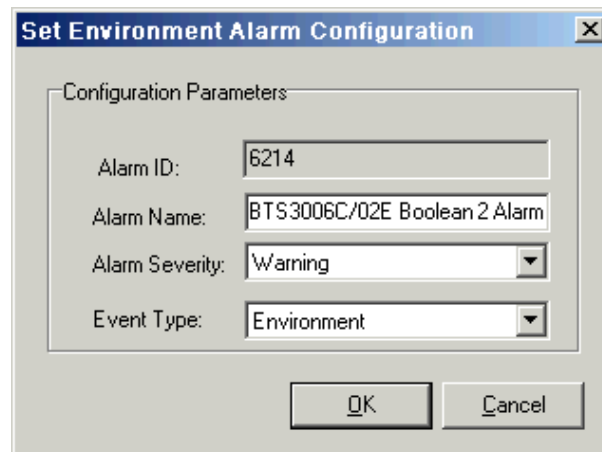


Alarm ID	Alarm name	Alarm type	Alarm severity	Event type
2666	H_XDC_1 failure	Fault	Minor	Hardware
2668	H_XDC_2 failure	Fault	Minor	Hardware
2676	L_XDC_1 failure	Fault	Critical	Hardware
2680	L_XDC_2 failure	Fault	Minor	Hardware
2682	L_XDC_3 failure	Fault	Minor	Hardware
2684	L_XDC_4 failure	Fault	Minor	Hardware
2686	MRU communication link alarm	Fault	Major	Hardware
2688	Temperature too high alarm	Fault	Major	Running
2714	Power off alarm	Fault	Major	Power
2760	Disk module I/O disk alarm	Fault	Critical	Hardware
2762	OOI of disk module alarm	Fault	Minor	Hardware
2764	IR reference disk alarm	Fault	Warning	Hardware
2792	E1_J055_3TR_ALARM_R0	Fault	Minor	Trunk
2794	E1_J055_3TR_ALARM_R1	Fault	Minor	Trunk
2796	E1_J055_3TR_ALARM_R2	Fault	Minor	Trunk
2798	E1_J055_3TR_ALARM_L1	Fault	Minor	Trunk
2800	E1_SUBLINK_1 error	Fault	Minor	Trunk
2802	E1_SUBLINK_1 error	Fault	Minor	Trunk
2810	Reverse power over high alarm	Fault	Warning	Hardware
2812	Forward power over low alarm	Fault	Major	Hardware
2814	Temperature A alarm	Fault	Minor	Environment
2816	Temperature B alarm	Fault	Critical	Environment
2820	TC_PUL_0 alarm	Fault	Major	Hardware
2822	TC_PUL_1 alarm	Fault	Major	Hardware
2824	TC_PUL_2 alarm	Fault	Major	Hardware
2826	RC_PUL_0 alarm	Fault	Major	Hardware
2828	RC_PUL_1 alarm	Fault	Major	Hardware
2830	RC_PUL_2 alarm	Fault	Major	Hardware
2832	Disk alarm	Fault	Critical	Hardware
2834	Power supply alarm	Fault	Critical	Power
2836	Frame number alarm	Fault	Major	Hardware
2838	SRM alarm	Fault	Critical	Hardware

After the alarm configuration is queried successfully, a dialog box prompting successful query is displayed.

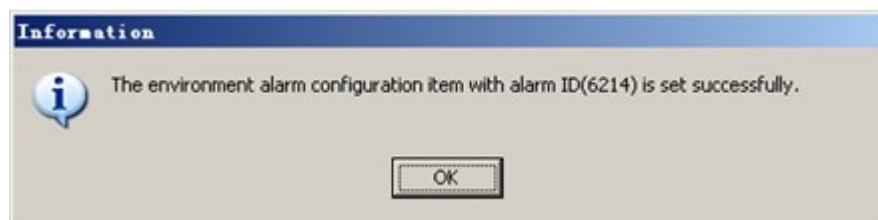
- Step 4** In the **Query Alarm Configuration** window, right-click the extended alarm ID to be modified. Select **Set Environment Alarm Configuration** from the shortcut menu. The **Set Environment Alarm Configuration** dialog box as shown in Figure 1.1 is displayed.

Figure 1.1 Setting parameters of the environment alarm configuration



- Step 5** Modify the settings of **Alarm ID** and **Alarm Severity** and click **OK**. If the modification succeeds, the **Information** dialog box is displayed prompting the operation result, as shown in Figure 1.1.

Figure 1.1 Successfully setting parameters of the environment alarm configuration



2.2.3 Modifying the Name of NMS Environment Alarm

To modify the alarm name in the NMS environment in the M2000V2R3, you need to modify the SQL script through the M2000 server. For details, see the *Guide of Modifying the Alarm Name for M2000V2 Products*.

The modification includes the operations such as querying whether the modified environment alarm ID exists, uploading the environment alarm ID definition file, and enabling the modification to the environment alarm to take effect.

The procedures for modifying alarm names through the M2000 are as follows:

- Step 1** Upload the **Query_AlarmInfo.sh** script to the **/tmp** directory on the server in the ASCII mode and run the following commands one by one to query the alarm modification records.

```
#. /opt/OMC/svc_profile.sh
#bash
#cd /tmp
#chmod 777 Query_AlarmInfo.sh
#. ./Query_AlarmInfo.sh
```

- Step 2** When the following prompt is displayed, enter the required information following the prompt. The entered information is displayed in the interface and is recorded in the **result.txt** file in the same directory at the same time. Figure 1.1 shows the information on the screen.

Figure 1.1 Querying the records of modifying environment alarms on the M2000

```
PNEType= (bsc6000,GBSC,GBTS,gt800bsc,cbsc,cbts3601c,cbts3606,cbts3612,
MGW,NodeB3812,SGSN,CG,WHLR9820,Msoft3000,Csoft3000,PCU,PDSN) :G
BTS
AlarmID = [0 ~ 99999] 2201
AlarmName= the state of extern time information's abnormal
continue to input another AlarmID? [ Y(yes), N(no), default:Y ]N
The result of quering saved to the file result.txt!
```

