```
BG9002N#set wan
->Please select one interface name to show(
 1----DATA
 2----VOICE
 3----MGMT
 4----OTHER1
 5----OTHER2)[1]:2
->Enable or not[yes]:
->LINK TYPE(0-STATIC IP,1-PPPOE,2-DHCP,3-PPTP,4-L2TP)[2]:0
->Vlan Enable[no]:y
->VLAN ID(1-4095)[1]:
->Priority Level(0-7)[0]:
->Primary DNS[192.168.100.9]:
->Secondary DNS[138.1.60.1]:
->MTU(512-1508)[1500]:
->IP Address[138.0.60.1]:
->Netmask[0.0.0.0]:255.255.255.0
->Enable Gateway or not[no]:
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reset!
```

Configure VOICE Interface Parameter

The following items are displayed on this screen:

- ► **Enable:** Enable this WAN interface (DATA can't be disabled).
- ► **Type:** Select Static IP if your ISP has assigned a static IP address for your.
- ► **VLAN Enable:** Optional. Enable VLAN to configure VLAN ID and VLAN Priority Level.
- ► **VLAN ID:** Optional. VLAN ID of this WAN interface.
- ► **Priority Level:** Optional. VLAN Priority Level of this WAN interface.
- ► **Primary DNS:** Enter the IP address of your ISP's Primary DNS (Domain Name Server). If you are not clear, please consult your ISP. It's not allowed to access the Internet via domain name if the Primary DNS field is blank.
- ► **Secondary DNS:** Optional. If a Secondary DNS Server address is available, enter it.
- ► **IP Address:** Enter the IP address assigned by your ISP. If you are not clear, please consult your ISP.
- ► **Netmask:** Enter the Subnet Mask assigned by your ISP.
- ► **Gateway:** Optional. Enter the Gateway assigned by your ISP.

Input "3" to configure MGMT parameter as below:

```
BG9002N#set wan
->Please select one interface name to show(
 1----DATA
 2----VOICE
 3----MGMT
 4----OTHER1
 5----OTHER2)[1]:3
->Enable or not[no]:y
->LINK TYPE(0-STATIC IP,1-PPPOE,2-DHCP,3-PPTP,4-L2TP)[0]:2
->Vlan Enable[no]:y
->VLAN ID(1-4095)[1]:3
->Priority Level(0-7)[0]:1
->Primary DNS[138.0.60.2]:
->Secondary DNS[138.1.60.1]:
->MTU(512-1508)[1500]:
->Specify Server Ip or not[no]:y
->Server IP address[138.0.60.2]:
->Vendor Class Identifier or not[no]:
->Manufacture name[]:company1
->Device Class[]:device2
->Device Type[]:type3
->Device version[]:version2
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reset!
```

Configure MGMT Interface Parameter

The following items are displayed on this screen:

- ► **Enable:** Enable this WAN interface (DATA can't be disabled).
- ► **Type:** Select DHCP if your ISP assigns the IP address automatically.
- ► **VLAN Enable:** Optional. Enable VLAN to configure VLAN ID and VLAN Priority Level.
- ► **VLAN ID:** Optional. VLAN ID of this WAN interface.
- ► **Priority Level:** Optional. VLAN Priority Level of this WAN interface.
- ► **Primary DNS:** Enter the IP address of your ISP's Primary DNS (Domain Name Server) manually. If you are not clear, please consult your ISP. It's not allowed to access the Internet via domain name if the Primary DNS field is blank.
- ► **Secondary DNS:** Optional. If a Secondary DNS Server address is available, enter it.
- ► **Appoint Server IP:** Optional. If network has multiple DHCP servers, enter the IP address of your ISP'S DHCP server
- ► **Vendor Class Identifier:** Optional. This option (60) is used by DHCP clients to optionally identify the vendor type and configuration of a DHCP client.
- ► **Enterprise Code:** Optional.
- ► **Manufacture Name:** Optional.
- ► **Device Class:** Optional.
- ► **Device Type:** Optional.
- ► **Device Version:** Optional.

Input "4" to configure OTHER1 parameter as below:

```
BG9002N#set wan
->Please select one interface name to show(
 1----DATA
 2----VOICE
 3----MGMT
 4----OTHER1
 5----OTHER2)[1]:4
->Enable or not[no]:y
->LINK TYPE(0-STATIC IP,1-PPPOE,2-DHCP,3-PPTP,4-L2TP)[0]:3
->The way of getting ip(0-STATIC IP,1-DHCP)[0]:1
->Vlan Enable[no]:y
->VLAN ID(1-4095)[1]:4
->Priority Level(0-7)[0]:
->Primary DNS[138.0.60.2]:
->Secondary DNS[138.1.60.1]:
->MTU(512-1508)[1500]:
->Specify Server Ip or not[no]:
->Vendor Class Identifier or not[no]:
->Manufacture name[]:
->Device Class[]:
->Device Type[]:
->Device version[]:
->Server IP[138.0.60.2]:
->PPTP Username[gkser]:
->PPTP Password[******]:
->Enable Encryption or not[no]:
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reset!
```

Configure OTHER1 Interface Parameter

The following items are displayed on this screen:

► **Enable:** Enable this WAN interface (DATA can't be disabled).

► **Type:** Select PPTP if your ISP provides a PPTP connection.

► **VLAN Enable:** Optional. Enable VLAN to configure VLAN ID and VLAN Priority Level.

► **VLAN ID:** Optional. VLAN ID of this WAN interface.

► **Priority Level:** Optional. VLAN Priority Level of this WAN interface.

► **Primary DNS:** Enter the IP address of your ISP's Primary DNS (Domain Name Server) manually. If you are not clear, please consult your ISP. It's not allowed to access the Internet via domain name if the Primary DNS field is blank.

► **Secondary DNS:** Optional. If a Secondary DNS Server address is available, enter it.

► **Server IP:** Enter the Server IP provided by your ISP.

► **Username:** Enter the Account Name provided by your ISP. If you are not clear, please consult your ISP.

► **Password:** Enter the Password provided by your ISP.

► **Enable Encryption:** Enable PPTP link encryption.

Secondary Connection: Here allow you to configure the secondary connection. DHCP and Static IP connection types are provided.

If **Static** is selected:

► **IP Address:** If Static IP is selected, configure the IP address of WAN port.

► **Netmask:** If Static IP is selected, configure the subnet mask of WAN port.

► **Gateway:** Optional. If Static IP is selected, configure the default gateway of WAN port.

If **DHCP** is selected:

► **Appoint Server IP:** Optional. If network has multiple DHCP servers, enter the IP address of your ISP's DHCP server.

►**Vendor Class Identifier:** Optional. This option (60) is used by DHCP clients to optionally identify the vendor type and configuration of a DHCP client.

► **Enterprise Code:** Optional.

► **Manufacture Name:** Optional.

► **Device Class:** Optional.

► **Device Type:** Optional.

► **Device Version:** Optional.

Input "5" to configure OTHER2 parameter as below:

```
BG9002N#set wan
->Please select one interface name to show(
 1----DATA
 2----VOICE
 3----MGMT
 4----OTHER1
 5----OTHER2)[1]:5
->Enable or not[no]:y
->LINK TYPE(0-STATIC IP,1-PPPOE,2-DHCP,3-PPTP,4-L2TP)[0]:4
->The way of getting ip(0-STATIC IP,1-DHCP,2-PPPOE)[0]:1
->Vlan Enable[no]:y
->VLAN ID(1-4095)[1]:5
->Priority Level(0-7)[0]:
->Primary DNS[138.0.60.2]:
->Secondary DNS[138.1.60.1]:
->MTU(512-1508)[1500]:
->Specify Server Ip or not[no]:y
->Server IP address[138.0.60.2]:
->Vendor Class Identifier or not[no]:y
->Enterprise Code[0]:3
->Manufacture name[]:comany5
->Device Class[]:class5
->Device Type[]:type5
->Device version[]:version5
->Server IP[138.0.60.1]:
->L2TP username[gkser]:
->L2TP password[******]:
->Really want to modify? 'yes' or 'no'[yes]:

 The configuration will take effect after saved and reset!
```

Configure OTHER2 Interface Parameter

The following items are displayed on this screen:

► **Enable:** Enable this WAN interface (DATA can't be disabled).

► **Type:** Select L2TP if your ISP provides a L2TP connection.

► **VLAN Enable:** Optional. Enable VLAN to configure VLAN ID and VLAN Priority Level.

► **VLAN ID:** Optional. VLAN ID of this WAN interface.

► **Priority Level:** Optional. VLAN Priority Level of this WAN interface.

► **Primary DNS:** Enter the IP address of your ISP's Primary DNS (Domain Name Server). If

you are not clear, please consult your ISP. It's not allowed to access the Internet via domain name if the Primary DNS field is blank.

► **Secondary DNS:** Optional. If a Secondary DNS Server address is available, enter it.

► **Server IP:** Enter the Server IP provided by your ISP.

► **Username:** Enter the Account Name provided by your ISP. If you are not clear, please consult your ISP.

► **Password:** Enter the Password provided by your ISP.

Secondary Connection: Here allow you to configure the secondary connection. DHCP and Static IP connection types are provided.

If **Static** is selected:

► **IP Address:** If Static IP is selected, configure the IP address of WAN port.

► **Netmask:** If Static IP is selected, configure the subnet mask of WAN port.

► **Gateway:** Optional. If Static IP is selected, configure the default gateway of WAN port.

If **DHCP** is selected:

► **Appoint Server IP:** Optional. If network has multiple DHCP servers, enter the IP address of your ISP's DHCP server.

►**Vendor Class Identifier:** Optional. This option (60) is used by DHCP clients to optionally identify the vendor type and configuration of a DHCP client.

► **Enterprise Code:** Optional.

► **Manufacture Name:** Optional.

► **Device Class:** Optional.

► **Device Type:** Optional.

► **Device Version:** Optional.

Lan Parameter

Show Lan Parameter

The commad "show lan" show the LAN configuration as below:

```
BG9002N#show lan

1----Static IP
2----Binding IP
3----Port Route/Bridge Mode
4----Advanced Parameters
Select the parameter to show[1]:
```

Show LAN Parameter

Input "1" to show LAN static IP confguration as below:

```
BG9002N#show lan

 1----Static IP
 2----Binding IP
 3----Port Route/Bridge Mode
 4----Advanced Parameters
 Select the parameter to show[1]:

 Interface Name.....................................:hello
 IP Address.........................................:192.168.100.79
 Netmask............................................:255.255.255.0
 Enable NAT or not..................................:yes
 Assign NAT IP or not...............................:no
 Enable DHCP Server or not..........................:yes
 Start IP...........................................:192.168.100.100
 End IP.............................................:192.168.100.200
 Netmask............................................:255.255.255.0
 Gateway............................................:192.168.100.1
 Primary DNS........................................:192.168.100.1
 Secondary DNS......................................:192.168.100.1
 Lease Time(Second).................................:86400
 Binding LAN Port...................................:LAN2 LAN3 LAN4
 Binding WAN Subinterface...........................:DATA VOICE MGMT OTHER1 OTHER2
```

Show Static IP Parameter

Input “2” to show binding IP configuration as below:

```
BG9002N#show lan

 1----Static IP
 2----Binding IP
 3----Port Route/Bridge Mode
 4----Advanced Parameters
 Select the parameter to show[1]:2
->Input the ID to show(0-0)[0]:

 Interface Name.....................................:vlan2
 IP Address.........................................:192.168.100.22
 Netmask............................................:255.255.255.0
 Enable NAT or not..................................:yes
 Assign NAT IP or not...............................:yes
 NAT IP.............................................:192.168.100.111
 Enable DHCP Server or not..........................:yes
 Start IP...........................................:192.168.100.23
 End IP.............................................:192.168.100.30
 Netmask............................................:255.255.255.0
 Gateway............................................:192.168.100.26
 Primary DNS........................................:192.168.100.11
 Secondary DNS......................................:192.168.100.12
 Lease Time(Second).................................:36000
 Binding LAN Port...................................:LAN1 LAN2 LAN3 LAN4
 Binding WAN Subinterface...........................:DATA VOICE MGMT OTHER1 OTHER2
->Continue show or not[yes]:n
```

Show Binding IP Parameter

Input “3” to show port route/bridge mode as below:

```
BG9002N#show lan

 1----Static IP
 2----Binding IP
 3----Port Route/Bridge Mode
 4----Advanced Parameters
 Select the parameter to show[1]:3
 Lan Route/Bridge Mode:
 LAN1.....:Route Mode
 LAN2.....:Route Mode
 LAN3.....:Route Mode
 LAN4.....:Route Mode
```

Show Port Mode Parameter

Input “4” to show advanced parameters as below:

```
BG9002N#show lan

 1----Static IP
 2----Binding IP
 3----Port Route/Bridge Mode
 4----Advanced Parameters
 Select the parameter to show[1]:4

 LAN Isolate or not.....:no
 Auto Bridge or not.....:yes
 DHCP Vendor ID.....:albis sagem
 STB Data Service IP Address.....:192.168.10.1
 STB DATA Service Netmask.....:255.255.255.0
 IPTV VLAN.....:8
 IPTV PRI.....:4
 STB Data VID Automatic or not.....:yes
```

Show Advanced Parameter

Configure Lan Parameter

The commad “set lan” configure the LAN parameter as below:

```
BG9002N#set lan

 1----Static IP
 2----Binding IP
 3----Port Route/Bridge Mode
 4----Advanced Parameters
 Select the parameter to configure[1]:
```

Configure LAN Parameter

Input “1” to configure static IP as below:

```
BG9002N#set lan

 1----Static IP
 2----Binding IP
 3----Port Route/Bridge Mode
 4----Advanced Parameters
 Select the parameter to configure[1]:
->Interface Name[hello]:
->IP Address[192.168.100.79]:
->Netmask[255.255.255.0]:
->Enable NAT or not[yes]:
->Assign NAT IP or not[no]:
->Enable DHCP Server or not[yes]:
->Start IP[192.168.100.100]:
->End IP[192.168.100.200]:
->Netmask[255.255.255.0]:
->Gateway[192.168.100.1]:
->Primary DNS[192.168.100.1]:
->Secondary DNS[192.168.100.1]:
->Lease Time(Second)[86400]:
 Binding LAN Port:
->LAN1[no]:
->LAN2[yes]:
->LAN3[yes]:
->LAN4[yes]:
 Binding WAN Subinterface:
->DATA[yes]:
->VOICE[yes]:
->MGMT[yes]:
->OTHER1[yes]:
->OTHER2[yes]:
->Really want to modify? 'yes' or 'no'[yes]:

  Operate success!
```

Configure Static IP Parameter

The following items are displayed on this part.

- ► **Interface Name:** Name of this LAN interface.
- ► **IP Address:** Enter the IP address for this LAN interface.
- ► **Netmask:** Enter the subnet mask for this LAN interface.
- ► **NAT:** Optional Enable or disable NAT for this LAN interface
- ► **Assign NAT IP:** Optional If NAT is selected. NAT IP address can be assigned.
- ► **Enable DHCP Server:** Enable or disable DHCP server on this LAN interface.
- ► **Start IP:** If **Enable DHCP Server** is selected, enter the Start IP address to define a range for the DHCP server to assign dynamic IP addresses. This address should be in the same IP address subnet with the IP address of this LAN interface.
- ► **End IP:** If **Enable DHCP Server** is selected, enter the End IP address to define a range for the DHCP server to assign dynamic IP addresses. This address should be in the same IP address subnet with the IP address of this LAN interface.
- ► **Netmask:** If **Enable DHCP Server** is selected, enter the **Netmask** to define a range for the DHCP server to assign dynamic IP addresses.

► **Gateway:** Optional .If **Enable DHCP Server** is selected, enter the Gateway address to be assigned.

► **Primary DNS:** Optional. If **Enable DHCP Server** is selected, enter the Primary DNS server address to be assigned.

► **Secondary DNS:** Optional. If **Enable DHCP Server** is selected, enter the Secondary DNS server address to be assigned.

► **Lease Time(Second):** If **Enable DHCP Server** is selected, specify the length of time the DHCP server will reserve the IP address for each client. After the IP address expired, the client will be automatically assigned a new one.

► **Binding LAN Port:** Select the physical LAN port to bind the IP address of this LAN interface.

► **Binding WAN Subinterface:** Select the WAN subinterface which the packet from this LAN interface can be sending to.

Input “2” to configure binding IP as below:

```
BG9002N#set lan

 1----Static IP
 2----Binding IP
 3----Port Route/Bridge Mode
 4----Advanced Parameters
 Select the parameter to configure[1]:
->Interface Name[hello]:
->IP Address[192.168.100.79]:
->Netmask[255.255.255.0]:
->Enable NAT or not[yes]:
->Assign NAT IP or not[no]:
->Enable DHCP Server or not[yes]:
->Start IP[192.168.100.100]:
->End IP[192.168.100.200]:
->Netmask[255.255.255.0]:
->Gateway[192.168.100.1]:
->Primary DNS[192.168.100.1]:
->Secondary DNS[192.168.100.1]:
->Lease Time(Second)[86400]:
 Binding LAN Port:
->LAN1[no]:
->LAN2[yes]:
->LAN3[yes]:
->LAN4[yes]:
 Binding WAN Subinterface:
->DATA[yes]:
->VOICE[yes]:
->MGMT[yes]:
->OTHER1[yes]:
->OTHER2[yes]:
->Really want to modify? 'yes' or 'no'[yes]:

  Operate success!
```

Configure Binding IP Parameter

Input “3” to configure port route/bridge mode as below:

```
BG9002N#set lan

1----Static IP
2----Binding IP
3----Port Route/Bridge Mode
4----Advanced Parameters
Select the parameter to configure[1]:3
Lan Route/Bridge Mode:

0----Route Mode
1----Transparent Bridge
2----Tagged Bridge
3----Promisc Bridge
->LAN1(0-3)[0]:
->LAN2(0-3)[0]:1
->LAN3(0-3)[0]:2
->VID(1-4095)[0]:7
->LAN4(0-3)[0]:3
->VID1[0]:8
->Continue Set Vid or not[yes]:
->VID2[0]:9
->Continue Set Vid or not[yes]:
->VID3[0]:10
->Continue Set Vid or not[yes]:
->VID4[0]:11
->Continue Set Vid or not[yes]:
->VID5[0]:12
->Continue Set Vid or not[yes]:n
->Really want to modify? 'yes' or 'no'[yes]:

 Operate success!
```

Configure Port Mode Parameter

The following items are displayed on this part.

► **Port:** The physical LAN port name (LAN1~LAN4).

► **Route/Bridge:** Mode of this physical LAN port. The following four modes are provided:
Route: route to WAN
Transparent bridge: not modify the packets;
Tagged bridge: LAN untagged, WAN tagged; only 1 VID supported
Promisc Mode: Tagged packets in bridge mode, untagged packets in route mode; most 5 VIDs supported (e.g. 8, 10, 13).

► **VLAN ID List:** If Tagged bridge/Promisc Mode is selected, configure the VID/VIDs.

Input “4” to configure advanced parameters as below:

```
BG9002N#set lan

 1----Static IP
 2----Binding IP
 3----Port Route/Bridge Mode
 4----Advanced Parameters
 Select the parameter to configure[1]:4
->LAN Isolate or not[no]:y
->Auto Bridge or not[yes]:
->DHCP Vendor ID1[albis]:
->DHCP Vendor ID2[albis]:
->STB Data Service IP Address[192.168.10.1]:
->STB DATA Service Netmask[255.255.255.0]:
->IPTV VLAN(1-4095)[8]:
->IPTV PRI(0-7)[4]:
->STB Data VID Automatic or not[yes]:
->Really want to modify? 'yes' or 'no'[yes]:

  Operate success!
```

Configure Advanced Parameter

The following items are displayed on this part.

- ► **LAN Isolate:** Check the box to prohibit the access between LAN interfaces.
- ► **Auto Bridge:** Check the box to dynamically create IPTV bridge for STB.
- ► **DHCP Vendor ID:** Vendor class identifier List (DHCP 60 option), support at most two vendor IDs.
- ► **IPAddress:** IP address of interface for STB data service.
- ► **Netmask:** Subnet mask of interface for STB data service.
- ► **VID:** VID of IPTV VLAN.
- ► **PRI:** Priority level of IPTV VLAN.
- ► **Automatic:** Check the box to automatically detect the VID of STB data service.

Data Service

DHCP Server

Static Address Assign

The command “show dhcp-server static-ip-assign” shows the static IP assign information as bellow:

```
BG9002N#show dhcp-server static-ip-assign

+----+---------------+---------------+--------------------+
|No  |IP             |Netmask        |MAC                 |
+----+---------------+---------------+--------------------+
|0   |192.168.4.5    |255.255.255.0  |01:02:03:04:05:06   |
+----+---------------+---------------+--------------------+
|1   |192.168.0.30   |255.255.255.0  |11:a2:3c:33:67:85   |
+----+---------------+---------------+--------------------+

BG9002N#
```

Show Static IP Assign Information

The command “set dhcp-server static-ip-assign” configures the static IP assign information as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set dhcp-server static-ip-assign
Static Ip Assign List Config:
->Select Config type(0-add,1-del,2-modify)[0]: 0
->IP[]: 192.168.4.66
->Netmask[]: 255.255.255.0
->MAC[00:00:00:00:00:00]: a4:2d:33:76:89:f3
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set dhcp-server static-ip-assign
Static Ip Assign List Config:
->Select Config type(0-add,1-del,2-modify)[0]: 2

+----+---------------+---------------+--------------------+
|No  |IP             |Netmask        |MAC                 |
+----+---------------+---------------+--------------------+
|0   |192.168.0.30   |255.255.255.0  |11:a2:3c:33:67:85   |
+----+---------------+---------------+--------------------+
|1   |192.168.12.56  |255.255.255.0  |14:34:86:99:a6:06   |
+----+---------------+---------------+--------------------+
|2   |192.168.4.66   |255.255.255.0  |a4:2d:33:76:89:f3   |
+----+---------------+---------------+--------------------+
->Please input number which you will modify[0-2]:0
->IP[192.168.0.30]:
->Netmask[255.255.255.0]:
->MAC[11:a2:3c:33:67:85]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set dhcp-server static-ip-assign
Static Ip Assign List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1

+----+---------------+---------------+--------------------+
|No  |IP             |Netmask        |MAC                 |
+----+---------------+---------------+--------------------+
|0   |192.168.0.30   |255.255.255.0  |11:a2:3c:33:67:85   |
+----+---------------+---------------+--------------------+
|1   |192.168.12.56  |255.255.255.0  |14:34:86:99:a6:06   |
+----+---------------+---------------+--------------------+
|2   |192.168.4.66   |255.255.255.0  |a4:2d:33:76:89:f3   |
+----+---------------+---------------+--------------------+

->Please choose the start index of deleting entry[0-2]:1
->Please choose the end index of deleting entry[0-2]:2
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure Static IP Assign

The command will configure static ip assign.

The following items are displayed on this screen:

► **IP :** The IP address reserved.

► **Mask:** The subnet mask of IP address reserved.

► **MAC:** The MAC address you want to reserve IP address.

DHCP Relay

The command “show dhcp-relay” shows the DHCP relay information as below:

```
BG9002N#show dhcp-relay
->Enable DHCP Relay.....................................: Enable
->Client Interface 1....................................: none
->Client Interface 2....................................: VLAN1
->Client Interface 3....................................: none
->Client Interface 4....................................: VOICE
->Server Interface......................................: DATA
->Server IP.............................................: 138.0.60.2

BG9002N#
```

Show DHCP Relay Information

The command "set dhcp-relay” configures the DHCP relay information as below:

```
BG9002N#set dhcp-relay
->Enable DHCP Relay? 'yes' or 'no'[yes]:
->Client Interface 1<[0]DATA [1]VOICE [2]MGMT [5]VLAN1 [255]none)[255]:2
->Client Interface 2<[0]DATA [1]VOICE [2]MGMT [5]VLAN1 [255]none)[5]:
->Client Interface 3<[0]DATA [1]VOICE [2]MGMT [5]VLAN1 [255]none)[255]:
->Client Interface 4<[0]DATA [1]VOICE [2]MGMT [5]VLAN1 [255]none)[1]:
->Server Interface<[0]DATA [1]VOICE [2]MGMT [5]VLAN1 [255]none)[0]:
->Server IP[138.0.60.2]:
Really want to modify? 'yes' or 'no'[yes]:y
The configuration will take effect after saved and reloaded!

BG9002N#
```

Set DHCP Relay Information

The following items are displayed on this screen:

► **Enable DHCP Relay:** Enable or disable DHCP Relay.

► **Client Interface:** The interface to listen for DHCP client requests. Up to four interfaces can be selected.

► **Server Interface:** Choose the interface which connects DHCP server.

► **Server IP:** Configure the DHCP server IP address.

NAT Config

Basic Settings

The command “show nat” shows the NAT basic settings as below:

```
BG9002N#

BG9002N#show nat
 Max Nat Connections.............................: 16000
 Enable MSS Auto Adaptive........................: Disable
 TCP MSS.........................................: 1260

BG9002N#_
```

Show NAT Basic Settings

The command “set nat” configures the NAT basic settings as below:

```
BG9002N#set nat
->Max Nat Connections(512~16000)(512-16000)[16000]:
->Enable MSS Auto Adaptive 'yes' or 'no' [no]:
->TCP MSS(1260-1460)[1260]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#_
```

Configure NAT Basic Settings

The following items are displayed on this screen:

► **Max Nat Connections:** Specify the maximum number of NAT connections.

► **Enable MSS Auto Adaptive:** Enable or disable auto adaptive the value of MSS (Maximum Segment Size).

► **TCP MSS:** If **Enable MSS Auto Adaptive** is not selected, configure this to specify the maximum segment size of the TCP protocol.

PAT Settings

The command “show pat” shows the PAT information as below:

```
BG9002N#show pat

 Enable PAT.....................................: Enable

+----+--------+-----------+----------+--------+----------------+----------+
| No | Enable |Inter_Iface|Inter_Port|Protocol|    Intra_IP    |Intra_Port|
+----+--------+-----------+----------+--------+----------------+----------+
|0   |Enable  |DATA       |1000      | TCP    |192.168.12.66   |2000      |
+----+--------+-----------+----------+--------+----------------+----------+

BG9002N#
```

Show PAT Information

The command “set pat” configures the PAT parameters as below:

```
BG9002N#set pat
->Enable PAT? 'yes' or 'no'[yes]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure PAT Parameters

The following items are displayed on this screen:

► **Enable PAT:** Enable or disable PAT globally.

The command “set pat rule” configures the PAT rule as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify .If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set pat rule
Pat Regular List Config:
->Select config type(0-add,1-del,2-modify)[0]:
->Enable the PAT rule? 'yes' or 'no'[yes]:
->Protocol Type(0-TCP, 1-UDP)[0]:1
->Internet Port(0-65535)[1000]:
->Intranet IP[0.0.0.0]:192.168.2.66
->Intranet Port(0-65535)[1000]:6000
->Internet Interface:'[0]DATA'[0]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set pat rule
Pat Regular List Config:
->Select config type(0-add,1-del,2-modify)[0]: 2
+----+--------+-----------+----------+--------+----------------+----------+
| No | Enable |Inter_Iface|Inter_Port|Protocol|    Intra_IP    |Intra_Port|
+----+--------+-----------+----------+--------+----------------+----------+
|0   |Enable  |DATA       |1000      | TCP    |192.168.12.66   |2000      |
+----+--------+-----------+----------+--------+----------------+----------+
|1   |Enable  |DATA       |1000      | UDP    |192.168.2.66    |6000      |
+----+--------+-----------+----------+--------+----------------+----------+
->Please input number which you will modify[0-1]:1
->Enable the PAT rule? 'yes' or 'no'[yes]:
->Protocol Type(0-TCP, 1-UDP)[1]:
->Internet Port(0-65535)[1000]:5000
->Intranet IP[192.168.2.66]:
->Intranet Port(0-65535)[6000]:
->Internet Interface:'[0]DATA'[0]:
->Really want to modify? 'yes' or 'no'[yes]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#

BG9002N#set pat rule
Pat Regular List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1
+----+--------+-----------+----------+--------+----------------+----------+
| No | Enable |Inter_Iface|Inter_Port|Protocol|    Intra_IP    |Intra_Port|
+----+--------+-----------+----------+--------+----------------+----------+
|0   |Enable  |DATA       |1000      | TCP    |192.168.12.66   |2000      |
+----+--------+-----------+----------+--------+----------------+----------+
|1   |Enable  |DATA       |5000      | UDP    |192.168.2.66    |6000      |
+----+--------+-----------+----------+--------+----------------+----------+

->Please choose the start index of deleting entry[0-1]:1
->Please choose the end index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure PAT Rule

The following items are displayed on this screen:

► **Enable:** Enable or disable this PAT entry.

► **Internet Port:** Enter the service port provided for accessing external network. All the requests from internet to this service port will be redirected to the specified server in local network.

► **Intranet Port:** Specify the service port of the LAN host as virtual server.

► **Intranet IP:** Enter the IP address of the specified internal server for the entry. All the requests from the internet to the specified LAN port will be redirected to this host.

► **Protocol:** Specify the protocol used for the entry.

► **Internet Interface:** Specify the interface to receive requests from the internet for the entry.

DMZ Settings

The command “show dmz” shows the DMZ information as below:

```
BG9002N#show dmz

 Enable DMZ.....................................: Enable

+----+-----------------+-----------------+
| No |    Public IP    |    Private IP   |
+----+-----------------+-----------------+
|0   | 138.1.61.2      | 192.168.12.54   |
+----+-----------------+-----------------+

BG9002N#
```

Show DMZ Information

The command “set dmz ” configures the DMZ Parameters as below:

```
BG9002N#set dmz
->Enable DMZ? 'yes' or 'no'[yes]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#_
```

Configure DMZ Parameters

The following items are displayed on this screen:

► **Enable DMZ:** Enable or disable DMZ globally.

The command “set dmz rule” configures the DMZ rule as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set dmz rule
DMZ Regular List Config:
->Select config type(0-add,1-del,2-modify)[0]:
->Public IP[]:192.15.26.3
->Private IP[]:172.56.5.69
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set dmz rule
DMZ Regular List Config:
->Select config type(0-add,1-del,2-modify)[0]: 2
+----+------------------+------------------+
| No |    Public IP     |    Private IP    |
+----+------------------+------------------+
|0   | 138.1.61.2       | 192.168.12.54    |
+----+------------------+------------------+
|1   | 192.15.26.3      | 172.56.5.69      |
+----+------------------+------------------+
->Please input number which you will modify[0-1]:1
->Public IP[192.15.26.3]:
->Private IP[172.56.5.69]:172.66.6.6
->Really want to modify? 'yes' or 'no'[yes]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set dmz rule
DMZ Regular List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1
+----+------------------+------------------+
| No |    Public IP     |    Private IP    |
+----+------------------+------------------+
|0   | 138.1.61.2       | 192.168.12.54    |
+----+------------------+------------------+
|1   | 192.15.26.3      | 172.66.6.6       |
+----+------------------+------------------+

->Please choose the start index of deleting entry[0-1]:1
->Please choose the end index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure DMZ Rule

The following items are displayed on this screen:

► **Public IP:** The public IP address for this DMZ entry.

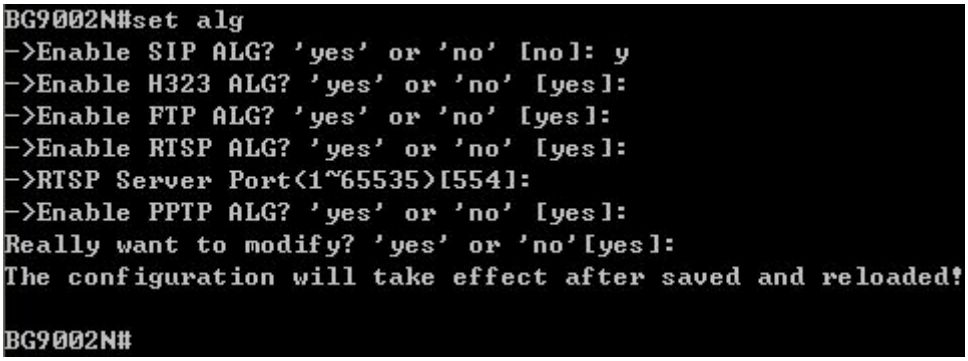
► **Private IP:** The private IP address for this DMZ entry.

ALG Settings

The command “show alg” shows the ALG information as below:

Show ALG Information

The command “set alg” configures the ALG parameters as below:



Configure ALG Parameters

The following items are displayed on this screen:

► **Enable SIP:** Enable or disable SIP ALG.

► **Enable H323:** Allow Microsoft NetMeeting clients to communicate across NAT if selected.

► **Enable FTP:** Allow FTP clients and servers to transfer data across NAT if selected.

► **Enable PPTP:** Enable or disable PPTP ALG.

► **Enable RTSP:** Enable or disable RTSP ALG.

Firewall Config

Attack Defense

The command “show attack-defense” shows the attack defense information as below:

