Integrating GCK with Mitel MiVoice

Background

This document describes the steps necessary to configure a Mitel MiVoice Business (MiVB) phone system in order to interface with AtlasIED GCK running in Trunking Mode. In this mode, GCK acts like a peer phone system to MiVB. This guide also provides instructions for connecting GCK to a MiVB trunk and how to test the trunk. This document serves as an example reference implementation. Other configurations are possible, but have not been vetted by AtlasIED.

This document assumes the following:

- The user has a functioning installation of MiVB. The version used here is 8.0 SP3 PR1.
- MiVB has enough license units available to allow a SIP trunk to be created. Contact Mitel for licensing information.
- The user has a functioning installation of GCK version 10.2 or higher.

Installation

The process of creating a new SIP trunk consists of setting up MiVB and GCK in the following steps:

MiVB Configuration

1. Create the SIP trunk licenses in MiVB.
2. Build a Class of Service in MiVB.
3. Build a Network Element in MiVB.
4. Build a Trunk Service in MiVB.
5. Build a SIP Peer Profile in MiVB.
6. Set SIP Peer Profile SDP option in MiVB.
7. Set Digit Modification in MiVB.
8. Build SIP Route in MiVB.
9. Build Dialed Digits in MiVB.

GCK Configuration

1. Set Trunking Mode in GCK.
2. Set the Proxy Address in GCK.
3. Create the Extensions in GCK.
4. Test.

MiVB Configuration
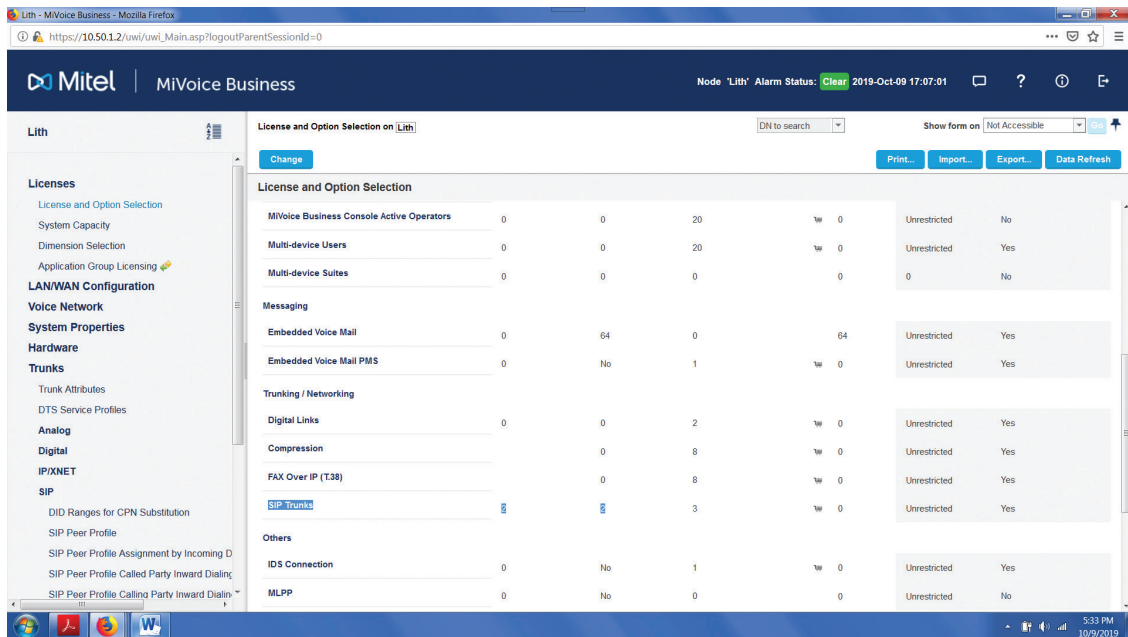
Create the SIP trunk licenses in MiVB.