 **NOTE**

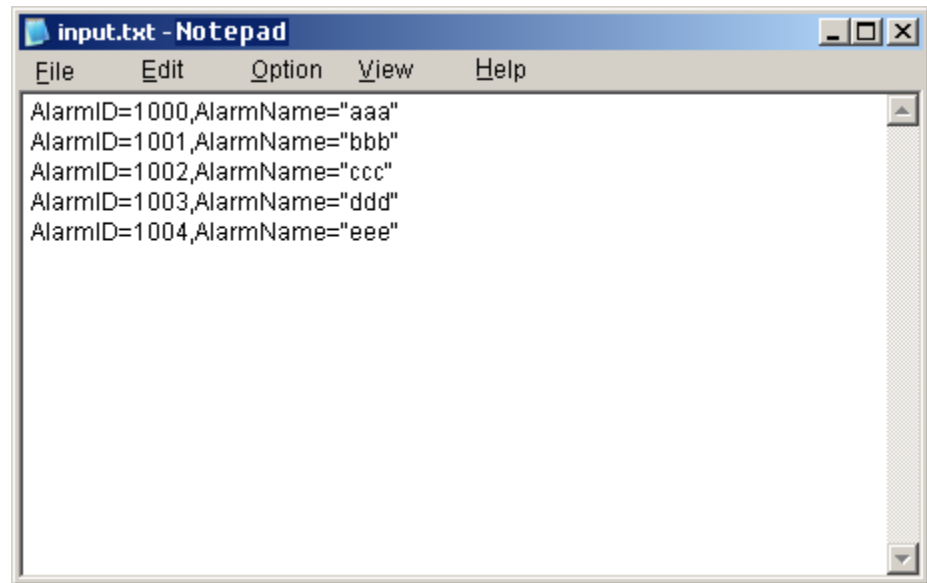
Because the script is case sensitive, ensure that the entered name must be identical with the print name for running the script when you enter the NE name to be modified.

You can query multiple environment alarm IDs by running the script once.

Because the query for the second time overwrites the first one, you need change the file name of the **result.txt** file and save it for backup.

- Step 3** According to the planned modification solution for the BTS environment alarm ID, create an **input.txt** file with a text editor. Figure 1.1 shows the file format, where, **AlarmID** refers to the alarm ID to be modified and **AlarmName** is the new name of this alarm.

Figure 1.1 Example of the input.txt file



 **NOTE**

In the **input.txt** file, acts as the separator and separates the **AlarmID** and **AlarmName** fields. This file is not compatible with any Chinese character and does not allow any blank line.

- Step 4** The NE and NMS version corresponding to the **input.txt** file must be indicated and the file is archived to the M2000 for backup.
- Step 5** Upload the **update_alm_exp.sh** script and the **input.txt** file to the **/tmp** directory on the M2000 server through the ASCII code. These two files must be stored in the same directory.

Run the following commands in turn.

```
#. /opt/OMC/svc_profile.sh
#bash
#cd /tmp
#chmod 777 update_alm_exp.sh
#. ./update_alm_exp.sh
```

Press **Enter** for each command line in step 5 to run the commands in turn.

- Step 6** Enter the NE name BSC6000 following the prompt in the interface, as shown in Figure 1.1.

Figure 1.1 Information displayed in the interface

```
Please input NEType (bsc6000, GBSC, GBTS, gt800bsc, chsc, cbts3601
c, cbts3606, cbts3612, MGW, NodeB3812, SGSN, CG, WHLR9820, Msoft3000
, PCU, PDSN):bsc6000
... updating tbl_alm_exp ...
... updating tbl_alm_exp version id...
current versionid is 2.0.73
upgrade versionid success! Current versionid is 2.0.74
```

Because the script is case sensitive, ensure that the entered name must be identical with the print name for running the script when you enter the NE name to be modified.

Step 7 Run the following commands in turn, and restart the alarm server to make the modified alarm name take effect.

```
# ./opt/OMC/svc_profile.sh
# svc_adm -cmd reload
# svc_adm -cmd restartsvc FaultService
```

Step 8 Run the command to check whether all the M2000 servers are started. The command is

If no information is returned, it means that

----End

2.3 Configuring BTS Environment Alarm in BSC6000 V900R003+M2000 V2R3

NOTE

This solution is applicable for configuring the environment alarm IDs in the BSC6000 and M2000 V2R3 of V9R3 or later versions.

To configure the environment alarm in the BSC6000 V900R003+M2000 V2R3 solution of R3 or later versions, do as follows:

- Step 1** Bind the environment alarm parameters through the MML on the Local Maintenance Terminal.
- Step 2** Modify the NE environment alarm names and definitions through the BSC6000 Local Maintenance Terminal.
- Step 3** Modify the names and definitions of the BTS environment alarm on the M2000V2R3.
- Step 4** Enable the alarm function on the environment monitoring board in the BSC6000 Local Maintenance Terminal interface in the V9R3 version. The V9R8 version does not involve this step.

----End

2.3.1 Planning User-Defined Environment Alarm IDs of BSC6000 R900R003

To perform the centralized management to the environment alarms reported from various sites, the environment alarms in V9R3 or later versions are planned as follows:

The valid configuration range of the alarm ID over the signal input port in the BSC environment is from 65334 to 65383. The valid configuration range of the alarm ID over the signal input port in the BTS environment is from 65384 to 65533.

Prior to configuring the environment alarms, plan all environment alarm IDs. The planning mode

is to allocate one unique environment alarm ID to each kind of environment alarms. For example: “54384” indicates “Fire Alarm”.

“54385” indicates “Smoke Alarm”.

The planning of environment alarm IDs complies with the following principles:

- The planning of the environment alarm ID needs to ensure that all the BSCs under the same M2000 are consistent.
- If this M2000 is attached to others NEs, keep the same planning with the environment alarms on these NEs as much as possible.

 **NOTE**

Because the V9R1 version fails to support the environment alarms in the centralized management mode, the reported environment alarm ID can use the default one reported by the BTS. If there are both V9R1 and V9R3 or later versions under this M2000, it occurs that one environment alarm type corresponds to two or more environment alarm IDs (in the R1 version, the environment alarm ID of each type of the BTS may differ). You should evaluate the influence to the system according to the actual situation.

The following example explains how to plan the environment alarm IDs of the BSC6000:

Set the environment signal input ports on the DEMU board in slot 2 of frame 0 in BTS 3012 as follows:

- Step 1** Enable ports 1 to 3 for inputting the BTS environment signals.
- Step 2** Set the alarm IDs to 65527–65529.
- Step 3** Set the alarm names respectively to “Fire alarm”, “Smoke” and “Water”, and set the port type to the digital port.
- Step 4** Set the alarm level to the high level.
- Step 5** Set the alarm severity to Critical, Major, and Minor.
- Step 6** According to the site and network planning, you can obtain the following contents, as shown in Figure 1.1. By following the principle shown in 1.2.1 IStep 1Figure 1.1 and referring to Figure 1.1, connect the sensor to the BTS to set up the channel for reporting alarms.

----End

For the detailed operations, see related manuals.

