



Cisco VG350, Cisco VG310, and Cisco VG320 Configuration Examples

This appendix presents the following sample configurations for the Cisco VG350, Cisco VG310, and Cisco VG320:

- [Cisco IOS Bulk Configuration on the voice-port Command, page A-1](#)
- [Group configuration on the dial-peer command, page A-4](#)
- [Loop-length configuration, page A-7](#)
- [ren configuration, page A-7](#)
- [ring dc-offset configuration, page A-8](#)
- [cm-current-enhance configuration, page A-8](#)
- [vmwi configuration, page A-9](#)
- [Configuring multiple ports and dial-peers in one instance, page A-9](#)
- [Configuring EnergyWise, page A-10](#)

Cisco IOS Bulk Configuration on the voice-port Command

The **voice-port** command will take a new '-' following the port# entry to signify range mode configuration. A second port# will be prompted, which will be interpreted as ending port# and the previous one as starting port.

```
vg350(config)#voice-port 2/0/0-71
    vg350(config-voiceport)#caller-id block
    vg350(config-voiceport)#exit
vg350(config)#voice-port 2/0/0-2
    vg350(config-voiceport)#ren 3
```

Subcommands entered will apply to all the affected ports. This is a one-shot emulation of the manual configuration N times by internally invoking the parser action function on the affected ports.

The following shows a snapshot of the resulting running-config display:

```
vg350#
!
voice-port 2/0/0
 caller-id block
 ren 3
!
voice-port 2/0/1
 caller-id block
 ren 3
!
voice-port 2/0/2
 caller-id block
 ren 3
!
voice-port 2/0/3
 caller-id block
!
. . .
!
voice-port 2/0/71
 caller-id block
!
```

Under the range mode, the **description** and **station-id** commands will take new **base** and **interval** keywords to automatically customize the contents for each port.

```
vg350(config)#voice-port 0/0/0-3
vg350(config-voiceport)#description base 100 interval 5 DESCRIPTION-
vg350(config-voiceport)#station-id name base 50 interval 2 NAME
vg350(config-voiceport)#station-id number base 20 interval 1 70000
vg350(config-voiceport)#end
vg350#sh run | b voice-port
voice-port 0/0/0
 description DESCRIPTION-100
 station-id name NAME50
 station-id number 70020
!
voice-port 0/0/1
 description DESCRIPTION-105
 station-id name NAME52
 station-id number 70021
!
voice-port 0/0/2
 description DESCRIPTION-110
 station-id name NAME54
 station-id number 70022
!
voice-port 0/0/3
 description DESCRIPTION-115
 station-id name NAME56
 station-id number 70023
!
```

The following commands will be supported for range mode:

```
vg350(config)#voice-port 2/0/0-71
vg350(config-voiceport)#?
```



Note

For Cisco VG310, the range is from 0 to 23 and for Cisco VG320, the range is from 0 to 47.

The following are voice-port configuration commands:

Table A-1 Voice-Port Configuration Commands

Command	Command Description
battery-reversal	Enables FXS battery-reversal generation.
busyout	Configures busyout trigger event & procedure.
caller-id	Configures port caller ID parameters.
default	Sets a command to its defaults.
description	Describes the port where the router is connected to.
disconnect-ack	Acknowledges FXS sending disconnect.
exit	Exits from voice-port configuration mode.
mwi	Enables MWI on this port.
no	Negates a command or set its defaults.
ren	Ringer Equivalence Number.
ring	Ring frequency Parameters.
shutdown	Takes voice port offline.
signal	Configures signal parameters for FXS/DID VIC.
snmp	Modifies SNMP voice port parameters.
station-id	Configures station ID.
loop-length	Configures loop length on FXS port.



Note

The bulk configuration CLIs are not HotIce compliant.

Group configuration on the dial-peer command

All dial peers created with **group** have the same defaults as legacy dial peers. However, they are not saved in the NVRAM and cannot be modified using legacy dial peer CLI after being created. Although no created dial peers are saved in the NVRAM, these dial peer bulk configuration lines will be saved in the NVRAM before the legacy dial peer CLIs, and hence, they will be parsed and their associated dial peers will be created first at the reboot time.