Figure 1 - Setting up 2 SIP Trunk Licenses in MiVB

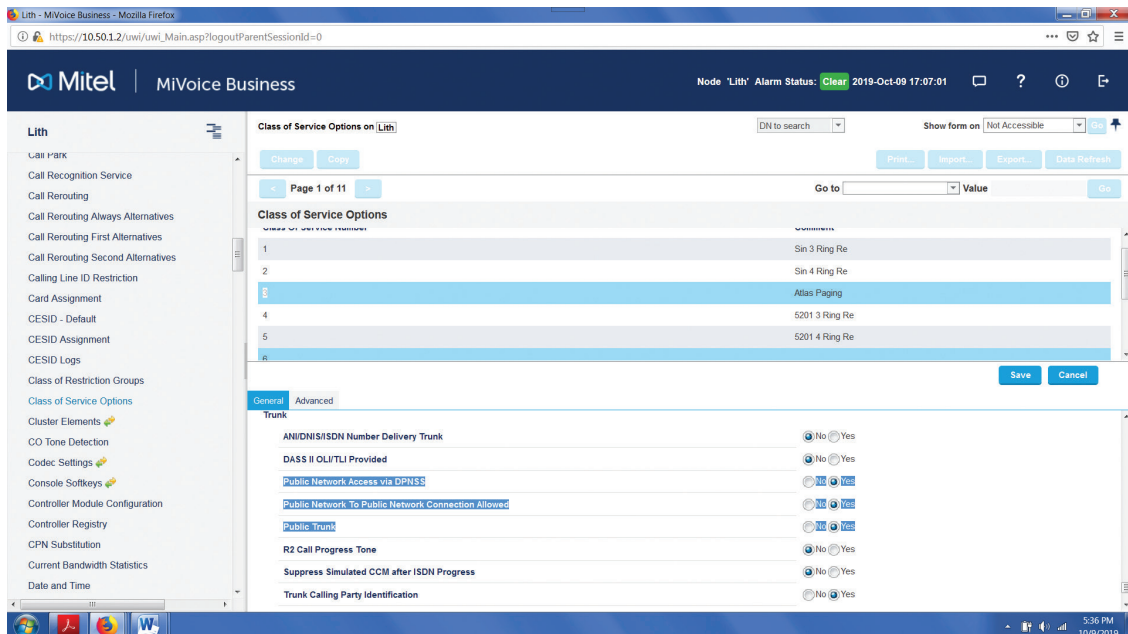Build Class Of Service 3. Set highlighted parameters to YES.

Figure 2 - Building a Class of Service in MiVB

Build Network Element. 10.50.20.6 is the IP address of GCK in this example. Note: UDP Port for GCK is 5080, not SIP default of 5060.
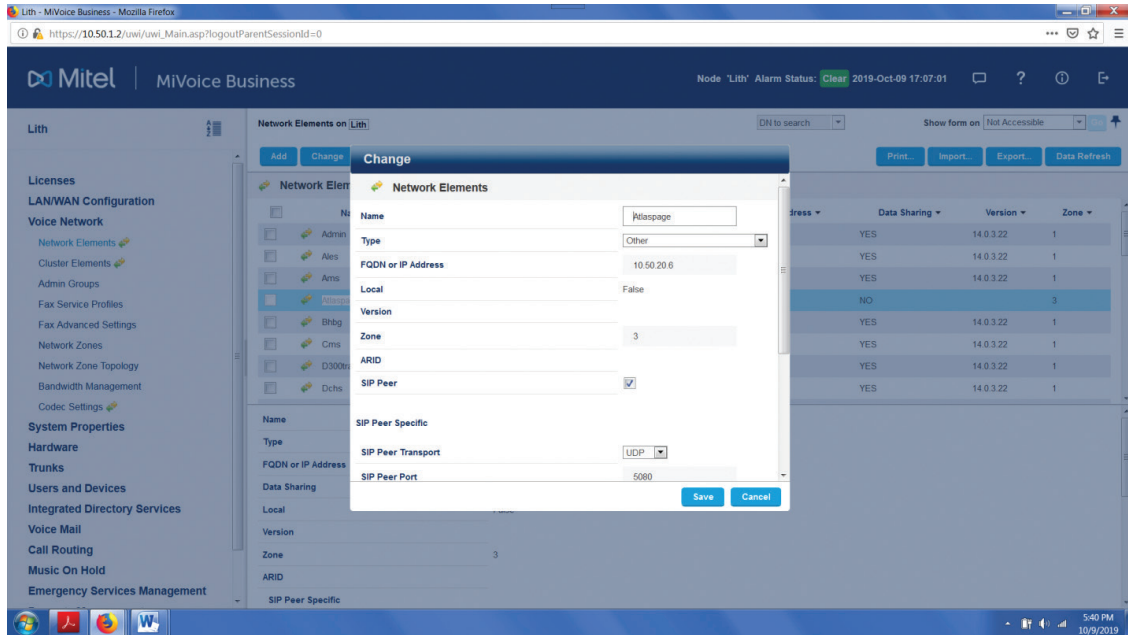