Figure 1.1 Board-cable-sensor-alarm ID

Board Type	Wire			Sensor	Alarm			
	Pin of the Connector	Wire Color	Port No.		BTS Alarm ID	Initial BSC Alarm ID	Trigger Level	Re-planned Alarm ID
DEMU	X1.2	White	1	Intruder	0x91	6438	High Level	65527
	X1.36	Blue						
DEMU	X1.3	White	2	Fire	0x92	6440	High Level	65528

Board Type	Wire			Sensor	Alarm			
	Pin of the Connector	Wire Color	Port No.		BTS Alarm ID	Initial BSC Alarm ID	Trigger Level	Re-planned Alarm ID
	X1.37	Orange		Panel				
DEMU	X1.4	White	3	Smoke Detector	0x93	6442	High Level	65529
	X1.38	Green						

2.3.2 Binding Environment Alarm ID Parameters on the MML Local Maintenance Terminal



NOTE


Prior to the operation, ensure that software version of the MML Local Maintenance Terminal is consistent with the BSC software version of the BTS.

This operation is to bind the default BTS environment alarm IDs with the environment alarm IDs planned by the BSC6000.

The bound BTS environment alarm ID parameters include the BTS name, the frame and slot location in the monitoring unit, the monitoring port for the BTS environment alarm, the alarm enabling flag, and the alarm signal type and value constraint.

The procedures are as follows:

Step 1 Starting the BSC6000 Local Maintenance Terminal. Use one of the following three methods to start the BSC6000 Local Maintenance Terminal.

- Choose **Start > All Programs > Huawei Local Maintenance Terminal > Local Maintenance Terminal**. A dialog box is displayed, as shown in 2.3.3 IStep 2Figure 1.1.
- On the BSC6000 Local Maintenance Terminal, choose **System > Start MML Client**.
- On the BSC6000 Local Maintenance Terminal, click  to start the Local Maintenance Terminal.



NOTE

The latter two methods are not displayed on the login dialog box.

Figure 1.1 Login window of BSC6000 Local Maintenance Terminal

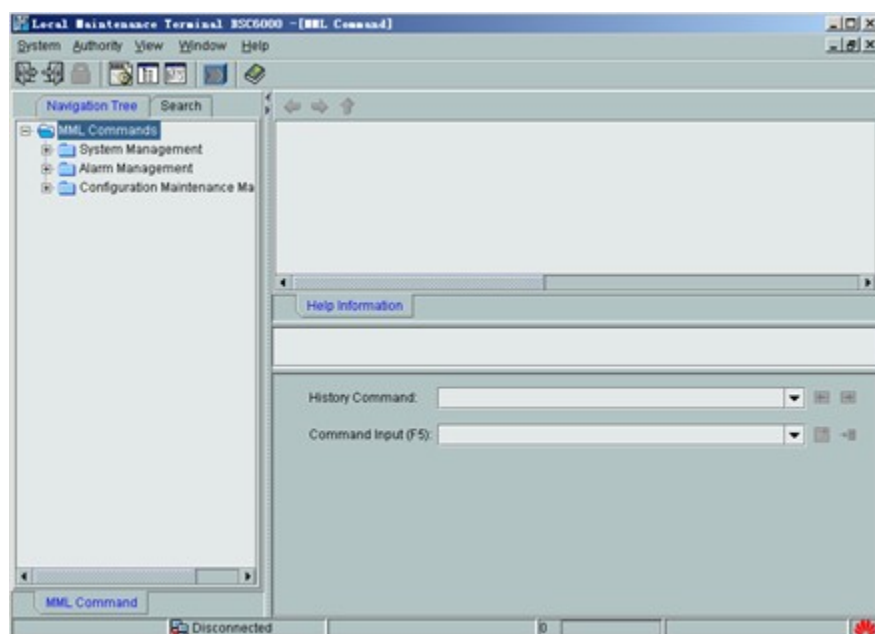


Step 1 Select the preset office direction.

Step 2 Enter the user name and password and select a user type.

Step 3 Click **Login** to start the Local Maintenance Terminal.
The **Local Maintenance Terminal** window is displayed, as shown in Figure 1.1.

Figure 1.1 Local Maintenance Terminal




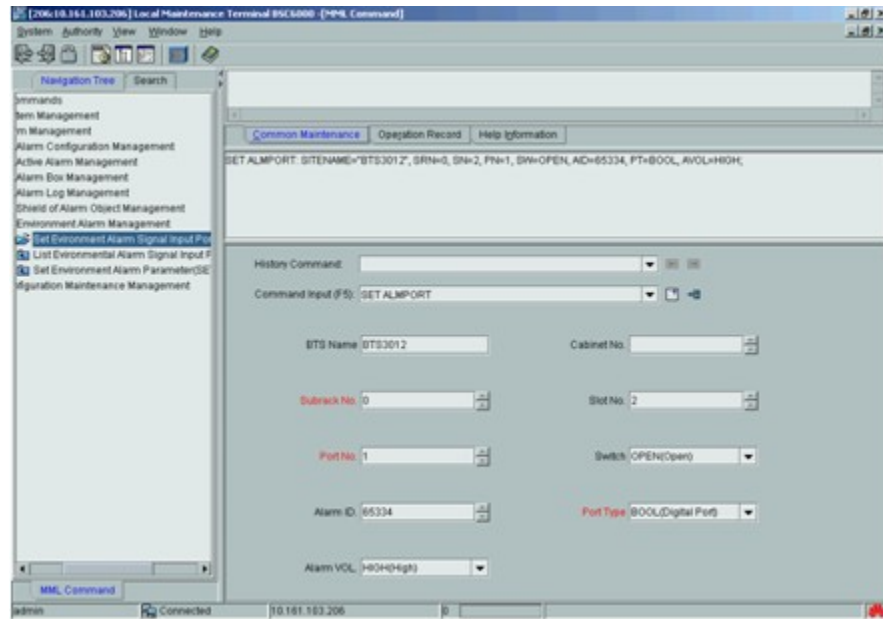
Step 4 To enter the **SET ALMPORT** command to set the parameter of the port for inputting the environment alarm signal, click . The interface for inputting the parameter is displayed. Enter the parameter, as shown in Figure 1.1.

Figure 1.1 Interface of inputting the command parameter.



The whole command is **SET ALMPORT: SITENAME="BTS3012", SRN=0, SN=2, PN=1, SW=OPEN, AID=65527, PT=BOOL, AVOL=HIGH;**

where, SITENAME is the name of the BTS, SRN is the frame number of the BTS, SN is the slot number, PN is the port number in the board, SW is the port switch, AID is the alarm ID to be configured, PT is port type, and AVOL is the alarm level.

TIP

The operation object of **SET ALMPORT** is each specific physical environment alarm port. Assuming the DEMU board is configured for N BTSs, to modify alarm ID 6438 over port 1 on the DEMU board, you need run N **SET ALMPORT** commands to respectively modify these physical ports. You can edit the MML commands in advance and deliver them once in the batch command form.