```
BG9002N#show attack-defense
 Enable Broadcast Storm Defense.....................: Disable
 Enable Block Ping..................................: Disable
 Enable TCP SYN Flood Defense.......................: Enable
 Max Limit(packets/second)..........................: 20
 Enable UDP Flood Defense...........................: Disable
 Enable ICMP Defense................................: Enable
 Max Limit(packets/second)..........................: 10
 Enable ARP Attack Defense..........................: Disable
 Enable Port Scan Defense...........................: Disable
 Enable Land Based Defense..........................: Disable
 Enable Ping Of Death Defense.......................: Disable
 Enable Teardrop Defense............................: Disable
 Enable Fraggle Defense.............................: Disable
 Enable Smurf Defense...............................: Disable

BG9002N#
```

Show Attack Defense Information

The command “set attack-defense” configures the attack defense parameters as below:

```
BG9002N#set attack-defense
->Enable Broadcast Storm Defense? 'yes' or 'no' [no]:
->Enable Block Ping? 'yes' or 'no' [no]:
->Enable TCP SYN Flood Defense? 'yes' or 'no' [yes]:
->Max Limit(packets/second)(1~1000)[20]:
->Enable UDP Flood Defense? 'yes' or 'no' [no]:
->Enable ICMP Defense? 'yes' or 'no' [yes]:
->Max Limit(packets/second)(1~1000)[10]:
->Enable ARP Attack Defense? 'yes' or 'no' [no]:
->Enable Port Scan Defense? 'yes' or 'no' [no]:
->Enable Land Based Defense? 'yes' or 'no' [no]:
->Enable Ping Of Death Defense? 'yes' or 'no' [no]:
->Enable Teardrop Defense? 'yes' or 'no' [no]:
->Enable Fraggle Defense? 'yes' or 'no' [no]:
->Enable Smurf Defense? 'yes' or 'no' [no]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!
```

Configure Attack Defense Parameters

The following items are displayed on this screen:

- ► **Enable Broadcast Storm Defense:** Enable or disable **Broadcast Storm Defense**.
- ► **Enable Block Ping:** Enable or disable **Block Ping** function.
- ► **Enable TCP SYN Flood Defense:** Enable or disable **TCP SYN Flood Defense**.
- ► **Enable UDP Flood Defense:** Enable or disable **UDP Flood Defense**.
- ► **Enable ICMP Defense:** Enable or disable **ICMP Defense**.
- ► **Enable ARP Attack Defense:** Enable or disable **ARP Attack Defense**.
- ► **Enable Port Scan Defense:** A port scanner is a software application designed to probe a server or host for open ports. Check the box to prevent port scanning.
- ► **Enable Land Based Defense:** The Land Denial of Service attack works by sending a spoofed packet with the SYN flag - used in a "handshake" between a client and a host - set from a host to any port that is open and listening. If the packet is programmed to have the same

destination and source IP address, when it is sent to a machine, via IP spoofing, the transmission can fool the machine into thinking it is sending itself a message, which, depending on the operating system, will crash the machine. Check the box to enable **Land Based Defense**.

► **Enable Ping Of Death Defense:** Ping of death is a denial of service (DoS) attack caused by an attacker deliberately sending an IP packet larger than the 65,536 bytes allowed by the IP protocol. Check the box to enable **Ping of Death Defense**.

► **Enable Teardrop Defense:** Teardrop is a program that sends IP fragments to a machine connected to the Internet or a network. Check the box to enable **Teardrop Defense**.

► **Enable Fraggle Defense:** A fraggle attack is a variation of a Smurf attack where an attacker sends a large amount of UDP traffic to ports 7 (echo) and 19 (chargen) to an IP Broadcast Address, with the intended victim's spoofed source IP address. Check the box to enable **Fraggle Defense**.

► **Enable Smurf Defense:** The Smurf Attack is a denial-of-service attack in which large numbers of Internet Control Message Protocol (ICMP) packets with the intended victim's spoofed source IP are broadcast to a computer network using an IP Broadcast address. Check the box to enable **Smurf Defense**.

Service Type

The command “show service-type” shows the service type information as below:

```
BG9002N#show service-type
+-----+--------------------+----------+----------------+
|  No |       Name         | Protocol |    Port Range  |
+-----+--------------------+----------+----------------+
| 0   |123                 |UDP       |1-65535         |
+-----+--------------------+----------+----------------+

BG9002N#_
```

Show Service Type Information

The command “set service-type” configures the service type as below. Enter 0 add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set service-type
Service Type List Config:
->Select Config type(0-add,1-del,2-modify)[0]: 0
->Name[]:asdf
->Protocol(0-UDP,1-TCP,2-ICMP,3-ALL)[0]: 1
->Port(Start Port)(0-65535)[0]: 1000
->Port(End Port)(0-65535)[0]: 2000
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set service-type
Service Type List Config:
->Select Config type(0-add,1-del,2-modify)[0]: 2
+-----+--------------------+----------+----------------+
|  No |       Name         | Protocol |    Port Range  |
+-----+--------------------+----------+----------------+
| 0   |123                 |UDP       |1-65535         |
+-----+--------------------+----------+----------------+
| 1   |asdf                |TCP       |1000-2000       |
+-----+--------------------+----------+----------------+
->Please input number which you will modify[0-1]:0
->Name[123]:1234
->Protocol(0-UDP,1-TCP,2-ICMP,3-ALL)[0]:
->Port(Start Port)(0-65535)[1]:
->Port(End Port)(0-65535)[65535]:
Really want to modify? 'yes' or 'no'[yes]:y
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set service-type
Service Type List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1
+-----+--------------------+----------+----------------+
|  No |       Name         | Protocol |    Port Range  |
+-----+--------------------+----------+----------------+
| 0   |123                 |UDP       |1-65535         |
+-----+--------------------+----------+----------------+
| 1   |asdf                |TCP       |1000-2000       |
+-----+--------------------+----------+----------------+

->Please choose the start index of deleting entry[0-1]:1
->Please choose the end index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure Service Type

The following items are displayed on this screen:

- **Name:** Name of this entry, it will be list in Internet Access-Ctrl page.
- **Protocol:** Select the protocol for this entry. Four types are provided: TCP, UDP, ICMP and ALL.
- **Port Range:** Configure the port range for this entry.

Internet Access-Ctrl

Access Control

The command “show access-control” shows the access control information as below:

```
BG9002N#show access-control

 Enable Access Control.............................: Enable
 Policy............................................: Allow

+----+-------+---------------------------+-------------+
| No |Enable |         Src IP Range      | Service Name |
+----+-------+---------------------------+-------------+
|0   |Enable |192.168.1.3-192.168.2.6    |123           |
+----+-------+---------------------------+-------------+

->Enter the index to show(0-0)[0]:
 Enable Rule.....................................:Enable
 Service Name....................................:123
 Source IP(Start IP).............................:192.168.1.3
 Source IP(End IP)...............................:192.168.2.6
 Destination IP(Start IP)........................:210.66.31.61
 Destination IP(End IP)..........................:210.66.55.99
 Active Time(Start Time).........................:00:00
 Active Time(End Time)...........................:23:59
 Active Monday...................................:Disable
 Active Tuesday..................................:Disable
 Active Wednesday................................:Disable
 Active Thursday.................................:Disable
 Active Friday...................................:Disable
 Active Saturday.................................:Disable
 Active Sunday...................................:Disable

->Show access control rule detail para continue or not?[yes]:n

BG9002N#_
```

Show Access Control Information

The command “set access-control” configures the access control policy as below:

```
BG9002N#set access-control
->Enable Access Control? 'yes' or 'no'[yes]:
->Policy(0-Allow,1-Deny)[0]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure Access Control

The following items are displayed on this screen:

► **Enable Access Control:** Enable or disable access control from WAN.

► **Policy:** Default policy of access control: **Allow** or **Deny**. If Allow is selected, all packets will be allowed except the entries list on this page. If Deny is selected, all packets will be denied except the entries list on this page.

The command “set access-control rule” configures the access control rule as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set access-control rule
Access Control Rule List Config:
->Select config type(0-add,1-del,2-modify)[0]:
->Enable Rule? 'yes' or 'no'[no]:y
->Source IP(Start IP)[]:192.168.5.6
->Source IP(End IP)[]:192.168.5.90
->Destination IP(Start IP)[]:139.0.1.6
->Destination IP(End IP)[]:139.0.1.66
->Service Name(0-123,255-NULL)[0]:
->Active Time(Start Time)[00:00]:
->Active Time(End Time)[00:00]:23:00
->Active Monday? 'yes' or 'no'[no]:
->Active Monday? 'yes' or 'no'[no]:
->Active Tuesday? 'yes' or 'no'[no]:
->Active Wednesday? 'yes' or 'no'[no]:
->Active Thursday? 'yes' or 'no'[no]:
->Active Friday? 'yes' or 'no'[no]:
->Active Saturday? 'yes' or 'no'[no]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set access-control rule
Access Control Rule List Config:
->Select config type(0-add,1-del,2-modify)[0]: 2
+----+-------+---------------------------+--------------+
| No |Enable |         Src IP Range      | Service Name |
+----+-------+---------------------------+--------------+
|0   |Enable |192.168.1.3-192.168.2.6    |123           |
+----+-------+---------------------------+--------------+
|1   |Enable |192.168.5.6-192.168.5.90   |123           |
+----+-------+---------------------------+--------------+
->Please input number which you will modify[0-1]:1
->Enable Rule? 'yes' or 'no'[yes]:
->Source IP(Start IP)[192.168.5.6]:
->Source IP(End IP)[192.168.5.90]:
->Destination IP(Start IP)[139.0.1.6]:
->Destination IP(End IP)[139.0.1.66]:
->Service Name(0-123,255-NULL)[0]:
->Active Time(Start Time)[00:00]:
->Active Time(End Time)[23:00]:
->Active Monday? 'yes' or 'no'[no]:
->Active Monday? 'yes' or 'no'[no]:
->Active Tuesday? 'yes' or 'no'[no]:
->Active Wednesday? 'yes' or 'no'[no]:
->Active Thursday? 'yes' or 'no'[no]:
->Active Friday? 'yes' or 'no'[no]:
->Active Saturday? 'yes' or 'no'[no]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set access-control rule
Access Control Rule List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1
+----+-------+---------------------------+--------------+
| No |Enable |         Src IP Range      | Service Name |
+----+-------+---------------------------+--------------+
|0   |Enable |192.168.1.3-192.168.2.6    |123           |
+----+-------+---------------------------+--------------+
|1   |Enable |192.168.5.6-192.168.5.90   |123           |
+----+-------+---------------------------+--------------+

->Please choose the start index of deleting entry[0-1]:1
->Please choose the end index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure Access Control Rule

The following items are displayed on this screen:

► **Enable Rule:** Enable or disable this rule.

► **Source IP Range:** Enter the source IP range in dotted-decimal format (e.g. 192.168.1.23).

► **Destination IP Range:** Enter the destination IP range in dotted-decimal format (e.g. 192.168.1.23).

► **Service Name:** Choose a service type that defined in **Service Type** page.

► **Active Time:** Specify the time range for the entry to take effect.

► **Active Day:** Specify the day range for the entry to take effect.

User Authentication

The command “show user-authentication” shows the user authentication information as below:

```
BG9002N#show user-authentication
->Enable User Authentication.....................: Enable
+----+----------------+----------------+
| No |    Username    |    Password    |
+----+----------------+----------------+
|0   |1234            |1234            |
+----+----------------+----------------+

BG9002N#_
```

Show User Authentication Information

The command “set user-authentication” configures the user authentication parameters as below:

```
BG9002N#set user-authentication
->Enable User Authentication? 'yes' or 'no'[yes]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure User Authentication Parameters

The following items are displayed on this screen:

► **Enable User Authentication:** Enable or disable user authentication globally. If enabled, only the following list of users and passwords can access the Internet.

The command “set user authentication list” configures the user authentication list as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set user-authentication list
User Authentication List Config:
->Select config type(0-add,1-del,2-modify)[0]:
->Username[]:z41x43f
->Password[]:bfzy
 Auth Mode
 0-Allow Multi-PC Access
 1-Allow One PC Access
 2-Allow Special IP Access
 3-Allow Special MAC Access
->Auth Mode [0]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set user-authentication list
User Authentication List Config:
->Select config type(0-add,1-del,2-modify)[0]: 2
+----+----------------+----------------+
| No |    Username    |     Password   |
+----+----------------+----------------+
|0   |1234            |1234            |
+----+----------------+----------------+
|1   |z41x43f         |bfzy            |
+----+----------------+----------------+
->Please input number which you will modify[0-1]:1
->Username[z41x43f]:
->Password[bfzy]:
 Auth Mode
 0-Allow Multi-PC Access
 1-Allow One PC Access
 2-Allow Special IP Access
 3-Allow Special MAC Access
->Auth Mode [0]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set user-authentication list
User Authentication List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1
+----+----------------+----------------+
| No |    Username    |     Password   |
+----+----------------+----------------+
|0   |1234            |1234            |
+----+----------------+----------------+
|1   |z41x43f         |bfzy            |
+----+----------------+----------------+

->Please choose the start index of deleting entry[0-1]:1
->Please choose the end index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure User Authentication List

The following items are displayed on this screen:

► **Username:** Enter the username of this entry.

► **Password:** Enter the password of this entry.

► **Auth Mode:** Choose the authentication mode of this entry. Provides four modes:

Allow Multi-PC Access: Allows multiple computers to access the Internet using this account.

Allow One PC Access: Only allows one computer to access the Internet using this account.

Allow Special IP Access: Allowing only specified IP computer uses this account to access the Internet.

Allow Special MAC Access: Allowing only specified MAC computer uses this account to access the Internet

Network Access-Ctrl

WEB

The command “show network-access-ctrl web” shows the web access control information as below:

```
BG9002N#show network-access-ctrl w

BG9002N#show network-access-ctrl web
->HTTP Port.....: 80
->HTTPS Port.....: 443
->Enable Internet Allow Access.....: Enable
->Enable Internet IP Limit.....: Disable
->Internet IP Range(Start IP).....: 138.0.60.1
->Internet IP Range(End IP).....: 138.0.255.255
->Internet IPv6 Range(Start IP).....: 2001::60
->Internet IPv6 Range(End IP).....: 2001::ffff
->Enable Intranet Allow Access.....: Enable
->Enable Intranet IP Limit.....: Disable
->Intranet IP Range(Start IP).....: 192.168.1.2
->Intranet IP Range(End IP).....: 192.168.1.255
->Intranet IPv6 Range(Start IP).....: 2001::60
->Intranet IPv6 Range(End IP).....: 2001::ffff

BG9002N#
```

Show Web Access Control Information

The command “set network-access-ctrl web” configures the web access control parameters as below:

```
BG9002N#set network-access-ctrl web
->HTTP Port[80]:
->HTTPS Port[443]:
->Enable Internet Allow Access? 'yes' or 'no' [yes]:
->Enable Internet IP Limit? 'yes' or 'no' [no]: y
->Internet IP Range(Start IP)[138.0.60.1]:
->Internet IP Range(End IP)[138.0.255.255]:
->Internet IPv6 Range(Start IP)[2001::60]:
->Internet IPv6 Range(End IP)[2001::ffff]:
->Enable Intranet Allow Access? 'yes' or 'no' [yes]:
->Enable Intranet IP Limit? 'yes' or 'no' [no]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure Web Access Control Parameters

The following items are displayed on this screen:

► **HTTP Port:** Port used with HTTP access device.
HTTP: Hypertext Transfer Protocol.

► **HTTPS Port:** Port used with HTTPS access device.
HTTPS: it is the result of simply layering the Hypertext Transfer Protocol (HTTP) on top of the SSL/TLS protocol.

► **Allow Access:** If enabled, allow user to access the device from the Internet via WEB.

► **IP Limit:** If enabled, allow only specific IP range to access the device from the Internet via WEB.

► **IP Range:** If **IP Limit** enabled, specifies the IPv4 address range that is only allowed to access to the device from the Internet via WEB.

► **IPv6 Range:** If **IP Limit** enabled, specifies the IPv6 address range that is only allowed to access to the device from the Internet via WEB.

► **Allow Access:** If enabled, allow user to access the device from the Intranet via WEB.

► **IP Limit:** If enabled, allow only specific IP range to access the device from the Intranet via WEB.

► **IP Range:** If **IP Limit** enabled, specifies the IPv4 address range that is only allowed to access the device from the Intranet via WEB.

► **IPv6 Range:** If **IP Limit** enabled, specifies the IPv6 address range that is only allowed to access the device from the Intranet via WEB.

TELNET

The command “show network-access-ctrl telnet” shows the telnet access control information as below:

```
BG9002N#show network-access-ctrl telnet
->Port.....: 23
->Enable Internet Allow Access.....: Disable
->Enable Internet IP Limit.....: Disable
->Internet IP Range(Start IP).....: 138.0.60.1
->Internet IP Range(End IP).....: 138.0.255.255
->Internet IPv6 Range(Start IP).....: 2001::60
->Internet IPv6 Range(End IP).....: 2001::ffff
->Enable Intranet Allow Access.....: Enable
->Enable Intranet IP Limit.....: Disable
->Intranet IP Range(Start IP).....: 192.168.1.2
->Intranet IP Range(End IP).....: 192.168.1.255
->Intranet IPv6 Range(Start IP).....: 2001::60
->Intranet IPv6 Range(End IP).....: 2001::ffff

BG9002N#
```

Show Telnet Access Control Information

The command “set network-access-ctrl telnet” configures the telnet access control parameters as below:

```
BG9002N#set network-access-ctrl telnet
->Port[23]:
->Enable Internet Allow Access? 'yes' or 'no' [no]: y
->Enable Internet IP Limit? 'yes' or 'no' [no]: y
->Internet IP Range(Start IP)[138.0.60.1]:
->Internet IP Range(End IP)[138.0.255.255]:
->Internet IPv6 Range(Start IP)[2001::60]:
->Internet IPv6 Range(End IP)[2001::ffff]:
->Enable Intranet Allow Access? 'yes' or 'no' [yes]:
->Enable Intranet IP Limit? 'yes' or 'no' [no]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure Telnet Access Control Parameters

The following items are displayed on this screen:

- ► **Port:** Port when using telnet tools access device.
- ► **Allow Access:** If enabled, allow access to the device from the Internet via telnet.
- ► **IP Limit:** If enabled, allow only specific IP range to access the device from the Internet via telnet
- ► **IP Range:** If **IP Limit** enabled, specifies the IPv4 address range that only allow access to the device from the Internet via telnet.
- ► **IPv6 Range:** If **IP Limit** enabled, specifies the IPv6 address range that only allow access to the device from the Internet via telnet.
- ► **Allow Access:** If enabled, allow access to the device from the Intranet via telnet.
- ► **IP Limit:** If enabled, allow only specific IP range to access the device from the Intranet via telnet
- ► **IP Range:** If **IP Limit** enabled, specifies the IPv4 address range that only allow access to the device from the Intranet via telnet.
- ► **IPv6 Range:** If **IP Limit** enabled, specifies the IPv6 address range that only allow access to the device from the Intranet via telnet.

SSH

The command “show network-access-ctrl ssh” shows the SSH access control information as below:

```
BG9002N#show network-access-ctrl telnet
->Port.....: 23
->Enable Internet Allow Access.....: Disable
->Enable Internet IP Limit.....: Disable
->Internet IP Range(Start IP).....: 138.0.60.1
->Internet IP Range(End IP).....: 138.0.255.255
->Internet IPv6 Range(Start IP).....: 2001::60
->Internet IPv6 Range(End IP).....: 2001::ffff
->Enable Intranet Allow Access.....: Enable
->Enable Intranet IP Limit.....: Disable
->Intranet IP Range(Start IP).....: 192.168.1.2
->Intranet IP Range(End IP).....: 192.168.1.255
->Intranet IPv6 Range(Start IP).....: 2001::60
->Intranet IPv6 Range(End IP).....: 2001::ffff

BG9002N#
```

Show SSH Access Control Information

The command “set network-access-ctrl ssh” configures the SSH access control parameters as below:

```
BG9002N#set network-access-ctrl telnet
->Port[23]:
->Enable Internet Allow Access? 'yes' or 'no' [no]: y
->Enable Internet IP Limit? 'yes' or 'no' [no]: y
->Internet IP Range(Start IP)[138.0.60.1]:
->Internet IP Range(End IP)[138.0.255.255]:
->Internet IPv6 Range(Start IP)[2001::60]:
->Internet IPv6 Range(End IP)[2001::ffff]:
->Enable Intranet Allow Access? 'yes' or 'no' [yes]:
->Enable Intranet IP Limit? 'yes' or 'no' [no]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure SSH Access Control Parameters

The following items are displayed on this screen:

- ► **Port:** Port when using SSH tools access device.
- ► **Allow Access:** If enabled, allow access to the device from the Internet via SSH.
- ► **IP Limit:** If enabled, allow only specific IP range to access the device from the Internet via SSH
- ► **IP Range:** If **IP Limit** enabled, specifies the IPv4 address range that only allow access to the device from the Internet via SSH.
- ► **IPv6 Range:** If **IP Limit** enabled, specifies the IPv6 address range that only allow access to the device from the Internet via SSH.
- ► **Allow Access:** If enabled, allow access to the device from the Intranet via SSH.
- ► **IP Limit:** If enabled, allow only specific IP range to access the device from the Intranet via SSH
- ► **IP Range:** If **IP Limit** enabled, specifies the IPv4 address range that only allow access to the device from the Intranet via SSH.
- ► **IPv6 Range:** If **IP Limit** enabled, specifies the IPv6 address range that only allow access to the

device from the Intranet via SSH.

Filter Strategy

Keyword Filter

The command “show keyword-filter” shows the keyword filter information as below:

```
BG9002N#show keyword-filter

 Enable Keyword Filter.............................: Enable
 Policy............................................: Deny

+----+--------------------------------+
| No |            Keyword             |
+----+--------------------------------+
|0   |12345                           |
+----+--------------------------------+

BG9002N#
```

Show Keyword Filter Information

The command “set keyword-filter” configures the keyword filter parameters as below:

```
BG9002N#set keyword-filter
->Enable Keyword Filter? 'yes' or 'no'[yes]:
->Policy(0-Deny,1-Allow)[0]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#_
```

Configure Keyword Filter Parameters

The command “set keyword-filter list” configures the keyword filter list as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set keyword-filter list
Keyword Filter List Config:
->Select config type(0-add,1-del,2-modify)[0]:
->Keyword[]:qwer
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set keyword-filter list
Keyword Filter List Config:
->Select Config type(0-add,1-del,2-modify)[0]: 2
+----+--------------------------------+
| No |            Keyword             |
+----+--------------------------------+
|0   |1234qwe                         |
+----+--------------------------------+
|1   |qweaszyd                        |
+----+--------------------------------+
->Please input number which you will modify[0-1]:0
->Keyword[1234qwe]:bgzy41
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set keyword-filter list
Keyword Filter List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1
+----+--------------------------------+
| No |             Keyword            |
+----+--------------------------------+
|0   |12345                           |
+----+--------------------------------+
|1   |asadf                           |
+----+--------------------------------+

->Please choose the start index of deleting entry[0-1]:1
->Please choose the end index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure Keyword Filter List

The following items are displayed on this screen:

► **Keyword Filter:** If enabled, packet filtering is enabled by keyword.

► **Policy:** The policy for filtering web page, Deny and Allow.

IP Filter

The command “show ip-filter” shows the IP filter information as below:

```
BG9002N#show ip-filter

 Enable MAC Filter.............................: Enable
 Policy........................................: Deny

+----+----------------+--------------------------------+
| No |      IPv4      |              IPv6              |
+----+----------------+--------------------------------+
|0   |192.168.2.3     |                                |
+----+----------------+--------------------------------+

BG9002N#_
```

Show IP Filter Information

The command “set ip-filter” configures the IP filter parameters as below:

```
BG9002N#set ip-filter
->Enable IP Filter? 'yes' or 'no'[yes]:
->Policy(0-Deny,1-Allow)[0]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#_
```

Configure IP Filter Parameters

The command “set ip-filter list” configures the IP filter list as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set ip-filter list
IP Filter List Config:
->Select config type(0-add,1-del,2-modify)[0]:
->IPv4[]:192.168.5.6
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set ip-filter list
IP Filter List Config:
->Select config type(0-add,1-del,2-modify)[0]: 2
+----+---------------+--------------------------------+
| No |      IPv4     |              IPv6              |
+----+---------------+--------------------------------+
|0   |192.168.2.3    |                                |
+----+---------------+--------------------------------+
|1   |192.168.5.6    |                                |
+----+---------------+--------------------------------+
->Please input number which you will modify[0-1]:1
->IPv4[192.168.5.6]:192.168.6.9
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set ip-filter list
IP Filter List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1
+----+---------------+--------------------------------+
| No |      IPv4     |              IPv6              |
+----+---------------+--------------------------------+
|0   |192.168.2.3    |                                |
+----+---------------+--------------------------------+
|1   |192.168.6.9    |                                |
+----+---------------+--------------------------------+

->Please choose the start index of deleting entry[0-1]:1
->Please choose the end index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure IP Filter List

The following items are displayed on this screen:

► **IP Filter:** If enabled, packet filtering is enabled by IP address.

► **Policy:** The policy for IP address list. Deny and Allow.

MAC Filter

The command “show mac-filter” shows the MAC filter information as below:

```
BG9002N#show mac-filter

 Enable MAC Filter.................................: Enable
 Policy............................................: Deny

+----+--------------------+
| No |          MAC       |
+----+--------------------+
|0   |11:a3:f6:33:44:55   |
+----+--------------------+

BG9002N#
```

Show MAC Filter Information

The command “set mac-filter ” configures the MAC filter parameters as below:

```
BG9002N#set mac-filter
->Enable MAC Filter? 'yes' or 'no'[yes]:
->Policy(0-Deny,1-Allow)[0]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#_
```

Configure IP Filter Parameters

The command “set mac-filter list” configures the MAC filter list as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set mac-filter list
MAC Filter List Config:
->Select config type(0-add,1-del,2-modify)[0]: 0
->MAC[00:00:00:00:00:00]:11:23:4e:d6:56:98
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set mac-filter list
MAC Filter List Config:
->Select config type(0-add,1-del,2-modify)[0]: 2
+----+--------------------+
| No |          MAC       |
+----+--------------------+
|0   |11:a3:f6:33:44:55   |
+----+--------------------+
|1   |11:23:4e:d6:56:98   |
+----+--------------------+
->Please input number which you will modify[0-1]:1
->MAC[11:23:4e:d6:56:98]:33:56:86:25:41:43
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set mac-filter list
MAC Filter List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1
+----+--------------------+
| No |          MAC       |
+----+--------------------+
|0   |11:a3:f6:33:44:55   |
+----+--------------------+
|1   |33:56:86:25:41:43   |
+----+--------------------+

->Please choose the start index of deleting entry[0-1]:1
->Please choose the end index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure MAC Filter List

The following items are displayed on this screen:

► **MAC Filter:** If enabled, packet filtering is enabled by MAC.

► **Policy:** The policy for MAC list. Deny and Allow.

QoS

Basic Settings

The command “show qos basic-settings” shows the QoS basic settings as below:

```
BG9002N#show qos basic-settings
->Enable QoS.....................................: Enable
->Scheduling mode................................: PQ
->QoS Priority...................................: 802.1P
->Upstream Bandwidth(Kbps).......................: 0
->Downstream Bandwidth(Kbps).....................: 0
->Enable Voice Reservation.......................: Enable
->Voice Reservation Bandwidth(Kbps)..............: 96
->Enable Video Reservation.......................: Disable
->Enable Remap ToS/DSCP to CoS...................: Disable

BG9002N#_
```

Show QoS Basic Settings

The command “set qos basic-settings” configures the QoS basic settings as below:

```
BG9002N#set qos basic-settings
->Enable QoS? 'yes' or 'no'[yes]:
->Scheduling mode(0: PQ, 1: WRR, 2: PQ+WRR)[0]: 1
->Weight[0]: 1
->Weight[0]: 2
->Weight[0]: 3
->Weight[0]: 4
->QoS Priority(0:DSCP, 1:802.1p)[1]: 0
->Upstream Bandwidth(Kbps)[0]:
->Downstream Bandwidth(Kbps)[0]:
->Enable Voice Reservation? 'yes' or 'no'[yes]:
->Voice Reservation Bandwidth(Kbps)[96]:
->Enable Video Reservation? 'yes' or 'no'[no]:
->Enable Remap ToS/DSCP to CoS? 'yes' or 'no'[no]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure QoS Basic Settings

The following items are displayed on this screen:

► **Qos Enable:** Enable or disable QoS functionality.

► **Scheduling Mode:** **PQ:** PQ means strict priority, that is, when congestion occurs, first sending packets of high priority queue.

WRR: All queues use weighted fair queuing scheme which is defined in **Weight Ratio**

PQ+WRR: Only highest queue use strict priority; others use weighted fair queuing scheme.

► **Qos Priority:** **DSCP** and **802.1P:** depending on the value of priority classification into different queues.

► **Upstream Bandwidth:** Configure the bandwidth of upstream.

► **Downstream Bandwidth:** Configure the bandwidth of downstream.

► **Enable Voice Reservation:** Enable voice reservation and give the value to reserved for voice

► **Enable Video Reservation:** Enable video reservation and give the value to reserved for video

► **Remap Tos/DSCP to CoS:** Check the box that the system will remark 802.1P value with TOS/DSCP of upstream packets, the mapping relationship is as follows:

Port Rate Limit

The command “show qos port-limit” shows the port rate limit information as below:

```
BG9002N#show qos port-limit
Tips:UP:Unicast; MP:Multicast; BP:Broadcast;
    UUP:Unknown Unicast; UMP:Unknown Multicast;
+----+--------+------------------+------------------+----------------------+
|port|Enable  |Incoming Rate Limit|Outgoing Rate Limit|   Limit Packet type  |
+----+--------+------------------+------------------+----------------------+
|LAN1|Disable | 0 kbps           | 0kbps            |All                   |
+----+--------+------------------+------------------+----------------------+
|LAN2|Disable | 0 kbps           | 0kbps            |UP,MP,UUP,UMP         |
+----+--------+------------------+------------------+----------------------+
|LAN3|Disable | 0 kbps           | 0kbps            |                      |
+----+--------+------------------+------------------+----------------------+
|LAN4|Disable | 0 kbps           | 0kbps            |                      |
+----+--------+------------------+------------------+----------------------+

BG9002N#_
```

Show Port Rate Limit Information

The command “set qos port-limit” configures the port rate limit as below:

```
BG9002N#set qos port-limit
->Input port index(1-LAN1, 2-LAN2, 3-LAN3, 4-LAN4)[1]: 1
->Enable rate limit 'yes' or 'no' [no]:y
->Incoming Rate Limit(Kbps)(0~1024000)[0]: 102400
->Outgoing Rate Limit(Kbps)(0~1024000)[0]:
packet type:
  ->all 'yes' or 'no' [yes]:n
  ->unicast 'yes' or 'no' [no]:
  ->multicast 'yes' or 'no' [no]:
  ->broadcast 'yes' or 'no' [no]:
  ->unknown unicast 'yes' or 'no' [no]:
  ->unknown multicast 'yes' or 'no' [no]:
Really want to modify? 'yes' or 'no'[yes]:y
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure Port Rate Limit

The following items are displayed on this screen:

- ► **Port:** Physical LAN port
- ► **Enable:** Enable or disable rate limit function.
- ► **Incoming Rate Limit:** Enter incoming maximum rate, which must is times of 32Kbsp.
- ►**Limit Packet Type:** Select the packet type which is limited rate.
- ► **Outgoing Rate Limit:** Enter Outgoing maximum rate, which must is times of 32Kbsp.

