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Microsoft Office Communication Suite 2007 to Patton SmartNode SN4600

Application note

Document version	1.0
Date of publication	27.01.2011

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1 Introduction

This application note is a general overview of requirements and configurations basics to interconnect Patton SmartNode VoIP gateway and Microsoft Office Communication Suite server 2007.

What is discussed in this document:

- Presentation of Patton SmartNode VoIP gateway concept
- Explanation of a basic configuration file
- Provide a sample configuration file for SmartNode

What is NOT discussed in this document :

- Configuration of Microsoft Communication Suite
- Deeper configuration capabilities of Patton SmartNode VoIP gateway

For more technical details, please visit the Patton Webpage (<http://www.patton.com>). Deeper configurations notes, samples and manuals are available.

2 Network infrastructure

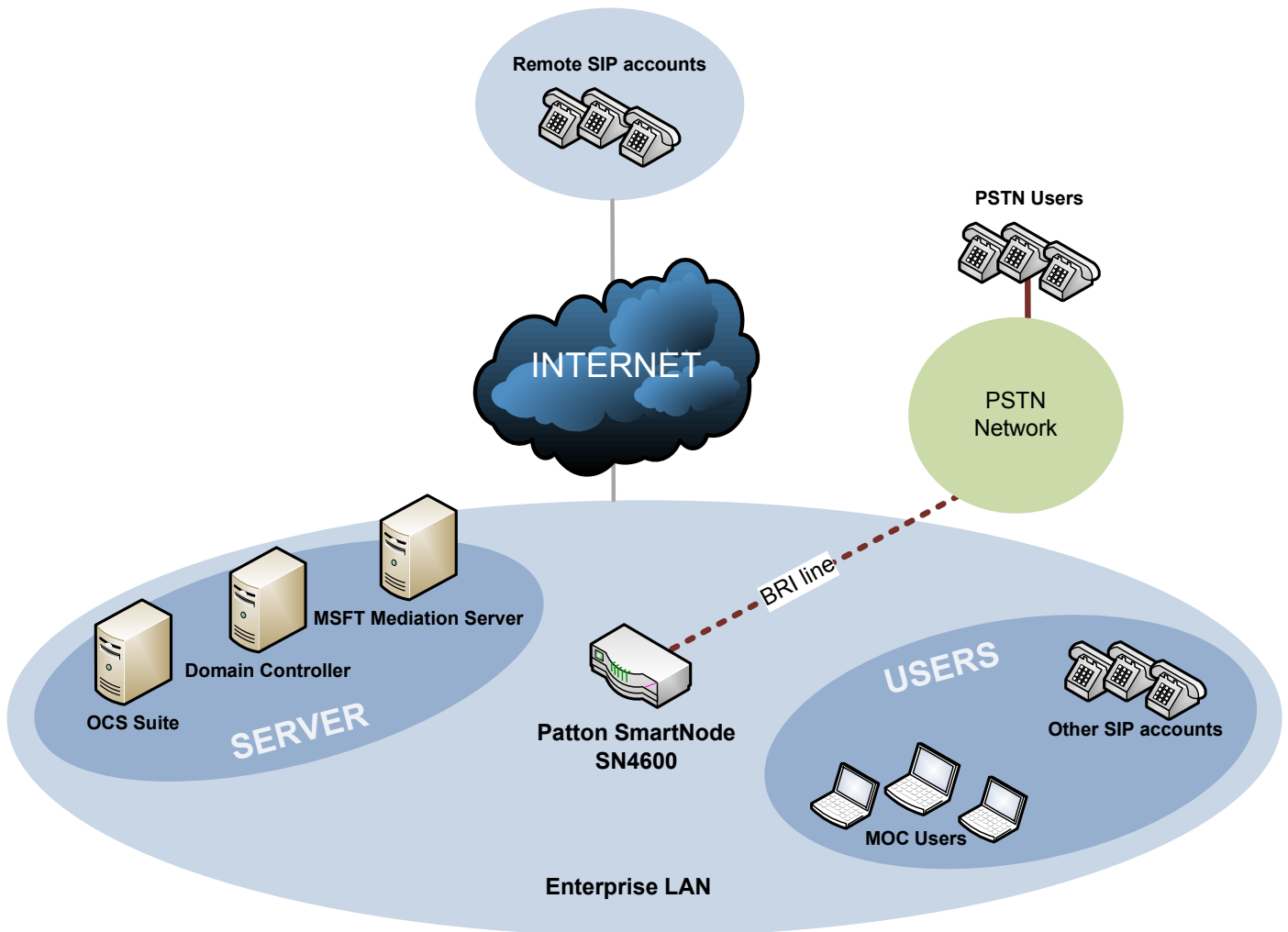


Figure 1 - OCS to Patton SmartNode Network Architecture

In this sample network infrastructure, the Patton SmartNode VoIP Gateway is connected to the LAN/WAN via 10/100 Ethernet ports and to PSTN network via BRI port.