For the usage of the MML batch command, see the *BSC MML Command Reference*.

Step 5 Click  or press **F9** to run the MML command.

Step 6 Repeat steps 5 and 6. All the configurations are completed.

----End

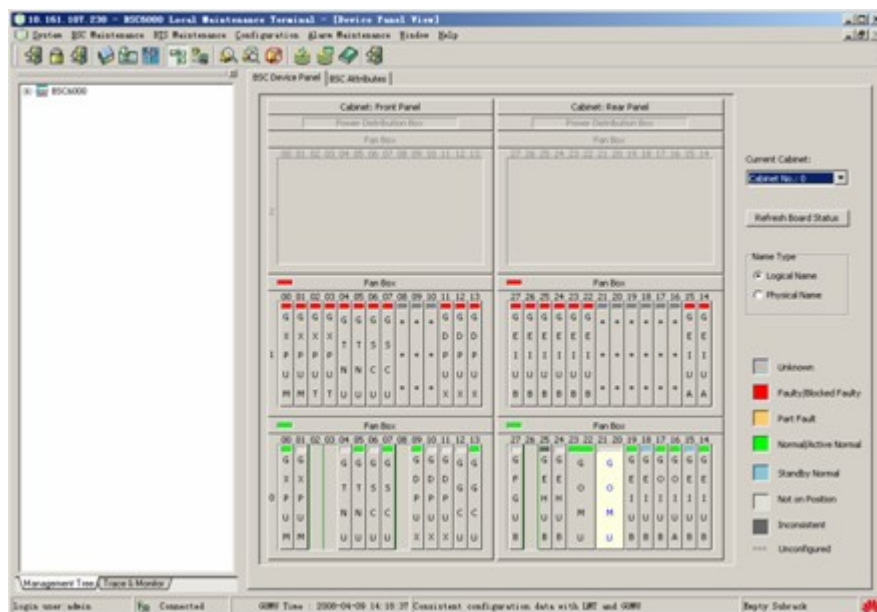
2.3.3 Modifying the BTS Environment Alarm Name and Definition on the BSC6000 Local Maintenance Terminal

In section 2.3.2, the parameters of the BTS environment alarm ID are set. The task of this section is to modify the BTS environment alarm name and definition, rename the bound environment alarm ID, and set Alarm Severity and To Alarm Box Flag.

The procedures are as follows:

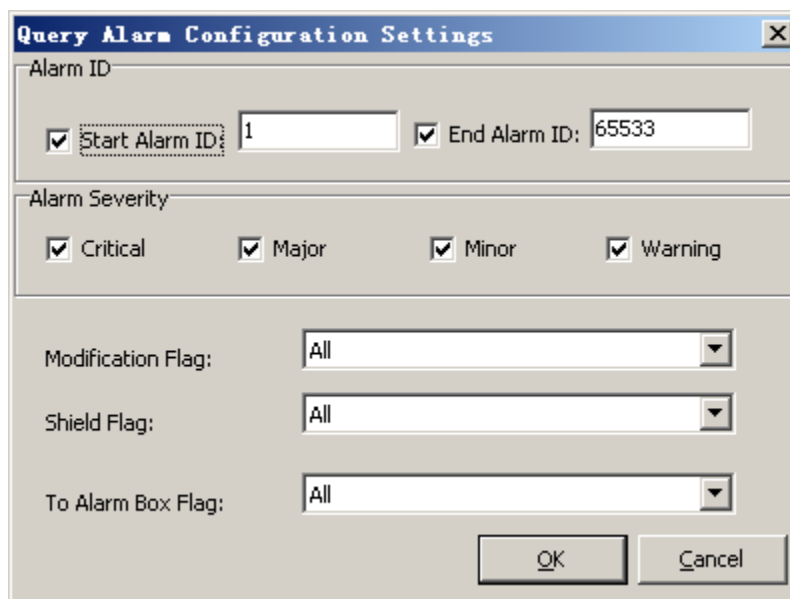
Step 1 Log in to the BSC6000 LMT. A window is displayed, as shown in Figure 1.1.

Figure 1.1 Interface of the BSC6000 Local Maintenance Terminal



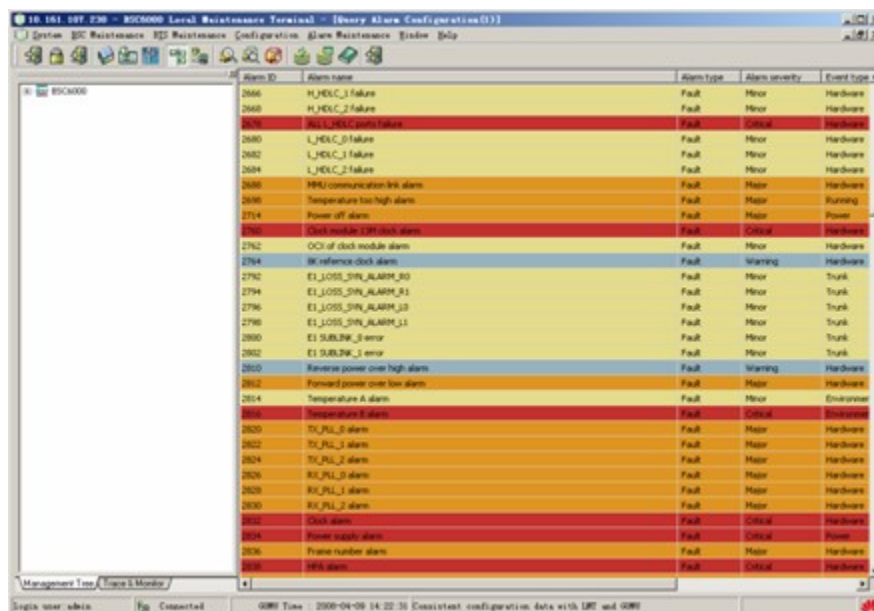
Step 2 Choose **Alarm Maintenance > Query Alarm Configuration Settings**. The **Query Alarm Configuration Settings** dialog box is displayed. Select the filter conditions according to the actual situation, as shown in Figure 1.1.