Flow Rate Limit

The command “show qos flow-limit” shows the flow rate limit information as below:

```
BG9002N#show qos flow-limit
+----+--------+---------+--------------+--------------+
| No |Protocol|Direction|   CIR(Kbps)  |   PIR(Kbps)  |
+----+--------+---------+--------------+--------------+
|0   |ANY     |up       | 0            | 0            |
+----+--------+---------+--------------+--------------+

->Enter the index to show(0-0)[0]:0
->IP Range(Start IP).............................:1.0.0.1
->IP Range(End IP)...............................:1.0.0.2
->Active Time(Start Time)........................:00:00
->Active Time(End Time)..........................:00:00
->Active Monday..................................:Disable
->Active Tuesday.................................:Disable
->Active Wednesday...............................:Disable
->Active Thursday................................:Disable
->Active Friday..................................:Disable
->Active Saturday................................:Disable
->Active Sunday..................................:Disable
->Direction......................................:up
->Protocol Type..................................:ANY
->Port Range(Start Port).........................:0
->Port Range(End Port)...........................:0
->CIR............................................:0
->PIR............................................:0

->Show flow rate limit detail para continue or not?[yes]:n

BG9002N#
```

Show Flow Rate Limit Information

The command “set qos flow-limit” configures the flow rate limit as below. Enter 0 add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set qos flow-limit
Flow Limit List Config:
->Select config type(0-add,1-del,2-modify)[0]:
->IP Range(Start IP)[]:192.168.5.6
->IP Range(End IP)[]:192.168.5.90
->Active Time(Start Time)[00:00]:
->Active Time(End Time)[00:00]:23:00
->Active Monday? 'yes' or 'no'[no]:
->Active Monday? 'yes' or 'no'[no]:
->Active Tuesday? 'yes' or 'no'[no]:
->Active Wednesday? 'yes' or 'no'[no]:
->Active Thursday? 'yes' or 'no'[no]:
->Active Friday? 'yes' or 'no'[no]:
->Active Saturday? 'yes' or 'no'[no]:
->Direction(0-up,1-down,2-all)[0]:
->Type(0-Application,1-Custom)[0]:
->Protocol Type(0-HTTP,1-HTTPS,2-FTP,3-TFTP,4-SMTP,5-POP3,6-TELNET,7-ANY)[0]:
->CIR[0]:
->PIR[0]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set qos flow-limit
Flow Limit List Config:
->Select config type(0-add,1-del,2-modify)[0]: 2
+----+--------+---------+--------------+--------------+
| No |Protocol|Direction|   CIR(Kbps)  |   PIR(Kbps)  |
+----+--------+---------+--------------+--------------+
|0   |ANY     |up       | 0            | 0            |
+----+--------+---------+--------------+--------------+
|1   |HTTP    |up       | 0            | 0            |
+----+--------+---------+--------------+--------------+
->Please input number which you will modify[0-1]:1
->IP Range(Start IP)[192.168.5.6]:
->IP Range(End IP)[192.168.5.90]:
->Active Time(Start Time)[00:00]:
->Active Time(End Time)[23:00]:
->Active Monday? 'yes' or 'no'[no]:
->Active Monday? 'yes' or 'no'[no]:
->Active Tuesday? 'yes' or 'no'[no]:
->Active Wednesday? 'yes' or 'no'[no]:
->Active Thursday? 'yes' or 'no'[no]:
->Active Friday? 'yes' or 'no'[no]:
->Active Saturday? 'yes' or 'no'[no]:
->Direction(0-up,1-down,2-all)[0]:
->Type(0-Application,1-Custom)[0]:
->Protocol Type(0-HTTP,1-HTTPS,2-FTP,3-TFTP,4-SMTP,5-POP3,6-TELNET,7-ANY)[0]:
->CIR[0]:
->PIR[0]:
->Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set qos flow-limit
Flow Limit List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1
+----+--------+---------+--------------+--------------+
| No |Protocol|Direction|   CIR(Kbps)  |   PIR(Kbps)  |
+----+--------+---------+--------------+--------------+
|0   |ANY     |up       | 0            | 0            |
+----+--------+---------+--------------+--------------+
|1   |HTTP    |up       | 0            | 0            |
+----+--------+---------+--------------+--------------+

->Please choose the start index of deleting entry[0-1]:1
->Please choose the end index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#_
```

Configure Flow Rate Limit

The following items are displayed on this screen:

- ► **IP Range:** The IP range of LAN's PC.
- ► **Active Time:** If not configured, which means that all time are in active
- ► **Active Day:** If not configured, which means that all time in active
- ► **Direction:** **Up: C**heck the frame from the direction of the LAN port to the WAN port, and match the source IP and destination port;
  Down: Check the frame from the direction of the WAN port to the LAN

port, and match the destination IP and source port;
Bidirectional: Limit both upstream and downstream speed.

► **Limited Bandwidth(CIR):** The limited bandwidth.

► **Maximal Bandwidth(PIR):** The maximum bandwidth.

If **Application** is selected:

► **Application Protocol:** Such as HTTP, HTTPS, FTP, TFTP, SMTP, POP3, TELNET, etc.

Service

The command “show qos service” shows the QoS service information as below:

```
BG9002N#show qos service
->Enable service queue.............................: Enable
->Remap Voice Queue Priority.......................: Enable
->Voice Priority...................................: 3
->Enable remark voice 802.1p.......................: Disable
->Enable remark Voice DSCP.........................: Disable
->Remap MGMT Queue Priority........................: Enable
->MGMT Priority....................................: 2
->Enable remark MGMT 802.1p........................: Disable
->Enable remark MGMT DSCP..........................: Disable
->Remap Video Queue Priority.......................: Enable
->Video Priority...................................: 1
->Enable remark Video 802.1p.......................: Disable
->Enable remark Video DSCP.........................: Disable

BG9002N#_
```

Show QoS Service Information

The command “set qos service” configures the QoS service as below:

```
BG9002N#set qos service
service qos:
->Enable service queue? 'yes' or 'no'[yes]:
->Remap Voice Queue Priority? 'yes' or 'no'[yes]:
->Voice Priority(0~3)[3]:
->Enable remark Voice 802.1p? 'yes' or 'no'[no]:
->Enable remark Voice DSCP? 'yes' or 'no'[no]:
->Remap MGMT Queue Priority? 'yes' or 'no'[no]:y
->MGMT Priority(0~3)[2]:
->Enable remark MGMT 802.1p? 'yes' or 'no'[no]:y
->MGMT 802.1p(0~7)[0]:
->Enable remark MGMT DSCP? 'yes' or 'no'[no]:y
->MGMT DSCP(0~63)[0]:
->Remap Video Queue Priority? 'yes' or 'no'[no]:
->Enable remark Video 802.1p? 'yes' or 'no'[no]:
->Enable remark Video DSCP? 'yes' or 'no'[no]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure QoS Service

The following items are displayed on this screen:

► **Name:** Service name. Read only.

► **Remap Queue Priority:** Check the box to remap scheduling queue.
► **Priority:** There are four levels of priority. Priority 3 is highest, and priority 0 is the lowest
► **Remark 802.1p:** Check the box to enable 802.1p priority remarking.
► **802.1p Value:** The value of remarking 802.1P.
► **Remark DSCP:** Check the box to enable DSCP remarking.
► **DSCP Value:** The value of remarking DSCP.

ACL

The command “show qos acl-rule” shows the ACL rule information as below:

```
BG9002N#show qos acl-rule
->input rule id(0~23,all)[0]:
->Rule Name.....: 123
->Bind Port(1-LAN1,2-LAN2,3-LAN3,4-LAN4,5-WAN)....: 0x06
->Rule Type.....: L3 Data
->Src IP.....: 192.168.1.2/255.255.0.0
->Dst IP.....: 139.6.5.9/255.255.0.0
->Drop.....: Disable
->Enable Remark VID.....: Disable
->Enable Remark 802.1P.....: Disable
->Enable Remark DSCP.....: Disable
->Enable Priority.....: Disable
->PIR.....: 0


BG9002N#
```

Show ACL Rule Information

The command “set qos acl-rule” configures the ACL rule as below:

```
BG9002N#set qos acl-rule
->Enable ACL 'yes' or 'no' [yes]:
->input rule id(0~23)[0]:
->enable rule 0 'yes' or 'no' [yes]:
->Rule Name[123]: 12345
->Input port member bitmap(Eg: 0x12 include port1,4)[0x6]: 0x05
->Rule Type(0-L2 Data,1-L3 Data)[1]:
 ->Src IP[192.168.1.2]:
 ->Src Netmask[255.255.0.0]:
 ->Dst IP[139.6.5.9]:
 ->Dst Netmask[255.255.0.0]:
 ->Protocol Type(1: icmp, 6: tcp, 17: udp)[0]: 1
->Drop 'yes' or 'no' [no]:
->Enable Remark VID 'yes' or 'no' [no]:
->Enable Remark 802.1P 'yes' or 'no' [no]:
->Enable Remark DSCP 'yes' or 'no' [no]:
->Enable Priority 'yes' or 'no' [no]:
->PIR(0~1024000 Kbps)[0]: 1024000
Really want to modify? 'yes' or 'no'[yes]:y
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure ACL Rule

The following items are displayed on this screen:

► **Rule Name:** The custom name.
► **Physical Port:** Rule's source port
► **Rule Type:** Type of rule: **L2 data** or **L3 data**.
► **Src IP/Netmask:** The source IP address and netmask of packets, such as 192.168.100.1/255.255.255.0.
► **Dest IP/Netmask:** The destination IP address and netmask of packets.
► **Protocol:** E.g. ICMP, UDP, TCP, or custom IP protocol types.
► **SRC MAC:** Source MAC address of packets.
► **DEST MAC:** Destination MAC address of packets.
► **Ether Type:** The ether type of packets.
► **VLAN ID:** The VLAN id of packets.
► **802.1p:** The VLAN priority of packets.
► **Drop:** Drop the packets matched with the rule.
► **Remark VID:** Change the VID of packets matched with the rule.
► **Remark 802.1p:** Change the 802.1P priority of packets matched with the rule.
► **Remark DSCP:** Change the DSCP of packets matched with the rule.
► **Priority:** Change the scheduling queue of packets matched with the rule.
► **Maximal Bandwidth:** Limit the bandwidth of packet matched with the rule.

DDNS

The command "show ddns status" shows the DDNS status as below:

```
BG9002N#show ddns status
 DDNS status.....................................: DDNS_TASK_NOT_INIT

BG9002N#
```

Show DDNS Status

The command "show ddns parameter" shows the DDNS parameters as below:

```
BG9002N#show ddns parameter
 Enable DDNS.....................................: Enable
 Username........................................: dydns
 Password........................................: 123456
 First Url.......................................: dydns1.com
 Second Url......................................: dydns2.com
 Update Interval.................................: 600
 Server Type.....................................: CUSTOM
 Server Name.....................................: dydns.com
 Server Url......................................: dydns.com
 Dyn DNS Server Name.............................: dydns.com
 Dyn DNS Server Url..............................: dydns.com
 System Item.....................................: dydns.com

BG9002N#
```

Show DDNS Parameters

The command "set ddns" configures the DDNS parameters as below:

```
BG9002N#set ddns
->Enable DDNS 'yes' or 'no' [no]:y
->Username[dydns]:
->Password[123456]:
->First Url[dydns1.com]:
->Second Url[dydns2.com]:
->Update Interval[600]:
->Server Type(0-DYNDNS,1-FREEDNS,2-ZONE,3-NOIP,4-3322,5-CUSTOM)[0]:5
->Server Name[dydns.com]:
->Server Url[dydns.com]:
->Dyn DNS Server Name[dydns.com]:
->Dyn DNS Server Url[dydns.com]:
->System Item[dydns.com]:
Really want to modify? 'yes' or 'no'[yes]:y
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure DDNS Parameters

The following items are displayed on this screen:

- ► **DDNS Enable:** Active or inactive dynamic DNS service.
- ► **Username:** Enter account name of your DDNS account.
- ► **Password:** Enter password of your DDNS account.
- ► **First Url:** First domain name that you registered your DDNS service provider.
- ► **Second Url:** First domain name that you registered your DDNS service provider.
- ► **Update Interval:** How often, in seconds, the IP is updated.
- ► **Server Type:** optional DDNS server type, can select from pull-dwon list:
  DYNDNS: For dyndns.org
  FREEDNS: For freedns.afraid.org
  ZONE: For zoneedit.com
  NOIP: For no-ip.com
  3322: For 3322.org
  CUSTOM: For custom self-defined DDNS server type.
- ► **Server Name:** If CUSTOM is selected, specify server name of the device.
- ► **Server Url:** If CUSTOM is selected, specify server URL of the device.
- ► **Dyn DNS Server Name:** If CUSTOM is selected, specify dyndns DNS server name of custom self-defined.
- ► **Dyn DNS Server Url:** If CUSTOM is selected, specify dyndns DNS server URL of custom self-defined.
- ► **System Item:** If CUSTOM is selected, specify system item of custom self-defined.
- ► **DDNS Status:** Display the status of DDNS service. Read only.

VPN

PPTP Server

The command “show pptp-server” shows the pptp server information as below:

```
BG9002N#show pptp-server
 Enable PPTP Server.................................: Enable
 IP Address Pool Range(Start IP)....................: 192.168.1.1
 IP Address Pool Range(End IP)......................: 192.168.1.6
 Enable Authentication..............................: Enable
 Enable Encryption..................................: Disable
+----+--------------------+--------------------+----------------+
| No |     Username       |     Password       |   Binding IP   |
+----+--------------------+--------------------+----------------+
|0   |123                 |123                 |192.168.5.6     |
+----+--------------------+--------------------+----------------+

BG9002N#_
```

Show PPTP Server Information

The command “set pptp-server” configures the pptp server parameters as below:

```
BG9002N#set pptp-server
->Enable PPTP Server 'yes' or 'no' [yes]:
->IP Address Pool Range(Start IP)[192.168.1.1]:
->IP Address Pool Range(End IP)[192.168.1.6]:
->Enable Authentication 'yes' or 'no' [yes]:
->Enable Encryption 'yes' or 'no' [no]:
Are you sure save parameter? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure PPTP Server Parameters

The following items are displayed on this screen:

► **Enable PPTP Server:** Enable or disable the PPTP server function globally.

► **IP Address Pool Range:** Specify the start and the end IP address for IP Pool. The start IP address should not exceed the end address and the IP ranges must not overlap.

► **Enable Authentication:** Specify whether to enable authentication for the tunnel.

► **Enable Encryption:** Specify whether to enable the encryption for the tunnel. If enabled, the PPTP tunnel will be encrypted by MPPE.

The command “set pptp-server user” configures the pptp server user list as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set pptp-server user
PPTPServer User List Config:
->Select Config type(0-add,1-del,2-modify)[0]: 1
+----+--------------------+--------------------+----------------+
| No |     Username       |     Password       |   Binding IP   |
+----+--------------------+--------------------+----------------+
|0   |123qwe              |qweasd              |192.168.5.6     |
+----+--------------------+--------------------+----------------+
|1   |wepasd              |123456              |136.23.6.8      |
+----+--------------------+--------------------+----------------+

->Please choose the start Index of deleting entry[0-1]:1
->Please choose the end Index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure PPTP Server User

The following items are displayed on this screen:

► **Username:** Enter the account name of PPTP tunnel. It should be configured identically on server and client.

► **Password:** Enter the password of PPTP tunnel. It should be configured identically on server and client.

► **Binding IP:** Enter the IP address of the client which is allowed to connect to this PPTP server.

L2TP Server

The command “show l2tp-server” shows the l2tp server information as below:

```
BG9002N#show l2tp-server
 Enable L2TP Server.................................: Enable
 Local IP...........................................: 10.0.0.1
 IP Address Pool Range(Start IP)....................: 10.0.0.1
 IP Address Pool Range(End IP)......................: 10.0.0.1
 Enable Authentication..............................: Enable
 L2TP Auth Secret...................................: 123456
 Enable Debug.......................................: Enable
+----+--------------------+--------------------+----------------+
| No |     Username       |     Password       |   Binding IP   |
+----+--------------------+--------------------+----------------+
|0   |1234                |1234                |138.2.61.136    |
+----+--------------------+--------------------+----------------+
|1   |1123                |54321               |136.56.22.65    |
+----+--------------------+--------------------+----------------+

BG9002N#
```

Show L2TP Server Information

The command “set l2tp-server” configures the l2tp server parameters as below:

```
BG9002N#set l2tp-server
->Enable L2TP Server 'yes' or 'no' [yes]:
->Local IP[10.0.0.1]:
->IP Address Pool Range(Start IP)[10.0.0.1]:
->IP Address Pool Range(End IP)[10.0.0.1]:
->Enable Authentication 'yes' or 'no' [yes]:
->L2TP Auth Secret[123456]:
->Enable Debug 'yes' or 'no' [yes]:
Are you sure save parameter? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure L2TP Server Parameters

The following items are displayed on this screen:

- ► **Enable L2TP Server:** Enable or disable the L2TP server function globally.
- ► **Local IP:** Enter the local IP address of L2TP server.
- ► **IP Address Pool Range:** Specify the start and the end IP address for IP Pool. The start IP address should not exceed the end address and the IP ranges must not overlap.
- ► **Enable Authentication:** Specify whether to enable authentication for the tunnel. If enabled, enter the authentication secret.
- ► **Enable Debug:** Specify whether to enable the debug for L2TP.

The command “set l2tp-server user” configures the l2tp server user list as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify .If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set l2tp-server user
L2TPServer User List Config:
->Select config type(0-add,1-del,2-modify)[0]:
->Username[]:yzasd
->Password[]:123654
->Pointed IP[]:195.6.5.9
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set l2tp-server user
L2TPServer User List Config:
->Select config type(0-add,1-del,2-modify)[0]: 2
+----+--------------------+--------------------+----------------+
| No |     Username       |     Password       |   Binding IP   |
+----+--------------------+--------------------+----------------+
|0   |1234                |1234                |138.2.61.136    |
+----+--------------------+--------------------+----------------+
|1   |1123                |54321               |136.56.22.65    |
+----+--------------------+--------------------+----------------+
|2   |yzasd               |123654              |195.6.5.9       |
+----+--------------------+--------------------+----------------+
->Please input number which you will modify[0-2]:2
->Username[yzasd]:
->Password[123654]:123456
->Pointed IP[195.6.5.9]:
->Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set l2tp-server user
L2TPServer User List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1
+----+--------------------+--------------------+----------------+
| No |     Username       |     Password       |   Binding IP   |
+----+--------------------+--------------------+----------------+
|0   |1234                |1234                |138.2.61.136    |
+----+--------------------+--------------------+----------------+
|1   |1123                |54321               |136.56.22.65    |
+----+--------------------+--------------------+----------------+
|2   |yzasd               |123456              |195.6.5.9       |
+----+--------------------+--------------------+----------------+

->Please choose the start index of deleting entry[0-2]:2
->Please choose the end index of deleting entry[0-2]:2
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure L2TP Server User

The following items are displayed on this screen:

► **Username:** Enter the account name of L2TP tunnel. It should be configured identically on server and client.

► **Password:** Enter the password of L2TP tunnel. It should be configured identically on server and client.

► **Binding IP:** Enter the IP address of the client which is allowed to connect to this L2TP server.

IPSEC

IKE Safety Proposal

The command “show ike-proposal” shows the IKE Proposal information as below:

```
BG9002N#show ike-proposall
+----+------------------+--------------------+----------------+----------+
| No |    Proposal Name  |Encryption Algorithm| Auth Algorithm | DH Group |
+----+------------------+--------------------+----------------+----------+
|0   | ike123            | 3DES               | SHA1           | modp1536 |
+----+------------------+--------------------+----------------+----------+

BG9002N#
```

Show IKE Proposal Information

The command “set ike-proposal” configures the IKE Proposal as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set ike-proposall

->IKE Proposal:0-Add,1-Delete,2-Modify[0]:0
->Proposal Name[]:ike_pro_11
->Encryption Algorithm(0-3DES,1-DES,2-AES)[0]:
->Auth Algorithm(0-SHA1,1-MD5)[0]:
->DH Group(0-modp1536,1-modp1024 ,2-modp768)[0]:
->Really want to modify? 'yes' or 'no'[yes]:

  Oprate success!
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set ike-proposall

->IKE Proposal:0-Add,1-Delete,2-Modify[0]:2
+----+------------------+--------------------+----------------+----------+
| No |    Proposal Name  |Encryption Algorithm| Auth Algorithm | DH Group |
+----+------------------+--------------------+----------------+----------+
|0   | ike123            | 3DES               | SHA1           | modp1536 |
+----+------------------+--------------------+----------------+----------+
|1   | ike_pro_11        | 3DES               | SHA1           | modp1536 |
+----+------------------+--------------------+----------------+----------+
->Enter the index to modify(0-1)[0]:0
->Proposal Name[ike123]:ike1
->Encryption Algorithm(0-3DES,1-DES,2-AES)[0]:1
->Auth Algorithm(0-SHA1,1-MD5)[0]:1
->DH Group(0-modp1536,1-modp1024 ,2-modp768)[0]:
->Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set ike-proposall

->IKE Proposal:0-Add,1-Delete,2-Modify[0]:1
+----+------------------+--------------------+----------------+----------+
| No |    Proposal Name  |Encryption Algorithm| Auth Algorithm | DH Group |
+----+------------------+--------------------+----------------+----------+
|0   | ike1              | DES                | MD5            | modp1536 |
+----+------------------+--------------------+----------------+----------+
|1   | ike_pro_11        | 3DES               | SHA1           | modp1536 |
+----+------------------+--------------------+----------------+----------+

->Please choose the start Index of deleting entry[0-1]:1
->Please choose the end Index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure IKE Proposal

The following items are displayed on this screen:

► **Proposal Name:** Specify a unique name to the IKE proposal for identification and management purposes. The IKE proposal can be applied to IPSEC proposal.

► **Encryption Algorithm:** Specify the encryption algorithm for IKE negotiation. Options include:

DES: DES (Data Encryption Standard) encrypts a 64-bit block of plain text with a 56-bit key.

3DES: Triple DES, encrypts a plain text with 168-bit key.

AES: Uses the AES algorithm for encryption.

► **Auth Algorithm:** Select the authentication algorithm for IKE negotiation. Options include:

MD5: MD5 (Message Digest Algorithm) takes a message of arbitrary length and generates a 128-bit message digest.

SHA1: SHA1 (Secure Hash Algorithm) takes a message less than 2^64 (the 64th power of 2) in bits and generates a 160-bit message digest.

► **DH Group:** Select the DH (Diffie-Hellman) group to be used in key negotiation phase 1. The DH Group sets the strength of the algorithm in bits. Options include **DH 768 modp**, **DH 1024 modp** and **DH 1536 modp**.

IKE Safety Policy

The command “show ike-policy” shows the IKE Policy information as below:

```
BG9002N#show ike-policy
+----+-----------------+-------------+----------+--------------+
| No |   Policy Name   |Operation Mode| Auth Mode|  PreShareKey |
+----+-----------------+-------------+----------+--------------+
|0   | ike_policy_1    |Main Mode    | PSK      | 123321       |
+----+-----------------+-------------+----------+--------------+

->Enter the index to show(0-0)[0]:
 Policy Name.....................................:ike_policy_1
 Operation Mode..................................:Main Mode
 Enable Local ID.................................:Disable
 Enable Remote ID................................:Disable
 Auth Mode.......................................:PSK
 Pre Share Key...................................:123321
 Enable Safety Proposal1.........................:Enable
 Proposal Name1..................................:ike123
 Enable Safety Proposal2.........................:Disable
 Enable Safety Proposal3.........................:Disable
 Enable Safety Proposal4.........................:Disable

->Show IKE policy detail para continue or not?[yes]:n

BG9002N#
```

Show IKE Policy Information

The command “set ike-policy” configures the IKE Policy as below. Enter 0 add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set ike-policy

->IKE Policy:0-Add,1-Delete,2-Modify[0]:0
->Policy Name[]:ike_po_2
->Operation Mode(0-Main Mode,1-Challenge Mode)[0]:1
->Enable Local ID(yes/no)[no]:
->Enable Remote ID(yes/no)[no]:
->Auth Mode(0-PSK,1-RSA,2-Certificate)[0]:1
->Pre Share Key[]:123456
->Enable Safety Proposal 1(yes/no)[no]:
->Enable Safety Proposal 2(yes/no)[no]:
->Enable Safety Proposal 3(yes/no)[no]:
->Enable Safety Proposal 4(yes/no)[no]:
->Really want to modify? 'yes' or 'no'[yes]:

  Oprate success!
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set ike-policy

->IKE Policy:0-Add,1-Delete,2-Modify[0]:2
+----+-----------------+-------------+----------+--------------+
| No |   Policy Name   |Operation Mode| Auth Mode|  PreShareKey |
+----+-----------------+-------------+----------+--------------+
|0   | ike_policy_1    |Main Mode    | PSK      | 123321       |
+----+-----------------+-------------+----------+--------------+
|1   | ike_po_2        |Challenge Mode| RSA     | 123456       |
+----+-----------------+-------------+----------+--------------+
->Enter the index to modify(0-1)[0]:1
->Policy Name[ike_po_2]:
->Operation Mode(0-Main Mode,1-Challenge Mode)[1]:0
->Enable Local ID(yes/no)[no]:
->Enable Remote ID(yes/no)[no]:
->Auth Mode(0-PSK,1-RSA,2-Certificate)[1]:
->Pre Share Key[123456]:
->Enable Safety Proposal 1(yes/no)[no]:
->Enable Safety Proposal 2(yes/no)[no]:
->Enable Safety Proposal 3(yes/no)[no]:
->Enable Safety Proposal 4(yes/no)[no]:
->Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set ike-policy

->IKE Policy:0-Add,1-Delete,2-Modify[0]:1
+----+-----------------+-------------+----------+--------------+
| No |   Policy Name   |Operation Mode| Auth Mode|  PreShareKey |
+----+-----------------+-------------+----------+--------------+
|0   | ike_policy_1    |Main Mode    | PSK      | 123321       |
+----+-----------------+-------------+----------+--------------+
|1   | ike_po_2        |Main Mode    | RSA      | 123456       |
+----+-----------------+-------------+----------+--------------+

->Please choose the start Index of deleting entry[0-1]:1
->Please choose the end Index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure IKE Policy

The following items are displayed on this screen:

► **Policy Name:** Specify a unique name to the IKE policy for identification and management purposes. The IKE policy can be applied to IPSEC policy.

► **Operation Mode:** Select the IKE Exchange Mode in phase 1, and ensure the remote VPN peer uses the same mode.

Main: Main mode provides identity protection and exchanges more information, which applies to the scenarios with higher requirement for identity protection.

Challenge: Challenge Mode establishes a faster connection but with lower security, which applies to scenarios with lower requirement for identity protection.

► **Enable Local ID:** If enabled, enter a name for the local device as the ID in IKE negotiation.

► **Enable Remote ID:** If enabled, enter the name of the remote peer as the ID in IKE negotiation.

► **Auth Mode:** Select the authentication mode for this IKE policy entry.

► **Pre Share Key:** Enter the Pre-shared Key for IKE authentication, and ensure both the two peers use the same key. The key should consist of visible characters without blank space.

► **Enable Safety Proposal:** Select the Proposal for IKE negotiation phase 1. Up to four proposals can be selected.

IPSEC Safety Proposal

The command “show ipsec-proposal” shows the IPSEC Proposal information as below:

```
BG9002N#show ipsec-proposal
+----+----------------+--------------------+----------------+--------------+
| No |  Proposal Name |Encryption Algorithm| Auth Algorithm |IPSEC Protocol|
+----+----------------+--------------------+----------------+--------------+
|0   |ipsec123        |3DES                | SHA1           | ESP          |
+----+----------------+--------------------+----------------+--------------+

BG9002N#
```

Show IPSEC Proposal Information

The command “set ipsec-proposal” configures the IPSEC Proposal as below. Enter 0 add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set ipsec-proposall

->IPSEC Proposal:0-Add,1-Delete,2-Modify[0]:
->Proposal Name[]:1234
->Encryption Algorithm(0-3DES,1-DES,2-AES)[0]:1
->Auth Algorithm(0-SHA1,1-MD5)[0]:1
->IPSEC Protocol(0-ESP,1-AH,2-ESP+AH)[0]:1
->Really want to modify? 'yes' or 'no'[yes]:

  Oprate success!
The configuration will take effect after saved and reloaded!

BG9002N#
```

```
BG9002N#set ipsec-proposall

->IPSEC Proposal:0-Add,1-Delete,2-Modify[0]:2
+----+---------------+--------------------+----------------+--------------+
| No |  Proposal Name |Encryption Algorithm| Auth Algorithm |IPSEC Protocol|
+----+---------------+--------------------+----------------+--------------+
|0   |ipsec123        |3DES                | SHA1           | ESP          |
+----+---------------+--------------------+----------------+--------------+
|1   |1234            |DES                 | MD5            | AH           |
+----+---------------+--------------------+----------------+--------------+
->Enter the index to modify(0-1)[0]:1
->Proposal Name[1234]:
->Encryption Algorithm(0-3DES,1-DES,2-AES)[1]:2
->Auth Algorithm(0-SHA1,1-MD5)[1]:1
->IPSEC Protocol(0-ESP,1-AH,2-ESP+AH)[1]:
->Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set ipsec-proposall

->IPSEC Proposal:0-Add,1-Delete,2-Modify[0]:1
+----+---------------+--------------------+----------------+--------------+
| No |  Proposal Name |Encryption Algorithm| Auth Algorithm |IPSEC Protocol|
+----+---------------+--------------------+----------------+--------------+
|0   |ipsec123        |3DES                | SHA1           | ESP          |
+----+---------------+--------------------+----------------+--------------+
|1   |1234            |AES                 | MD5            | AH           |
+----+---------------+--------------------+----------------+--------------+

->Please choose the start index of deleting entry[0-1]:1
->Please choose the end index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure IPSEC Proposal

The following items are displayed on this screen:

► **Proposal Name:** Specify a unique name to the IPSEC Proposal for identification and management purposes. The IPSEC proposal can be applied to IPSEC policy.

► **IPSec Protocol:** Select the security protocol to be used. Options include:

AH: AH (Authentication Header) provides data origin authentication, data integrity and anti-replay services.

ESP: ESP (Encapsulating Security Payload) provides data encryption in addition to origin authentication, data integrity, and anti-replay services.

ESP+AH: Both ESP and AH security protocol.

► **Encryption Algorithm:** Select the algorithm used to encrypt the data for ESP encryption. Options include:

DES: DES (Data Encryption Standard) encrypts a 64-bit block of plain text with a 56-bit key. The key should be 8 characters.

3DES: Triple DES, encrypts a plain text with 168-bit key. The key should be 24 characters.

AES: Uses the AES algorithm for encryption. The key should be 16 characters.

► **Auth Algorithm:** Select the algorithm used to verify the integrity of the data. Options include:

MD5: MD5 (Message Digest Algorithm) takes a message of arbitrary length and generates a 128-bit message digest.

SHA: SHA (Secure Hash Algorithm) takes a message less than the 64th power of 2 in bits and generates a 160-bit message digest.

IPSEC Safety Policy

The command “show ipsec-policy” shows the IPSEC Policy information as below:

```
BG9002N#show ipsec-policy
+----+----------------+-----------+---------+-------------+----------------+
| NO |IPSEC Policy Name|Enable IPSEC|Interface|   VPN Mode   | Remote Address |
+----+----------------+-----------+---------+-------------+----------------+
|0   |ipsec_policy_1   | Enable     | DATA    |PC To Site    |138.60.61.20    |
+----+----------------+-----------+---------+-------------+----------------+

->Enter the index to show(0-0)[0]:
 Proposal Name.....................................:ipsec_policy_1
 Enable IPSEC......................................:Enable
 VPN Mode..........................................:PC To Site
 Interface.........................................:DATA
 Local Subnet IP...................................:192.168.20.9
 Local Subnet Netmask..............................:255.255.255.0
 Remote Address....................................:138.60.61.20
 Remote Subnet IP..................................:0.0.0.0
 Remote Subnet Netmask.............................:0.0.0.0
 IKE Policy Name...................................:ike_policy_1
 Enable IPSEC Proposal1............................:Enable
 Proposal Name1....................................:ipsec123
 Enable IPSEC Proposal2............................:Disable
 Enable IPSEC Proposal3............................:Disable
 Enable IPSEC Proposal4............................:Disable

->Show IPSEC policy detail para continue or not?[yes]:n

BG9002N#
```

Show IPSEC Policy Information

The command “set ipsec-policy” configures the IPSEC Policy as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set ipsec-policy

->IPSEC Policy:0-Add,1-Delete,2-Modify[0]:
->Proposal Name[]:12345
->Enable IPSEC(yes/no)[no]:y
->VPN Mode(0-Site To Site,1-PC To Site)[0]:
->Interface([0]DATA)[0]:
->Local Subnet IP[]:192.168.1.2
->Local Subnet Netmask[]:255.255.0.0
->Remote Address[]:139.6.5.8
->Enable IPSEC Proposal 1(yes/no)[no]:
->Enable IPSEC Proposal 2(yes/no)[no]:
->Enable IPSEC Proposal 3(yes/no)[no]:
->Enable IPSEC Proposal 4(yes/no)[no]:
->IKE Policy Name[]:ike_policy_1
->Really want to modify? 'yes' or 'no'[yes]:

  Oprate success!
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set ipsec-policy

->IPSEC Policy:0-Add,1-Delete,2-Modify[0]:2
+----+----------------+-----------+---------+-------------+----------------+
| NO |IPSEC Policy Name|Enable IPSEC|Interface|   VPN Mode   | Remote Address |
+----+----------------+-----------+---------+-------------+----------------+
|0   |ipsec_policy_1   | Enable     | DATA    |PC To Site    |138.60.61.20    |
+----+----------------+-----------+---------+-------------+----------------+
|1   |12345            | Enable     | DATA    |Site To Site  |139.6.5.8       |
+----+----------------+-----------+---------+-------------+----------------+
->Enter the index to modify(0-1)[0]:1
->Proposal Name[12345]:asdfg
->Enable IPSEC(yes/no)[yes]:
->VPN Mode(0-Site To Site,1-PC To Site)[0]:
->Interface([0]DATA)[0]:
->Local Subnet IP[192.168.1.2]:
->Local Subnet Netmask[255.255.0.0]:
->Remote Address[139.6.5.8]:
->Enable IPSEC Proposal 1(yes/no)[no]:
->Enable IPSEC Proposal 2(yes/no)[no]:
->Enable IPSEC Proposal 3(yes/no)[no]:
->Enable IPSEC Proposal 4(yes/no)[no]:
->IKE Policy Name[ike_policy_1]:
->Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set ipsec-policy

->IPSEC Policy:0-Add,1-Delete,2-Modify[0]:1
+----+----------------+-----------+---------+-------------+----------------+
| NO |IPSEC Policy Name|Enable IPSEC|Interface|   VPN Mode   | Remote Address |
+----+----------------+-----------+---------+-------------+----------------+
|0   |ipsec_policy_1   | Enable     | DATA    |PC To Site   |138.60.61.20    |
+----+----------------+-----------+---------+-------------+----------------+
|1   |asdfg            | Enable     | DATA    |Site To Site |139.6.5.8       |
+----+----------------+-----------+---------+-------------+----------------+

->Please choose the start index of deleting entry[0-1]:1
->Please choose the end index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure IPSEC Policy

The following items are displayed on this screen:

► **Enable Ipsec:** Enable or disable this IPSEC entry.

