FAA San Diego Call Center

Cisco vXML Setup

Prepared For:
FAA San Diego

Prepared By:
AT&T

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Executive Summary

The purpose of this document is to provide an overview of the vXML configuration used in the IPCC environment This guide will address the areas of setup based on best practices provided from Cisco Systems with any modifications required for equipment deployment in the **FAA San Diego** environment.

With new hardware, even with the same part number, you may have revisions of the accompanying software that may affect this guide. Please contact AT&T if this happens and this document will be updated to reflect these changes.

It is also suggested to contact Cisco or log on to www.cisco.com and find the latest supported versions of the server setup software.

This guide has been designed to be usable by both an experienced IT engineer or one with less experience in the area of server setup. This document was designed to help the engineer through the many choices you have during setup to achieve a designated configuration for Cisco IPCC environment on a Windows Server 2003 operating system.

Requirements for the Gateway

1. System Power

    a. The power supplying the system must be able to support the server's requirements: Rated line voltage 100-127 VAC and 200-240 VAC & Rated input current 10A (100 VAC), 10A (120 VAC), and 5A (200 VAC)

    b. UPS protection is strongly suggested for this server if it will be in production, along with Windows 2003 agents to respond to an outage with a graceful shutdown.

2. HVAC & Operating environments

    a. The system should be set up in a cool, dry area for optimal operation. Range of 50° to 95° F (10° to 35° C) at 0 - 3000 feet (0 - 914.4 meters) with an altitude derating of 0.75° C per 1000 ft to 10,000 ft (3048 m)

    b. Cooling should be able to handle a BTU rating of BTU/hr 3390

    c. Maximum altitude 7000 ft (2133 m)

3. Input and Output

    a. Network Connection

        i. The Ethernet cable should be connected to an active network connection on a network switch.

        ii. Speed and Duplex **MUST** be set on both the server and switch to match (Not Auto). This deployment has been tested at 100/full and testing is continuing with 1000/full. At the time of this document, the gigabit/full has not been certified.

        iii. Prior to installing the server, you should collect what the IP address, Subnet Mask, Default Gateway, DNS Server, and WINS server will be.

        iv. All TCP/IP ports should be open and accessible to the client devices that they will be supporting; a more granular list is based on what application will be installed on the system.

Configuration of vXML Defined

The following is a configuration for the vXML – Most default items have been removed to reference

1. service nagle

   a. Nagle is a congestion control algorithm used to reduce the transmission of small packets. It's a bandwidth-saving feature for keystroke-based applications (such as Telnet). While the Cisco IOS turns off Nagle by default, you can enable it with the service nagle command.

2. service linenumber

   a. This command notifies the user of the router's or switch's async line number used at login. This can come in handy if you're having problems with your VTY line — it reminds you what line you're on. It even works on the console.

3. service sequence-numbers

   a. service sequence-numbers You can use the service sequence-numbers command to insert sequence numbers into log files. This can be important when log entries are coming really quickly. In fact, they can come so quickly that they appear at the same time.

4. ip domain name FAASDIPT.com

   a. Set the domain name for the system

5. ip host FAASDCMPUB 10.100.59.31

   a. Add the DNS Entries as backup to a DNS Server

6. multilink bundle-name authenticated

   a. You can change the criteria that is selected for naming a multilink bundle if you issue the multilink bundle

7. voice call send-alert

   a. To enable the terminating gateway to send an alert message instead of a progress message after it receives a call setup message, use the voice call send-alert command in global configuration mode.

8. voice rtp send-recv

   a. To establish a two-way voice path when the Real-Time Transport Protocol (RTP) channel is opened, use the voice rtp send-recv command in global configuration mode

9. voice class codec 100

   a. The following example shows configuration for voice class codec 10 with two audio codec preferences and three video codec preferences

10. service cvp-survivability flash:survivability.tcl

    a. paramspace english language en

    b. paramspace english index 0

       c. `paramspace english location flash`

       d. `paramspace english prefix en`

11. `service cvperror flash:cvperror.tcl`

       a. `paramspace english language en`

       b. `paramspace english index 0`

       c. `paramspace english location flash`

       d. `paramspace english prefix en`

12. `service ringtone flash:ringtone.tcl`

       a. `paramspace english language en`

       b. `paramspace english index 0`

       c. `paramspace english location flash`

       d. `paramspace english prefix en`

13. `service handoff flash:handoff.tcl`

       a. `paramspace english language en`

       b. `paramspace english index 0`

       c. `paramspace english location flash:`

       d. `paramspace english prefix en`

14. `archive`

       a. To enter archive configuration mode, use the archive command in global configuration mode.

15. `log config`

       a. Enters configuration change logger configuration mode.

16. `hidekeys`

       a. Suppresses the display of password information in configuration log files. Note Enabling the hidekeys command increases security by preventing password information from being displayed in configuration log files.

17. `MRCP`

       a. `mrcp client timeout connect 5`

       b. `mrcp client timeout message 5`

       c. `mrcp client rtpsetup enable`

18. `vxml tree memory 15000`

       a.

