

# VOICEGENIE

## VoiceGenie 7 SS7 Connector Installation Guide

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## Table of Contents

<b>Proprietary / Copyright Information</b>	<b>3</b>
<b>Notice</b>	<b>3</b>
<b>Trademarks</b>	<b>3</b>
<b>Table of Contents</b>	<b>4</b>
<b>Revision History</b>	<b>5</b>
<b>1 Introduction</b>	<b>6</b>
1.1 Initial Steps	6
1.2 Installation Instructions for the SS7 Connector Server	7
<b>2 Configuring the SS7 Connector</b>	<b>9</b>
<b>3 Configuring the Redundancy Manager</b>	<b>10</b>
<b>4 Configuring the Media Platform</b>	<b>10</b>
4.1 Call Manager Configuration	11

## Revision History

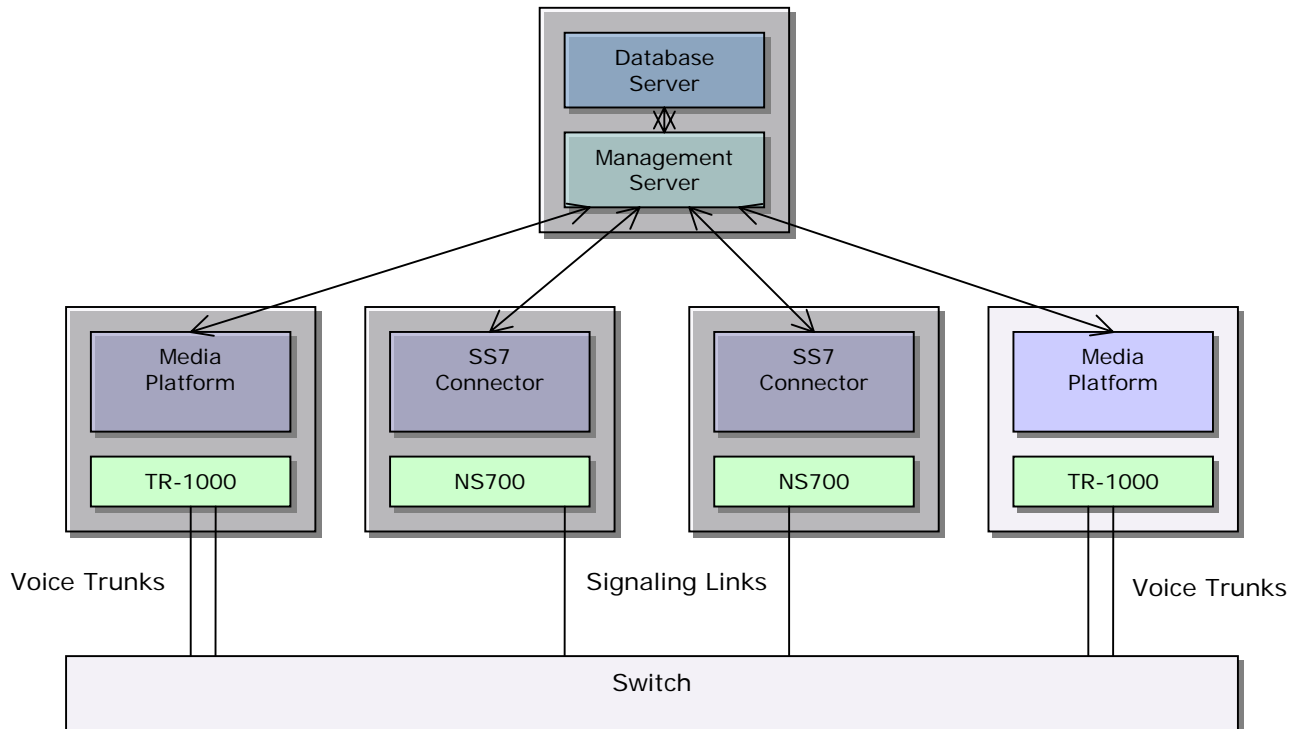
Version	Date	Change Summary	Author/Editor
Draft	March 22 <sup>nd</sup> , 2005	Initial release	Payam Borghei Henry Lum Andrew Ho