► **IPSEC Policy Name:** Specify a unique name to the IPSEC policy.

► **Select Interface:** Specify the local WAN port for this Policy.

► **VPN Mode:** Select the network mode for IPSEC policy. Options include:

Site To Site: Select this option when the client is a network.

PC to Site: Select this option when the client is a host.

► **Local Subnet IP & Local Subnet Netmask:** Specify IP address range on your local LAN to identify which PCs on your LAN are covered by this policy.

► **Remote Address:** If **PC to Site** is selected, specify IP address on your remote network to identify which PCs on the remote network are covered by this policy.

► **Remote Subnet IP & Remote Subnet Netmask:** Specify IP address range on your remote network to identify which PCs on the remote network are covered by this policy.

► **IKE Safety Policy:** Specify the IKE policy.

► **Enable Safety Prososal: If enabled,** Select IPSEC Proposal.

Routing

Static Route

IPv4

The command “show static-route ipv4” shows the IPv4 static route information as below:

```
BG9002N#show static-route ipv4
+----+--------+----------------+---------------+---------------+----------+
| No | Enable |   Destination  |     Netmask   |     Next Hop  |   Valid  |
+----+--------+----------------+---------------+---------------+----------+
|0   |Enable  |192.168.12.6    |255.255.255.0  |DATA           |Invalid   |
+----+--------+----------------+---------------+---------------+----------+

BG9002N#_
```

Show IPv4 Static Route Information

The command “set static-route ipv4” configures the IPv4 static route as below.

```
BG9002N#set static-route ipv4
->Please input ipv4 static route index(0-9)[0]: 1
->Enable Route 'yes' or 'no' [no]:y
->Destination[192.168.16.5]:
->Netmask[255.255.255.0]:
->Next Hop Type(0-Interface,1-Address)[1]:
->Gateway[192.168.10.1]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure IPv4 Static Route

The following items are displayed on this screen:

- ► **Enable:** Select it to add and modify the current route. Conversely, disable the current route.
- ► **Destination IP:** Enter the destination host the route leads to.
- ► **Netmask:** Enter the Subnet mask of the destination network.
- ► **Next Hop Type:** Include **Next Hop Interface** and **Next Hop Address**(see following option)
- ► **Next Hop Interface:** Specify the interface of next hop for current route
- ► **Next Hop Address:** Specify the address of next hop for current route
- ► **Valid:** Show the status of current route.

IPv6

The command “show static-route ipv6” show the IPv6 static route information as below:

```
BG9002N#show static-route ipv6
+----+--------+------------------------------+--------------------+----------+
| No | Enable |Destination IPv6/Prefix Length|       Next Hop     |   Valid  |
+----+--------+------------------------------+--------------------+----------+
|0   |Enable  |2001::1/64                    |WAN                 |Valid     |
+----+--------+------------------------------+--------------------+----------+

BG9002N#
```

Show IPv6 Static Route Information

The command “set static-route ipv6” configures the IPv6 static route as below.

```
BG9002N#set static-route ipv6
->Please input ipv6 static route index(0-9)[0]: 1
->Enable Route 'yes' or 'no' [no]:y
->Destination IPv6[]: 2001::2
->IPv6 Prefix Length[64]:
->Next Hop Type(0-Interface,1-Address)[0]:
->Next Hop Interface(0-WAN)[0]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure IPv6 Static Route

The configuration options of Ipv6 is similar to Ipv4, the prefix length is equal to mask of Ipv4 address.

Policy Route

The command “show policy-route” shows the policy route information as below:

```
BG9002N#show policy-route
+----+-------+------------------------------+----------------+---------------+
| No | Enable|          Src IP Range        | Dst Port Range |    Next Hop   |
+----+-------+------------------------------+----------------+---------------+
|0   |Enable |0.0.0.0-0.0.0.0               |0-0             |DATA           |
+----+-------+------------------------------+----------------+---------------+

->Enter the index to show(0-0)[0]:
 Enable Polocy Route.............................:Enable
 Next Hop Type(0-Interface,1-Address)............:Interface
 Next Hop Interface..............................:DATA
 Protocol Type(0-ALL,1-TCP,2-UDP)................:ALL
 Source IP(Start IP).............................:0.0.0.0
 Source IP(End IP)...............................:0.0.0.0
 Destination IP(Start IP)........................:0.0.0.0
 Destination IP(End IP)..........................:0.0.0.0
 Destination Port(Start Port)....................:0
 Destination Port(End Port)......................:0
 Active Time(Start Time).........................:00:00
 Active Time(End Time)...........................:23:59
 Active Monday...................................:Disable
 Active Tuesday..................................:Disable
 Active Wednesday................................:Disable
 Active Thursday.................................:Disable
 Active Friday...................................:Disable
 Active Saturday.................................:Disable
 Active Sunday...................................:Disable

->Show policy route detail para continue or not?[yes]:n

BG9002N#
```

Show Policy Route Information

The command “set policy-route” configure thes policy route as below. Enter 0 to add a new entry. Enter 2 and choose the entry you want to modify. If you want to delete the entry, enter 1 and choose the corresponding entry.

```
BG9002N#set policy-route
Policy Route List Config:
->Select config type(0-add,1-del,2-modify)[0]:
->Enable Polocy Route? 'yes' or 'no'[no]:y
->Next Hop Type(0-Interface,1-Address)[0]:
->Next Hop Interface([0]DATA [30]3G Modem [31]DATA VPN)[0]:30
->Protocol Type(0-ALL,1-TCP,2-UDP)[0]:
->Source IP(Start IP)[]:192.16.5.6
->Source IP(End IP)[]:192.168.5.90
->Destination IP(Start IP)[]:136.5.6.4
->Destination IP(End IP)[]:136.5.6.8
->Destination Port(Start Port)[0]:1000
->Destination Port(End Port)[0]:2000
->Active Time(Start Time)[00:00]:
->Active Time(End Time)[00:00]:23:00
->Active Monday? 'yes' or 'no'[no]:
->Active Monday? 'yes' or 'no'[no]:
->Active Tuesday? 'yes' or 'no'[no]:
->Active Wednesday? 'yes' or 'no'[no]:
->Active Thursday? 'yes' or 'no'[no]:
->Active Friday? 'yes' or 'no'[no]:
->Active Saturday? 'yes' or 'no'[no]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set policy-route
Policy Route List Config:
->Select config type(0-add,1-del,2-modify)[0]: 2
+----+-------+-------------------------------+----------------+---------------+
| No | Enable|           Src IP Range        | Dst Port Range |    Next Hop   |
+----+-------+-------------------------------+----------------+---------------+
|0   |Enable |0.0.0.0-0.0.0.0                |0-0             |DATA           |
+----+-------+-------------------------------+----------------+---------------+
|1   |Enable |192.16.5.6-192.168.5.90        |1000-2000       |3G             |
+----+-------+-------------------------------+----------------+---------------+
->Please input number which you will modify[0-1]:1
->Enable Polocy Route? 'yes' or 'no'[yes]:
->Next Hop Type(0-Interface,1-Address)[0]:
->Next Hop Interface([0]DATA [30]3G Modem [31]DATA VPN)[30]:
->Protocol Type(0-ALL,1-TCP,2-UDP)[0]:
->Source IP(Start IP)[192.16.5.6]:
->Source IP(End IP)[192.168.5.90]:
->Destination IP(Start IP)[136.5.6.4]:
->Destination IP(End IP)[136.5.6.8]:
->Destination Port(Start Port)[1000]:
->Destination Port(End Port)[2000]:
->Active Time(Start Time)[00:00]:
->Active Time(End Time)[23:00]:
->Active Monday? 'yes' or 'no'[no]:
->Active Monday? 'yes' or 'no'[no]:
->Active Tuesday? 'yes' or 'no'[no]:
->Active Wednesday? 'yes' or 'no'[no]:
->Active Thursday? 'yes' or 'no'[no]:
->Active Friday? 'yes' or 'no'[no]:
->Active Saturday? 'yes' or 'no'[no]:
->Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!
```

```
BG9002N#set policy-route
Policy Route List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1
+----+-------+------------------------------+----------------+---------------+
| No | Enable|           Src IP Range       | Dst Port Range |    Next Hop   |
+----+-------+------------------------------+----------------+---------------+
|0   |Enable |0.0.0.0-0.0.0.0               |0-0             |DATA           |
+----+-------+------------------------------+----------------+---------------+
|1   |Enable |192.16.5.6-192.168.5.90       |1000-2000       |3G             |
+----+-------+------------------------------+----------------+---------------+

->Please choose the start index of deleting entry[0-1]:1
->Please choose the end index of deleting entry[0-1]:1
->Are you sure to delete?'yes' or 'no'[yes]:
Delete success
BG9002N#
```

Configure Policy Route

The following items are displayed on this screen:

- ► **Enable PoliceRoute:** Enable or disable the entry
- ► **Next Hop Type:** Select from pull-down list: **Interface, Address.**
- ► **Interface:** Specify the interface of next hop for the entry.
- ► **Address:** Specify the address of next hop for the entry.
- ► **Description:** Give description for the entry.
- ► **Protocol:** Specify the protocol, **TCP**, **UDP** or **ALL**.
- ► **Source IP:** Enter IP address or IP range of source in the rule entry.
- ► **Destination IP:** Enter IP address or IP range of destination in the rule entry.
- ► **Destination Port:** Specify port or port range of destination in the rule entry.
- ► **Active Time:** Specify the active time range for the rule entry.
- ► **Active Day:** Specify the active days for the rule entry.

RIP

RIP Service

The command “show rip” shows the RIP information as below:

```
BG9002N#set ip-filter conf
->Enable IP Filter? 'yes' or 'no'[yes]:y
->Policy(0-Deny,1-Allow)[0]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Show RIP Information

The command “set rip switch” configures the RIP switch as below:

```
BG9002N#set rip switch
->Enable RIP Protocol 'yes' or 'no' [yes]:
Really want to modify? 'yes' or 'no'[yes]:

BG9002N#_
```

Configure RIP Switch

The following items are displayed on this page:

► **Enable RIP Service:** Enable or disable RIP service function globally.

The command “set rip interface” configures the RIP interface as below.

```
BG9002N#set rip interface

RIP Interface List:
  +----+--------+-------+-------+-----------+----------+----------------+
  | NO |Inteface|Version|Auth   |AuthKeyMode |KeyFrom   |Key             |
  +----+--------+-------+-------+-----------+----------+----------------+
  |0   |DATA    |R2 S2  |disable|simple key  |string    |                |
  +----+--------+-------+-------+-----------+----------+----------------+
Rip Interface List Config:
->Select config type(0-add,1-del,2-modify)[0]:
->Interface(0-Data,1-Voice,2-Mgmt,3-Other1,4-Other2):[0] 1
->Interface Recv RIP Version(1-RIPv1, 2-RIPv2)[2]:
->Interface Send RIP Version(1-RIPv1, 2-RIPv2)[2]:
->Enable Interface RIP Authentication 'yes' or 'no' [no]:y
->Interface RIP Authentication Key Mode(0-text, 1-md5)[0]:
->Interface RIP Authentication Key Get Mode(0-simple Key, 1-key chain)[0]:
->Interface RIP Authentication Simple Key[]: 123
->Continue to Add RIP Interface? 'yes' or 'no'[no]: n

BG9002N#
```

```
BG9002N#set rip interface

RIP Interface List:
  +----+--------+-------+-------+-----------+----------+----------------+
  | NO |Inteface|Version|Auth   |AuthKeyMode |KeyFrom   |Key             |
  +----+--------+-------+-------+-----------+----------+----------------+
  |0   |DATA    |R2 S2  |disable|simple key  |string    |                |
  +----+--------+-------+-------+-----------+----------+----------------+
  |1   |VOICE   |R2 S2  |enable |simple key  |string    |123             |
  +----+--------+-------+-------+-----------+----------+----------------+
Rip Interface List Config:
->Select config type(0-add,1-del,2-modify)[0]: 2
Enter the index to modify(0-1)[0]: 1
->Interface(0-Data,1-Voice,2-Mgmt,3-Other1,4-Other2)[1]: 2
->Interface Recv RIP Version(1-RIPv1, 2-RIPv2)[2]: 1
->Interface Send RIP Version(1-RIPv1, 2-RIPv2)[2]:
->Enable Interface RIP Authentication 'yes' or 'no' [yes]:
->Interface RIP Authentication Key Mode(0-text, 1-md5)[0]:
->Interface RIP Authentication Key Get Mode(0-simple Key, 1-key chain)[0]:
->Interface RIP Authentication Simple Key[123]:
->Really want to modify? 'yes' or 'no'[no]: y
  The configuration will take effect after saved and reloaded!
```

```
RIP Interface List:
  +----+--------+-------+-------+-----------+-----------+----------------+
  | NO |Inteface|Version|Auth   |AuthKeyMode |KeyFrom    |Key             |
  +----+--------+-------+-------+-----------+-----------+----------------+
  |0   |DATA    |R2 S2  |disable|simple key  |string     |                |
  +----+--------+-------+-------+-----------+-----------+----------------+
  |1   |MGMT    |R1 S2  |enable |simple key  |string     |123             |
  +----+--------+-------+-------+-----------+-----------+----------------+
Rip Interface List Config:
->Select config type(0-add,1-del,2-modify)[0]: 1
->Please input begin index(0-1)[0]: 1
->Please input end index(0-1)[0]: 1
  Delete success

BG9002N#
```

Configure RIP Interface

The following items are displayed on this screen:

- ► **Interface:** Specify the interface for the entry.
- ► **Receive RIP Version:** Specify receiving RIP version for the entry.
- ► **Send RIP Version:** Specify sending RIP version for the entry.
- ► **Authorization Enable:** Check the box to enable authorization.
- ► **Key Mode:** Specify the encryption mode of key, **TEXT**(plaintext),**MD5**(cipertext).
- ► **Key Type:** Specify the key from **Simple String** or **Key Chain**.
- ► **Simple String:** If select Simple String in item of Key Type, enter simple string as key.

Key Chain

The command “set rip key-chain” configures the RIP key chain as below.

```
BG9002N#set rip key-chain
Current Key-Chain Name:12345
Want to Modify Key Chain Name? 'yes' or 'no'[no]n

Key List of Key-Chain:
  +----+------+---------------+
  | No |Key ID|Key-String     |
  +----+------+---------------+
  |0   |3     |12345          |
  +----+------+---------------+
Sure to Config Key List of the Key-Chain?  'yes' or 'no'[no]: y
Key List Config of Key-Chain:
->Select config type(0-add,1-del,2-modify)[0]:
->Key ID: 1
->Key String: qwer
->Continue to Add Key to Key Chain? 'yes' or 'no'[no]: n

BG9002N#
```

```
BG9002N#set rip key-chain
Current Key-Chain Name:12345
Want to Modify Key Chain Name? 'yes' or 'no'[no]

Key List of Key-Chain:
  +----+------+----------------+
  | No |Key ID|Key-String      |
  +----+------+----------------+
  |0   |3     |12345           |
  +----+------+----------------+
  |1   |1     |qwer            |
  +----+------+----------------+
Sure to Config Key List of the Key-Chain?  'yes' or 'no'[no]: y
Key List Config of Key-Chain:
->Select config type(0-add,1-del,2-modify)[0]: 2
->Please input index to modify(0-1)[0]: 1
->Key ID[1]: 2
->Key String[qwer]:
->Really want to modify? 'yes' or 'no'[no]: y
  The configuration will take effect after saved and reloaded!
```

```
BG9002N#set rip key-chain
Current Key-Chain Name:12345
Want to Modify Key Chain Name? 'yes' or 'no'[no]

Key List of Key-Chain:
  +----+------+----------------+
  | No |Key ID|Key-String      |
  +----+------+----------------+
  |0   |3     |12345           |
  +----+------+----------------+
  |1   |2     |qwer            |
  +----+------+----------------+
Sure to Config Key List of the Key-Chain?  'yes' or 'no'[no]: y
Key List Config of Key-Chain:
->Select config type(0-add,1-del,2-modify)[0]: 1
->Please input begin index(0-1)[0]: 1
->Please input end index(0-1)[0]: 1
  Delete success

BG9002N#
```

Configure RIP Key Chain

The following items are displayed on this screen:

► **Key Chain Name:** Enter the name of key chain.

► **Key ID:** Enter the ID of the entry.

► **Key String:** Enter the Key of the entry.

Advanced Parameters

UPnP Parameter

The command “show upnp” shows the UPnP information as below:

```
BG9002N#show upnp

 Enable Upnp.....................................: Enable
 Upstream Interface..............................: VLAN1
 Downstream Interface............................: STB

BG9002N#
```

Show UPnP Information

The command “set upnp” configures the UPnP parameters as below.

```
BG9002N#set upnp
->Enable Upnp 'yes' or 'no' [yes]:
->Upstream Interface([0]DATA [5]VLAN1)[5]:0
->Downstream Interface([5]VLAN1 [21]STB)[21]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

Configure UPnP Parameters

The following items are displayed on this screen:

► **Enable UPnP:** Enable or disable the UPnP function globally.

► **Upstream Interface:** The network interface connected to the DLNA server.

► **Downstream Interface:** The network interface connected to the DLNA client.

Multicast

The command “show multicast” shows the multicast information as below:

```
BG9002N#show multicast

 Enable IGMP proxy...............................: Enable

BG9002N#
```

Show Multicast Information

The command “set multicast” configures the multicast parameters as below.

```
BG9002N#set multicast
->Enable IGMP proxy? 'yes' or 'no'[yes]:
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!

BG9002N#
```

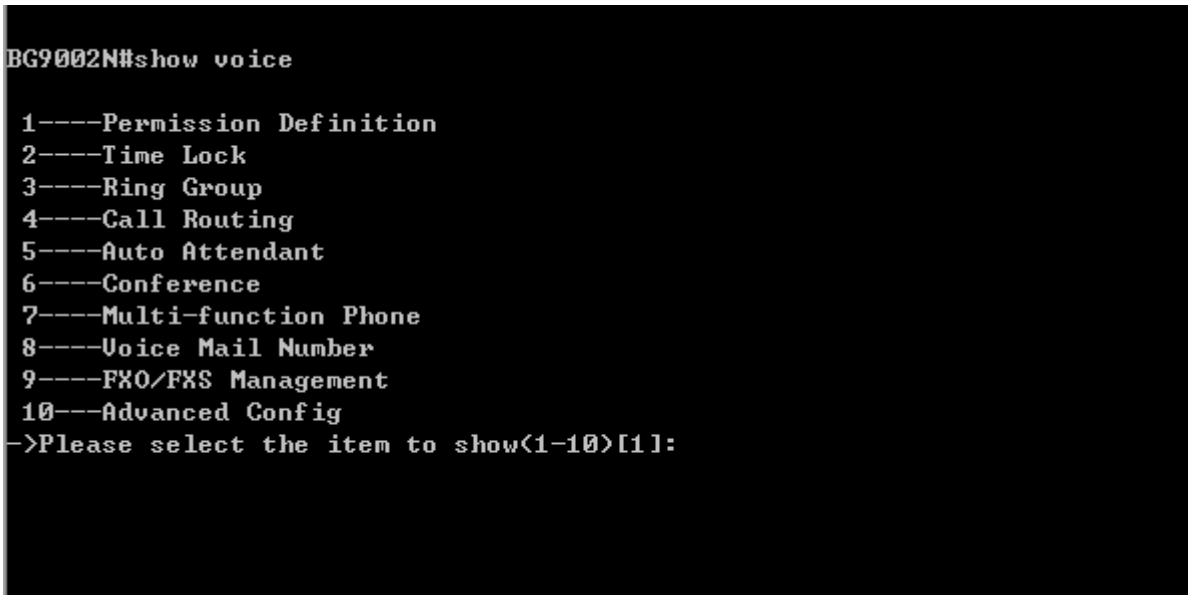
Configure Multicast Parameters

The following items are displayed on this screen:

► **Enable IGMP Proxy:** Enable or disable the IGMP proxy function globally. Currently, IGMP proxy is mainly used for IPTV.

Show Voice Service Parameter

The Voice Service information shows as below:



Show Voice Parameter

The command contains the Information of permission definition, time lock, ring group, call routing, auto attendant, conference , multi-function phone, voice mail number, FXO/FXS management and advanced config, just choose “1” to “10” to get the information of each configuration. The detail information introduction is as below.

i. Permission Definition

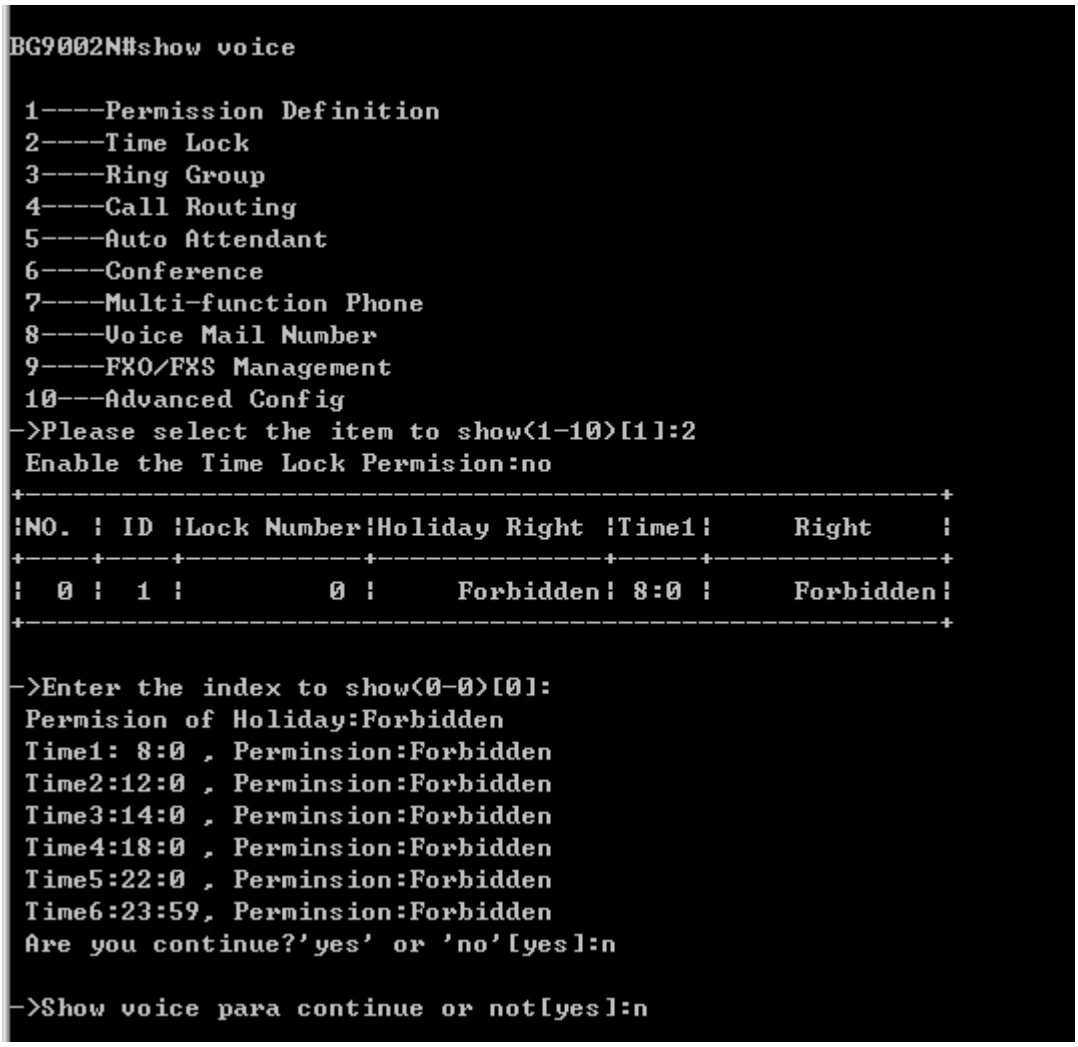
Permissions define the meaning and weight, Call routing and user need to configure permission. Input the command “show voice” and choose “1” to show permission definition parameter as below:

```
BG9002N#show voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select the item to show(1-10)[1]:
+-------------------------------------------------+
|No. | ID |Permission Value|Permission Descripton|
+----+----+----------------+---------------------+
|  0 |  1 |              0 |           Forbidden |
+----+----+----------------+---------------------+
|  1 |  2 |             30 |            Internal |
+----+----+----------------+---------------------+
|  2 |  3 |             60 |               Local |
+----+----+----------------+---------------------+
|  3 |  4 |             90 |       Long Distance |
+----+----+----------------+---------------------+
|  4 |  5 |            120 |       International |
+-------------------------------------------------+

->Show voice para continue or not[yes]:n

BG9002N#
```

Show Permission Definition

ii. Time Lock

Input the command “show voice” and choose “2” to show time lock parameter as below:



Show Time Lock

iii. Ring Group

Input the command “show voice” and choose “3” to show ring group parameter as below:

```
BG9002N#show voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select the item to show(1-10)[1]:3
+-------------------------------------------------------------------------------+
|NO.  | ID |Group |Group Type|Ring Policy|Time|RingBack Music|   Music File   |
+-----+----+------+----------+-----------+----+--------------+----------------+
|  0  |  1 |   701|  External|  Alternate|20s |            no|                |
+-------------------------------------------------------------------------------+
+--------------------------+
|NO.  |  Group  | Telephone  |
+-----+---------+------------+
|  0  |      701|         701|
+--------------------------+

->Show voice para continue or not[yes]:n
```

Show Ring Group

iv. Call Routing

Input the command “show voice” and choose “4” to show call routing parameter as below:

```
BG9002N#show voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select the item to show(1-10)[1]:4
+-------------------------------------------------------------------------------+
|No. | ID |Table No. |Phone Prefix|Total Length|Route Permission| Description |
+----+----+----------+------------+------------+----------------+-------------+
|  0 |  1 |        0 |         112|   Unlimited|       Forbidden|         test|
+-------------------------------------------------------------------------------+

 Show trunk details or not[no]:y
+-------------------------------------------------------------------------------+
|Route ID|Trunk Type| Group  |Caller Group|Prefic Mode|Modify Code|Modify Len|
+--------+----------+--------+------------+-----------+-----------+----------+
|      1 |StaticTrun|      2 |          3 |        Add|          4|         1 |
+--------+----------+--------+------------+-----------+-----------+----------+
|      1 |StaticTrun|      0 |          4 |     Normal|           |         0 |
+-------------------------------------------------------------------------------+

->Show voice para continue or not[yes]:n
```

Show Call Routing

.

v. Auto Attendant

Input the command “show voice” and choose “5” to show auto attendant parameter as below:

```
BG9002N#show voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select the item to show(1-10)[1]:5

 1----Generic
 2----IVR Menu
 3----IVR Configuration
->Please select the item to show(1-3)[1]:
```

Show Auto Attendant Parameter

Input “1” to show generic parameters as below:

```
 1----Generic
 2----IVR Menu
 3----IVR Configuration
->Please select the item to show(1-3)[1]:

 Enable Auto Attendant.............................:no
 Transfer to External..............................:no
 DTMF Internal(3-5s)...............................:3s
 DTMF Total Time(5-20s)............................:7
 Extension Wait Answer Time(15-60s)................:30s
+-----------------------------+
|NO.  | ID | Attendant Number |
+-----+----+------------------+
|  0  |  1 |              444 |
+-----------------------------+

->Show attendant para continue or not[yes]:
```

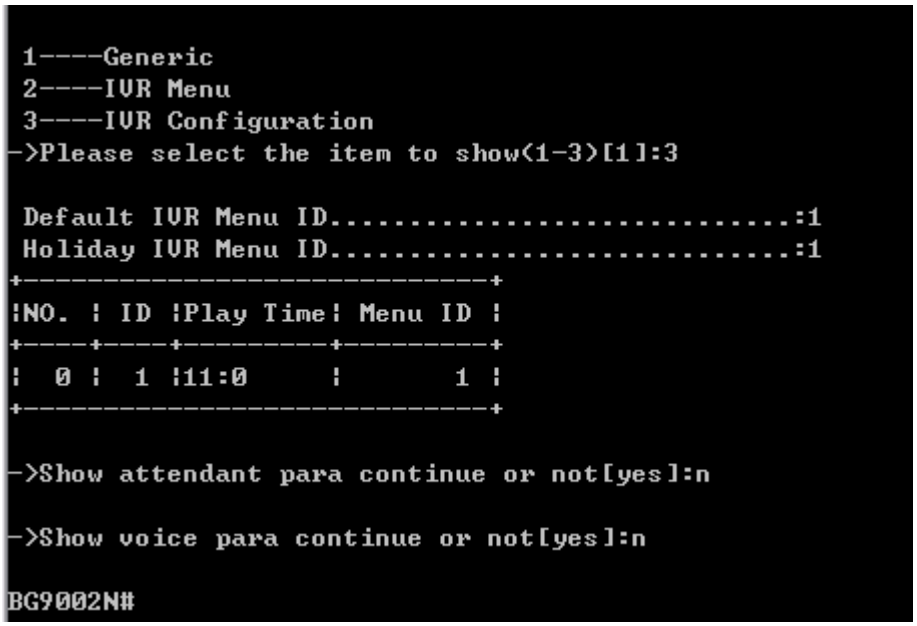
Show Auto Attendant Generic Parameter

Input “2” to show IVR menu information as below:

```
 1----Generic
 2----IVR Menu
 3----IVR Configuration
->Please select the item to show(1-3)[1]:2
+-------------------------------------------------------------------+
|NO.  | ID |Transfer to KEY 0|Call Queue Enable|      Menu Name     |
+-----+----+-----------------+-----------------+--------------------+
|  0  |  1 |            yes  |            yes  |               menu1|
+-------------------------------------------------------------------+

->Enter the index to show(0-0):0
 Prompt  Voice File................................:ivr
 Waiting Music File................................:ivrwaiting
 Key0Extension.....................................:701
 Key6Extension.....................................:700

 Are you continue?'yes' or 'no'[yes]:n
```

Show IVR Menu Parameter

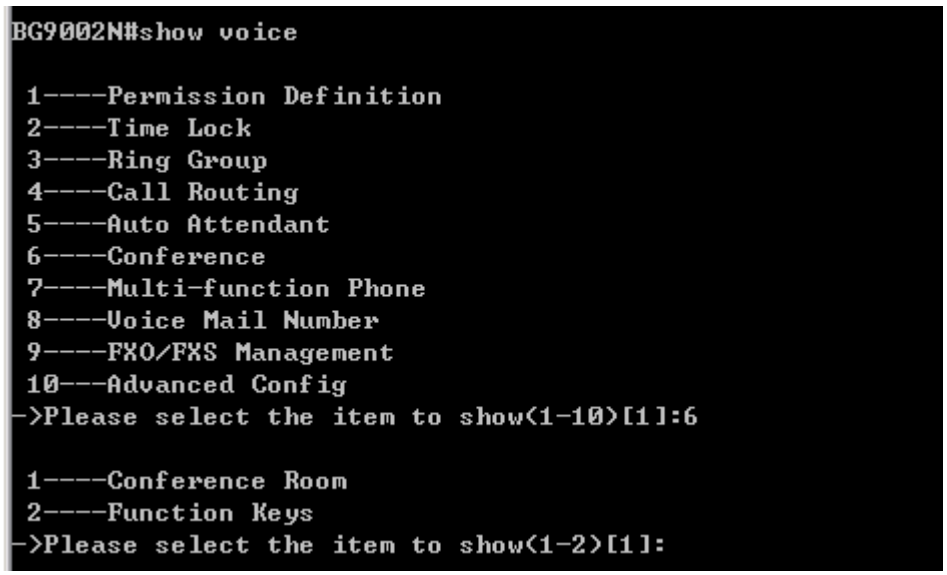
Input “3” to show IVR configuration parameter as below:



Show IVR Configuration

vi. Conference

Input the command “show voice” and choose “6” to show conference parameter as below:



Show Conference Parameter

Input “1” to show conference room information as below:

```
 1----Conference Room
 2----Function Keys
->Please select the item to show(1-2)[1]:
+-------------------------------------------------------------------------+
|NO. | ID |Conference Name  |Internal Number|External Number|Prompt Level|
+----+----+-----------------+---------------+---------------+------------+
|  0 |  1 |         conroom1|            700|          45566|       Brief|
+-------------------------------------------------------------------------+

->Enter the index to show(0-0)[0]:

 Enable Conference.................................:yes
 Enable Recording..................................:yes
 Public Conference.................................:yes
 First Member As Moderator or not..................:yes
 Wait Moderator or not.............................:yes
 Prompt Level......................................:Brief
 Conference Name...................................:conroom1
 Internal Number...................................:700
 External Number...................................:45566
 Moderator PIN.....................................:pinno
 Member PIN........................................:pinmem
 Max Participants(3-30)............................:20
 Are you continue?'yes' or 'no'[yes]:n
```

Show Conference Room Parameter

Input “2” to show function keys information as below:

```
1----Conference Room
2----Function Keys
->Please select the item to show(1-2)[1]:2

Partic Key:
Mute[0..9,*].....................................:*11
Mute&Deaf[0..9,*]................................:*12
Request to Speak[0..9,*].........................:*13
Disable Speak[0..9,*]............................:*14
Moderator key:
Mute[0..9,*].....................................:*11
Mute&Deaf[0..9,*]................................:*12
Invite Member[0..9,*]............................:*13
Kick Member[0..9,*]..............................:*14
Transfer Moderator[0..9,*].......................:*15
Recording[0..9,*]................................:*16
Accept Speak Request[0..9,*].....................:*17
Refuse Speak Request[0..9,*].....................:*18
Lock Conference Room[0..9,*].....................:*19
```

Show Conference Key Parameter

vii. Multi-function Phone

Input the command “show voice” and choose “7” to show multi-function phone parameter as below:

```
BG9002N#show voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select the item to show(1-10)[1]:7
+-------------------------------------------------------------------------+
|NO. | ID | Func-Phone Ip |User Line1 |User Line2 |User Line3 |User Line4 |
+----+----+---------------+-----------+-----------+-----------+-----------+
|  0 |  1 |192.168.100.124|        701|        700|           |           |
+----+----+---------------+-----------+-----------+-----------+-----------+
|  1 |  2 |192.168.100.106|        700|        701|           |           |
+-------------------------------------------------------------------------+
+-----------------------------------------------+
|NO. |Phone Port|Line Phone Number|Suppor Subscribe|
+----+----------+-----------------+----------------+
|  0 |       55 |              755|             yes|
+-----------------------------------------------+
```

Show Multi-function Phone Parameter

viii. Voice Mail Number

Input the command “show voice” and choose “8” to show call voice mail number parameter as below:

```
BG9002N#show voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select the item to show(1-10)[1]:8

 Internal Number.................................:8000
 External Number.................................:82598000
```

Show Voice Mail Parameter

ix. FXO/FXS Management

Input the command “show voice” and choose “9” to show FXO/FXS management parameter as below:

```
BG9002N#show voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select the item to show(1-10)[1]:9

 1----FXS Parameter
 2----DSP Parameter
 3----Digitmap
 4----Signal Tone
 5----Packetization Period
->Please select the item to show(1-5)[1]:
```

Show FXO/FXS Management Parameter

Input “1” to show FXS parameter:

```
 1----FXS Parameter
 2----DSP Parameter
 3----Digitmap
 4----Signal Tone
 5----Packetization Period
->Please select the item to show(1-5)[1]:

 Min Flash Detect Time(50-750).....:80 ms
 Max Flash Detect Time.....:500 ms
 Switch&Release Call.....:Flash+1
 Enable flash key or not.....:yes
 Reject key.....:Flash+0
 Switch call key.....:Flash+2
 Three Party Call.....:Flash+3
 Keep the hold call when onhook or not.....:no
 # is quick dial key or not.....:yes
 Adterisk to be the function key or not.....:no
 Tap Report.....:no
 Escape Seq.....:no
 Enable Callee Inverse Polarity.....:no
 Enable Caller Inverse Polarity.....:no
```

Show FXS Parameter

Input “2” to show dsp parameter:

```
1----FXS Parameter
2----DSP Parameter
3----Digitmap
4----Signal Tone
5----Packetization Period
->Please select the item to show(1-5)[1]:2

Echo Clear up or not.............................:yes
Silence Compress.................................:no
Input Gain(-10-12db).............................:0
Ouput Gain(-10-12db).............................:0
Delay Level......................................:delay moderate
DTMF Transfer Model..............................:RFC2833
T38 Max FAX Rate.................................:Unlimited
T38 FAX Signaling Reduncancy(0-7)................:4
T38 FAX Data Redundancy(0-3).....................:0
Ring Frequency...................................:25HZ
Impedance........................................:600 Ohm
->Show FXS management continue or not[yes]:

1----FXS Parameter
```

Show DSP Parameter

Input “3” to show digitmap parameter:

```
1----FXS Parameter
2----DSP Parameter
3----Digitmap
4----Signal Tone
5----Packetization Period
->Please select the item to show(1-5)[1]:3

Enable Digitmap..................................:no
Digitmap Short Timer S(1-30).....................:4s
Digit Map Content................................:xxxxxxx
```

Show Digitmap Parameter

Input “4” to show signal tone parameter:

```
1----FXS Parameter
2----DSP Parameter
3----Digitmap
4----Signal Tone
5----Packetization Period
->Please select the item to show(1-5)[1]:4

Tone Type.....:Switzerland
Dial Tone User Define Enable.....:no
Dial tone frequency 1(100-2000HZ).....:0
Dial tone frequency 2(100-2000HZ).....:0
Busy Tone User Define Enable.....:no
Busy Tone Frequency1(100-2000HZ).....:0
Busy Tone Frequency2(100-2000HZ).....:0
On Time(100-10000ms).....:500
Off Time(100-10000ms).....:500
Ring Back Tone User Define Enable.....:no
Ring Back Tone Frequency 1(100-2000HZ).....:0
Ring Back Tone Frequency 2(100-2000HZ).....:0
On Time(100-10000ms).....:500
Off Time(100-10000ms).....:500
Internal ring on time1(*100ms).....:10
Internal ring off time1(*100ms).....:40
Internal ring on time2(*100ms).....:0
Internal ring off time2(*100ms).....:0
External ring on time1(*100ms).....:10
External ring off time1(*100ms).....:40
External ring on time2(*100ms).....:0
External ring off time2(*100ms).....:0
```

Show Signal Tone Parameter

Input “5” to show packetization period parameter:

```
1----FXS Parameter
2----DSP Parameter
3----Digitmap
4----Signal Tone
5----Packetization Period
->Please select the item to show(1-5)[1]:5

G.711A Packet Period(10-90,degeress of 10).....:20
G.711U Packet Period(10-90,degeress of 10).....:30
G.723 Packet Period(10-90,degeress of 10).....:30
G.729 Packet Period(10-90,degeress of 10).....:20
```

Show Packetization Period Parameter

x. Advanced Config

Input the command “show voice” and choose “10” to show advanced configuration parameter as below:

```
BG9002N#show voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select the item to show(1-10)[1]:10

 1----Emergency Phone Number
 2----DISA Number
 3----Holiday
 4----Service Control
 5----Supplementary Key
 6----Supplementaly
 7----Department Definition
 8----File Management
```

Show Advance Configuartion

Input “1” to show emergency phone number parameter:

```
 1----Emergency Phone Number
 2----DISA Number
 3----Holiday
 4----Service Control
 5----Supplementary Key
 6----Supplementaly
 7----Department Definition
 8----File Management
->Please select the item to show(1-8)[1]:
+--------------------------+
|NO.  | ID |Emergency Number|
+-----+----+----------------+
|   0 |  1 |          32423 |
+-----+----+----------------+
|   1 |  2 |         768768 |
+--------------------------+
```

Show Emergency Phone Number Parameter

Input “2” to show DISA Number parameter:

```
->Show advanced configuration continue or not[yes]:

 1----Emergency Phone Number
 2----DISA Number
 3----Holiday
 4----Service Control
 5----Supplementary Key
 6----Supplementaly
 7----Department Definition
 8----File Management
->Please select the item to show(1-8)[1]:2

 Internal Number.................................:7867
 External Number.................................:8978
 Time lock valid or not..........................:no
```

Show Disa Number Parameter

Input “3” to show holiday parameter:

```
 1----Emergency Phone Number
 2----DISA Number
 3----Holiday
 4----Service Control
 5----Supplementary Key
 6----Supplemently
 7----Department Define
 8----File Management
->Please select the item to show(1-8)[1]:3
+-----------------------------------------------+
|NO. | ID |Year |Month|Day| Week      |Description|
+----+----+-----+-----+---+-----------+-----------+
|  0 |  1 |2014 |   1 | 1 | Wednesday |           |
+-----------------------------------------------+
```

Show Holiday Parameter

Input “4” to show service control parameter:

```
1----Emergency Phone Number
2----DISA Number
3----Holiday
4----Service Control
5----Supplementary Key
6----Supplementaly
7----Department Definition
8----File Management
->Please select the item to show(1-8)[1]:4

Enable Centrex.....................................:yes
Call Time Limit....................................:no
Enable Internal Music..............................:yes
Video Support......................................:no
Enable Trunk Alternate.............................:no
Enabel Trunk Refer Transfer........................:yes
Call Park Time-Out.................................:yes
How long to be time out............................:60s
Prmpt Language Type................................:English
Max Forward Times(1-5).............................:1
Max Registration As Per-Account(1-20).............:1
RTP Port...........................................:9000-20000
Local SIP Port(1024-65535).........................:5060
External Call Forward Type.........................:Forward by 302
Tos/DiffServ settings..............................:DiffServ(Dscp)
Signaling Precedence...............................:0
Voice Precedence...................................:0
Enable Call In Black&White.........................:Black User List
Enable Call Out Black&White........................:Black User List
```

Show Service Control Parameter

Input “5” to show supplementary key parameter:

```
 1----Emergency Phone Number
 2----DISA Number
 3----Holiday
 4----Service Control
 5----Supplementary Key
 6----Supplementaly
 7----Department Definition
 8----File Management
->Please select the item to show(1-8)[1]:5
```

No.	Function No.	Function Key Name	Function Key	Enable Key
0	0	Same group to pickup	*88#	no
1	1	Appoint extension pickup	*88*	no
2	2	Set call restriction	*54*	no
3	3	Cancel call restrition	#54*	no
4	4	Set alarm clock	*55*	no
5	5	Cancel alarm clock	#55*	no
6	6	Set no disturb	*56#	no
7	7	Cancel no disturb	#56#	no
8	8	Set forward unconditional	*57*	no
9	9	Cancel forward uncoditional	#57#	no
10	10	Ring test	*99#	no
11	11	Time report	*90#	no
12	12	Set call forward no reply	*41*	no
13	13	Cancel call forward no reply	#41#	no
14	14	Set call forward on busy	*40*	no
15	15	Cancel call forward on busy	#40#	no
16	16	Set instant hotline	*42*	no
17	17	Cancel instant hotline	#42*	no

Show Supplementary Key Parameter

Input “6” to show supplementary parameter:

```
1----Emergency Phone Number
2----DISA Number
3----Holiday
4----Service Control
5----Supplementary Key
6----Supplementaly
7----Department Definition
8----File Management
->Please select the item to show(1-8)[1]:6

Call Restriction1.............................:Forbidden
Call Restriction2.............................:Forbidden
Call Restriction3.............................:Forbidden
Call Restriction4.............................:Forbidden
```

Show Call Restriction Parameter

Input “7” to show department parameter:

```
1----Emergency Phone Number
2----DISA Number
3----Holiday
4----Service Control
5----Supplementary Key
6----Supplementaly
7----Department Definition
8----File Management
->Please select the item to show(1-8)[1]:7
+------------------------------+
|NO. | ID |   Department Name   |
+----+----+---------------------+
|  0 |  1 |                7878 |
+----+----+---------------------+
|  1 |  2 |                7879 |
+------------------------------+
```

Show Department Parameter

Input “8” to show file management information:

```
1----Emergency Phone Number
2----DISA Number
3----Holiday
4----Service Control
5----Supplementary Key
6----Supplementaly
7----Department Definition
8----File Management
->Please select the item to show(1-8)[1]:8

On Hold Music File.............................:music_on_hold
Ring Back Music File...........................:default
Total Recording Capacity(1-100G)...............:10
Record File Effective Time(1-365Day)...........:365
->Show advanced configuration continue or not[yes]:n
```

Show File Management parameter

Configure Voice Service Parameter

The command “set voice” configures voice service parameter as below:

```
BG9002N#set voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select one item to set(1-10)[1]:
```

Configure Voice Parameter

The command contains the configuration of permission definition, time lock, ring group, call routing, auto attendant, conference , multi-function phone, voice mail number, FXO/FXS management and advanced config, just choose “1” to “10” to input to configure parameters. The detail configuration introduce is as below.

Permission Definition

Permissions define the meaning and weight, Call routing and user need to configure permission. Input the command “set voice” and choose “1” to configure permission definition parameter as below:

```
1----Permission Definition
2----Time Lock
3----Ring Group
4----Call Routing
5----Auto Attendant
6----Conference
7----Multi-function Phone
8----Voice Mail Number
9----FXO/FXS Management
10---Advanced Config
->Please select one item to set(1-10)[1]:
+-------------------------------------------------+
|No. | ID |Permission Value|Permission Descripton|
+----+----+----------------+---------------------+
|  0 |  1 |              0 |           Forbidden |
+----+----+----------------+---------------------+
|  1 |  2 |             30 |            Internal |
+----+----+----------------+---------------------+
|  2 |  3 |             60 |               Local |
+----+----+----------------+---------------------+
|  3 |  4 |             90 |       Long Distance |
+----+----+----------------+---------------------+
|  4 |  5 |            120 |       International |
+-------------------------------------------------+

->Permission definiton:0-add,1-delete,2-modify[0]:2
->Enter the index to modify(0-4)[0]:
->Permission description[Forbidden]:
->Permission value(0-255)[0]:
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reloaded!
```

Configure Permission Definition Parameter

►**0-add,1-delete,2-modify**: Input “0” to add new permission definition, input “1” to delete a permission definition from the permission definition list, input “2” to modify one of the permission definition from the permission definition list.

Time Lock

Time Lock is just time-based call restriction. Call permission can be changed automatically for different time period. For example, the extension has permission for local call at working time, and has permission only for internal call at off-duty time. The device supports up to 100 time lock items. Each time lock has 6 time period settings and a holiday setting. Holidays can be configured to any day you need. If you want to active all rules, you must enable time lock firstly. Input the command “set voice” and choose “2” to configure time lock parameter as below:

```
1----Permission Definition
2----Time Lock
3----Ring Group
4----Call Routing
5----Auto Attendant
6----Conference
7----Multi-function Phone
8----Voice Mail Number
9----FXO/FXS Management
10---Advanced Config
->Please select one item to set(1-10)[1]:2
Enable the Time Lock Permision:no
+-------------------------------------------------------+
|NO. | ID |Lock Number|Holiday Right |Time1|     Right    |
+----+----+-----------+--------------+-----+--------------+
|  0 |  1 |         0 |     Forbidden| 8:0 |     Forbidden|
+-------------------------------------------------------+

->Enable the Time Lock Permision(yes/no)[no]:
->Really want to modify? 'yes' or 'no'[yes]:

->Time Lock:0-add,1-delete,2-modify[0]:
+-----------------------------------------------+
|No. | ID |Permission Value|Permission Descripton|
+----+----+----------------+---------------------+
|  0 |  1 |              0 |           Forbidden |
+----+----+----------------+---------------------+
|  1 |  2 |             30 |            Internal |
+----+----+----------------+---------------------+
|  2 |  3 |             60 |               Local |
+----+----+----------------+---------------------+
|  3 |  4 |             90 |       Long Distance |
+----+----+----------------+---------------------+
|  4 |  5 |            120 |       International |
+-----------------------------------------------+
->Permision of Holiday(0-4)[0]:
->Time1:Hour(0-23)[0]:
->Time1:Minute(0-59)[0]:
->Time1 Permision(0-4)[0]:
->Time2:Hour(0-23)[0]:
->Time2:Minute(0-59)[0]:
->Time2 Permision(0-4)[0]:
->Time3:Hour(0-23)[0]:
->Time3:Minute(0-59)[0]:
->Time3 Permision(0-4)[0]:
->Time4:Hour(0-23)[0]:
->Time4:Minute(0-59)[0]:
->Time4 Permision(0-4)[0]:
->Time5:Hour(0-23)[0]:
->Time5:Minute(0-59)[0]:
->Time5 Permision(0-4)[0]:
->Time6:Hour(0-23)[0]:
->Time6:Minute(0-59)[0]:
->Time6 Permision(0-4)[0]:
->Really want to modify? 'yes' or 'no'[yes]:
   Operate success!

  The configuration will take effect after saved and reloaded!
```

Configure Time Lock Parameter

Ring Group

Input the command “set voice” and choose “3” to configure ring group parameter as below:

```
BG9002N#set voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select one item to set(1-10)[1]:3
+-------------------------------------------------------------------------------+
|NO. | ID |Group |Group Type|Ring Policy|Time|RingBack Music|   Music File   |
+----+----+------+----------+-----------+----+--------------+----------------+
|  0 |  1 |   701|  External|  Alternate|20s |            no|                |
+-------------------------------------------------------------------------------+
+--------------------------+
|NO. |  Group  | Telephone  |
+----+---------+------------+
|  0 |      701|         701|
+--------------------------+

->Ring Group:0-add,1-delete,2-modify[0]:2
->Enter the index to modify(0-0)[0]:
->Group Number[701]:
->Group Type(0-External,1-Internal)[0]:
->Ring Policy(0-Alternate,1-Ordinal,2-Parallel)[0]:
->Ring Time(5-90)[20]:
->RingBack Music On(yes/no)[no]:
->Really want to modify? 'yes' or 'no'[yes]:
  Operate success!

->Set Group Member or not?[yes]:

->Ring Group Member:0-add,1-delete,2-modify[0]:2
->Enter the index to modify(0-0)[0]:
->Telephone number[701]:
->Really want to modify? 'yes' or 'no'[yes]:
  Operate success!

  The configuration will take effect after saved and reloaded!
```

Configure Ring Group Parameter

The following items are displayed on this screen:

►**Group Number:** The group number which can be called.

►**Group Type**: Internal number or external number.

►**Ringing Policy**: Include Alternate, Ordinal, Parallel.

►**Ring Time**: The timeout period of ringing

►**On RingBack Music**: When you call group number, you will hear a ringback tone or music. You can update the music file of ringback.

Call Routing

Input the command “set voice” and choose “4” to configure call routing parameter as below:

```
1----Permission Definition
2----Time Lock
3----Ring Group
4----Call Routing
5----Auto Attendant
6----Conference
7----Multi-function Phone
8----Voice Mail Number
9----FXO/FXS Management
10---Advanced Config
->Please select one item to set(1-10)[1]:4
+-----------------------------------------------------------------------------+
|No. | ID |Table No. |Phone Prefix|Total Length|Route Permission| Description |
+----+----+----------+------------+------------+----------------+-------------+
|  0 |  1 |        0 |         112|   Unlimited|       Forbidden|         test|
+-----------------------------------------------------------------------------+

 Show trunk details or not[no]:

->Call Route:0-add,1-delete,2-modify[0]:2
->Enter the index to modify(0-0)[0]:
->Phone Prefix(length can't be zero)[112]:
->Total Length(0-32,0-unlimited)(0-32)[0]:
+-------------------------------------------------+
|No. | ID |Permission Value|Permission Descripton|
+----+----+----------------+---------------------+
|  0 |  1 |              0 |           Forbidden |
+----+----+----------------+---------------------+
|  1 |  2 |             30 |            Internal |
+----+----+----------------+---------------------+
|  2 |  3 |             60 |               Local |
+----+----+----------------+---------------------+
|  3 |  4 |             90 |       Long Distance |
+----+----+----------------+---------------------+
|  4 |  5 |            120 |       International |
+-------------------------------------------------+
->Route Permission(0-4)[0]:
->Description(length can't be zero)[test]:
->Call Route table number(0-9)[0]:
->set trunk detail or not[no]:y
->Trunk Type(1-Static IP trunk;2-Register Ip Trunk;3-FXO)[1]:
->Trunk Group Number(1-10)[2]:
->Caller Group Number(1-10)[2]:
->PreFix Mode(0-Normal;1-Delete;2-add;3-modify)[2]:
->Modify call length(1-32)[1]:
->Modify number[1]:
->continue or not?[no]:
->Really want to modify? 'yes' or 'no'[yes]:

  Operate success!

  The configuration will take effect after saved and reloaded!
```

Configure Call Routing Parameter

The following items are displayed on this screen:

►**Phone Prefix**: A call to the destination number which starts with this prefix will be routed with the corresponding call route table.

►**Total Length**: The length of destination number, 0 means indefinite length. A call route item is

uniquely identified by the prefix and total length field. Two call route items with same prefix but different “total length” is allowable. This parameter is also used to indicate whether the number is received completely.

►**Route Permission**: The call permission of subscriber should be no less than the permission of call route item.

►**Trunk Type**： There are 3 trunk types supported, static IP trunk, register IP trunk and FXO (analog trunk).

►**Trunk Group Number**: The trunk resource can be grouped.

►**Caller Group Number**: **Caller Group Number** indicates which caller number to be sent when call out through the specified trunk.

►**Prefix Mode**: The parameter specifies what the transformation performed on a called number before it gets routed over a trunk. There are four transformations that can be selected: **Unmodify**, **Remove**, **Add**, **Modify**

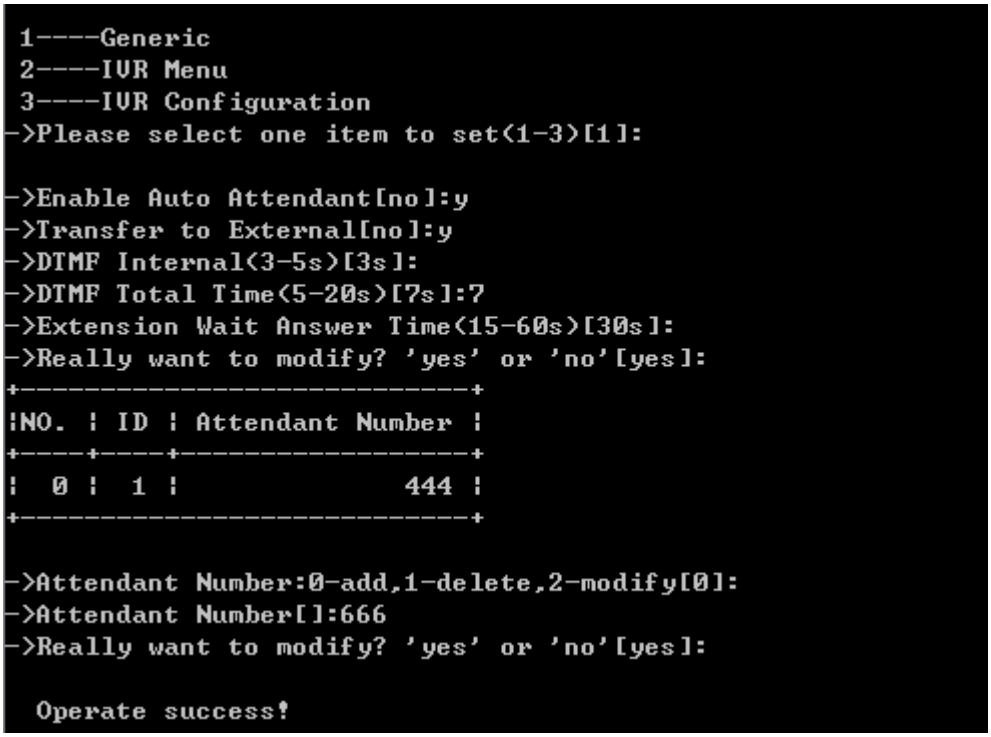
Auto Attendant

Auto attendant service allows callers to be automatically transferred to an extension without the intervention of an operator, and also allows a caller to reach a live operator by dialing a number, usually "0". Auto attendant will have a greeting message that is played to callers, this message can be configured. Different message to play in different time period is available. The auto attendant supports up to 20 phone numbers.Input the command “set voice” and choose “5” to configure auto attendant parameter as below:

```
BG9002N#set voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select one item to set(1-10)[1]:5

 1----Generic
 2----IVR Menu
 3----IVR Configuration
->Please select one item to set(1-3)[1]:
```

Configure Auto Attendant Parameter

Input “1” to configure auto attendant generic parameter as below:



Configure Auto Attendant Generic Parameter

The following items are displayed on this screen:

►**AutoAttendant**: Enable or disable Auto attendant.

►**Transfer To External**: Control whether or not the auto attendant can dial extension number.

►**DTMF Interval**: Inter-digit timer for DTMF collecting.

►**DTMF Total Time**: The total time use for DTMF collecting.

►**Extension Wait Answer Time**: The caller will return to the main menu when the timer expired.

►**Attendant Number**: All numbers are extension numbers.

Input “2” to configure IVR menu Parameter as below:

```
 1----Generic
 2----IVR Menu
 3----IVR Configuration
->Please select one item to set(1-3)[1]:2
+-----------------------------------------------------------------+
|NO. | ID |Transfer to KEY 0|Call Queue Enable|      Menu Name     |
+----+----+-----------------+-----------------+--------------------+
|  0 |  1 |            yes  |            yes  |               menu1|
+-----------------------------------------------------------------+

->IVR Menu:0-add,1-delete,2-modify[0]:
->Menu Name[]:menu2
->Prompt  Voice File[]:ivrmenu1
->Waiting Music File[]:waitingivr1
->Auto Transfer To Key 0[no]:y
->Call Queue Enable[no]:y
->Key 0 Extension[]:700
->Key 1 Extension[]:701
->Key 2 Extension[]:710
->Key 3 Extension[]:
->Key 4 Extension[]:
->Key 5 Extension[]:
->Key 6 Extension[]:
->Key 7 Extension[]:
->Key 8 Extension[]:
->Key 9 Extension[]:
->Really want to modify? 'yes' or 'no'[yes]:
  Operate success!
```

Configure IVR Menu Parameter

The following items are displayed on this screen:

►**Auto Transfer To Key 0**: Automatically transferred to the corresponding number of key 0 after playing greeting message.

►**Call Queue Enable:** This function is for the 0 key bindings extension. If o key binding extension is calling, third party will be queued, otherwise will hear busy tone.

Input “3” to Configure IVR parameter:

```
 1----Generic
 2----IVR Menu
 3----IVR Configuration
->Please select one item to set(1-3)[2]:3
+-------------------------------------------------------------------+
!NO. ! ID !Transfer to KEY 0!Call Queue Enable!      Menu Name     !
+----+----+----------------+----------------+--------------------+
!  0 !  1 !            yes  !            yes  !               menu1!
+----+----+----------------+----------------+--------------------+
!  1 !  2 !            yes  !            yes  !               menu2!
+-------------------------------------------------------------------+

->Default IVR Menu(0-1)[0]:1
->Holiday IVR Menu(0-1)[0]:0
+-----------------------------+
!NO. ! ID !Play Time! Menu ID !
+----+----+---------+---------+
!  0 !  1 !11:0     !       1 !
+-----------------------------+

->IVR Play Time Menu:0-add,1-delete,2-modify[0]:
->Play Time:Hour(0-23)[0]:18
->Play Time:Minute(0-59)[0]:
->IVR Menu(0-1)[0]:1
->Really want to modify? 'yes' or 'no'[yes]:
   Operate success!

  The configuration will take effect after saved and reloaded!
```

Configure IVR Parameter

The following items are displayed on this screen:

►**Default IVR Menu**: If you don't configure IVR menu of holidays and time period, use this IVR menu.

►**Holiday Menu**: Holiday uses special IVR menu.

Conference

Conference call allows the calling party to call the other participants and add them to the conference room. It also allows the called party to participate during the conference call. Input the command “set voice” and choose “6” to configure conference parameter as below:

```
BG9002N#set voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select one item to set(1-10)[1]:6

 1----Conference Room
 2----Function Keys
->Please select one item to set(1-2)[1]:
```

Configure Conference Parameter

Input “1” to configure conference room parameter:

```
 1----Conference Room
 2----Function Keys
->Please select one item to set(1-2)[1]:
+-------------------------------------------------------------------------+
|NO.  | ID |Conference Name  |Internal Number|External Number|Prompt Level|
+-----+----+-----------------+---------------+---------------+------------+
|  0  |  1 |         conroom1|            700|          45566|       Brief|
+-------------------------------------------------------------------------+

->Conference Room:0-add,1-delete,2-modify[0]:
->Conference Name[conference room]:
->Enable Conference[no]:y
->Enable Recording[no]:y
->Public Conference[yes]:
->First Member As Moderator or not[no]:y
->Wait Moderator or not[no]:y
->Prompt Level(0-Brief;1-Verbose)[1]:
->Internal Number[]:700
->External Number[]:324234
->Moderator PIN[]:
->Member PIN[]:
->Max Participants(3-30)[20]:
->Really want to modify? 'yes' or 'no'[yes]:
   Operate success!

  The configuration will take effect after saved and reloaded!
```

Configure Conference Room Parameter

The following items are displayed on this screen:

►**Enable**: Conference Room is valid.

►**Recording**: Check the box to enable recording for meeting.

►**Public Conference**: Indicates the conference is public or not. The public conference is always open, and the private conference is only open at specified time.

►**Fist Member As Moderator**: First telephone which enters the conference room is moderator, When

the conference room is a public meeting.

►**Wait Moderator**: The participants can not speak at the beginning when the conference is configured to wait moderator, they should ask for permission of moderator to speak.

►**Internal Number**: Internal phone number to enter this conference room.

►**External Number**: DID number to enter this conference room.

►**Moderator PIN**: Used to distinguish the moderator and other participants.

►**Member PIN**: Used for participant authentication, should be different from moderator PIN.

►**Start Time**: Start time for private conference.

►**End Time**: End time for private conference.

►**Max Participants**: Max participants for this conference room.

Input “2” to configure function keys parameter as below:

```
1----Conference Room
2----Function Keys
->Please select one item to set(1-2)[1]:2

Partic Key:
->Mute[0..9,*][*11]:
->Mute&Deaf[0..9,*][*12]:
->Request to Speak[0..9,*][*13]:
->Disable Speak[0..9,*][*14]:

Moderator key:
->Mute[0..9,*][*11]:
->Mute&Deaf[0..9,*][*12]:
->Invite Member[0..9,*][*13]:
->Kick Member[0..9,*][*14]:
->Transfer Moderator[0..9,*][*15]:
->Recording[0..9,*][*16]:
->Accept Speak Request[0..9,*][*17]:
->Refuse Speak Request[0..9,*][*18]:
->Lock Conference Room[0..9,*][*19]:
->Really want to modify? 'yes' or 'no'[yes]:

 The configuration will take effect after saved and reloaded!
```

Configure Function Keys Parameter

The following items are displayed on this screen:

Participant key:

►**Mute**: Mute oneself, it’s disabled in wait moderator mode. It works like toggle switch, one will be muted the first time when the keys pressed, and gets back next time.

►**Mute&Deaf**: Mute and deaf oneself, it’s disabled in wait moderator mode.

►**Request to speak**: The participants ask for permission to speak in waiting moderator mode.

►**Disable speak**: The participants mute themselves in waiting moderator mode, no need to confirm.

Moderator key:

►**Mute**: Mute moderator self or other participants. Instructions for participant muting, press mute keys+ participant number.

►**Mute&Deaf**: Mute and deaf moderator self.

►**Invite Member**: Add participant to the conference call.

►**Kick Member**: Kick participant from the conference call.
►**Transfer moderator**: Transfer the moderator role to another participant.
►**Recording**: Start or end recording of conference call.
►**Accept speak request**: Allow the participant to speak after receiving the request.
►**Refuse speak request**: Refuse the participant to speak after receiving the request.
►**Lock Conference Room**: Nobody can join the conference after the conference is locked unless the moderator calls them or unlocks the conference.