19. `http`

       a. `http client cache memory pool 35000`

       b. `http client cache memory file 600`

       c. `http client cache refresh 86400`

       d. `http client response timeout 1`

20. h323-gateway

      a. h323-gateway voip interface

      b. h323-gateway voip id FAASDUCCZONE1 ipaddr 10.100.99.30 1719 priority 120

      c. h323-gateway voip id FAASDUCCZONE2 ipaddr 10.200.0.20 1719

      d. h323-gateway voip h323-id FAASDUCCVXML05

      e. h323-gateway voip tech-prefix 2#

      f. h323-gateway voip bind srcaddr 10.10.99.50

21. ss7

      a. ss7 mtp2-variant Bellcore 0

      b. ss7 mtp2-variant Bellcore 1

      c. ss7 mtp2-variant Bellcore 2

      d. ss7 mtp2-variant Bellcore 3

Full Gateway Configuration

The following is a full configuration and has not been finalized at the time of document.

```
FAASDUCCVXML05#sh run

Building configuration...


Current configuration : 4024 bytes

!

! Last configuration change at 19:49:14 UTC Mon Aug 25 2008

! NVRAM config last updated at 19:52:22 UTC Mon Aug 25 2008

!

version 12.4

service nagle

service timestamps debug datetime msec localtime

service timestamps log datetime localtime show-timezone

service password-encryption

service linenumber

service sequence-numbers

no service dhcp

!

hostname FAASDUCCVXML05

!

boot-start-marker

boot system flash:c5350-is-mz.124-15.T1.bin

no boot startup-test

boot-end-marker

!

no logging console

enable secret 5 $1$xxxxxxxxxxxxxx/OQxxxxIk/

enable password 7 01100F175804

!

resource-pool disable
```

```
no aaa new-model
spe default-firmware spe-firmware-1
!
ip cef
!
multilink bundle-name authenticated
!
voice rtp send-recv
!
voice service voip
 h323
!
voice class codec 100
 codec preference 1 g711ulaw
 codec preference 2 g729br8
 codec preference 3 g729r8
!
application
  service vru-leg flash:bootstrap.tcl
  paramspace english index 0
  paramspace english language en
  paramspace english location flash
  paramspace english prefix en
  !
  service new-call flash:bootstrap.vxml
  paramspace english index 0
  paramspace english language en
  paramspace english location flash
  paramspace english prefix en
  !
  service handoff flash:handoff.tcl
  paramspace english index 0
  paramspace english language en
  paramspace english location flash:
```

```
   paramspace english prefix en
!
mrcp client timeout connect 5
mrcp client timeout message 5
mrcp client rtpsetup enable
vxml tree memory 15000
http client cache memory pool 35000
http client cache memory file 600
http client cache refresh 86400
http client response timeout 1
!
archive
 log config
  hidekeys
!
interface Loopback0
 description FAASDUCCVXML05 Loopback0
 ip address 10.100.99.50 255.255.255.255
 no ip redirects
 h323-gateway voip interface
 h323-gateway voip id FAASDUCCZONE1 ipaddr 10.100.9.30 1719 priority 120
 h323-gateway voip id FAASDUCCZONE2 ipaddr 10.200.0.20 1719
 h323-gateway voip h323-id FAASDUCCVXML05
 h323-gateway voip tech-prefix 2#
 h323-gateway voip bind srcaddr 10.10.99.50
!
interface GigabitEthernet0/0
 ip address 10.100.59.121 255.255.255.128
 ip access-group 198 in
 no ip unreachables
 ip route-cache policy
 ip route-cache flow
 ip ospf priority 0
 ip policy route-map nachi-worm
```

```
 load-interval 30
 duplex full
 speed 100
 negotiation auto
!
interface GigabitEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
 negotiation auto
!
interface Serial0/0
 no ip address
 shutdown
 clock rate 2000000
 no fair-queue
!
interface Serial0/1
 no ip address
 shutdown
 clock rate 2000000
!
router ospf 100
 log-adjacency-changes
 network 10.100.99.50 0.0.0.0 area 10.100.28.146
 network 10.100.59.0 0.0.0.127 area 10.100.28.146
 network 10.100.59.128 0.0.0.127 area 10.100.28.146
 maximum-paths 6
!
no ip http server
!
control-plane
!
```

```
dial-peer voice 900 voip
 service vru-leg
 voice-class codec 100
 incoming called-number 10002T
 dtmf-relay rtp-nte h245-signal h245-alphanumeric
 no vad
!
gateway
 timer receive-rtp 1200
!
ss7 mtp2-variant Bellcore 0
ss7 mtp2-variant Bellcore 1
ss7 mtp2-variant Bellcore 2
ss7 mtp2-variant Bellcore 3
banner motd ^CCC
WARNING:
This system is provided for FAA San Diego business purposes by
authorized users
only. Users of company resources, including computers, communications
equipment, and associated services provided by these resources
(e.g., internet, electronic mail, facsimile, voice mail, hardcopy) are
to be used for company business purposes only. The company reserves the
right to monitor usage of all auditing purposes and when
such action is deemed necessary due to business circumstances. Anyone
using this system expressly consents to such monitoring.^C
!
line con 0
 password 7 143xxxxxxxxxx7874
 stopbits 1
line aux 0
 password 7 12xxxxxxxxxx1718
 stopbits 1
line vty 0 4
 exec-timeout 120 0
```

```
 password 7 052xxxxxxxxxx5A49
 login
!
scheduler allocate 10000 400
ntp clock-period 17179874
ntp server 10.100.119.84
ntp server 10.100.119.83
end
```

This Configuration will change as needed