Figure 1.1 Query Alarm Configuration Settings dialog box



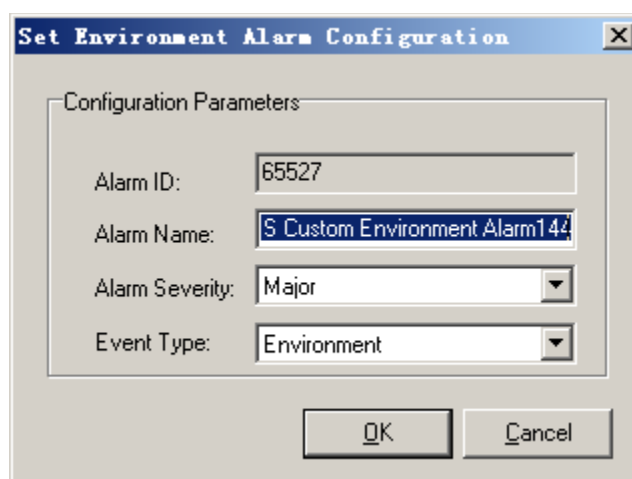
Step 3 Click **OK**. The Query Alarm Configuration window is displayed, as shown in Figure 1.1.

Figure 1.1 Query Alarm Configuration window



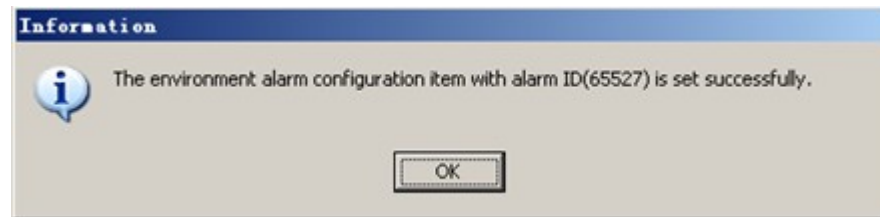
Step 4 Right-click the line where alarm ID 65527 is located and select **Set Environment Alarm Configuration** from the shortcut menu. The **Set Environment Alarm Configuration** dialog box is displayed, as shown in Figure 1.1.

Figure 1.1 Setting parameters of the environment alarm configuration



Step 5 Change **Alarm Name** from **BTS Custom Environment Alarm 144** to **Fire and Alarm Severity** from **Major** to **Critical**.

Step 6 Click **OK**. The information dialog box is displayed, as shown in Figure 1.1.

Figure 1.1 Successful setting

Step 7 Click **OK**. Repeat steps 4 to 6. All the configurations are completed.

----End

2.3.4 Modifying the Name of M2000V2R3 Environment Alarm

To modify the alarm name in the NMS environment in the M2000V2R3 version, you need to modify the SQL script through the M2000 server. For details, see *Guide of Modifying the Alarm Name for M2000V2 Products*.

The modification includes the operations such as querying whether the modified environment alarm ID has existed, uploading the environment alarm ID definition file and enabling the modification to the environment alarm to take effect.

For the detailed operation, see section 2.2.3.

2.4 Configuring BTS Environment Alarm in BSC6000 V900R003+M2000 V2R6

NOTE

This solution is applicable for configuring the environment alarm ID in the BSC6000 and M2000 V2R6 of V9R3 and later versions.

The operation to an NE can reach the same result as the operations of setting the environment alarm signal input port on the MML Local Maintenance Terminal and binding the user-defined alarm through the M2000. However, the M2000 provides the function of importing and exporting the configuration script according to the excel file and querying the current NE environment alarm binding correlation, both of which facilitate the operation.

The operation of modifying the alarm name carried on the M2000 takes effect on both the M2000 and the NE at the same time, but the operation performed on the NE through the BSC6000 Local Maintenance Terminal only modifies the data on the NE, and it cannot modify the data on the M2000. The alarm name is stored respectively on the M2000 and the NE as the independent data. Therefore, to configure the environment alarm in the BSC6000 V900R003+M2000 V2R3 solution of R3 or later versions, do as follows:

Step 1 Bind the parameters of the BTS environment alarm IDs through the M2000V2R6.

- Step 2** Modify the names and definitions of BTS environment alarms on the M2000V2R6.
- Step 3** Enable the alarm function on the environment monitoring board in the BSC Local Maintenance Terminal interface in the V9R3 version. The V9R8 version does not involve this step.

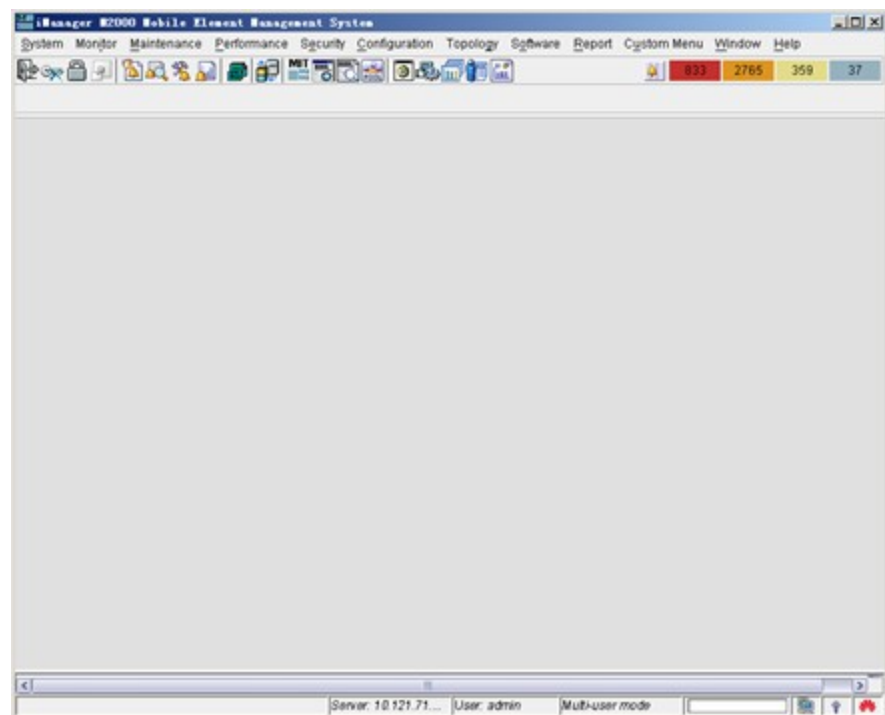
Besides the parameters in section 2.3.2, the parameters of the BTS alarm IDs mentioned in this section also include the NE name. The definitions of the environment alarm names are the same as those in section 2.3.2 .