Multi-function Phone

Input the command “set voice” and choose “7” to configure multi-function phone parameter as below:

```
BG9002N#set voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select one item to set(1-10)[1]:7
+-------------------------------------------------------------------------+
|NO.  | ID | Func-Phone Ip |User Line1 |User Line2 |User Line3 |User Line4 |
+-----+----+---------------+-----------+-----------+-----------+-----------+
|   0 |  1 |192.168.100.124|        701|        700|           |           |
+-----+----+---------------+-----------+-----------+-----------+-----------+
|   1 |  2 |192.168.100.106|        700|        701|           |           |
+-------------------------------------------------------------------------+
+-----------------------------------------------+
|NO.  |Phone Port|Line Phone Number|Suppor Subscribe|
+-----+----------+-----------------+----------------+
|   0 |       55 |              755|             yes|
+-----------------------------------------------+

->Multi-function:0-add,1-delete,2-modify[0]:2
->Enter the index to modify(0-1)[0]:
->Multi-function phone IP address[192.168.100.124]:
->User line1[701]:
->User line2[700]:
->User line3[]:
->User line4[]:
->Really want to modify? 'yes' or 'no'[yes]:
   Operate success!

->Set binding lines or not?[yes]:

->Func-Phone Binding Lines:0-add,1-delete,2-modify[0]:
->Phone Port(0-71)[0]:
->Line Phone Number[]:53535
->Support Subscribe(yes/no)[no]:
->Really want to modify? 'yes' or 'no'[yes]:
  Operate success!

  The configuration will take effect after saved and reloaded!
```

Configure Multi-function Phone Parameter

The following items are displayed on this screen:

►**IP**: Multi-function phone IP address to connect LAN port of device.

►**User line(N)**: Phone numbers which are monitored.

►**Phone Port**: Multifunctional phone number that is corresponding with the bound user.

►**Support Subscription**: Support sending and receiving subscription packet.

Voice Mail Number

Voicemail is used to convey a caller's recorded audio message when you can not answer the phone. It contains a user interface to select, play and manage voice messages. Input the command “set voice” and choose “8” to configure voice mail number parameter as below:

```
BG9002N#set voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select one item to set(1-10)[1]:8

->Internal Number[8000]:
->External Number[8000]:
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reloaded!
```

Configure Voice Mail Parameter

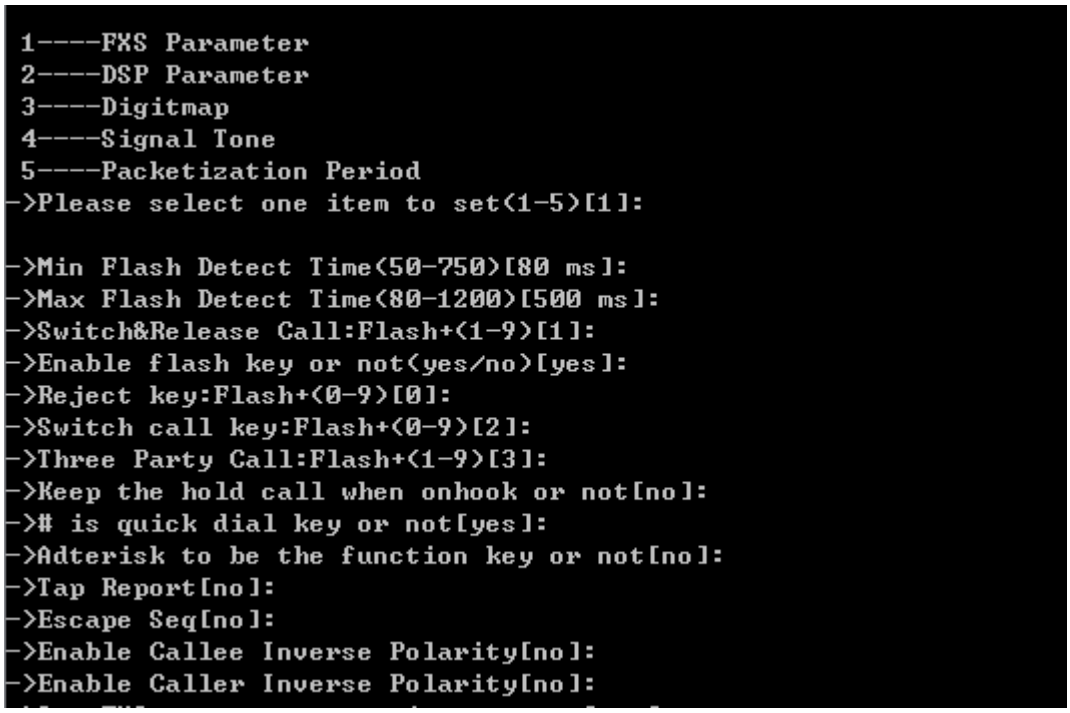
FXO/FXS Management

Input the command “set voice” and choose “9” to configure permission FXO/FXS management as below:

```
BG9002N#set voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select one item to set(1-10)[1]:9

 1----FXS Parameter
 2----DSP Parameter
 3----Digitmap
 4----Signal Tone
 5----Packetization Period
->Please select one item to set(1-5)[1]:
```

Configure FXO/FXS Management Parameter

Input “1” to configure FXS parameter:

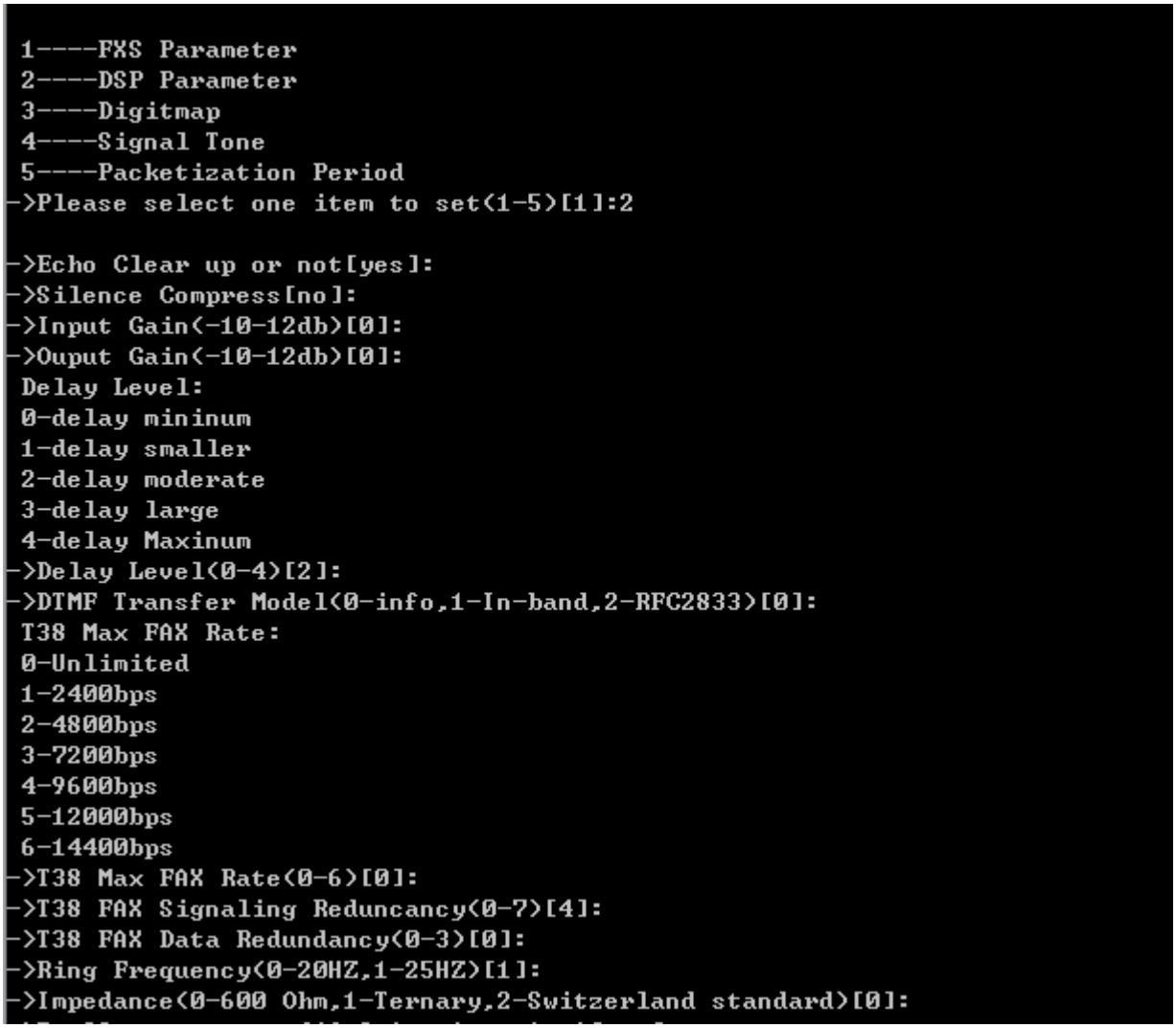


Configure FXS Management Parameter

The following items are displayed on this screen:

- ► **Min Flash Detect Time:** The minimum time to detect the flash.
- ► **Max Flash Detect Time:** The maximum time to detect the flash.
- ► **Flash Key Enable:** Whether to enable digit detect after flash.
- ► **Three Party Call:** If the digit specified is detected after flash, enter the conference mode.
- ► **Reject Key:** If the digit specified is detected after flash, reject the call on hold.
- ► **Switch Call Key:** If the digit specified is detected after flash, hold the active call or recover the call on hold.
- ► **Keep the hold call when onhook:** If selected, when hanging up in this context, the telephone rings to notify the user there is still a call on hold.
- ► **(#)Quick Dial Key:** Whether to send telephone number immediately after receiving the # key.
- ► **Asterisk Func Key:** Whether to use the ‘*’ key as flash key.
- ► **Tap Report:** Whether to report an event to server when flash detected.
- ► **Escape Seq:** Whether to use an escape characters when sending special DTMF.
- ► **CID Enable:** Whether to enable caller id globally.
- ► **Callee Inverse Polarity:** Whether to activate the Polarity Reversal for FXS callee.
- ► **Caller Inverse Polarity:** Whether to activate the Polarity Reversal for FXS caller.

Input “2” to configure DSP parameter as below:



Configure DSP Parameter

The following items are displayed on this screen:

► **Echo Clear up or not:** Enable or disable echo cancellation.

► **Silence Detection/Suppression:** Enable or disable silence detection and silence suppression.

► **Input Gain:** Configure the input gain value.

► **Output Gain:** Configure the input gain value

► **Delay Level:** Choose the delay level, five levels are provided: **Minimum, Smaller, Moderate, Larger, Maximum.**

► **DTMF Transfer Model:** Select DTMF transmission mode**: In-Band, INFO, RFC2833**.

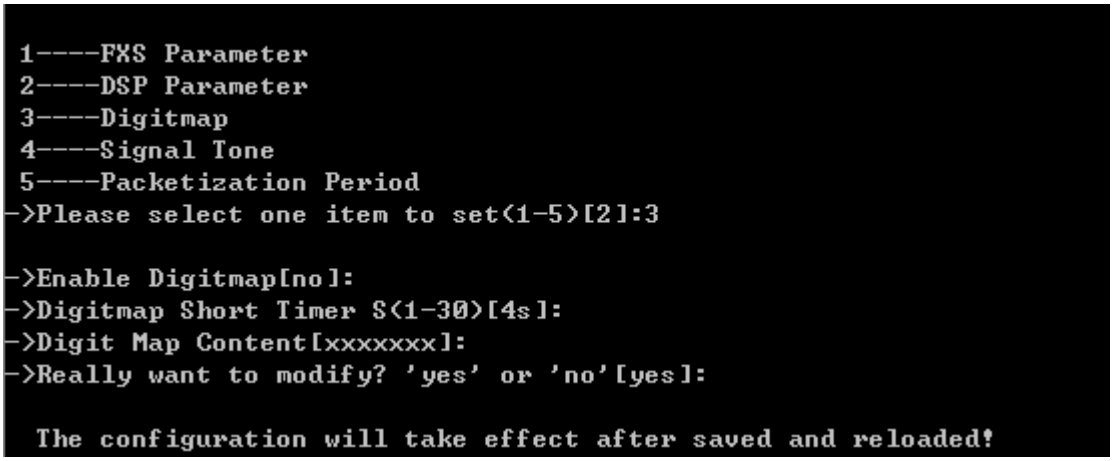
► **RFC2833 Load Type:** If RFC2833 is selected, specify payload type of RFC2833.

► **T38 Max FAX Rate:** Select the maximum rate, when using T38 fax mode: **Unlimited, 2400bps, 4800bps, 7200bps, 9600bps, 12000bps, 14400bps**.

► **T38 Signaling Redundancy:** Configure the redundancy of T38 signal.

► **T38 Data Redundancy:** Configure the redundancy of T38 data.

Input “3” to configure digitmap parameter as below:



Configure Digitmap Parameter

Digitmap example:

8XXXXXXX|1[0-24]0|2[18].3|3XXSXX|[0-9*#][0-9*#][0-9*#].#|[0-9*#].T

“8XXXXXXX” denotes numbers start with 8, the length is 8.

“1[0-24]0” denotes numbers include 100, 110, 120 and 140.

“2[18].3” denotes numbers that start with 2 and end with 3, there can be arbitrary length of 1 or 8 after the first digit 2. 23, 213, 2183 is matched.

“3XXSXX” denotes numbers start with 3, the length can be 3 or 5. If the short timer configured expires between the third digit and the fourth digit, the number will be sent.

“[0-9*#][0-9*#][0-9*#].#” denotes numbers end with #, and the length is no less than 2.

“[0-9*#].T” denotes any number that dialing time out.

Input “4” to configure signal tone parameter as below:

```
1----FXS Parameter
2----DSP Parameter
3----Digitmap
4----Signal Tone
5----Packetization Period
->Please select one item to set(1-5)[3]:4

0----China
1----Chile
2----Peru
3----America
4----Mexico
5----Telmex_Columbia
6----Switzerland
7----Other
->Tone Type(0-7)[6]:
->Dial Tone User Define Enable[no]:
->Busy Tone User Define Enable[no]:
->On Time(100-10000ms)[500]:
->Off Time(100-10000ms)[500]:
->Ring Back Tone User Define Enable[no]:
->Internal ring on time1(1-100)(*100ms)[10]:
->Internal ring off time1(1-100)(*100ms)[40]:
->Internal ring on time2(0-100)(*100ms)[0]:
->Internal ring off time2(0-100)(*100ms)[0]:
->External ring on time1(1-100)(*100ms)[10]:
->External ring off time1(1-100)(*100ms)[40]:
->External ring on time2(0-100)(*100ms)[0]:
->External ring off time2(0-100)(*100ms)[0]:
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reloaded!
```

Configure Signal Tone Parameter

The following items are displayed on this screen:

► **Tone Type:** Select the type of signal tone.

► **User Define Enable:** Whether to use user-defined dial tone frequency.

► **Dial Tone Frequency 1:**

► **Dial Tone Frequency 2:**

► **User Define Enable:** Whether to use user-defined busy tone frequency.

► **Busy Tone Frequency 1:**

► **Busy Tone Frequency 2:**

► **On Time:**

► **Off Time:**

► **User Define Enable:** Whether to use user-defined ringback tone frequency.

► **Ring Back Tone Frequency 1:**

► **Ring Back Tone Frequency 2:**

► **On Time:**

► **Off Time:**

Distinction Ring: Specify the ring cadence for the FXS port. In these fields, you specify the on and off pulses for the ring. The ring cadence that should be configured differs between internal call and external call.

Input “5” to configure packetization period parameter as below:

```
1----FXS Parameter
2----DSP Parameter
3----Digitmap
4----Signal Tone
5----Packetization Period
->Please select one item to set(1-5)[4]:5
->G.711APacket Period(10-90,degeress of 10)[20]:
->G.711UPacket Period(10-90,degeress of 10)[30]:
->G.723Packet Period(10-90,degeress of 10)[30]:
->G.729Packet Period(10-90,degeress of 10)[20]:
->Really want to modify? 'yes' or 'no'[yes]:

 The configuration will take effect after saved and reloaded!
```

Configure Packetizer Period Parameter

► **G.711A Packet Period:** RTP packetization period of G.711A codec.
► **G.711u Packet Period:** RTP packetization period of G.711U codec.
► **G.723 Packet Period:** RTP packetization period of G.723 codec.
► **G.729 Packet Period:** RTP packetization period of G.729 codec.

Advanced Configuration

Input the command “set voice” and choose “10” to configure advanced configuration parameter as below:

```
BG9002N#set voice

 1----Permission Definition
 2----Time Lock
 3----Ring Group
 4----Call Routing
 5----Auto Attendant
 6----Conference
 7----Multi-function Phone
 8----Voice Mail Number
 9----FXO/FXS Management
 10---Advanced Config
->Please select one item to set(1-10)[1]:10

 1----Emergency Phone Number
 2----DISA Number
 3----Holiday
 4----Service Control
 5----Supplementary Key
 6----Supplementaly
 7----Department Definition
 8----File Management
->Please select one item to set(1-8)[1]:
```

Configure Advance Config Parameter

User dials emergency phone number without calling privileges restricted. Input “1” to configure emergency phone number parameter as below:

```
1----Emergency Phone Number
2----DISA Number
3----Holiday
4----Service Control
5----Supplementary Key
6----Supplementaly
7----Department Definition
8----File Management
->Please select one item to set(1-8)[1]:
+--------------------------+
|NO. | ID |Emergency Number|
+----+----+----------------+
|  0 |  1 |          32423 |
+----+----+----------------+
|  1 |  2 |         768768 |
+--------------------------+

->Emergency Number:0-add,1-delete,2-modify[0]:2
->Enter the index to modify(0-1)[0]:
->Emergency Number[32423]:
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reloaded!
```

Configure Emergency Phone Number Parameter

DISA Number is access code to enter the DISA system. Input “2” to configure DISA number parameter as below:

```
1----Emergency Phone Number
2----DISA Number
3----Holiday
4----Service Control
5----Supplementary Key
6----Supplementaly
7----Department Definition
8----File Management
->Please select one item to set(1-8)[1]:2

->Internal Number[7867]:
->External Number[8978]:
->Time lock valid or not(yes/no)[no]:
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reloaded!
```

Configure Disa Number Parameter

The following items are displayed on this screen:

►**Internal number**: Phone number to access the DISA IVR system.

►**Extenal number**: DID number for external users to access the DISA IVR system.

►**Time Lock Valid**: Call permission is affected by Time Lock or not when authenticated by DISA.

Input “3” to configure holiday days parameter as below:

```
 1----Emergency Phone Number
 2----DISA Number
 3----Holiday
 4----Service Control
 5----Supplementary Key
 6----Supplementy
 7----Department Define
 8----File Management
->Please select one item to set(1-8)[2]:3
+-----------------------------------------------+
|NO. | ID |Year |Month|Day| Week      |Description|
+----+----+-----+-----+---+-----------+-----------+
|  0 |  1 |2014 |   1 | 1 | Wednesday |           |
+-----------------------------------------------+

->Holiday :0-add,1-delete(0):
->Select Scope(0-full year;1-One Day)[0]:1
->Input an year to set(not smaller than 2013)[2013]:2014
->Input month to set(1-12)[1]:2
->Input a day to set(1-31)[1]:14
->Description:qingrenjie
->Really want to modify? 'yes' or 'no'[yes]:
  Operate success!
```

Configure Holiday Days Parameter

Input “4” to configure service control parameter as below:

```
1----Emergency Phone Number
2----DISA Number
3----Holiday
4----Service Control
5----Supplementary Key
6----Supplementaly
7----Department Definition
8----File Management
->Please select one item to set(1-8)[3]:4

->Enable Centrex(yes/no)[yes]:
->Call Time Limit(yes/no)[no]:
->Enable Internal Music(yes/no)[yes]:
->Video Support(yes/no)[no]:
->Enable Trunk Alternate(yes/no)[no]:
->Enabel Trunk Refer Transfer(yes/no)[yes]:
->Call Park Time-Out(yes/no)[yes]:
->How long to be time out(1-240s)[60]:
->External Call Forward Type(0-Forward by 302;1-Forward by asterisk)[0]:
->Prmpt Language Type(0-Chinese,1-English)[1]:
->Max Forward Times(1-5)[1]:
->Max Registration As Per-Account(1-20)[1]:
->Rtp begin Port(1024-65535)[9000]:
->Rtp end Port(9000-65535)[20000]:
->Local SIP Port(1024-65535)[5060]:
->Tos/DiffServ settings(0-Tos Ip Presedence,1-DiffServ(Dscp))[1]:
->Signaling Precedence(0-7)[0]:
->Voice Precedence(0-7)[0]:
->Enable Call In Black&White(0-Black User List,1-White User List)[0]:
->Enable Call Out Black&White(0-Black User List,1-White User List)[0]:
->Really want to modify? 'yes' or 'no'[yes]:

 The configuration will take effect after saved and reloaded!
```

Configure Service Control Parameter

The following items are displayed on this screen:

►**Centrex**: Whether or not to enable centrex function globally.

►**Call Time Limit**: Set the call time to prevent long talk.

►**Internal Music**: Hear music when extensions call each other.

►**Video Support**: Enable or disable the support of video call.

►**Trunk Alternate**: If the calls of one register IP trunk has reached the maximum, then poll next register IP trunk.

►**Trunk Refer Transfer**: Transfer a call by sending refer or reinvite request.

►**External Call Forward Type**: Reply 302 or send reinvite request.

►**Prompt Language Type**: The language of prompt tone is Chinese or other.

►**Max Forward Times**: A call can be transferred maximum time in the device.

►**Rtp Port**: RTP port range.

►**Local SIP Port**: SIP signaling port number.

►**SDP Pack With Audio When T38 Faxing**: T38 fax packets with audio information.

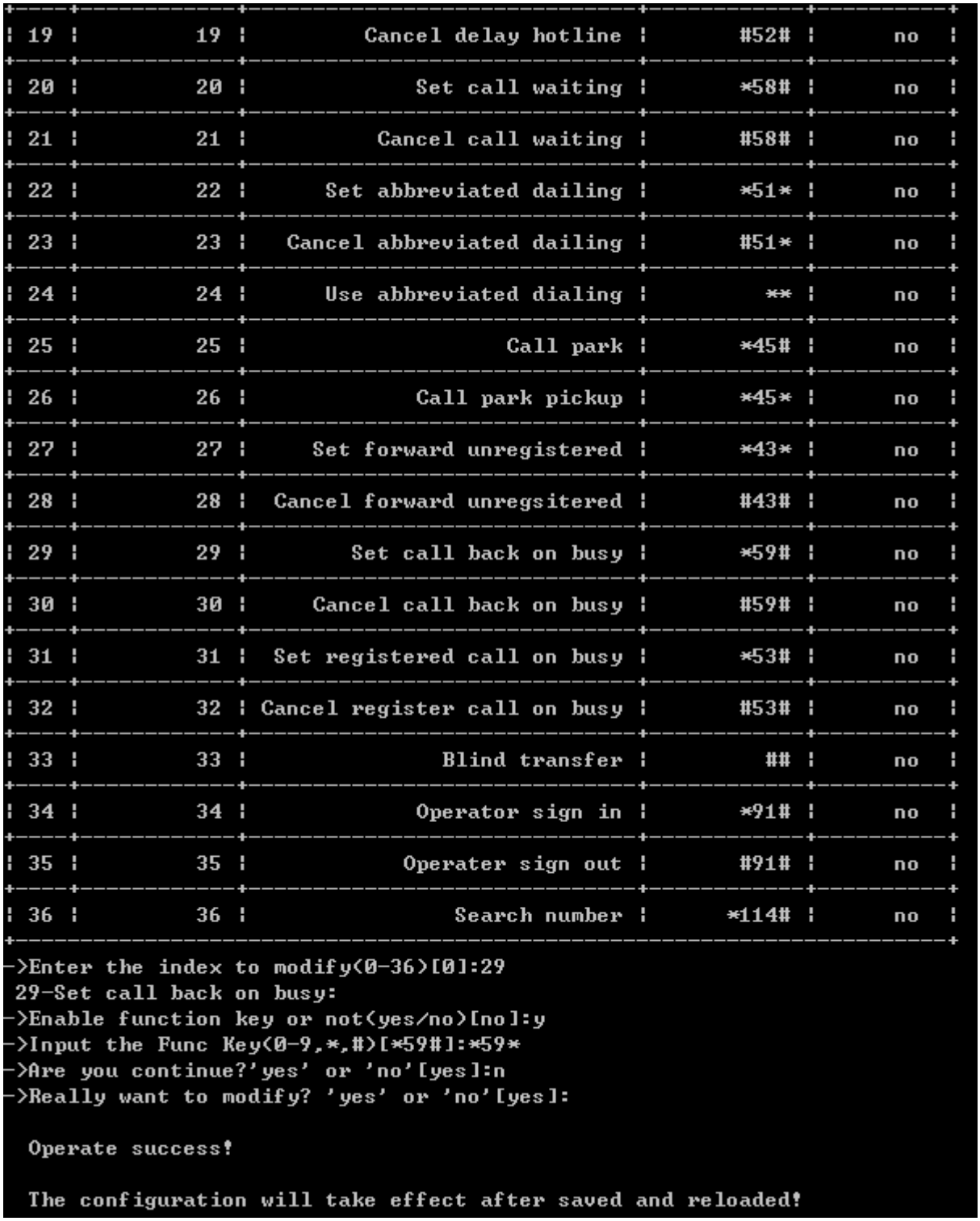
►**Enable Call In Black&White**: Enable or disable incoming blacklist or whitelist.

►**Enable Call Out Black&White**: Enable or disable outgoing blacklist or whitelist.

Input “5” to configure supplementary key parameter as below:

```
 1----Emergency Phone Number
 2----DISA Number
 3----Holiday
 4----Service Control
 5----Supplementary Key
 6----Supplementaly
 7----Department Definition
 8----File Management
->Please select one item to set(1-8)[4]:5
+-----------------------------------------------------------------------+
|No. |Function No.|      Function Key Name       |Function Key|Enable Key|
+----+------------+------------------------------+------------+----------+
|  0 |          0 |         Same group to pickup |       *88# |      no  |
+----+------------+------------------------------+------------+----------+
|  1 |          1 |     Appoint extension pickup |       *88* |      no  |
+----+------------+------------------------------+------------+----------+
|  2 |          2 |         Set call restriction |       *54* |      no  |
+----+------------+------------------------------+------------+----------+
|  3 |          3 |       Cancel call restrition |       #54* |      no  |
+----+------------+------------------------------+------------+----------+
|  4 |          4 |              Set alarm clock |       *55* |      no  |
+----+------------+------------------------------+------------+----------+
|  5 |          5 |           Cancel alarm clock |       #55* |      no  |
+----+------------+------------------------------+------------+----------+
|  6 |          6 |               Set no disturb |       *56# |      no  |
+----+------------+------------------------------+------------+----------+
|  7 |          7 |            Cancel no disturb |       #56# |      no  |
+----+------------+------------------------------+------------+----------+
|  8 |          8 |    Set forward unconditional |       *57* |      no  |
+----+------------+------------------------------+------------+----------+
|  9 |          9 |  Cancel forward uncoditional |       #57# |      no  |
+----+------------+------------------------------+------------+----------+
| 10 |         10 |                   Ring test |       *99# |      no  |
+----+------------+------------------------------+------------+----------+
| 11 |         11 |                 Time report |       *90# |      no  |
+----+------------+------------------------------+------------+----------+
| 12 |         12 |    Set call forward no reply |       *41* |      no  |
+----+------------+------------------------------+------------+----------+
| 13 |         13 | Cancel call forward no reply |       #41# |      no  |
+----+------------+------------------------------+------------+----------+
| 14 |         14 |     Set call forward on busy |       *40* |      no  |
+----+------------+------------------------------+------------+----------+
| 15 |         15 |  Cancel call forward on busy |       #40# |      no  |
+----+------------+------------------------------+------------+----------+
| 16 |         16 |          Set instant hotline |       *42* |      no  |
+----+------------+------------------------------+------------+----------+
| 17 |         17 |       Cancel instant hotline |       #42* |      no  |
+----+------------+------------------------------+------------+----------+
| 18 |         18 |            Set delay hotline |       *52* |      no  |
+----+------------+------------------------------+------------+----------+
```

Configure Supplementaly Key Parameter(1)



19	19	Cancel delay hotline	#52#	no
20	20	Set call waiting	*58#	no
21	21	Cancel call waiting	#58#	no
22	22	Set abbreviated dailing	*51*	no
23	23	Cancel abbreviated dailing	#51*	no
24	24	Use abbreviated dialing	**	no
25	25	Call park	*45#	no
26	26	Call park pickup	*45*	no
27	27	Set forward unregistered	*43*	no
28	28	Cancel forward unregsitered	#43#	no
29	29	Set call back on busy	*59#	no
30	30	Cancel call back on busy	#59#	no
31	31	Set registered call on busy	*53#	no
32	32	Cancel register call on busy	#53#	no
33	33	Blind transfer	##	no
34	34	Operator sign in	*91#	no
35	35	Operater sign out	#91#	no
36	36	Search number	*114#	no

```
->Enter the index to modify(0-36)[0]:29
 29-Set call back on busy:
->Enable function key or not(yes/no)[no]:y
->Input the Func Key(0-9,*,#)[*59#]:*59*
->Are you continue?'yes' or 'no'[yes]:n
->Really want to modify? 'yes' or 'no'[yes]:

  Operate success!

  The configuration will take effect after saved and reloaded!
```

Configure Supplementaly Key Parameter(2)

Iput “6” to configure supplementary (call restriction) parameter as below:

```
 1----Emergency Phone Number
 2----DISA Number
 3----Holiday
 4----Service Control
 5----Supplementary Key
 6----Supplementaly
 7----Department Definition
 8----File Management
->Please select one item to set(1-8)[1]:6
+-------------------------------------------------+
|No. | ID |Permission Value|Permission Descripton|
+----+----+----------------+---------------------+
|  0 |  1 |              0 |           Forbidden |
+----+----+----------------+---------------------+
|  1 |  2 |             30 |            Internal |
+----+----+----------------+---------------------+
|  2 |  3 |             60 |               Local |
+----+----+----------------+---------------------+
|  3 |  4 |             90 |       Long Distance |
+----+----+----------------+---------------------+
|  4 |  5 |            120 |       International |
+-------------------------------------------------+
->Call Restriction1(0-4)[0]:
->Call Restriction2(0-4)[0]:
->Call Restriction3(0-4)[0]:
->Call Restriction4(0-4)[0]:
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reloaded!
```

Configure Supplementary Parameter

Four time-lock corresponding permissions, one must be chosen when user enables password lock.

Input “7” to configure department parameter as below:

```
1----Emergency Phone Number
2----DISA Number
3----Holiday
4----Service Control
5----Supplementary Key
6----Supplementaly
7----Department Definition
8----File Management
->Please select one item to set(1-8)[6]:7
+------------------------------+
|NO.  | ID |   Department Name   |
+-----+----+---------------------+
|  0  |  1 |                7878 |
+-----+----+---------------------+
|  1  |  2 |                7879 |
+------------------------------+

->Department name:0-add,1-delete,2-modify[0]:2
->Enter the index to modify(0-1)[0]:
->Department name[7878]:
->Really want to modify? 'yes' or 'no'[yes]:
   Operate success!

  The configuration will take effect after saved and reloaded!
```

Configure Department Parameter

Input “8” to configure file management parameter as below:

```
1----Emergency Phone Number
2----DISA Number
3----Holiday
4----Service Control
5----Supplementary Key
6----Supplementaly
7----Department Definition
8----File Management
->Please select one item to set(1-8)[7]:8
->On Hold Music File[music_on_hold]:
->Ring Back Music File[default]:
->Total Recording Capacity(1-100G)[10]:
->Record File Effective Time(1-365Day)[365]:
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reloaded!
```

Configure File Management Parameter

The following items are displayed on this screen:

►**On Hold Music File:** Set this music file which is used in call waiting.

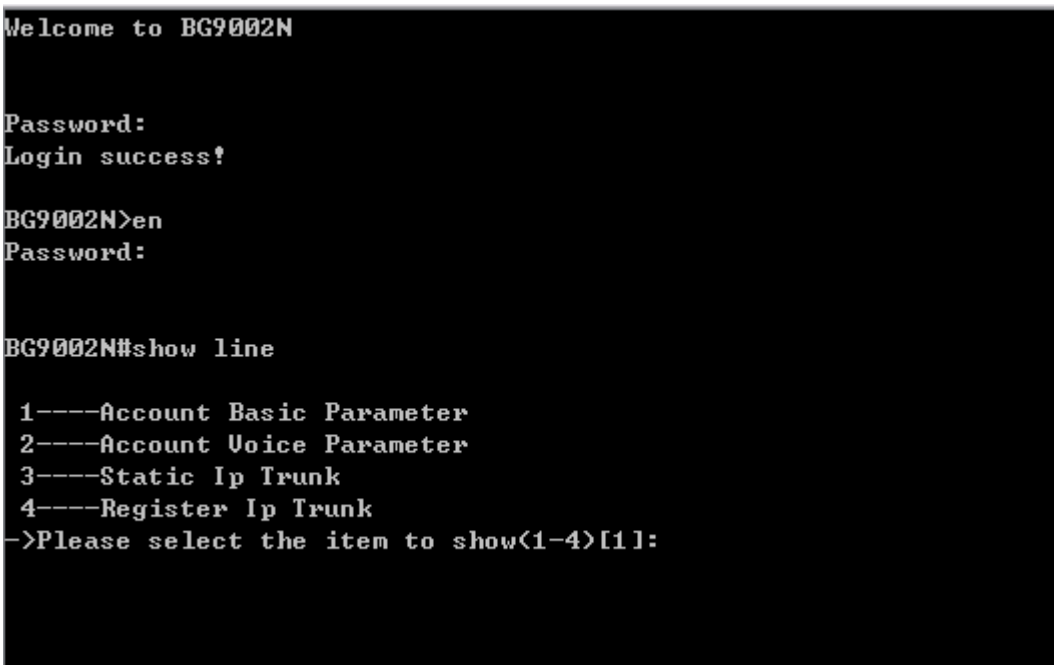
►**Ring Back Music File:** Set this music file which is used in ringback tone

►**Total Recording Capacity**: The total size of all recording files.