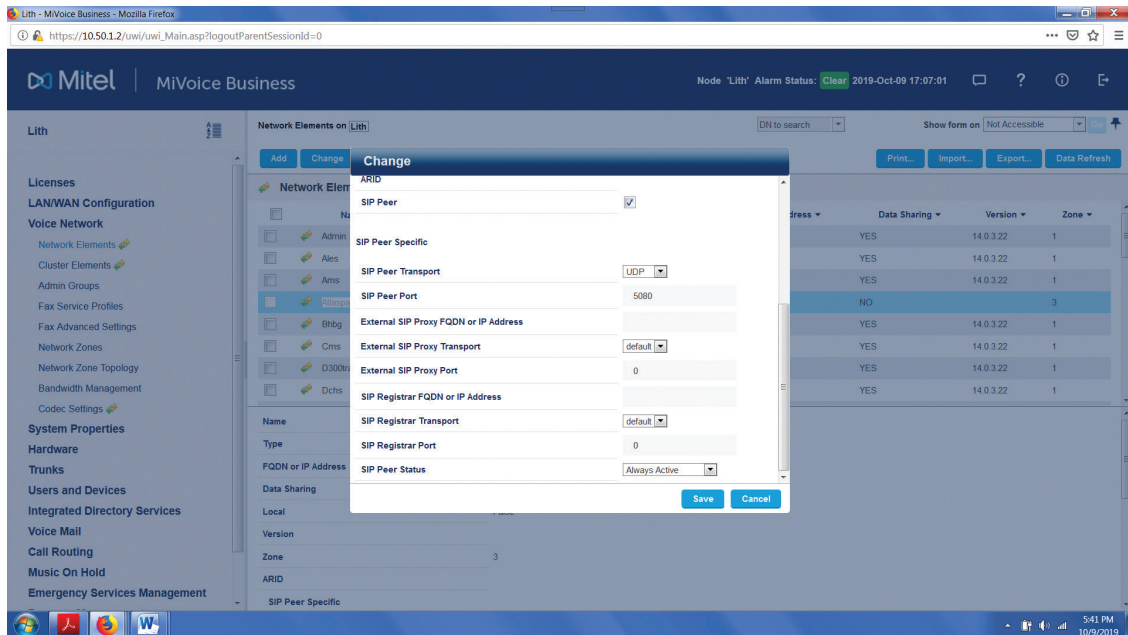Figure 3 - Building a Network Element (Part 1) in MiVB