2.4.2 Binding the Parameters of the NE BTS Environment Alarm ID through M2000V2R6

The operation of binding the parameters of the BTS environment alarm ID is performed by binding and adding the user-defined alarms. The procedures are as follows:

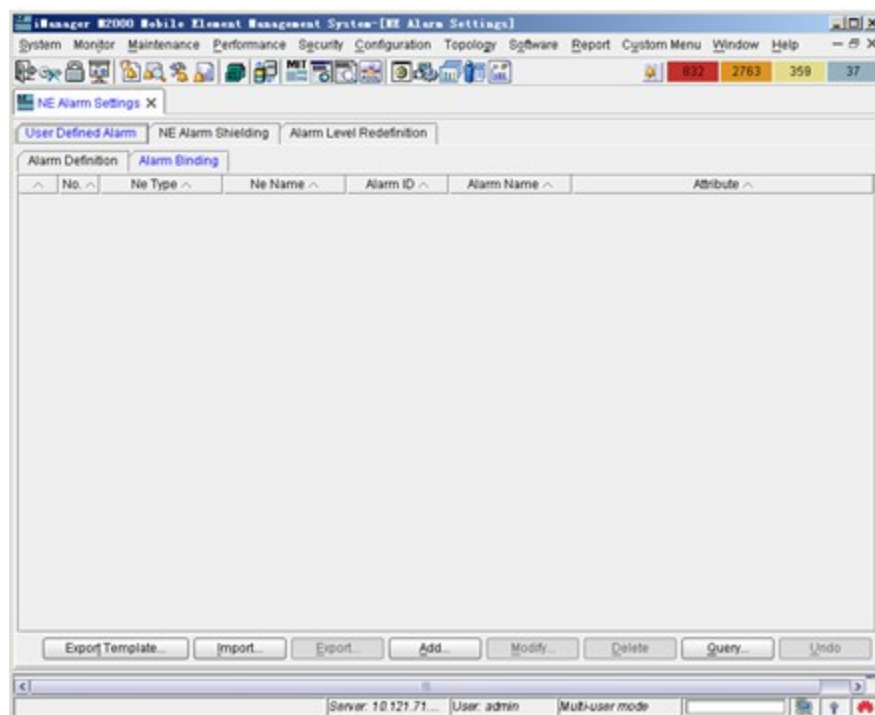
- Step 1** Log in to the M2000 mobile element management system. Figure 1.1 shows the interface for the successful login.

Figure 1.1 M2000 Mobile Element Management System interface



- Step 2** Choose **Monitor > Settings > NE Alarm Settings**. The **NE Alarm Settings** tab page is displayed in the **iManager M2000 Mobile Element Management System** window, as shown in Figure 1.1.

Figure 1.1 Binding an alarm



- Step 3** Click **Export Template** on the Alarm Binding tab page to export the alarm binding template. Save the template as the **binding data.xls** file.
- Step 4** Open the **binding data.xls** file, fill in the file with the alarm binding information, and save it.
- Step 5** Click **Import** in the **Alarm Binding** tab page to import the **binding data.xls** file into the client.
- Step 6** Click **Apply** on the **Alarm Binding** tab page.

The **Information** dialog box is displayed to give the operation result.


NOTE

For the cut over BTS, repeat these procedures.

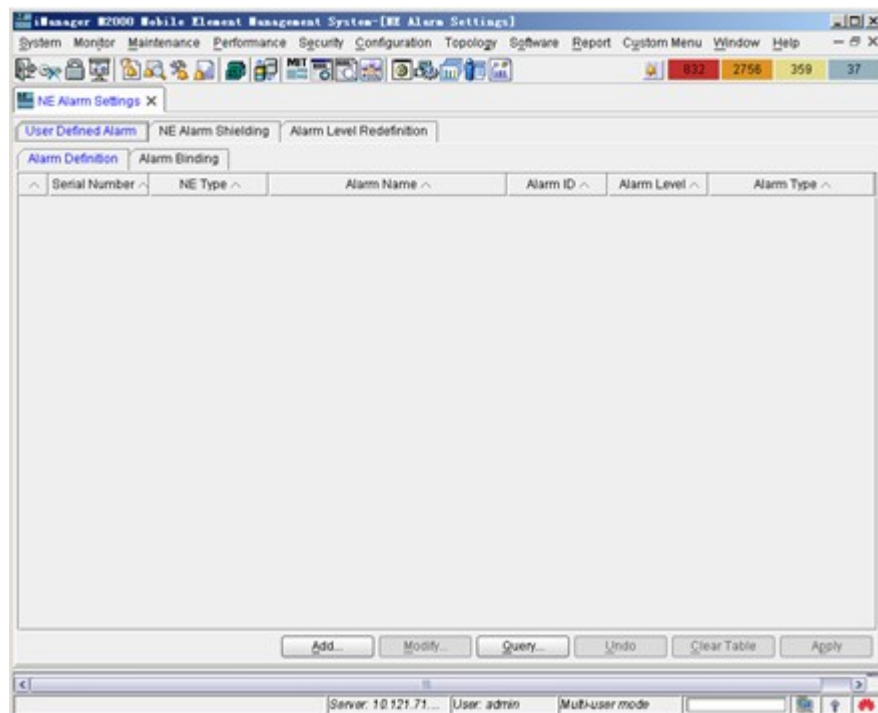
----End

2.4.3 Modifying the Name and Definition of the M2000V2R6 Environment Alarm

The operation of modifying the name and definition of the M2000V2R6 environment alarm is performed by adding the user-defined alarm and adding the user-defined alarm binding. The procedures are as follows.

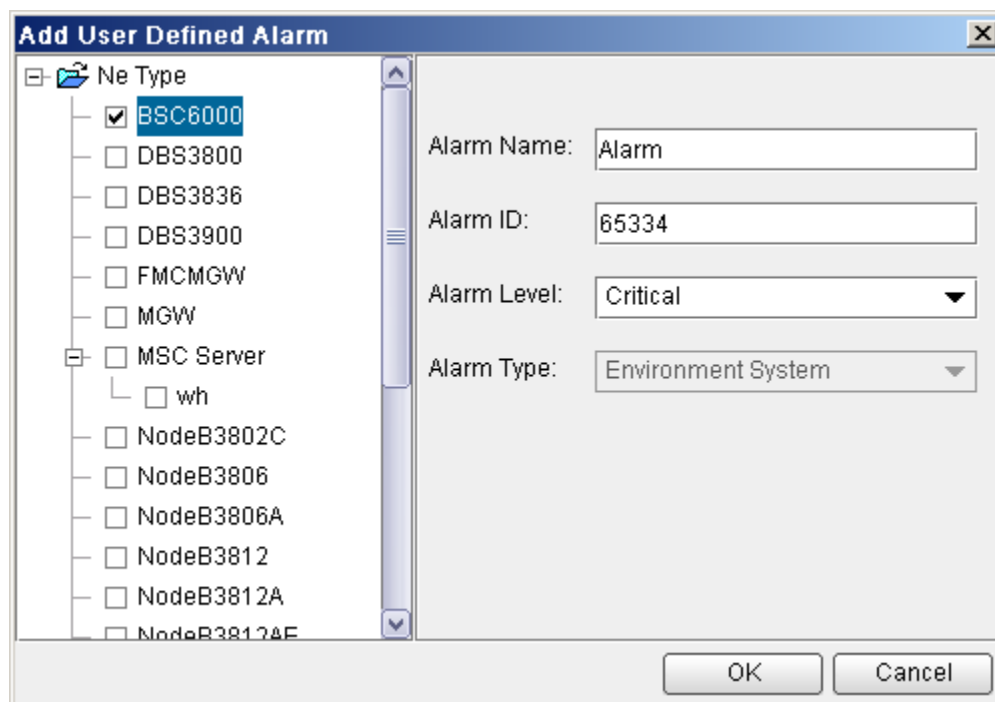
- Step 1** Repeat steps 1 and 2 of binding the user-defined alarms.
- Step 2** As shown in Figure 1.1, select the **Alarm Definition** tab under the **User Defined Alarm** tab.