This bulk configuration feature will not only provide a configuration shortcut but also save a lot of NVRAM space. The following example shows how to configure **dial-peer group <group tag> pots**. The **dial-peer group** submode is prompted for further parameters specification.

```
vg350(config)#dial-peer ?
group          Define group parameters
cor           Class of Restriction
data          Data type
hunt          Define the dial peer hunting choice
inbound       Define the inbound options
no-match      Define the disconnect cause for no dialpeer match
outbound      Define the outbound options
search        Define dial peer search service
terminator    Define the address terminate character
voice         Voice type

vg350(config)#dial-peer group ?
<1-10> dial-peer group tag

vg350(config)#dial-peer group 1 ?
pots          Telephony

vg350(config)#dial-peer group 1 pots
vg350(config-dp-group)#?
Dial Peer Group commands:
default       Set a command to its defaults
description   Dial peer specific description
exit          Exit from dial-peer configuration mode
no            Negate a command or set its defaults
port          Voice port number or range
preference    Configure the preference order of group configured dial peers
service       The selected service
shutdown      Change the Admin State to down (no->up)
```

When configuring a voice port number, a port range, or all ports, users can specify port-specific parameters in a line.

**Note**

For E164 associated parameters, only one can be configured and it has to be configured before the description.

```
vg350(config-dp-group)# port 0/0/0 ?
ans          The Call Destination Number
called       Incoming Called number
desc         Dial peer description
dest         A full E.164 telephone number prefix
cr>

vg350(config-dp-group)# port 0/0/0 ans ?
WORD A sequence of digits - representing the prefix or full telephone number

vg350(config-dp-group)# port 0/0/0 ans ?
desc         Dial peer description
<cr>

vg350(config-dp-group)# port 0/0/0 called 1000 desc **Security Panel**
vg350(config-dp-group)# port 0/0/1 desc **Alarm 1**
vg350(config-dp-group)# port 0/0/2 dest 1001 desc **Alarm 2**
vg350(config-dp-group)# port 0/0/3 ans 1002
vg350(config-dp-group)# port 0/0/4
```

If the E164 number among each port is the same or incremented by an interval not larger than 100, users can provision dial peers using a port range or the "all" option. The interval value is zero by default and can range from 1 to 100.

```
vg350(config-dp-group)# port 4/0/0-9 dest 1000 desc Sales
vg350(config-dp-group)# port 4/0/10-19 dest 2000 1 desc Marketing
vg350(config-dp-group)# port 4/0/20-29 dest 3000 100
vg350(config-dp-group)# port 4/0/30-39 dest 4000
vg350(config-dp-group)# port 4/0/40-49 desc Marketing
vg350(config-dp-group)# port 4/0/50-59
```

The users need to use legacy dial peer CLI to configure the dial peer with unsupported subcommands when the configurable subcommands for a specific port or non-default common attributes for a set of ports are limited and the group-configured dial peers are not presented for further modification,

If one port in a range of ports requires unsupported attributes, the user will have to configure two port ranges for auto bulk configuration and one manual dial peer for the voice port.

If a user wants to troubleshoot a group-configured dial peer specified in a port range using "pcm-dump" subcommand, he needs to shut down the dial peer for this port or remove the whole port range and reconfigure other ports using two port ranges before manually creating a dial peer using legacy dial-peer CLI.

After finishing the troubleshooting for a voice port with the manual dial peer, the user can shut down or remove the manual dial peer or just continue using this manual dial peer.

The group-configured dial peer is created in the same way as a manual dial peer, and hence, it has the default preference value, 0, and would be selected as inbound dial peer according to the configured or created order.

Because the group dial peer CLI will be saved in the NVRAM before the legacy dial peer, it will be parsed before the legacy dial peer.