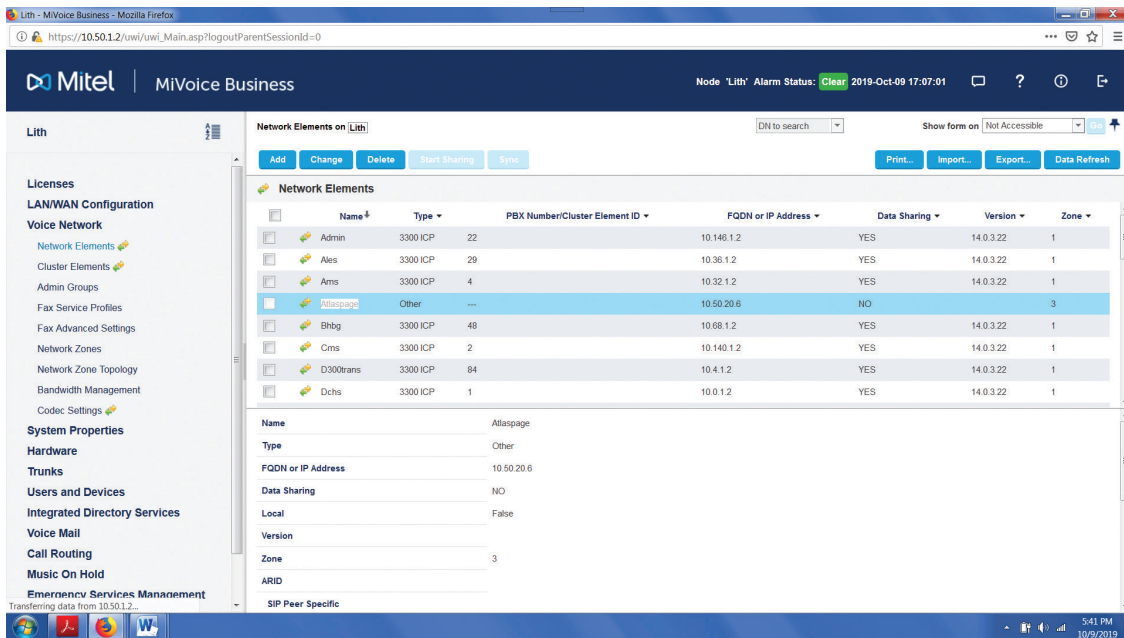Figure 4 - Building a Network Element (Part 2) in MiVB

Figure 5 - Building a Network Element (Part 3) in MiVB
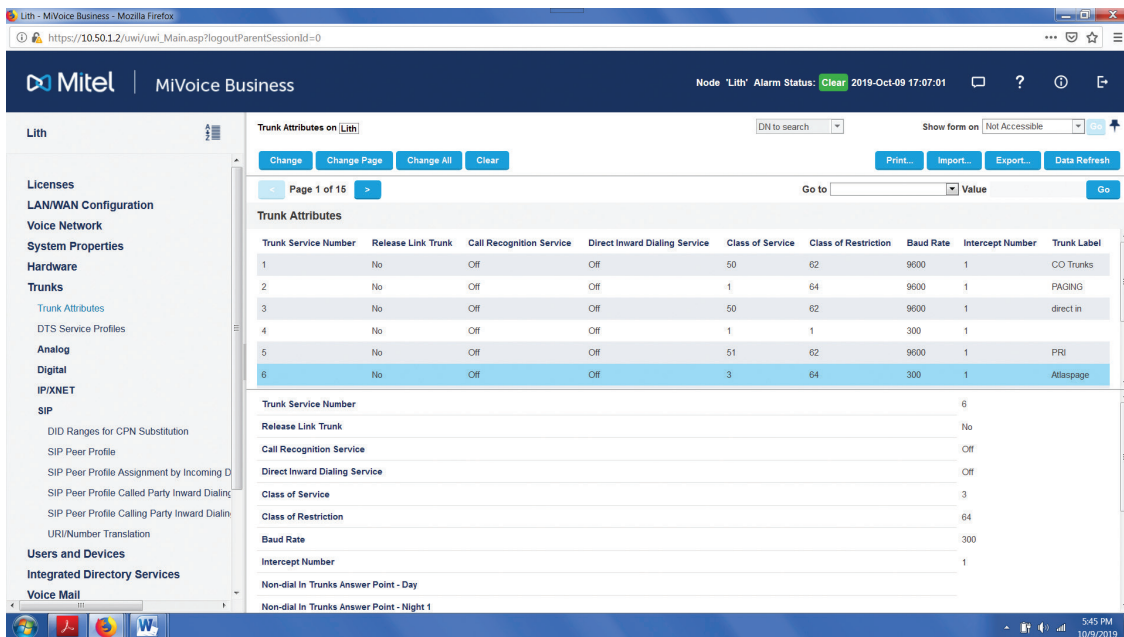
Build Trunk Service