3 Configuration

3.1 SmartNode configuration concept

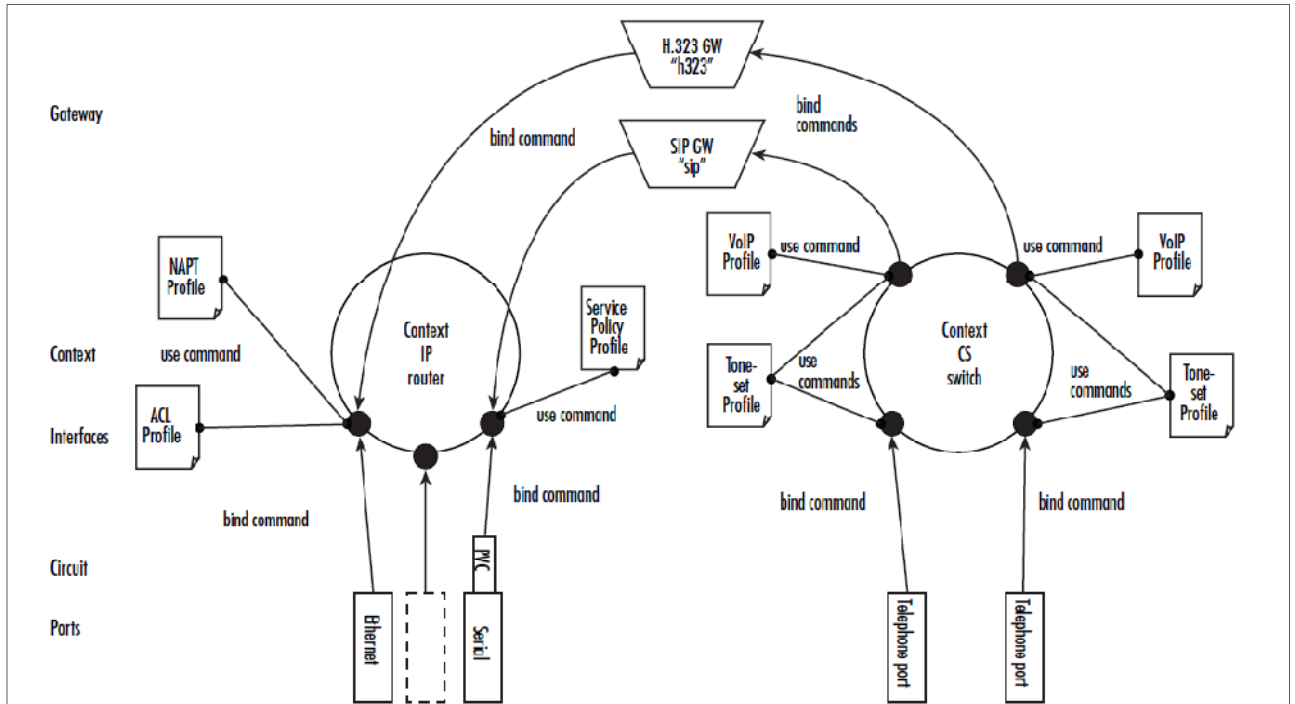


Figure 2 - SmartNode configuration architecture

3.2 Call-routing concept

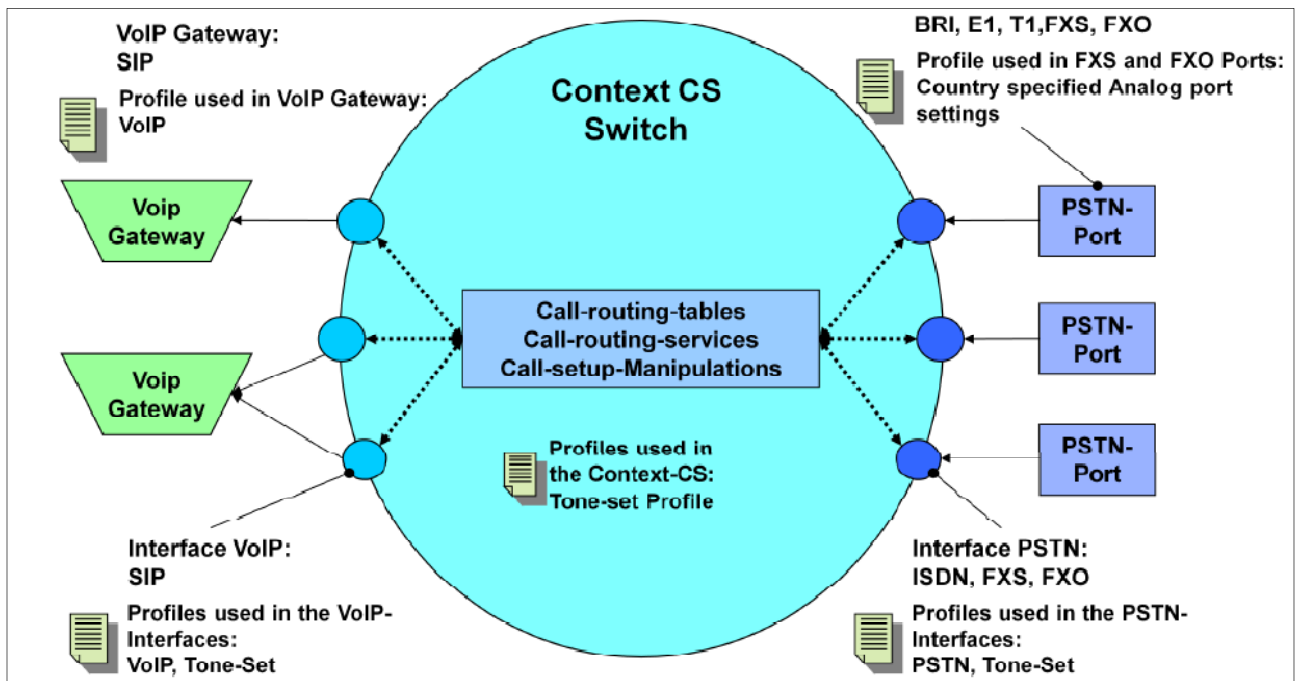


Figure 3 - Call-routing concept

3.3 Commented configuration

Note : this section does not contain all of the configuration possibilities. For more details, please visit the Patton Webpage (<http://www.patton.com>). Deeper configurations notes, samples and manuals are available.

```

#-----#
#
# SN4638/5BIS/UI
# R5.6 2011-11-19 H323 SIP BRI
# 1970-01-01T00:04:26
# SN/00a0ba01411d
# Generated configuration file
#
#-----#

cli version 3.20
gui type basic
banner "OCS Patton GW"
clock local default-offset +00:00
dns-client server 8.8.8.8
webserver port 80 language en
system hostname SN-OCSGW

system

    ic voice 0

system
    clock-source 1 bri 0 0
    clock-source 2 bri 0 1
    clock-source 3 bri 0 2
    clock-source 4 bri 0 3
    clock-source 5 bri 0 4

profile acl LAN
    permit 1 ip any any

profile ppp default

profile call-progress-tone defaultSITone
    play 1 330 950 -7
    play 2 330 1400 -7

profile tone-set default

profile voip default
    codec 1 g711ulaw64k rx-length 20 tx-length 20
    codec 2 g711alaw64k rx-length 20 tx-length 20
    dtmf-relay rtp
    silence-suppression

profile pstn default

profile sip default
    no autonomous-transitioning