Figure 1.1 NE Alarm Settings tab




Step 3 Click **Add**. The **Add User Defined Alarm** dialog box is displayed, as shown in Figure 1.1.


Figure 1.1 Adding the user-defined alarm



Step 4 Select **BSC6000** under **Ne Type**, set **Alarm Name** and **Alarm Level**, and click **OK**.

The user-defined alarm to be added is displayed in the list on the **Alarm Definition** tab page, and each record has .

Step 5 Click **Apply** on the **Alarm Definition** tab page.

 disappears. The **Information** dialog box is displayed to give the operation result.

 **NOTE**

Repeat these procedures to the BTS newly cut over.

----**End**

3 Difference of Environment Alarm Configurations Between BSC6000 Versions

3.1 Differences of Environment Alarm Configurations Between BSC6000 Versions

The default environment alarm IDs reported by the BTS can be reported by the BSC6000 V9R1 to the alarm subsystem and the M2000. The BSC6000 V9R1 does not support to bind the BTS environment alarm port to the specified alarm ID again. In the mean time, the V9R1 supports to modify the name of the default the alarm ID reported by the BTS, but the operation of modifying the alarm name needs to be performed respectively on the M2000 and the BSC6000 Local Maintenance Terminal. In the V9R1 version, the external equipment of the BTS environment alarm can be connected to the fixed port for satisfying the BTS requirement. Because the alarm and the port are bound, the environment alarm reported by the BTS cannot be identified once the connection is changed to another idle port due to the failure on this port.

V9R8 is upgraded on the basis of V9R3, and there is not difference in the environment alarm configuration.

The V9R3 version supports to bind the BTS environment alarm port with the BTS environment alarm ID range first and then modify the alarm name of the bound alarm ID.

In addition, for V9R1 and V9R3, the environment alarm monitoring on the BTS monitoring board needs to be enabled to monitor the environment after the BTS environment alarm ID is set.

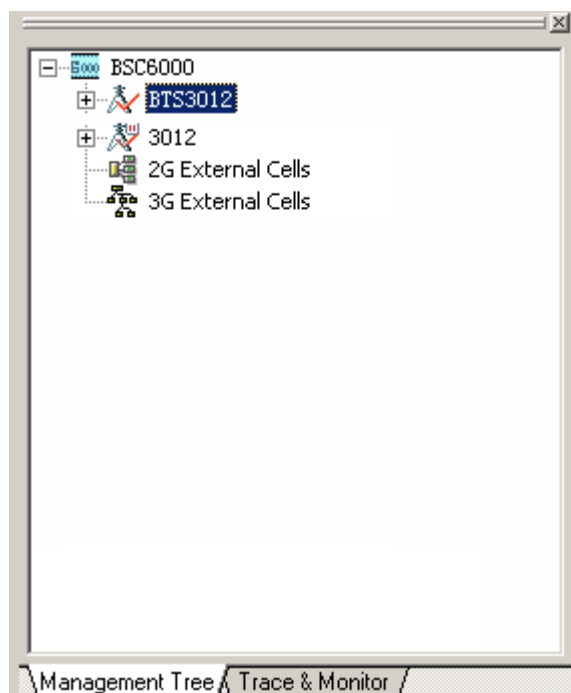
NOTE

The V9R8 version does not involve this step.

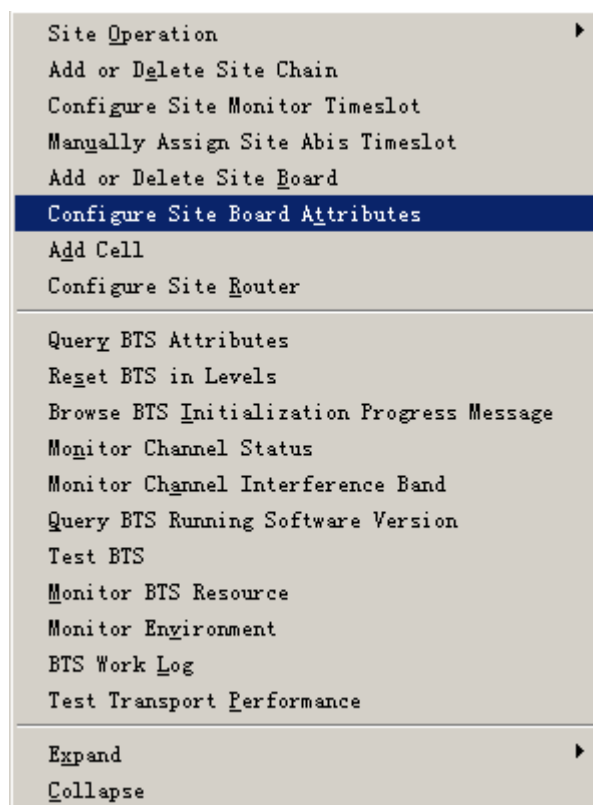
The process for enabling the environment alarm monitoring on the BTS monitoring board is as follows:

- Step 1** Select BTS3012 from the Management Tree on the Local Maintenance Terminal (taking BTS3012 as an example), as shown in Figure 1.1.

Figure 1.1 Selecting a BTS



Step 2 Right-click **BTS3012** and select **Configure Site Board Attributes** from the shortcut menu, as shown in Figure 1.1.