All dial peers configured under the group CLI or the dial peer for a specific port can be shut at the same time.

```
vg350(config-dp-group)# shut ?
WORD      Shut down a group configured dial peer for a specified port
all       Shut down all group configured dial peers
```

Although these group-configured dial peers are not saved in the NVRAM, they are visible using **show dial-peer group [<tag>] [summary|detail]**:

```
vg350# show dial-peer auto
dial-peer group 1:
description Analog ports
service stcapp
port 2/0/00-9
port 2/0/10-19 desc Marketing
dial-peer group 2:
port all dest 1000 10 desc group configured analog ports

vg350# show dial-peer auto 1
description Analog ports
service stcapp
port 2/0/00-9
port 2/0/10-19 desc Marketing

vg350# show dial-peer auto summary
dial-peer group 1:
TAG      TYPE  ADMIN OPER  PREFIX  DEST-PATTERNPREFERPASSTHRUCESS-TARGET  OUT  STATE  PORT
21474-   pots  up    up    0        0                                     down  0/0/0
83647
dial-peer group 2:
TAG      TYPE  ADMIN OPER  PREFIX  DEST-PATTERNPREFERPASSTHRUCESS-TARGET  OUT  STATE  PORT
21474-   pots  up    up    1000    0                                     down  0/0/0
83678
21474-   pots  up    up    1000    0                                     down  0/0/1
83678
vg350# show dial-peer auto 1 summary
TAG      TYPE  ADMIN OPER  PREFIX  DEST-PATTERNPREFERPASSTHRUCESS-TARGET  OUT  STATE  PORT
21474-   pots  up    up    0        0                                     down  0/0/0
83647

vg350# show dial-peer auto 1 detail
VoiceEncapPeer2147483648
peer type = voice, system default peer = FALSE, information type = voice,
description = '',
tag = 2147483648, destination-pattern = '',
voice reg type = 0, corresponding tag = 0,
answer-address = '', preference=0,
group = 8, Admin state is up, Operation state is up,
Outbound state is down,
incoming called-number = '', connections/maximum = 0/unlimited,
in bound application associated: 'stcapp'
out bound application associated: ''
```

Loop-length configuration

The following configuration shows the use of the **loop-length** command:

```

vg350#config t
Enter configuration commands, one per line. End with CNTL/Z.
vg350(config)#voice-port 2/0/0
vg350(config-voiceport)#loop-length ?
    long    long loop length
    short   short loop length

vg350(config-voiceport)#loop-length long
vg350(config-voiceport)#shut
vg350(config-voiceport)#no shut
vg350(config-voiceport)#
*Mar 21 21:19:17.790: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to Administrative Shutdown
*Mar 21 21:19:19.094: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to up
vg350(config-voiceport)#

default to loop-length short.

```

ren configuration

In the **ren x** configuration, **x** is the actual REN specified on the analog phone. It is important to enter a proper value for **x** that should match with the actual REN required on the analog phone in use. Normally, this REN number is specified on the back label of the analog phone.

The following example shows the **ren** command:

```

vg350(config-voiceport)#loop-length short
vg350(config-voiceport)#shut
vg350(config-voiceport)#no shut
vg350(config-voiceport)#
*Mar 21 21:20:23.242: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to Administrative Shutdown
*Mar 21 21:20:24.122: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to up
vg350(config-voiceport)#ren ?    <<< with short loop FXS, ren 1-5 is supported
    <1-5>  REN Value
vg350(config-voiceport)#ren 5
vg350(config-voiceport)#loop-length long    <<<< change loop-legnth from short to long
when ren 5 is configured, warning msg is printed out
The existing ren configuration is changed to 2 due to loop-legnth long is configured
vg350(config-voiceport)#sh
vg350(config-voiceport)#no sh
vg350(config-voiceport)#
*Mar 21 21:20:44.354: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to Administrative Shutdown
*Mar 21 21:20:45.242: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to up
vg350(config-voiceport)#ren ?    <<<< with long loop FXS, ren 1 - 2 is supported
    <1-2>  REN Value