profile aaa default
    method 1 local
    method 2 none

```

Basic information configuration
 In this section, you can define **DNS server** and **system hostname**.

VoIP profile configuration
 In this section, you can define parameters related to VoIP. You can define **codec** and enable **silence-suppression**.

```

context ip router

interface IF_IP_WAN
  ipaddress 10.16.0.2 255.255.255.0

interface IF_IP_LAN
  ipaddress 192.168.1.10 255.255.255.0

```

IP router configuration

In this section, you can define parameters related to your IP configuration.

You can define **interfaces** which needs to be bound to physical port (see below), **ip addresses** to interfaces and defines **routes**.

```

context ip router
  route 0.0.0.0 0.0.0.0 192.168.1.1 0

```

```

context cs switch
  digit-collection timeout 3

  routing-table called-e164 RT_ISDN_TO_SIP
  route default dest-interface IF_SIP

```

Call Switch configuration

In this section, you can configure call routing rules. You can chose whether to **route** the call to a SIP interface, an ISDN interface or to pass through a routing table to perform complex function (see manuals on Patton web site).

```

interface isdn IF_ISDN
  route call dest-table RT_ISDN_TO_SIP

interface sip IF_SIP
  bind context sip-gateway GW_SIP
  route call dest-interface IF_ISDN
  remote sip.registrar.sample 5060