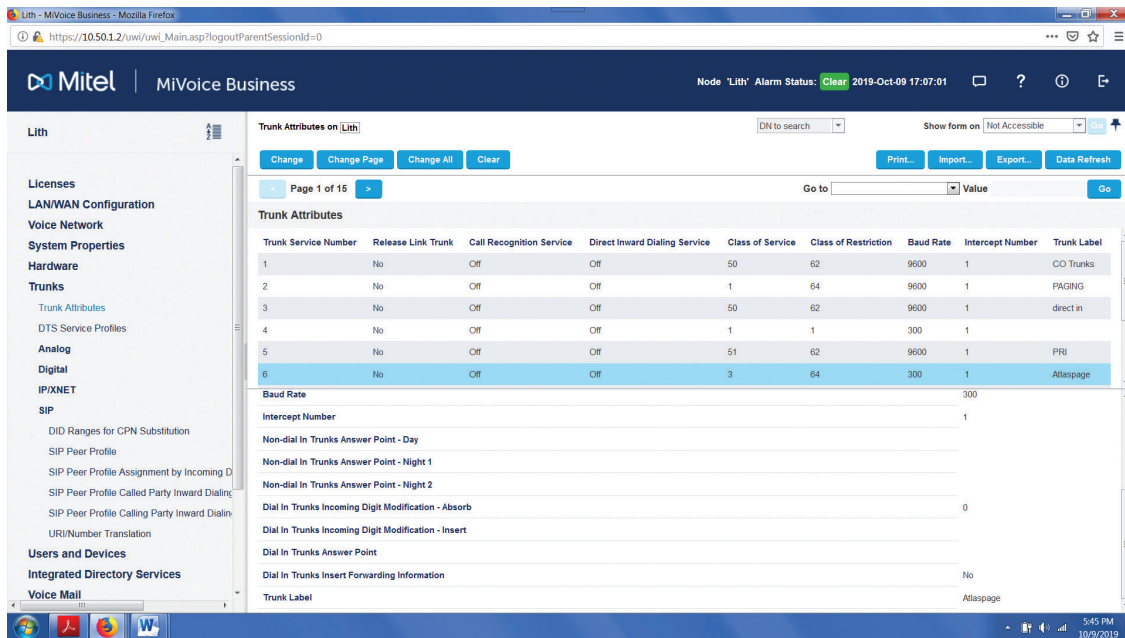Figure 6 - Building Trunk Service (Part 1) in MiVB