## 1 Introduction

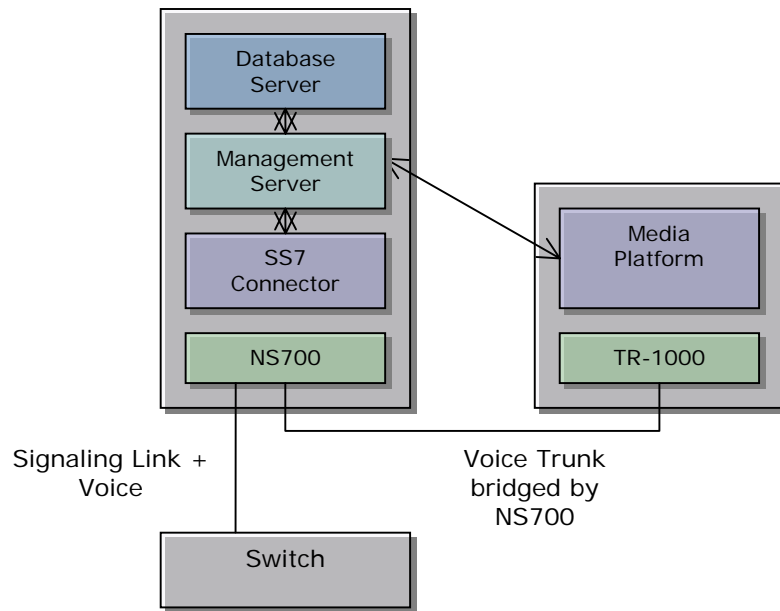
This guide intends focuses on installing and configuring the VoiceGenie 7 SS7 Connector software.

### 1.1 Initial Steps

- Determine the role of physical servers and what VoiceGenie component will be installed. There are 3 main components involved in an SS7 deployment: CMP (Database Server + Management server), SS7 Connectors, and Media Platforms. Please read the [VoiceGenie 7 Installation Guide](#) to determine the Deployment Architecture.
- Sample Redundant SS7 configuration



- Sample Non-Redundant SS7 configuration



- Please install telephony hardware into SS7 Connector machines and Media Platform machines before installing software. Each SS7 Connector requires one NS700 board, and each Media Platform requires one or two TR1000 boards.
- Proceed to "VoiceGenie Linux Installation" for all machines
- Follow [VoiceGenie 7 Installation Guide](#) to install OA&M Framework for all machines.
- Follow Configuration instructions below to complete the configuration

## 1.2 Installation Instructions for the SS7 Connector Server

Starting in the VoiceGenie 7 release, component installation makes use of the web-based System Management Console (SMC).

For further information regarding the SMC, please see [VoiceGenie 7 OA&M – SMC Guide](#)

Under Configuration Tab of SMC:

- Choose "Product Manager"
- Upload the following list
  1. `ccp-ss7-7.x.x-x.tar.gz`
  2. `ccp-rm-7.x.x-x.tar.gz`
  3. `brkt-ns700-5.1.2-x.tar.gz`
  4. `bonding-7.0.0-x.tar.gz`
- Choose "Config Profile Manager" and create a default configuration for each of the uploaded products. While creating a new SS7 Connector configuration we will be asked whether the configuration is for a primary server or backup. The primary server's SS7 Connector board ID starts from 0 and backup starts from 4.

- In “Deployment Manager”, component deployment on each machine is performed. The following list should be deployed on each SS7 Connector machine.
  1. Bonding driver
  2. Brooktrout SS7 Driver
  3. Call Control Platform Redundancy Manager
- And for the Primary and Backup SS7 Connector servers we deploy their respective configuration
  1. Call Control Platform SS7 Server (Primary selected)
  2. Call Control Platform SS7 Server (Backup selected)
- “Deployment History” should show the successfulness of deployment on each machine.

Once the backup configuration is deployed, go to SS7 Connector Server configuration and make target the primary configuration to **both** SS7 Connector servers. Once in effect, the backup configuration will not be used after deployed.

Restart both SS7 Connector servers; login as root and execute the following:  
root@voicegenie> /sbin/reboot



## 2 Configuring the SS7 Connector

Edit the SS7 Connector Call Control configuration to ensure the SS7 Connector configuration is set up properly. Determine the multicast address that this pair of SS7 Connector servers will be listening on.

sip.transport.0 = transport0 udp:**227.0.0.1:5060**

Ensure mandatory SS7 Connector and board parameters are setup correctly.