►**Recording File Effective Time**: The existence time of recording file.

Show Sip Account and Sip Trunk Parameter

The sip account and sip trunk parameter is showed by input command “show line” as below:



Show Sip Account and Sip Trunk Parameter

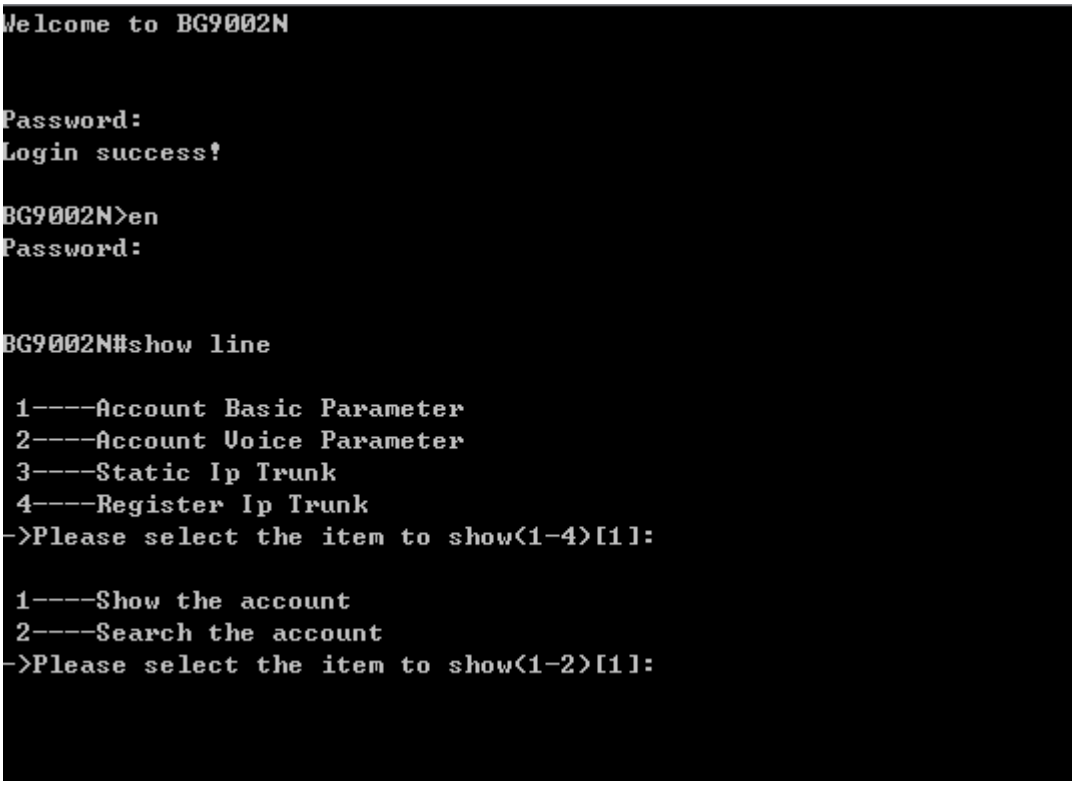
The command contains the Information of user line or sip account basic parameters, account voice parameters, static IP trunk parameters, register IP trunk parameter, just choose “1” to “4” to input to get the information of each configuration. The detail information introduction is as below

Account Basic Parameter

Input the command “show line” and choose 1 to show account basic parameter, and then there are two items to choose to show:

- show the account
- search the account

as below:



Show Account Basic Parameter

You can choose “1” to show all the account basic parameter or choose “2” to show the right account parameter by input the account name. When choose “1”, it shows as below:

```
 1----Show the account
 2----Search the account
->Please select the item to show(1-2)[1]:
+-----------------------------------------------------------------+
|No. | ID  |     Account Name        | Extension  |Extention Type|
+----+-----+-------------------------+------------+--------------+
|  0 |   1 |              Phone_001  |         700|      Internal|
+----+-----+-------------------------+------------+--------------+
|  1 |   2 |              Phone_002  |         701|      External|
+----+-----+-------------------------+------------+--------------+
|  2 |   3 |              Phone_003  |         710| Intern/Extern|
+-----------------------------------------------------------------+

->Enter the index to show(0-2)[0]:
 account.....................................:open
 password....................................:
 Caller name.................................:
 Authentication name.........................:
 Register State..............................:Unregister
 Register Url................................:
 Hired time..................................:0s
 The reason for failure of register..........:0

->Show account detail parameters continue or not?[yes]:

->Enter the index to show(0-2)[0]:1
 account.....................................:open
 password....................................:
 Caller name.................................:
 Authentication name.........................:
 Register State..............................:Unregister
 Register Url................................:
 Hired time..................................:0s
 The reason for failure of register..........:0

->Show account detail parameters continue or not?[yes]:n
```

Show All Account Basic Parameter

If the account number is more than 10, then it will show by pages as below:

```
 1----Show the account
 2----Search the account
->Please select the item to show(1-2)[1]:
+-----------------------------------------------------------------+
|No. | ID  |     Account Name        | Extension  |Extention Type|
+----+-----+-------------------------+------------+--------------+
|  0 |   1 |              Phone_001  |         700|      Internal|
+----+-----+-------------------------+------------+--------------+
|  1 |   2 |              Phone_002  |         701|      External|
+----+-----+-------------------------+------------+--------------+
|  2 |   3 |              Phone_003  |         710| Intern/Extern|
+----+-----+-------------------------+------------+--------------+
|  3 |   4 |             1Phone_004  |         804|      Internal|
+----+-----+-------------------------+------------+--------------+
|  4 |   5 |             1Phone_005  |         805|      Internal|
+----+-----+-------------------------+------------+--------------+
|  5 |   6 |             1Phone_006  |         806|      Internal|
+----+-----+-------------------------+------------+--------------+
|  6 |   7 |             1Phone_007  |         807|      Internal|
+----+-----+-------------------------+------------+--------------+
|  7 |   8 |             1Phone_008  |         808|      Internal|
+----+-----+-------------------------+------------+--------------+
|  8 |   9 |             1Phone_009  |         809|      Internal|
+----+-----+-------------------------+------------+--------------+
|  9 |  10 |             1Phone_010  |         810|      Internal|
+-----------------------------------------------------------------+

 Show account assign continue or not[yes]:
+-----------------------------------------------------------------+
|No. | ID  |     Account Name        | Extension  |Extention Type|
+----+-----+-------------------------+------------+--------------+
| 10 |  11 |             1Phone_011  |         811|      Internal|
+----+-----+-------------------------+------------+--------------+
| 11 |  12 |             1Phone_012  |         812|      Internal|
+----+-----+-------------------------+------------+--------------+
| 12 |  13 |             1Phone_013  |         813|      Internal|
+----+-----+-------------------------+------------+--------------+
| 13 |  14 |             1Phone_014  |         814|      Internal|
+----+-----+-------------------------+------------+--------------+
| 14 |  15 |             1Phone_015  |         815|      Internal|
+----+-----+-------------------------+------------+--------------+
| 15 |  16 |             1Phone_016  |         816|      Internal|
+----+-----+-------------------------+------------+--------------+
| 16 |  17 |             1Phone_017  |         817|      Internal|
+----+-----+-------------------------+------------+--------------+
| 17 |  18 |             1Phone_018  |         818|      Internal|
+----+-----+-------------------------+------------+--------------+
| 18 |  19 |             1Phone_019  |         819|      Internal|
+----+-----+-------------------------+------------+--------------+
| 19 |  20 |             1Phone_020  |         820|      Internal|
+-----------------------------------------------------------------+

 Show account assign continue or not[yes]:n
```

Show Account Basic Parameter by Page

When choose “2” to search account by account name, it shows as below:

```
 1----Show the account
 2----Search the account
->Please select the item to show(1-2)[1]:2
->Input the account name to search:phone

 Can not find the account on the list
->Search the other account continue or not[yes]:
->Input the account name to search:Phone_001
+-----------------------------------------------------------------+
|No. | ID  |     Account Name       | Extension  |Extention Type|
+----+-----+------------------------+------------+--------------+
|  0 |   1 |              Phone_001 |         700|      Internal|
+-----------------------------------------------------------------+
->Search the other account continue or not[yes]:n

->Enter the index to show(0-2)[0]:
 account.........................................:open
 password........................................:
 Caller name.....................................:
 Authentication name.............................:
 Register State..................................:Unregister
 Register Url....................................:
 Hired time......................................:0s
 The reason for failure of register..............:0
```

Search the Account and Show Account Basic Parameter

Account Voice Parameter

Input the command “show line” and choose 2 to show account voice parameter, and there are six items to choose:

1. callee number
2. caller number
3. supplementary
4. advanced config
5. black&white list
6. abbreviated dialing

as below:

```
BG9002N#show line

 1----Account Basic Parameter
 2----Account Voice Parameter
 3----Static Ip Trunk
 4----Register Ip Trunk
->Please select the item to show(1-4)[1]:2
+-------------------------------------------------------------------+
|No. | ID  |     Account Name       | Extension  |Extention Type|
+----+-----+------------------------+------------+--------------+
|  0 |   1 |             Phone_001  |         911|      Internal|
+----+-----+------------------------+------------+--------------+
|  1 |   2 |             Phone_002  |         912|      External|
+----+-----+------------------------+------------+--------------+
|  2 |   3 |              phone004  |         801|      Internal|
+-------------------------------------------------------------------+
->Enter the index to show(0-2)[0]:

 1----Callee Number
 2----Caller NUmber
 3----Supplementary
 4----Advanced Config
 5----Black&White List
 6----Abbreviated Dialing
->Please select the item to show(1-6)[1]:
```

Show Account Voice parameter

Input “1” to show callee number as below:

```
1----Callee Number
2----Caller NUmber
3----Supplementary
4----Advanced Config
5----Black&White List
6----Abbreviated Dialing
->Please select the item to show(1-6)[1]:

Callee number1.................................:911
Callee type....................................:Internal
Callee number2.................................:825
Callee type....................................:Internal
Callee number3.................................:
Callee type....................................:Internal
Callee number4.................................:
Callee type....................................:Internal
Callee number5.................................:
Callee type....................................:Internal
Callee number6.................................:
Callee type....................................:Internal
Callee number7.................................:
Callee type....................................:Internal
Callee number8.................................:
Callee type....................................:Internal
Callee number9.................................:1011
Callee type....................................:External
Callee number10................................:
Callee type....................................:Internal
```

Show Callee Number Parameter

Input “2” show caller number as below:

```
1----Callee Number
2----Caller NUmber
3----Supplementary
4----Advanced Config
5----Black&White List
6----Abbreviated Dialing
->Please select the item to show(1-6)[1]:2

Caller number1.................................:911
Caller number2.................................:
Caller number3.................................:
Caller number4.................................:
Caller number5.................................:
Caller number6.................................:
Caller number7.................................:
Caller number8.................................:
Caller number9.................................:
Caller number10................................:
```

Show Caller Number Parameter

Input “3” to show supplementary parameter as below:

```
1----Callee Number
2----Caller NUmber
3----Supplementary
4----Advanced Config
5----Black&White List
6----Abbreviated Dialing
->Please select the item to show(1-6)[2]:3

Call Out Permission.............................:Internal
Time Lock Number................................:0
Enable Call Restriction.........................:no
Enable voice mail...............................:yes
Total Message Time..............................:15
Password........................................:******
If the new message is too long,how to handle it:Overwrite
Call Forwarding Unconditional...................:no
Call Forwarding When No Reply...................:no
Call Forwarding On Busy.........................:no
Call Forwarding When UnRegistered...............:no
Phone Number....................................:
Set to Instant Hotline..........................:no
Delay Time......................................:0s
Internal Call Limit(0-255Min,0,Unlimit).........:0
FXO Call Limit(0-255Min,0,Unlimit)..............:0
IP Trunk Call Limit(0-255Min,0,Unlimit).........:0
CID Restriction.................................:no
Enable No Disturb...............................:no
Enable Call Waiting.............................:no
Call Back On Busy...............................:no
TimeOut No Reply................................:no
Wait Time Long..................................:0
Enable Alarm Clock..............................:yes
Time............................................:10:0
Enable On RingBack Music........................:no
CID Enable......................................:yes
CID Mode........................................:FSK
Enable MWI......................................:no
```

Show Supplementary Parameter

Input “4” to show advanced config parameter as below:

```
1----Callee Number
2----Caller NUmber
3----Supplementary
4----Advanced Config
5----Black&White List
6----Abbreviated Dialing
->Please select the item to show(1-6)[3]:4

General Scheme:
Route SN.....:1
Media Transfer.....:Undirect Media
T38 Transfe Mode.....:T38
Recording Enable.....:yes
Forbid Attendant Transmit.....:yes
Enable Security Authetication:
Enable IP Address Limit Pattern.....:yes
White IP Address.....:192.168.1.66-192.168.1.77
Enable Mac Limit Pattern.....:yes
White Mac Address.....: 0-11-22-33-44-55
Enable UserAgent Limit Pattern.....:yes
White User-Agent Member.....:useragent1
Reg-Port Limit Pattern.....:yes
White Reg-Port Member.....:1024-65535
Seat Phone Name.....:seatphone
Department ID.....:1
Voice Codec:
Consultation Model.....:Priority-Level
Codec First Priority.....:G.711U
Codec Second Priority.....:G.723
Codec Third Priority.....:G.729
Codec Fourth Priority.....:G.726
Disa Function:
Enable DISA.....:yes
Display Local Extension Name.....:yes
DISA Password.....:******
DISA Bind Caller Number.....:700
```

Show Advance Config Parameter

Input “5” to show black&white list parameter as below:

```
 1----Callee Number
 2----Caller NUmber
 3----Supplementary
 4----Advanced Config
 5----Black&White List
 6----Abbreviated Dialing
->Please select the item to show(1-6)[1]:5
+-----------------------------------------------+
|No. | ID |   List Type         | Phone Number   |
+----+----+---------------------+----------------+
|  0 |  1 | Call Out Black List |        3536546 |
+----+----+---------------------+----------------+
|  1 |  2 | Call Out White List |         564765 |
+----+----+---------------------+----------------+
|  2 |  3 |  Call In White List |         456756 |
+-----------------------------------------------+
```

Show Black&White List Parameter

Input “6” to show abbreviated dialing number parameter as below:

```
 1----Callee Number
 2----Caller NUmber
 3----Supplementary
 4----Advanced Config
 5----Black&White List
 6----Abbreviated Dialing
->Please select the item to show(1-6)[5]:6
+-------------------------------------------------+
|No. | ID |     Phone Number     |Abbreviated Number|
+----+----+----------------------+------------------+
|  0 |  1 |              5676557 |               56 |
+----+----+----------------------+------------------+
|  1 |  2 |             65756876 |               65 |
+-------------------------------------------------+
```

Show Abbreviated Dialing Parameter

Static IP Trunk

Input the command “show line” and select “3” to show static IP trunk parameter as below:

```
 1----Account Basic Parameter
 2----Account Voice Parameter
 3----Static Ip Trunk
 4----Register Ip Trunk
->Please select the item to show(1-4)[2]:3
+----+----+---------+--------------------+--------------------+-----+
|No. | ID |Group No.|     Trunk Name     |    Ip or Domain    |Port|
+----+----+---------+--------------------+--------------------+-----+
|  0 |  1 |       0 |        statictrunk |    192.168.100.124 | 5060|
+----+----+---------+--------------------+--------------------+-----+
|  1 |  2 |       1 |      staticktrunk2 |    192.168.100.106 | 5060|
+----+----+---------+--------------------+--------------------+-----+
```

Show Static IP Trunk Parameter

Register IP Trunk

Input the command “show line”and select “4” to show Register IP Trunk parameter, and then there are three items to choose:

1. register server
2. register IP trunk
3. wildcard register group

as below:

```
 1----Account Basic Parameter
 2----Account Voice Parameter
 3----Static Ip Trunk
 4----Register Ip Trunk
->Please select the item to show(1-4)[3]:4

 1----Register Server
 2----Register Ip Trunk
 3----Wildcard Register Group
->Please select the item to show(1-3)[1]:
```

Show Register IP Trunk Parameter

Input “1” to show register server parameter as below:

```
 1----Register Server
 2----Register Ip Trunk
 3----Wildcard Register Group
->Please select the item to show(1-3)[1]:
+-----------------------------------------------------------------------------+
|No. | ID |    Register Server |   Server IP/Domain    | Port |Register Cycle |
+----+----+--------------------+-----------------------+------+---------------+
|  0 |  1 |          RegServer |           138.0.60.2  | 5060 |          3600 |
+----+----+--------------------+-----------------------+------+---------------+
|  1 |  2 |         Regserver1 |      192.168.100.124  | 5060 |            60 |
+----+----+--------------------+-----------------------+------+---------------+
|  2 |  3 |              hello |        192.168.100.1  | 5060 |          3600 |
+-----------------------------------------------------------------------------+

->Enter the index to show(0-2)[0]:

 Enable backup server or not.....................:no
 Enable proxy server or not......................:no
 Enable backup agent register or not.............:no
 SBC enable or not...............................:no
 Enable Keeping Alive............................:no
 Enable Realm....................................:no
 Enable Session .................................:no
 Enable Sip Retrans Timer........................:no
 User Agent......................................:GaoKePBX
 SDP Mode When Call holding......................:0.0.0.0
 Enable NextNonce................................:no
 Support PRACK or not............................:no
 Support USER-PHONE or not.......................:no
 Auto Update Register Cycle or not...............:yes
 Support Full Register or not....................:no
 First Package with Information..................:no
 SDP with Audio when T38 Faxing..................:no
```

Show Register Server Parameter

Input “2” to show register ip trunk parameter as below:

```
 1----Register Server
 2----Register Ip Trunk
 3----Wildcard Register Group
->Please select the item to show(1-3)[1]:2
+-------------------------------------------------------------------------+
|No. | ID |Register IP Trunk Name| Group  |  Account     |Callee Number |
+----+----+----------------------+--------+--------------+--------------+
|  0 |  1 |             iptrunck1|      1 |    RegServer1|           701|
+----+----+----------------------+--------+--------------+--------------+
|  1 |  2 |              iptrunk2|      3 |  dsfsgsgdsfsd|           702|
+----+----+----------------------+--------+--------------+--------------+
|  2 |  3 |              iptrunk3|      1 |      sdgdsfsd|           701|
+----+----+----------------------+--------+--------------+--------------+

->Enter the index to show(0-2)[0]:

 TR069 Enable.....................................:yes
 TR069 User Name..................................:dslfdsf
 TR069 Password...................................:******
 IP TRUNK Group...................................:1
 Match Caller.....................................:
 Binding Callee...................................:701
 IP Trunk Name....................................:iptrunck1
 Register Account.................................:RegServer1
 Auth User Name...................................:sdfdsfsd
 Password.........................................:******
 Max InterCurrent Count...........................:0
 Wildcard Number(-1 is not belong to any group).:0
 Is it wildcard account...........................:yes
 Enable Register..................................:yes
 Regster State....................................:Unregister
 Server ID........................................:1
->Show IP trunk para continue or not?[yes]:n
```

Show Register IP Trunk Detail Parameter

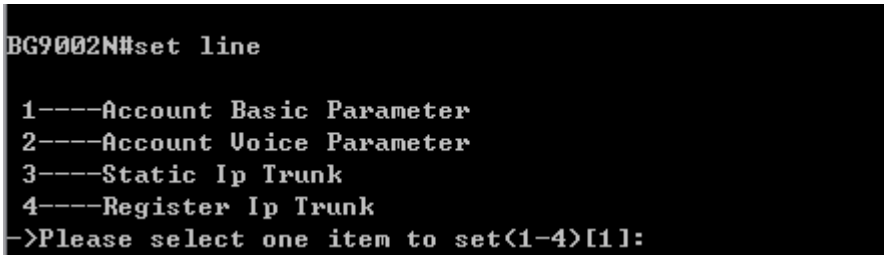
Input “3” to show wildcard register group as below:

```
 1----Register Server
 2----Register Ip Trunk
 3----Wildcard Register Group
->Please select the item to show(1-3)[1]:3
+-------------------------------------------------------------------------------+
|No. | ID |    Register Name     |Wildcard Grp|wildcard account|Register State|
+----+----+----------------------+------------+----------------+--------------+
|  0 |  1 |             iptrunck1|           0 |            yes |    Unregister|
+----+----+----------------------+------------+----------------+--------------+
|  1 |  2 |              iptrunk2|          -1 |             no |    Unregister|
+----+----+----------------------+------------+----------------+--------------+
|  2 |  3 |              iptrunk3|           0 |             no |    Unregister|
+----+----+----------------------+------------+----------------+--------------+
```

Show Wildcard Register Group Parameter

Configure Sip Account and Sip Trunk Parameter

The sip account and sip trunk parameter is configured by input command “set line” as below:



Configure Sip Account and Sip Trunk Parameter

The command contains the Information of user line or sip account basic parameter, account voice parameters, static IP trunk parameters, register IP trunk parameters. Just choose “1” to “4” to input to configure each item. The detail information introduction is as below:

Account Basic Parameter

Input the command “set line” and choose 1 to configure account basic parameter, include add more than one account, by set “Amount”(account number),”step” and “password type”, as below:

```
BG9002N#set line

 1----Account Basic Parameter
 2----Account Voice Parameter
 3----Static Ip Trunk
 4----Register Ip Trunk
->Please select one item to set(1-4)[1]:
+-------------------------------------------------------------+
|No. | ID  |     Account Name       | Extension  |Extention Type|
+----+-----+------------------------+------------+--------------+
|  0 |   1 |              Phone_001 |        701 |      Internal|
+----+-----+------------------------+------------+--------------+
|  1 |   2 |              Phone_002 |        702 |      External|
+----+-----+------------------------+------------+--------------+
|  2 |   3 |               phone004 |        801 |      Internal|
+----+-----+------------------------+------------+--------------+
|  3 |   4 |                 phone5 |        802 |      Internal|
+-------------------------------------------------------------+

->account:0-add,1-delete,2-modify[0]:
->account:1-open,0-close[0]:
->account[]:
It is not allowed to skipped without input
->account[]:phone6
->password[]:
->Callee type:0-Internal,1-External,2-Internal/External[0]:
->Phone number[]:803
->Pickup Group[0]:
->Really want to modify? 'yes' or 'no'[yes]:

->Batch add or not(yes/no)[no]y
->Amount(0-99)[2]:
->Step(1-10)[1]:
->Password Type(
 0-the same as account;
 1-the same as pasword;
 2-increase)[0]:

  Operate success!

  The configuration will take effect after saved and reloaded!
```

Configure Account Basic Parameter

The following items are displayed on this screen:

►**0-add,1-delete,2-modify**: Input “0” to add new account, input “1” to delete an account from the account list, input “2” to modify one of the account from the account list.

►**Batch add or not**: choose “yes” to add more than an account.

►**Amount:** Batch add account number.

►**Step:** Batch add account step, for example, when the step configures “1”, if the first account added is “phone1”, the second added account will be “phone2”.

Account Voice Parameter

Input the command “set line” and choose 2 to configure account voice parameter, if just modify one

account, select not to batch set accounts, as below:

```
BG9002N#set line

 1----Account Basic Parameter
 2----Account Voice Parameter
 3----Static Ip Trunk
 4----Register Ip Trunk
->Please select one item to set(1-4)[1]:2
+-------------------------------------------------------------+
|No. | ID  |     Account Name        | Extension  |Extention Type|
+----+-----+-------------------------+------------+--------------+
|  0 |   1 |              Phone_001  |         911|      Internal|
+----+-----+-------------------------+------------+--------------+
|  1 |   2 |              Phone_002  |         912|      External|
+----+-----+-------------------------+------------+--------------+
|  2 |   3 |               phone004  |         801|      Internal|
+-------------------------------------------------------------+

->Batch Edit Accounts(yes/no)[no]

->Enter the index to modify(0-2)[0]:

 1----Callee Number
 2----Caller NUmber
 3----Supplementary
 4----Advanced Config
 5----Black&White List
 6----Abbreviated Dialing
->Please select one item to set(1-6)[1]:
```

Configure Account Voice Parameter

Input “yes” about “Batch Edit Accounts” to modify accounts, as below:

```
BG9002N#set line

 1----Account Basic Parameter
 2----Account Voice Parameter
 3----Static Ip Trunk
 4----Register Ip Trunk
->Please select one item to set(1-4)[1]:2
+-------------------------------------------------------------------+
|No. | ID  |     Account Name        | Extension  |Extention Type|
+----+-----+-------------------------+------------+--------------+
|  0 |   1 |              Phone_001  |         911|      Internal|
+----+-----+-------------------------+------------+--------------+
|  1 |   2 |              Phone_002  |         912|      External|
+----+-----+-------------------------+------------+--------------+
|  2 |   3 |               phone004  |         801|      Internal|
+-------------------------------------------------------------------+

->Batch Edit Accounts(yes/no)[no]y

->The start account number to batch edit(0-2)[0]:

->The end account number to batch edit(0-2)[2]:

 1----Supplementary
 2----Advance Config
->Please select one item to set(1-2)[1]:
```

Batch Configure Account Voice Parameter

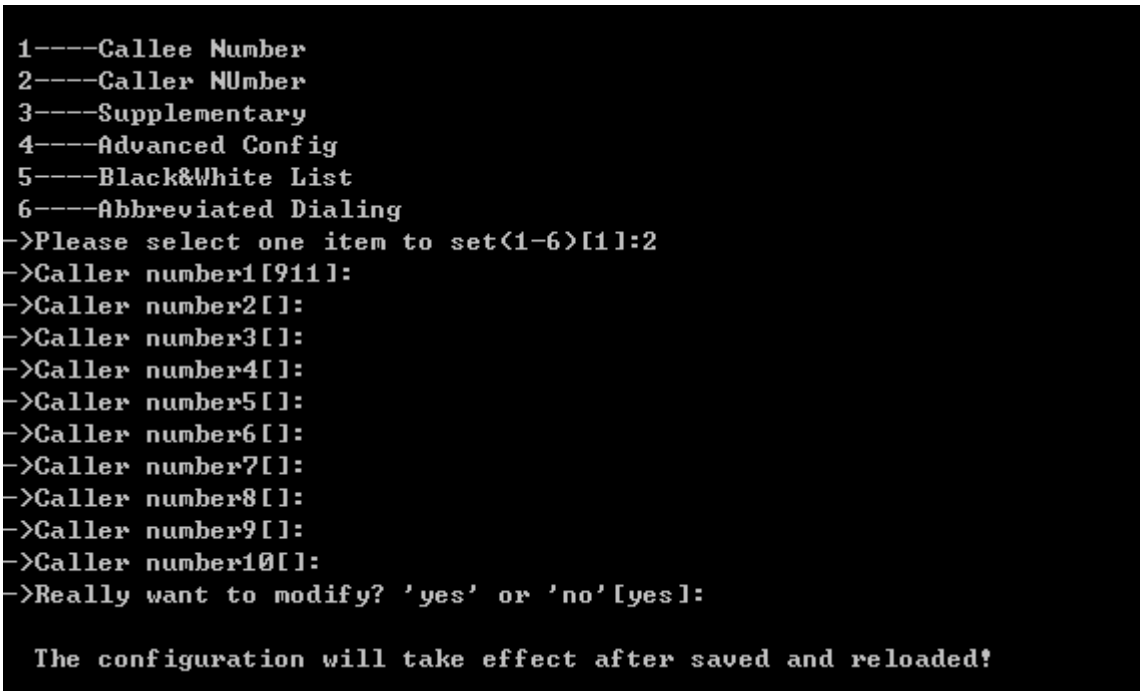
The account parameters include callee number, caller number, supplementary, advanced config, black&white list, abbreviated dialing. The detail configuration as below:
Input “1” to set callee number as below:

```
1----Callee Number
2----Caller NUmber
3----Supplementary
4----Advanced Config
5----Black&White List
6----Abbreviated Dialing
->Please select one item to set(1-6)[1]:
->Callee number1[911]:
->Callee type:0-Internal,1-External,2-Internal/External[0]:
->Callee number2[825]:
->Callee type:0-Internal,1-External,2-Internal/External[0]:
->Callee number3[]:
->Callee type:0-Internal,1-External,2-Internal/External[0]:
->Callee number4[]:
->Callee type:0-Internal,1-External,2-Internal/External[0]:
->Callee number5[]:
->Callee type:0-Internal,1-External,2-Internal/External[0]:
->Callee number6[]:
->Callee type:0-Internal,1-External,2-Internal/External[0]:
->Callee number7[]:
->Callee type:0-Internal,1-External,2-Internal/External[0]:
->Callee number8[]:
->Callee type:0-Internal,1-External,2-Internal/External[0]:
->Callee number9[1011]:
->Callee type:0-Internal,1-External,2-Internal/External[1]:
->Callee number10[]:
->Callee type:0-Internal,1-External,2-Internal/External[0]:
->Really want to modify? 'yes' or 'no'[yes]:

 The configuration will take effect after saved and reloaded!
```

Configure Account Callee Number

Called number is just the phone number. The device defines two types of called number, internal called number and external called number. The internal called number is only use for internal calls, the external called number is use for Direct Inward Dialing (DID). The device supports up to 10 called numbers, the first called number, also named extension number, should be unique in order to distinguish each extension.

Input “2” to set caller number as below:



Configure Account Caller Number

Caller number is usually used for caller identifier display (CID). The device supports up to 10 caller number, you can select different caller number when you call out from different trunk. The first group of caller number is used for internal calls. You can select the group number of outbound calls when configuring the call routing.

Input “3” to set supplementary parameter as below:

```
 1----Callee Number
 2----Caller NUmber
 3----Supplementary
 4----Advanced Config
 5----Black&White List
 6----Abbreviated Dialing
->Please select one item to set(1-6)[2]:3
+-----------------------------------------------+
!No. ! ID !Permission Value!Permission Descripton!
+----+----+----------------+--------------------+
!  0 !  1 !              0 !           Forbidden !
+----+----+----------------+--------------------+
!  1 !  2 !             30 !            Internal !
+----+----+----------------+--------------------+
!  2 !  3 !             60 !               Local !
+----+----+----------------+--------------------+
!  3 !  4 !             90 !       Long Distance !
+----+----+----------------+--------------------+
!  4 !  5 !            120 !       International !
+-----------------------------------------------+
->Call out permission sequence number(0-4)[1]:0
->Time Lock Number(0-100,65535:Not Enable)[0]:
->Enable Call Restriction(yes/no)[no]:
->Enable voice mail(yes/no)[yes]:
->Total Message Time(5-20 min)[15]:
->Password[******]:
->If the new message is too long,how to handle it(0-Discard,1-Overwrite)[1]:
->Call Forwarding Unconditional(yes/no)[no]:
->Call Forwarding When No Reply(yes/no)[no]:
->Call Forwarding On Busy(yes/no)[no]:
->Call Forwarding When UnRegistered(yes/no)[no]:
->Phone Number[]:
->Set to Instant Hotline(yes/no)[no]:
->Delay Time(0-10s)[0]:
->Internal Call Limit(0-255Min,0,Unlimit)[0]:
->FXO Call Limit(0-255Min,0,Unlimit)[0]:
->IP Trunk Call Limit(0-255Min,0,Unlimit)[0]:
->CID Restriction(yes/no)[no]:
->Enable No Disturb(yes/no)[no]:
->Enable Call Waiting(yes/no)[no]:
->Call Back On Busy(yes/no)[no]:
->TimeOut No Reply(yes/no)[no]:
->Enable Alarm Clock(yes/no)[yes]:
->Time:Hour(0-23)[10]:
->Time:Minute(0-59)[0]:
->Enable On RingBack Music(yes/no)[no]:
->CID Enable[yes]:
->CID Enable(0-FSK,2-FXS+TYPE II)[0]:
->Enable MWI(yes/no)[no]:
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reloaded!
```

Configure Account Supplementary Parameter

The following items are displayed on this screen:

►**Call Out Permission**: Call permission is used to control whether or not you can dial some phone numbers, such as long distance call, international long distance call. The device has 5 levels of call permission.