Figure 7 - Building Trunk Service (Part 2) in MiVB
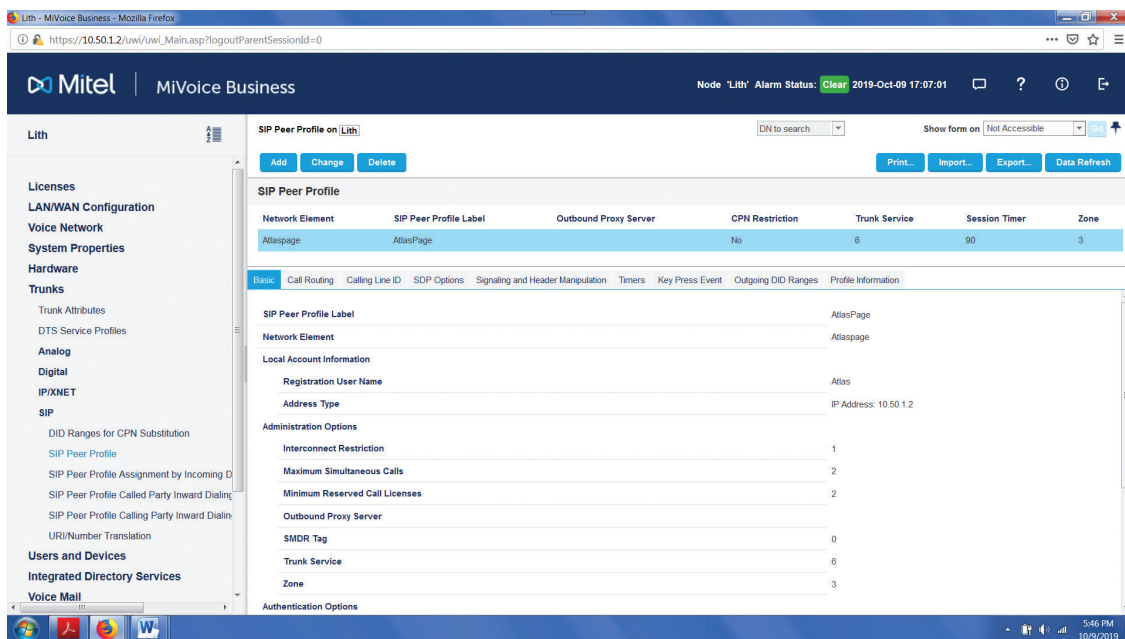
Build SIP Peer Profile

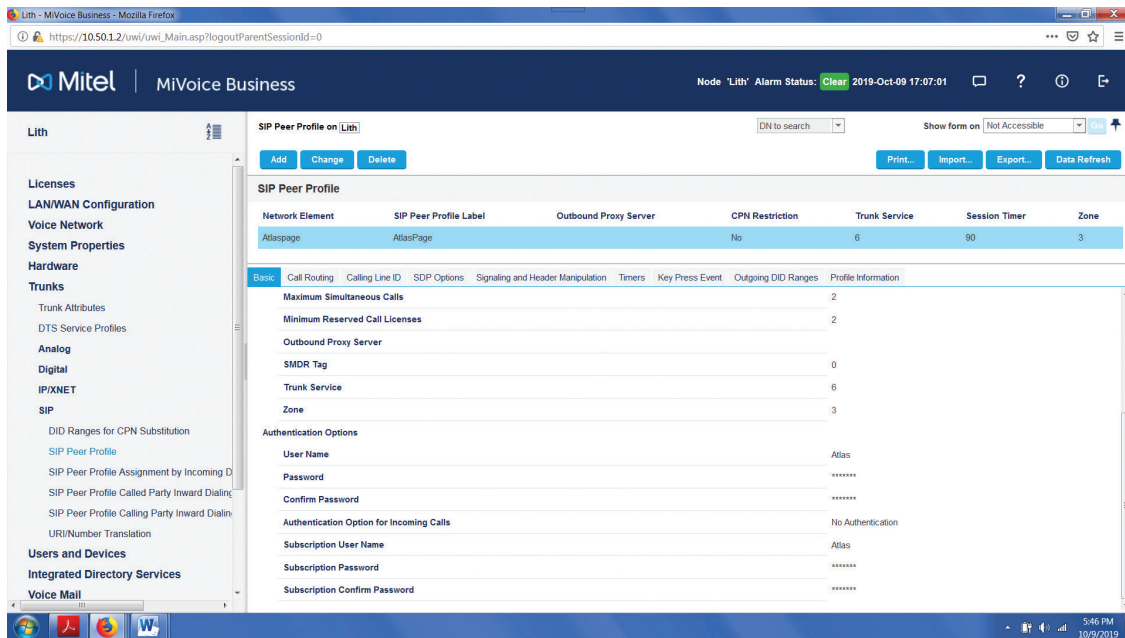Figure 8 - Building a SIP Peer Profile (Part 1) in MiVB