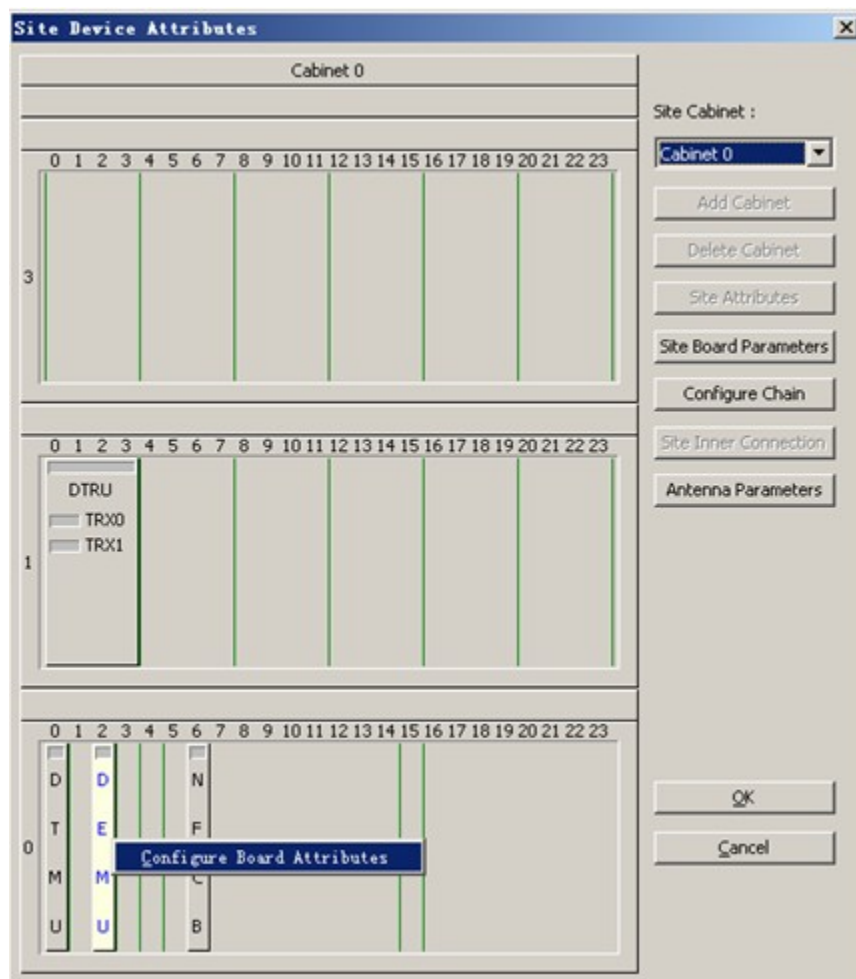
Figure 1.1 Shortcut menu

Step 3 The **Configure Site Board Attributes** dialog box is displayed. Click **Configure Site Board Attributes**, as shown in Figure 1.1.

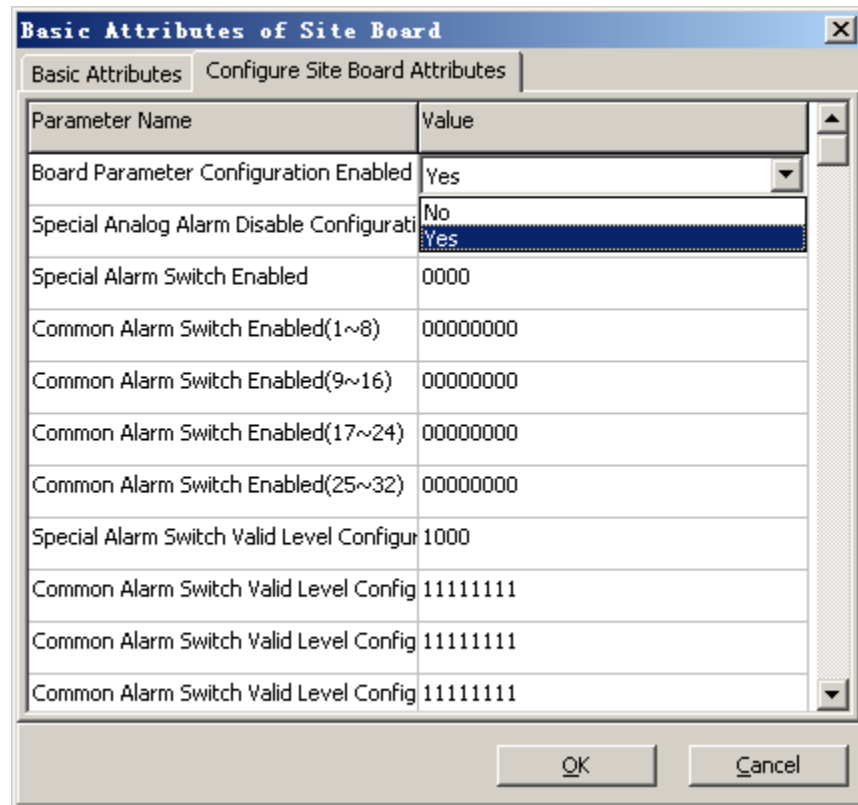
Figure 1.1 Configure Site Boards Attributes dialog box

Step 4 The **Site Device Attributes** dialog box is displayed. Right-click the DEMU board (the DEMU board is taken as an example) to be set, as shown in Figure 1.1.

Figure 1.1 Site Device Attributes dialog box



Step 5 Select **Configure Board Attributes** from the shortcut menu. The **Basic Attributes of Site Board** dialog box is displayed. On the **Configure Site Board Attributes** tab page, set **Board Parameter Configuration Enabled** to **Yes**, as shown in Figure 1.1.

Figure 1.1 Enabling the board alarm


Step 6 Click **OK** to return to Step 1 (Figure 1.1) and then click **OK**. The environment alarm monitoring is enabled.

3.2 Environment Alarm Configuration in V9R1 Upgraded to V9R3 or Later Versions

After V9R1 is upgraded to V9R3, the environment alarm name configured in the V9R1 version is still available. You can handle the configurations after the upgrade in the following ways:

1. If no cutover is performed to add new BTSs to the upgraded BSC6000 or the newly BTSs added to the BSC6000 is of the original type configured in V9R1, the new environment alarms do not need to be configured. However, the original environment alarm cannot be renamed in the V9R3 version after the upgrade. For all the BTSs upgraded to V9R3, you can bind the alarm IDs again and set the alarm name with the method in the V9R3 version, that is, the environment alarm ID is switched from the uncentralized management mode to the centralized management.

 **NOTE**

The switching of the environment alarm ID from the uncentralized management to the centralized management influences the alarm interconnection of the northbound NMS due to the change of the environment alarm ID. In the site with the northbound alarm interconnection, the customer and the field technical personnel should evaluate and adapt (such as planning the environment alarm ID at the NMS level) the influence to the northbound alarm interconnection (such as the alarm ID change).

2. If the type of the added BTS is new, use the method in the V9R3 version to bind the alarm ID and modify the alarm name of the cut over BTSs to realize the centralized management. Of course, you can make the settings according to those in the uncentralized management to the BTS environment alarm ID in the V9R1 version.
3. If all the BSCs under the same M2000 are upgraded to V9R3, it is recommended to configure the BSC environment alarm upgraded from V9R1 again in the mode in V9R3 to keep the unified management to the environment alarms under the same M2000.

If V9R1 is upgraded to V9R8, the alarm configuration is performed in the same way.