```

ring dc-offset configuration

The following example shows how to configure the **dc-offset** command. Default is **no ring dc-offset**:

```

vg350(config-voiceport)#loop-length long
vg350(config-voiceport)#shut
vg350(config-voiceport)#no shut
vg350(config-voiceport)#
*Mar 21 21:34:28.370: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to Administrative Shutdown
*Mar 21 21:34:29.274: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to up
vg350(config-voiceport)#ring dc-offset ?    <<< this CLI is only existed for loop-length
long FXS
    10-volts  Ring DC offset 10 volts
    20-volts  Ring DC offset 20 volts
    24-volts  Ring DC offset 24 volts
    30-volts  Ring DC offset 30 volts
    35-volts  Ring DC offset 35 volts

vg350(config-voiceport)#ring dc-offset 10
vg350(config-voiceport)#shut
vg350(config-voiceport)#no shut
*Mar 21 21:34:42.986: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to Administrative Shutdown
vg350(config-voiceport)#
*Mar 21 21:34:44.478: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to up
vg350(config-voiceport)#loop-length short    <<< change loop-length from long to short when
ring dc-offset is configured, warning msg is printed out
The existing ring dc-offset configuration is removed due to loop-length short is
configured
vg350(config-voiceport)#shut
vg350(config-voiceport)#no shut
vg350(config-voiceport)#
*Mar 21 21:34:55.362: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to Administrative Shutdown
*Mar 21 21:34:56.322: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to up

```

cm-current-enhance configuration



Note

The **cm-current-enhance** command is used to improve immunity to extreme levels of longitudinal noise on the long loop-length FXS and the command should not be used under normal conditions.

The following example shows how to configure the **cm-current-enhance** command:

```

vg350(config-voiceport)#loop-length long
vg350(config-voiceport)#shut
vg350(config-voiceport)#no shut
*Mar 21 21:41:05.362: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to Administrative Shutdown
vg350(config-voiceport)#
*Mar 21 21:41:06.778: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to up
vg350(config-voiceport)#cm-current-enhance <<<< this CLI is only existed for loop-length
long FXS
vg350(config-voiceport)#shut
vg350(config-voiceport)#no shut

```



```

vg350(config-voiceport)#
*Mar 21 21:41:18.778: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to Administrative Shutdown
*Mar 21 21:41:19.658: %LINK-3-UPDOWN: Interface Foreign Exchange Station 2/0/0, changed
state to up

```

Default is **no cm-current-enhance**.

vmwi configuration

VMWI CLI is only applicable to loop start signaling FXS. Default is **vmwi fsk**.

This CLI is only applicable to analog FXS voice ports on SM-D-72FXS and SMD-48FXS-E modules. It is not applicable to FXS voice ports on motherboard slot (slot 0).

The following shows a sample configuration showing the **vmwi** command:

```

vg350(config-voiceport)#vmwi ?
  dc-voltage  Enable DC Voltage VMWI on this FXS port
  fsk         Enable FSK VMWI on this FXS port

vg350(config-voiceport)#vmwi dc-voltage
vg350(config-voiceport)#vmwi fsk
vg350(config-voiceport)#no vmwi

```

Configuring multiple ports and dial-peers in one instance

The following example shows how to configure multiple ports and dial-peers in one instance for Cisco VG350:

```

!
Voice-port 2/0/0 - 2/0/0-71
Caller-id enable
!
dial-peer group configuration <tag> pots
port all
service stcapp

!
Dial-peer voice 1 - 160
Service stcapp
!
!

```



Note

This example is also applicable to the Cisco VG310 and Cisco VG320 platforms that enable you to configure multiple ports and dial peers in one instance.

Configuring EnergyWise

The following shows how to configure the EnergyWise feature on the module:

```
xfr_cube(config)#energywise ?
  allow          Configure which EnergyWise settings are allowed on this domain
                 member
  domain         Set the EnergyWise domain this entity should join
  endpoint       Set the EnergyWise endpoint access options
  importance     A rating of the importance this EnergyWise parent entity has in
                 the network
  keywords       EnergyWise keywords associated with this parent entity
  level          Set the EnergyWise level of this parent entity
  management     energywise management access options
  name           EnergyWise name for this parent entity
  neighbor       Specify a static neighbor
  role           The role this EnergyWise entity has in the network
```



Note

This feature is not supported on Cisco VG310 and Cisco VG320 platforms.