Figure 9 - Building a SIP Peer Profile (Part 2) in MiVB

In SDP Options of SIP Peer Profile set "Force sending SDP in Initial Invite Message" to Yes.
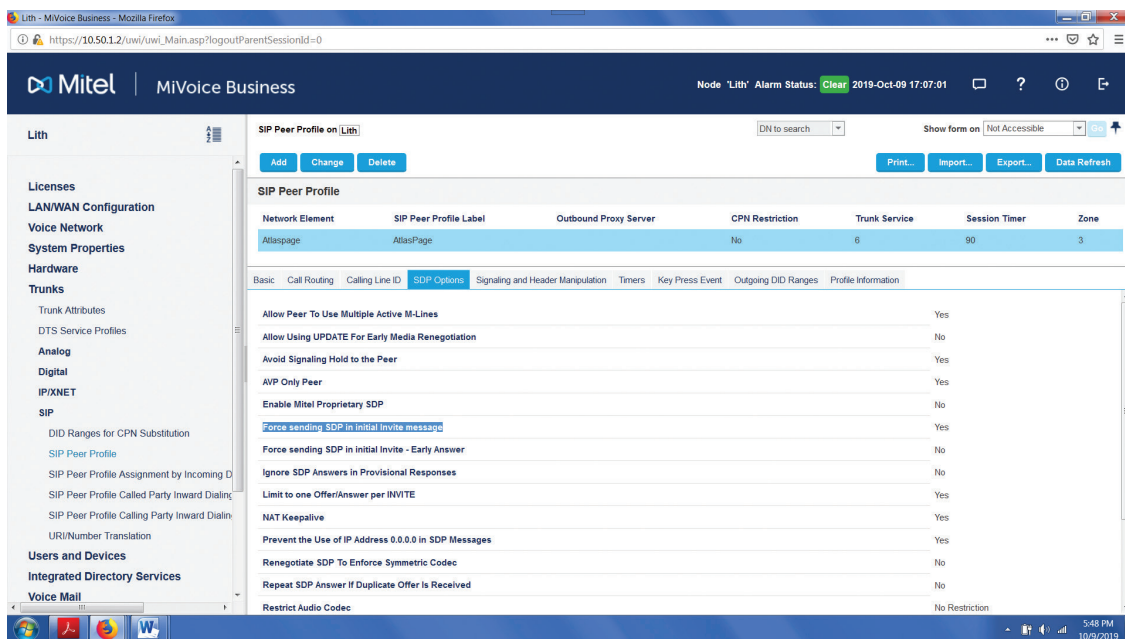