```

```

context cs switch
  no shutdown

```

```

authentication-service AUTH_GW
  username GW_x password J4EaAtALa34= encrypted

```

```

location-service LOC_SERV_TRAIN
  domain 1 sip.registrar.sample

```

```

identity x

```

```

  authentication outbound
    authenticate 1 authentication-service AUTH_GW username GW_x

```

```

  registration outbound
    register auto

```

```

context sip-gateway GW_SIP

interface SIP
  bind interface IF_IP_LAN context router port 5060

```

```

context sip-gateway GW_SIP
  bind location-service LS
  no shutdown

  no shutdown

```

```

context sip-gateway GW
  shutdown

```

```

port ethernet 0 0
  medium auto
  encapsulation ip
  bind interface IF_IP_WAN router
  no shutdown

```

```

port ethernet 0 1

```

```
medium 10 half
shutdown

port bri 0 0
clock auto
encapsulation q921

q921
uni-side auto
encapsulation q931

q931
protocol dss1
uni-side user
bchan-number-order ascending
encapsulation cc-isdn
bind interface IF_ISDN switch

port bri 0 0
no shutdown

port bri 0 1
clock auto
encapsulation q921

q921
uni-side auto
encapsulation q931

q931
protocol dss1
uni-side net
bchan-number-order ascending

port bri 0 0
no shutdown
```

Configuration of BRI port (physical)

You will need to define protocols encapsulation. In this particular case **q931** is used as layer 3 protocol. In the q931 parameters, select uni-side as **user** when this interface will face a PSTN network. You will need to bind it to an ISDN interface, in this case **IF_ISDN** (see Context CS Switch).

Enable the port with **no shutdown**.

3.4 Sample configuration

This is a sample configuration file. It doesn't contain any comment for copy/paste purpose. The parameters marked in red are the minimal changes required.

```
#-----#
#
# SN4638/5BIS/UI
# R5.6 2011-11-19 H323 SIP BRI
# 1970-01-01T00:04:26
# SN/00a0ba01411d
# Generated configuration file
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#-----#

cli version 3.20
gui type basic
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webserver port 80 language en
system hostname SN-OCSGW

system

    ic voice 0

system
    clock-source 1 bri 0 0
    clock-source 2 bri 0 1
    clock-source 3 bri 0 2
    clock-source 4 bri 0 3
    clock-source 5 bri 0 4

profile acl LAN
    permit 1 ip any any

profile ppp default

profile call-progress-tone defaultSItone
    play 1 330 950 -7
    play 2 330 1400 -7

profile tone-set default

profile voip default
    codec 1 g711ulaw64k rx-length 20 tx-length 20
    codec 2 g711alaw64k rx-length 20 tx-length 20
    dtmf-relay rtp
    silence-suppression

profile pstn default

profile sip default
    no autonomous-transitioning

profile aaa default
    method 1 local
    method 2 none

context ip router

    interface IF_IP_LAN
        ipaddress 192.168.1.10 255.255.255.0

context ip router
context cs switch
```

```
digit-collection timeout 3

routing-table called-e164 RT_ISDN_TO_SIP
  route default dest-interface IF_SIP

interface isdn IF_ISDN
  route call dest-table RT_ISDN_TO_SIP

interface sip IF_SIP
  bind context sip-gateway GW_SIP
  route call dest-interface IF_ISDN
  remote sip.registrar.sample 5060

context cs switch
  no shutdown

authentication-service AUTH_GW
  username GW_x password J4EaAtALa34= encrypted

location-service LOC_SERV_TRAIN
  domain 1 sip.registrar.sample

identity x

  authentication outbound
    authenticate 1 authentication-service AUTH_GW username GW_x

  registration outbound
    register auto

context sip-gateway GW_SIP

  interface SIP
    bind interface IF_IP_LAN context router port 5060

context sip-gateway GW_SIP
  bind location-service LS
  no shutdown

  no shutdown

context sip-gateway GW
  shutdown

port ethernet 0 0
  medium auto
  encapsulation ip
  bind interface IF_IP_LAN router
  no shutdown

port ethernet 0 1
  medium 10 half
  shutdown

port bri 0 0
  clock auto
  encapsulation q921

  q921
    uni-side auto
    encapsulation q931

  q931
    protocol dss1
    uni-side user
```

```
bchan-number-order ascending
encapsulation cc-isdn
bind interface IF_ISDN switch

port bri 0 0
no shutdown

port bri 0 1
clock auto
encapsulation q921

q921
uni-side auto
encapsulation q931

q931
protocol dss1
uni-side net
bchan-number-order ascending

port bri 0 0
no shutdown
```