►**Time Lock**: Time Lock is just time-based call restriction. Call permission can be changed automatically for different time period. For example, the extension has permission for local call at working period, and has permission only for internal call at off-duty time.

►**Call Restriction**: Call Restriction enables you to restrict or bar certain or all types of calls to your phone, i.e. long distance calls, international calls. Dialing supplementary services function key can be opened and canceled..

►**Voice mail**: Voicemail is used to convey a caller's recorded audio message when you can not answer the phone. It contains a user interface to select, play and manage messages.

►**Total Message Time**：The total time length is for all voice messages.

►**Password:** When using to extract messages, you must input password.

►**Action**: When the total time length has been reached, then if new voice message comes, it will be discarded or overwritten.

►**Call Forwarding Unconditional**: If you enter a number for this parameter, any call to your extension will be forwarding to that number, unconditional.

►**Call Forwarding No Reply**: If you enter a number for this parameter, any call to your extension will be forwarding to that number when you don't reply the call.

►**Call Forwarding On Busy**: If you enter a number for this parameter, any call to your extension will be forwarding to that number, on busy.

►**Call Forwarding UnRegistered**: If you enter a number for this parameter, any call to your extension will be forwarding to that number when the registering of extension fails.

►**Hot line**: Immediately hotline or delay hotline. Time 0 indicates immediate hotline, otherwise indicates delay hotline. If corresponding function key of supplementary services is enabled, then dial function key to configure the number, but note, can't use immediately hotline.

►**Session Time Limit**: The functionality will disconnect the call automatically when the call time reached the specified value.

►**CID Restriction**: Enable or disable CID Restriction. If CID Restriction is enabled, the display name content in sip package is anonymous. If **Anonymous As UserName** is chosen, that user name content is anonymous also.

►**CID Restriction Over**: This function is only valid for the call between two internal extensions.

►**Enable No Disturb**: Allows you to totally block incoming calls at any time. If corresponding function key of supplementary services is enabled, then dial function key to configure.

►**Enable Call Waiting**: When talking, a third party phone comes in and you can hear the beep tone. If corresponding function key of supplementary services is enabled, then dial function key to configure.

►**Call Back On Busy**: When talking, a third party phone comes in and dial 1 after the prompt tone. When you hang up, the system will call you and third party.

►**Alarm Clock**: Alarm Clock lets the phone ring at a specified time for alerting.

Input "4" to set advance configuration parameter as below:

```
 1----Callee Number
 2----Caller NUmber
 3----Supplementary
 4----Advanced Config
 5----Black&White List
 6----Abbreviated Dialing
->Please select one item to set(1-6)[1]:4

General Scheme:
->Route SN(1-10)[1]:
->Media Transfer(0-Direct Media,1-Undirect Media)[1]:
->T38 Transfe Mode(0-Transfer,1-T38,2-VBD)[1]:
->Recording Enable[yes]:n
->Forbid Attendant Transmit[yes]:n

Enable Security Authetication:
->Enable IP Address Limit Pattern[yes]:n
->Enable Mac Limit Pattern[yes]:n
->Enable UserAgent Limit Pattern[yes]:n
->Reg-Port Limit Pattern[yes]:n
->Seat Phone Name[seatphone]:
+------------------------------+
!NO. ! ID !   Department Name   !
+----+----+--------------------+
!  0 !  1 !               7878 !
+----+----+--------------------+
!  1 !  2 !               7879 !
+------------------------------+
->Department No.(0-1)[1]:

 Voice Codec:
->Consultation Model(0-Auto-Adapt,1-Priority-Level)[1]:0

 Disa Function:
->Enable DISA(yes/no)[yes]:n
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reloaded!
```

Configure Account Advanced Configuration

The following items are displayed on this screen:

►**Route SN**: The system supports up to ten call route tables. The parameter is the index of call routing table.

►**Media Transfer**: RTP media stream to go directly between the caller and the callee.

►**Fax Mode**: Transparent, T38, VBD.

►**Recording**: Enable or disable call recording function for the user.

►**Forbid Attendant Transmit**: Check the box to permit whether of not the attendant can transfer call to this user.

►**Security Authentication**: To prevent from attacking, only allow qualified SIP account to register.

►**Seat Phone name**: The value is used for Caller ID Name Display.

►**Department Name**: Department attribution division, which is used in billing statistics.

►**Codec**: Negotiation mode of voice capabilities.

Auto-Adapted: The system forwards codec capability priority.

Priority-Level: The system rearranges codec capability before sending.

►**DISA**: Enable or disable DISA (Direct Inward System Access).

DISA Password: The password for authentication.

DISA Bind Caller Number: The caller from this number does not need to authentication

Input “5” to set black&white list parameter as below:

```
1----Callee Number
2----Caller NUmber
3----Supplementary
4----Advanced Config
5----Black&White List
6----Abbreviated Dialing
->Please select one item to set(1-6)[4]:5

There is no list in the account!
->0-add,1-delete,2-modify[0]:
->List Type(
0-Call In Black List
1-Call In White List
2-Call Out Black List
3-Call Out White List)[0]:2
->Phone Number[]:546645
->Really want to modify? 'yes' or 'no'[yes]:

 Operate success!

 The configuration will take effect after saved and reloaded!
```

Configure Account Black&White List Parameter

Blacklist & Whitelist is one function which detects incoming calls and rejects unwanted callers which are in the blacklist and allows only whitelist numbers to come through.

Input “6” to set abbreviated dialing number as below:

```
1----Callee Number
2----Caller NUmber
3----Supplementary
4----Advanced Config
5----Black&White List
6----Abbreviated Dialing
->Please select one item to set(1-6)[5]:6

There is no abbreviated dialing number of the account!

->0-add,1-delete,2-modify[0]:
->Phone Number[]:6545456
->Abbreviated Number[]:65
->Really want to modify? 'yes' or 'no'[yes]:

 Operate success!

 The configuration will take effect after saved and reloaded!
```

Configure Account Caller Number

Abbreviated Dialing allows you to store selected phone numbers for quick and easy dialing. Each

telephone number can be dialed by using a one to two-digit code with a simple prefix. Stored numbers may be up to 32 digits in length

Static Ip Trunk Parameter

Input the command “set line” and choose 3 to configure static IP trunk as below:

```
 1----Account Basic Parameter
 2----Account Voice Parameter
 3----Static Ip Trunk
 4----Register Ip Trunk
->Please select one item to set(1-4)[2]:3
+----+----+---------+--------------------+--------------------+-----+
|No. | ID |Group No.|     Trunk Name     |    Ip or Domain    | Port|
+----+----+---------+--------------------+--------------------+-----+
|  0 |  1 |       0 |        statictrunk |    192.168.100.124 | 5060|
+----+----+---------+--------------------+--------------------+-----+
|  1 |  2 |       1 |      staticktrunk2 |    192.168.100.106 | 5060|
+----+----+---------+--------------------+--------------------+-----+

->Static IP trunk:0-add,1-delete,2-modify[0]:

->Input static-iptrunk name[]:statictrunk3
->Input static-iptrunk group number(0-120)[0]:
->Input static-iptrunk ip or domain[]:domainname
->Input static-iptrunk port(1-65535)[5060]:
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reloaded!

->Set line para continue or not[yes]:

 1----Account Basic Parameter
 2----Account Voice Parameter
 3----Static Ip Trunk
 4----Register Ip Trunk
->Please select one item to set(1-4)[3]:
+----+----+---------+--------------------+--------------------+-----+
|No. | ID |Group No.|     Trunk Name     |    Ip or Domain    | Port|
+----+----+---------+--------------------+--------------------+-----+
|  0 |  1 |       0 |        statictrunk |    192.168.100.124 | 5060|
+----+----+---------+--------------------+--------------------+-----+
|  1 |  2 |       1 |      staticktrunk2 |    192.168.100.106 | 5060|
+----+----+---------+--------------------+--------------------+-----+
|  2 |  3 |       0 |       statictrunk3 |         domainname | 5060|
+----+----+---------+--------------------+--------------------+-----+

->Static IP trunk:0-add,1-delete,2-modify[0]:
```

Configure Static Ip Trunk Parameter

Static IP trunk is used for peer-to-peer connecting with other media gateway. The following items are displayed on this screen:

► **Trunk Name**: The description of the trunk.

► **Group Number**: Each static IP trunk is required to specify a SIP trunk group number which will be used in the call routing.

► **IP/Domain**: IP address or domain of remote device.

► **Port**: Service port of remote device.

Register Ip Trunk Parameter

Input the command “set line” and choose 4 to configure register IP trunk as below:

```
BG9002N#set line

 1----Account Basic Parameter
 2----Account Voice Parameter
 3----Static Ip Trunk
 4----Register Ip Trunk
->Please select one item to set(1-4)[1]:4

 1----Register Server
 2----Register Ip Trunk
 3----Wildcard Register Group
->Please select one item to set(1-3)[1]:
```

Configure Register Ip Trunk Parameter

Input “1” to configure register server as below:

```
 1----Register Server
 2----Register Ip Trunk
 3----Wildcard Register Group
->Please select one item to set(1-3)[1]:1
+-----------------------------------------------------------------------------+
|No. | ID |    Register Server |   Server IP/Domain    | Port |Register Cycle |
+----+----+--------------------+-----------------------+------+---------------+
|  0 |  1 |          RegServer |           138.0.60.2  | 5060 |          3600 |
+----+----+--------------------+-----------------------+------+---------------+
|  1 |  2 |         Regserver1 |      192.168.100.124  | 5060 |            60 |
+----+----+--------------------+-----------------------+------+---------------+
|  2 |  3 |              hello |        192.168.100.1  | 5060 |          3600 |
+-----------------------------------------------------------------------------+

->Register Server:0-add,1-delete,2-modify[0]:
->Input register server name[]:regserver3
->Input register server id(1-20)[0]:3
Register server id can not repeat
->Input register server id(1-20)[3]:4
->Register server ip or domain[]:192.168.100.106
->Register server port(1024-65535)[5060]:
->Enable backup server or not[no]:y
->Backup Register server IP or domain(Enter SPACE key to clear)[]:regdomain
->Backup Register server port(1024-65535)[5060]:
->Enable proxy server or not[no]:
->Enable backup proxy register or not[no]:
->Register interval(60-3600s)[60]:
->Set advance para or not[no]:y
->SBC enable or not[no]:
->Enable Keeping Alive[no]:
->Enable Realm[no]:
->Enable Session [no]:
->Enable Sip Retrans Timer[no]:
->User Agent[GaoKePBX]:
->SDP Mode When Call holding(0-0.0.0.0,1-Send-Only)[0]:
->Enable NextNonce[no]:y
->Max Value of NextNonce(1-65535)[0]:10
->Tos/DiffServ settings(0-Tos Ip Presedence,1-DiffServ(Dscp))[1]:
->Support PRACK or not[no]:
->Support USER-PHONE or not[no]:
->Auto Update Register Cycle or not[yes]:
->Support Full Register or not[no]:
->First Package with Information[no]:
->SDP with Audio when T38 Faxing[no]:
->Really want to modify? 'yes' or 'no'[yes]:

 Operate success!

 The configuration will take effect after saved and reloaded!
```

Configure Register Server Parameter

More IP trunk accounts can be configured in device, and each account can be registered to different SIP server.

The following items are displayed on this screen:

► **Primary Server Address:** Domain or IP of SIP server.

► **Primary Server Port:** Listening port of SIP server.

► **Enable Backup Server:** Enable or disable backup SIP server.

► **Backup Server Address:** Domain or IP of backup SIP server.
► **Backup Server Port:** Listening port of backup SIP server.
► **Enable Proxy Server:** Enable or disable Proxy server.
► **Proxy Address:** Domain or IP of proxy server.
► **Proxy Port:** Listening port of proxy server.
► **Enable Secondary Proxy:** Enable or disable backup proxy server.
► **Secondary Proxy Address:** Domain or IP of backup proxy server.
► **Secondary Proxy Port:** Listening port of backup proxy server.
► **Register Interval:** Enter the desired time interval in which sip UA will send register message.
► **Enable Alive:** After successful registration, whether or not to send keep-alive packets.
► **Keep Alive Mode:** Keep alive mode: **CLRF**, **OPTIONS** or **PING**.
► **Enable Realm:** Check the box to enable SIP signaling packets with realm field information.
► **Enable Session Timer:** Enable or disable UAC / UAS session refresh mode.
►**Enable SIP Retrans Timer:** When registration fails, whether or not to initiate retransmission, retransmission cycle and time with configuration.
► **User Agent:** Check the box to enable signaling packets with **User Agent** field.
► **Hold Mode:** Select the SIP signal format of call hold.
► **Enable Next Nonce:** Enable SIP packets with nonce count field information, incremented each one and with a maximum value.
► **Support PRACK:** Enable or disable provisional response. If enabled, 1xx (except 100rel) messages are required to respond with ACK.
► **Support User=Phone:** Whether or not SIP signaling packets with User = Phone field information.
► **Update Register Cycle:** Based on server response to update registering period.
► **Support Full Register:** Each registering packets are generated, rather than re-issued.
► **First Package With Auth Info:** The first registration packet with authentication information.
► **SDP With Audio When T38 Faxing:** T38 fax signaling packet with audio information.

Input “2” to configure register IP trunk as below:

```
 1----Register Server
 2----Register Ip Trunk
 3----Wildcard Register Group
->Please select one item to set(1-3)[2]:
+-------------------------------------------------------------------------+
|No. | ID |Register IP Trunk Name| Group  |  Account     |Callee Number |
+----+----+----------------------+--------+--------------+--------------+
|  0 |  1 |             iptrunck1|      1 |    RegServer1|           701|
+----+----+----------------------+--------+--------------+--------------+
|  1 |  2 |              iptrunk2|      3 |  dsfsgsgdsfsd|           702|
+----+----+----------------------+--------+--------------+--------------+
|  2 |  3 |              iptrunk3|      1 |      sdgdsfsd|           701|
+-------------------------------------------------------------------------+

->Register IP trunk:0-add,1-delete,2-modify[0]:
->IP Trunk Name[]:iptrunk4
->Register Account[]:regserver2
->TR069 Enable(yes/no)[no]:
->IP TRUNK Group(1-120)[1]:
->Match Caller[]:8255
->Binding Callee[]:701
->Auth User Name[]:
->Password[******]:
->Max InterCurrent Count(0-100)[0]:
->Enable Register(yes/no)[no]:y
+-------------------------------------------------------------------------------+
|No. | ID |    Register Server |   Server IP/Domain    | Port |Register Cycle |
+----+----+--------------------+-----------------------+------+---------------+
|  0 |  1 |          RegServer |           138.0.60.2  | 5060 |          3600 |
+----+----+--------------------+-----------------------+------+---------------+
|  1 |  2 |         Regserver1 |      192.168.100.124  | 5060 |            60 |
+----+----+--------------------+-----------------------+------+---------------+
|  2 |  3 |              hello |        192.168.100.1  | 5060 |          3600 |
+-------------------------------------------------------------------------------+
->Server ID(1-3)[1]:
->Wildcard Number(-1 is not belong to any group)(-1-99)[-1]:
->Really want to modify? 'yes' or 'no'[yes]:

->Batch add or not(yes/no)[no]y
->Amount(1-20)[2]:
->Step(1-10)[1]:

  Operate success!

  The configuration will take effect after saved and reloaded!
```

Configure Register Ip Trunk Detail Parameter(1)

And then you will find that two register server is added because select batch add and set amount “2”:

```
 1----Register Server
 2----Register Ip Trunk
 3----Wildcard Register Group
->Please select one item to set(1-3)[2]:
+-------------------------------------------------------------------------+
|No. | ID |Register IP Trunk Name| Group  |  Account     |Callee Number |
+----+----+----------------------+--------+--------------+--------------+
|  0 |  1 |             iptrunck1|      1 |    RegServer1|           701|
+----+----+----------------------+--------+--------------+--------------+
|  1 |  2 |              iptrunk2|      3 |  dsfsgsgdsfsd|           702|
+----+----+----------------------+--------+--------------+--------------+
|  2 |  3 |              iptrunk3|      1 |      sdgdsfsd|           701|
+----+----+----------------------+--------+--------------+--------------+
|  3 |  4 |              iptrunk4|      1 |    regserver2|           701|
+----+----+----------------------+--------+--------------+--------------+
|  4 |  5 |              iptrunk5|      1 |    regserver3|           701|
+-------------------------------------------------------------------------+
```

Configure Register Ip Trunk Parameter(2)

The following items are displayed on this screen:

► **IP Trunk Group**: Each account is required to specify one SIP trunk group number which will be used in the call routing.

► **Match Caller:** When caller number match the number in whole or in part, then call out with this IP trunk account.

► **Binding Callee**: When one incoming call arrives, the called number of all the account will be matched and routed.

► **IP Trunk Name**: The description of IP Trunk.

► **Account**: The registering account provided by SS Platform.

► **Auth User Name**: The user name for SIP authentication. The user account will be used for authentication if this parameter leave blank.

► **Password**: Authentication password.

► **Max Intercurrent Count**: The maximum of concurrent calls in the same time for the account.

► **Enable Register**: Enable or disable registering.

► **Server Description**: Server IP or domain.

►**Batch add or not**: choose “yes” to add more than a register IP trunk.

►**Amount:** Batch add register IP trunk number.

►**Step:** Batch add account step, for example,when the step confgures “1”, if the first account added is “iptrunk1”, the second added account will be “iptrunk2”

Input “3” to wildcard register group as below:

```
 1----Register Server
 2----Register Ip Trunk
 3----Wildcard Register Group
->Please select one item to set(1-3)[2]:3
+-----------------------------------------------------------------------------+
|No. | ID |    Register Name     |Wildcard Grp|wildcard account|Register State|
+----+----+----------------------+------------+----------------+--------------+
|  0 |  1 |             iptrunck1|           0 |            yes |    Unregister|
+----+----+----------------------+------------+----------------+--------------+
|  1 |  2 |              iptrunk2|          -1 |             no |    Unregister|
+----+----+----------------------+------------+----------------+--------------+
|  2 |  3 |              iptrunk3|           0 |             no |    Unregister|
+----+----+----------------------+------------+----------------+--------------+
|  3 |  4 |              iptrunk4|          -1 |             no |    Unregister|
+----+----+----------------------+------------+----------------+--------------+
|  4 |  5 |              iptrunk5|          -1 |             no |    Unregister|
+-----------------------------------------------------------------------------+
->Please input wildcard group number(0-99)[0]:
->Please input the sequence number of account for the group(0-4)[0]:
->Is it wildcard account(yes/no)[no]:y
->Are you continue?'yes' or 'no'(yes/no)[no]:
->Really want to modify? 'yes' or 'no'[yes]:

  The configuration will take effect after saved and reloaded!
```

Configure Wildcard Register Group

This function must be supported by SIP server or IMS platform, in order to reduce the number of registering packets. Registered IP trunk accounts are divided into groups. Each group only one account registers to the server. If this account is registered, then all accounts are registered in this group.

► **Enable Group Register**: Whether or not to enable the group registering.

Save and Reload Parameter

The voice and sip parameter will take effect after save and reload commands:

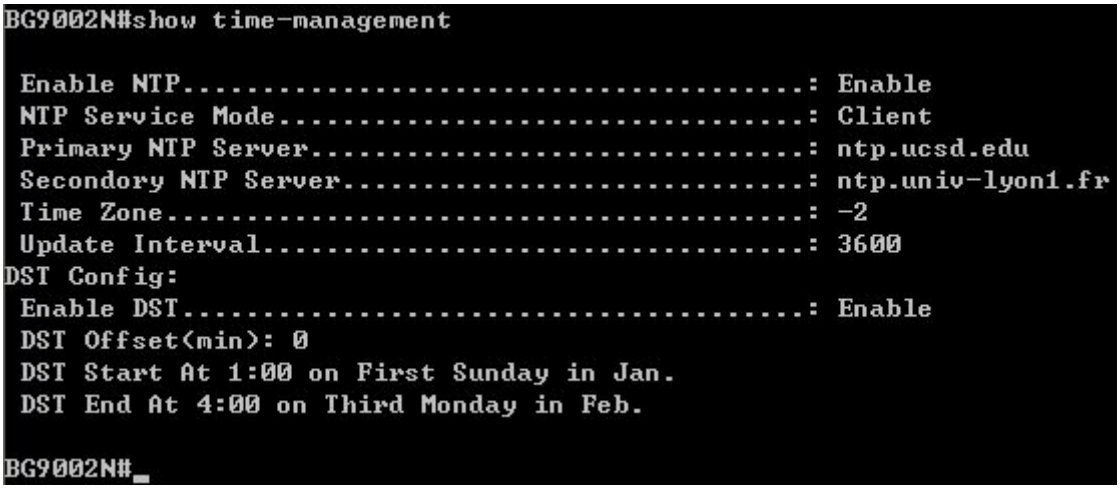
```
BG9002N#save

  Save operation successful!


BG9002N#reload
Really want to modify? 'yes' or 'no'[yes]:
 Voice parameter reload success!

BG9002N#
```

Save and Reload Parameter

System

Time Management

The command “show time-management” show the time management information as below:



Show Time Management Information

The command “set time-management” configure the time management parameters as below.

```
BG9002N#set time-management
->Enable NTP? 'yes' or 'no'[yes]:
->NTP Service Mode(0-Client,1-Server And Client)[0]:
->Primary NTP Server[ntp.ucsd.edu]:
->Secondory NTP Server[ntp.univ-lyon1.fr]:
->Time Zone[1]: -2
->Update Interval(60~36000s)[3600]:
->Enable Daylight Savings Time(DST)? 'yes' or 'no'[yes]:
->DST Offset(0-120min)[0]:
Start Time of DST:
->Month(1~12)[1]:
->Select Weekday:
    0-Sunday   1-Monday  2-Tuesday   3-Wednesday
    4-Thursday 5-Friday  6-Saturday
->Weekday(0~6)[0]:
->Select Order of Weekday in Month:
    1-First in Month   2-Second in Month  3-Third in Month
    4-Fourth in Month  5-Last in Month
->Order of Weekday in Month(1~5)[1]:
->Hour of Day(0~23)[0]: 1
End Time of DST:
->Month(1~12)[1]: 2
->Select Weekday:
    0-Sunday   1-Monday  2-Tuesday   3-Wednesday
    4-Thursday 5-Friday  6-Saturday
->Weekday(0~6)[0]: 1
->Select Order of Weekday in Month:
    1-First in Month   2-Second in Month  3-Third in Month
    4-Fourth in Month  5-Last in Month
->Order of Weekday in Month(1~5)[1]: 3
->Hour of Day(0~23)[0]: 4
Really want to modify? 'yes' or 'no'[yes]:
The configuration will take effect after saved and reloaded!
```

Configure Time Management Parameters

The following items are displayed on this screen:

- ► **Enable NTP:** Enable or disable NTP.
- ► **Enable DST:** Enable or disable the Daylight Saving Time(DST).
- ► **DST Offset:** Enter the offset of DST.
- ► **Month:** Specify the month of DST, range from 1 to 12 in one year.
- ► **Weekday :** Specify the weekday of DST, range from Sunday to Saturday.
- ► **Order of Weekday in Month**: Specify the order of start weekday in the month from pull-down list as following:**First in Month,Second in Month,Third in Month,Fourth in Month, Last in Month**
- ► **Hour of Day:** Specify the start hour of DST, range from 0 to 23 in one day.

Reboot System

Enter command “reset” to reset the device.

Backup/Restore

The command "load config" backup/restore the configurations as blow. Enter 0 to save current parameters as custom default configurations, Enter 1 to reset to custom default parameters, Enter 2 to

reset to factory parameters.

```
BG9002N#load config
->Select Load config source(0-Default,1-FileSystem,2-Flash)[0]:
```

Backup/Restore Configurations

Diagnostic

Ping

The command "ping" can used to check connectivity of your network in the following screen.

```
BG9002N#ping 192.168.100.182
->If Using Interface when ping 'yes' or 'no' [no]:
->Set ping packet size(0-65500)[56]:
->Set ping count(1-86400)[4]:
->If Using mark when ping 'yes' or 'no' [no]:
PING 192.168.100.182 (192.168.100.182): 56 data bytes
64 bytes from 192.168.100.182: seq=0 ttl=64 time=0.860 ms
64 bytes from 192.168.100.182: seq=1 ttl=64 time=1.260 ms
64 bytes from 192.168.100.182: seq=2 ttl=64 time=0.740 ms
64 bytes from 192.168.100.182: seq=3 ttl=64 time=0.740 ms

--- 192.168.100.182 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max = 0.740/0.900/1.260 ms

BG9002N#
```

PING Diagnostic

► **Ping:** Enter the IP Address or Domain Name of the PC whose connection you wish to diagnose.

► **Interface:** By selecting the interface, through this interface to send Echo Request messages.

►**Ping Packet Size:** Specifies the packet size of Echo Request messages sent.

► **Ping Count:** Specifies the number of Echo Request messages sent.

System Log

The command “show syslog” show the system log information as below:

```
BG9002N#show syslog
 Log Level.....................................:INFO
 Alarm Log.....................................:Enable
 Login Log.....................................:Enable
 Web Log.......................................:Enable
 VoIP Log......................................:Enable
 Data Service Log..............................:Enable
 Others........................................:Disable
 Local Log Enable..............................:Enable
 Remote Log Enable.............................:Disable
 Syslog Log Address............................:/var/log/messages

BG9002N#
```

Show System Log Information

The command “set syslog” configure the system log parameters as below.

```
BG9002N#set syslog
 0-EMERG
 1-ALERT
 2-CRIT
 3-ERR
 4-WARNING
 5-NOTICE
 6-INFO
 7-DEBUG
->Select Log Level[6]:
Log Module Onoff:
->Alarm Log[yes]:
->Login Log[yes]:
->Web Log[yes]:
->VoIP Log[yes]:
->Data Service Log[yes]:
->Others[no]:
->Local Log Enable[yes]:
->Remote Log Enable[no]:
->Syslog Log Address[/var/log/messages]:
->Really want to modify? 'yes' or 'no'[yes]:
  Oprate success!
 The configuration will take effect after saved and reloaded!
```

Configure System Log Parameters

The following items are displayed on this screen:

TR069

The command “show tr069” show the tr069 information as below:

```
BG9002N#show tr069
 Enable TR069.....................................: Enable
 Enable TR069 SSL Encode..........................: Disable
 ACS Address......................................: 10.250.0.10
 ACS Server Name..................................: ACS-server/ACS
 ACS Port.........................................: 8080
 Enable Single Account Mode.......................: Enable
 ACS Auth Username................................: acs
 ACS Auth Password................................: acs
 CPE Auth Username................................: cpe
 CPE Auth Password................................: cpe
 CPE Server Name..................................: cpe
 CPE Port.........................................: 8099
 CPE Auth Enable..................................: Disable
 Enable Send Periodic Inform......................: Disable
 Enable TR069 NAT.................................: no
 Root Device Type.................................: InternetGatewayDevice
 Custom Area......................................: Switzerland
 TR069 CPE User Agent.............................: BG_TR69_CPE
 Reboot System after Download.....................: no
 Non First Install................................: no

BG9002N#_
```

Show TR069 Information

The command “set tr069” configure the tr069 parameters as below.

```
BG9002N#set tr069
->Enable TR069 'yes' or 'no' [yes]:
0 - China Mobile
1 - ShenZhen Telecom
2 - Switzerland
->Custom Area[2]:
->Enable TR069 SSL Encode 'yes' or 'no' [no]:
->ACS Address[10.250.0.10]:
->ACS Server Name[ACS-server/ACS]:
->ACS Port(1-65535)[8080]:
->ACS Auth Username[acs]:
->ACS Auth Password[acs]:
->CPE Auth Username[cpe]:
->CPE Auth Password[cpe]:
->CPE Server Name[cpe]:
->CPE Port(1-65535)[8099]:
->CPE Auth Enable 'yes' or 'no' [no]:
->Enable Send Periodic Inform 'yes' or 'no' [no]:
->Enable TR069 NAT 'yes' or 'no' [no]:
->TR069 CPE User Agent[BG_TR69_CPE]:
->Reboot System after Download 'yes' or 'no' [no]:
->Clean first install flag 'yes' or 'no' [no]:
->Are you sure save parameter? 'yes' or 'no' 'yes' or 'no' [yes]:
The configuration will take effect after saved and reloaded!

BG9002N#_
```

Configure TR069 Parameters

The following items are displayed on this screen:

► **Serial Number:** The serial number of device. Read only.

► **Enable:** Enable or disable the TR069 function globally.

- ► **ACS Address:** Enter the IP address or domain name of ACS.
- ► **ACS Port:** Enter the port of ACS.
- ► **ACS Server Name:** Enter the TR069 server name of ACS.
- ► **SSL Enable:** Enable or disable the SSL(Secure Sockets Layer) for TR069.
- ► **Schedular Send Inform:** Whether or not the CPE must periodically send CPE information to Server using the Inform method call. Enter the duration in seconds of the interval if enabled.
- ► **Single Account Enable:** Whether or not the TR069 Account is enabled.
- ► **TR069 Account:** Username used to authenticate the CPE when making a connection to the ACS.
- ► **TR069 password:** Password used to authenticate the CPE when making a connection to the ACS.
- ► **Connection Request Auth:** Whether to authenticate an ACS making a Connection Request to the CPE.
- ► **Connection Request Username:** Username used to authenticate an ACS making a Connection Request to the CPE.
- ► **Connection Request Password:** Password used to authenticate an ACS making a Connection Request to the CPE.
- ► **CPE Server Name:** A part of the HTTP URL for an ACS to make a Connection Request notification to the CPE. In the form:http://host:port/**path**
- ► **CPE Port:** A part of the HTTP URL for an ACS to make a Connection Request notification to the CPE. In the form:http://host:**port**/path
- ► **Status:** Connection Status when CPE making a connection to the ACS. Read only.
- ► **Fail Reason:** Show reason for the failure when CPE making a connection to the ACS. Read only.

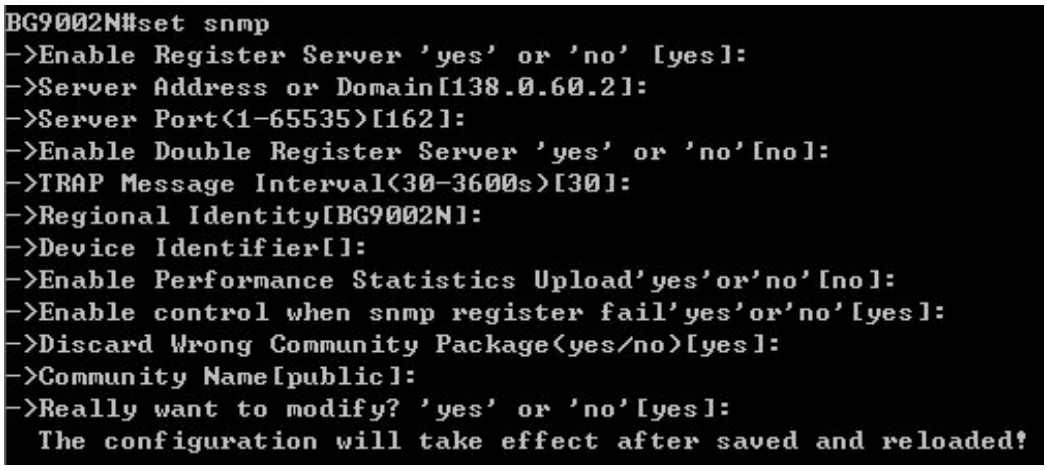
SNMP

The command “show snmp” show the snmp information as below:

```
BG9002N#show snmp
 Enable Register Server.............................: yes
 Server Address or Domain...........................: 138.0.60.2
 Server Port........................................: 162
 Enable Double Register Server......................: no
 TRAP Message Interval..............................: 30s
 Regional Identity..................................: BG9002N
 Device Identifier..................................:
 Discard Wrong Community Package....................: yes
 Community Name.....................................: public
 Registration Status................................: Register Failed

BG9002N#_
```

Show SNMP Information

The command “set snmp” configure the snmp parameters as below.



Configure SNMP Parameters

The following items are displayed on this screen:

- ► **Register Enable:** Check this box to enable SNMP register.
- ► **Server Address or Domain:** Enter the IP address or domain name of register server.
- ► **Server Port:** Enter the port of Register Server.
- ► **TRAP Message Interval:** Set the sending interval between TRAP messages.
- ► **Regional Identity:** Set the identity of regional.
- ► **Device Identifier:** Set the identifier of device.
- ► **Enable Double Register Server:** Check this box to enable backup Register Server.
- ► **Backup Server Address or Domain:** Enter the IP Address or Domain Name of Backup Register Server.
- ► **Backup Server Port:** Enter the port of Backup Register Server.
- ► **Registration Status:** The status of registration. Read only.

FCC Caution.

§ 15.19 Labelling requirements.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

§ 15.21 Information to user.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

§ 15.105 Information to the user.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause

harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

***RF warning for Mobile device:**
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.