Please refer to Section 4 of the [VoiceGenie 7 SS7 Connector System Reference Guide](#) for references to the parameters:

```
ss7.cards = 2
ss7.card0 = 0 0x40 0x4f
ss7.card4 = 0 0x40 0x4f
ss7.card0.trunk0 = 0 E1_120_HDB3 CRC_ON 0 0 0
ss7.card4.trunk0 = 1 E1_120_HDB3 CRC_ON 0 1 0
ss7.card0.signaling0 = 0 16 0 L2_ITUT_MTP 0 0
ss7.card4.signaling0 = 0 16 0 L2_ITUT_MTP 0 1
mtp.stack0 = 0x124 2
mtp.stack0.linkset0 = 2 0x123 2 -1 1 0 1
mtp.stack0.dest0 = 1 0x123 2 1 60 0
```

For each media platform installed, ensure the SS7 Connector Circuits Mapping is provisioned correctly with the matching ISUP circuit IDs.

<b>Entry ID:</b>	10		
<b>Network ID:</b>	18	<b>Platform:</b>	10.0.0.81
	<b>Trunk ID</b>	<b># Circuits</b>	<b>Start CIC</b>
	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="button" value="Add"/>
	<input type="text" value="2"/>	<input type="text" value="30"/>	<input type="text" value="31"/> <input type="button" value="Remove"/>
	<input type="text" value="1"/>	<input type="text" value="30"/>	<input type="text" value="1"/> <input type="button" value="Remove"/>
	<input type="button" value="Update"/>	<input type="button" value="Delete"/>	<input type="button" value="Select Target"/>

### 3 Configuring the Redundancy Manager

Open RM Cluster Mapping page from SMC. Click "Create RM Cluster" to create a new cluster. Enter the IP address with port 9801 for each server available in the drop down menu. A finished configuration should look like the following:

Redundancy Manager Cluster ID: 3			
Cluster Members			
RM:	Member ID	Member String	
10.0.0.169 (14)	1	10.0.0.169:9801	<input type="button" value="Remove"/>
10.0.0.104 (18)	2	10.0.0.104:9801	<input type="button" value="Remove"/>
<input type="button" value="Delete"/>			

### 4 Configuring the Media Platform

When creating a profile for the Media Platform, you will be asked a set of questions about the configuration. Please use the following answers:

"Please select the type of Telephony board that these machines will support, select None if using VoIP (SIP or H323) only." – **Brooktrout Telephony Card(s)**

"Please select the type(s) of VoIP interfaces that these machine will support, select None if using Telephony only." – **SIP Only**

"Would you like to enable the G726 protocol in VoIP?" – **No, use G711 protocol only (default)**

"How many T1/E1 spans will be connected to this machine?" – **depends on the number of TR1000 boards installed on the Media Platform**

"This utility will upgrade the firmware on the Brooktrout cards installed on this box. This only needs to be done once per board, although it is ok to do it more often. If you have previously upgraded the firmware on these boards, you can say no now?" - **Yes**

"Which type of T1/E1 line is being used?" – **T1-ISDN or E1-ISDN**

"If the signalling protocol is T1-RB, E1-RB or E1-R2, Switch type: 4ESS, 5ESS, DMS100, DMS250, NTT(Japan), MD110T1(Ericsson), MD110E1, EWSD(Siemens North America), UNKNOWN(for the other switches)." - **UNKNOWN**

"Switch variant: ATT, NT, INS1500, NET5(EuroISDN), VN3(France), TS014(Australia), GEN-ITU, 1TR6(Germany)" - **ATT**

"How many telephony licenses have you purchased from VoiceGenie?" – **enter the number of licenses you have purchased from VoiceGenie**

"Is this installation for CCP SS7?" - **Yes**

"Please select the audio format to use:" – **Mulaw for T1; Alaw for E1**

#### 4.1 Call Manager Configuration

Once the configuration profile is created, edit the Call Manager configuration and select the same multicast address entered in the SS7 Connector configuration, shown in [Configuring the SS7 Connector](#).

Please copy the bolded values into the following Call Manager configuration parameter:  
sip.defaultgw=**227.0.0.1:5060**

Also modify the following parameters depending on T1 or E1 configuration:  
brooktrout.board00.sigprotocol to E1-CC (for E1) or T1-CC (for T1)  
brooktrout.board01.sigprotocol to E1-CC (for E1) or T1-CC (for T1) if there are two boards installed.