Figure 10 - Setting SIP Peer Profile SDP in MiVB

All other options in SIP Peer Profile were default. Choose Digit Mod 3 that by default does not absorb any digits.
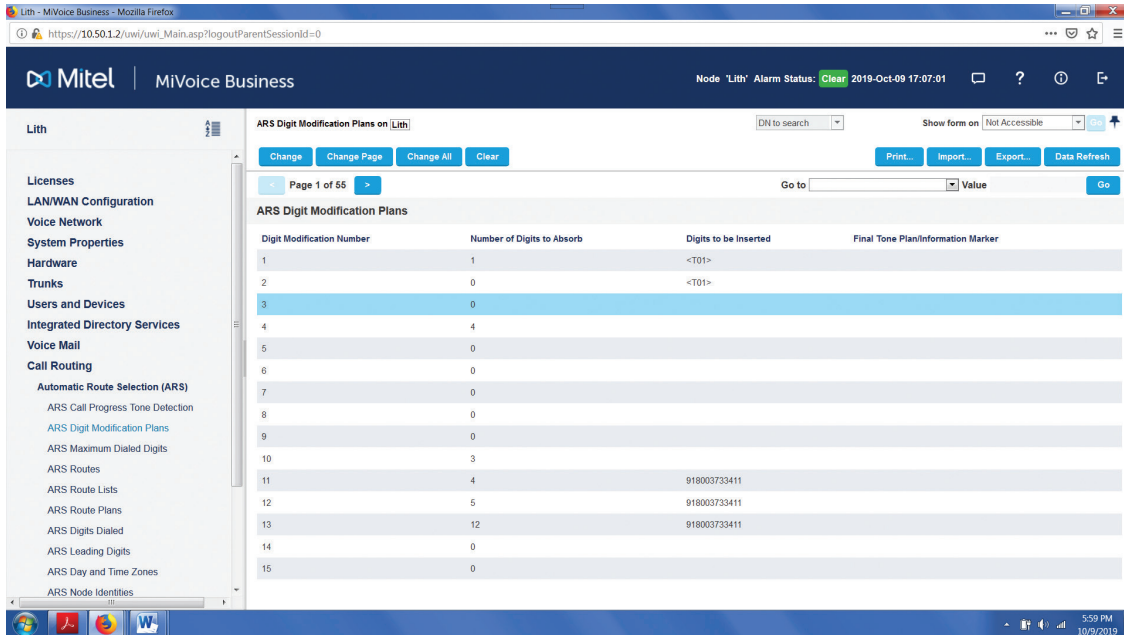

Figure 11 - Setting Digit Modification in MiVB
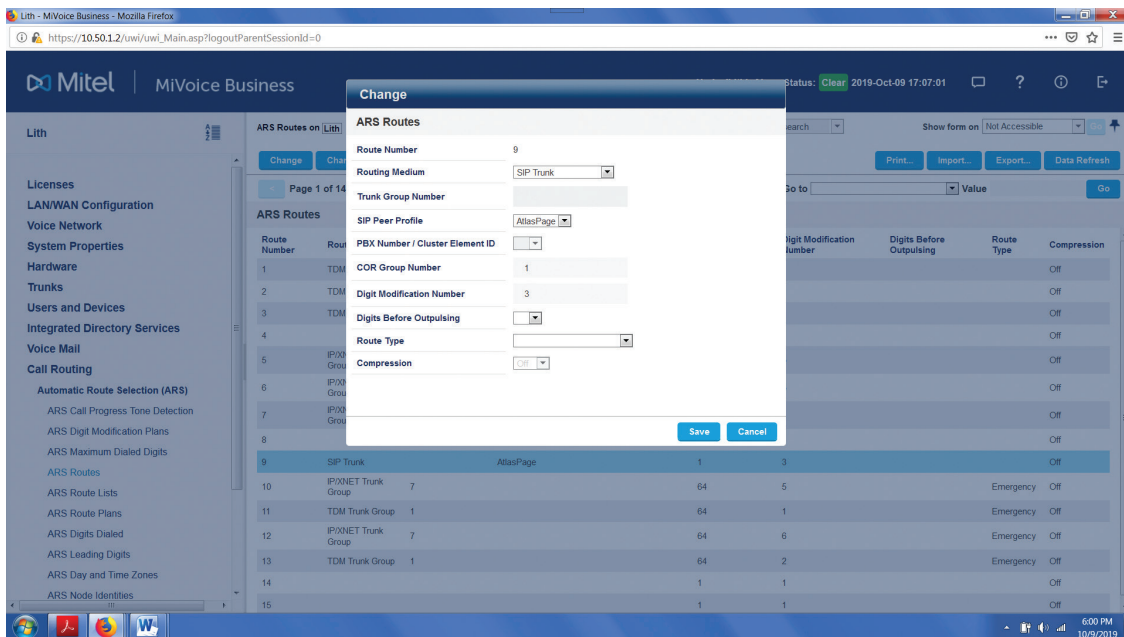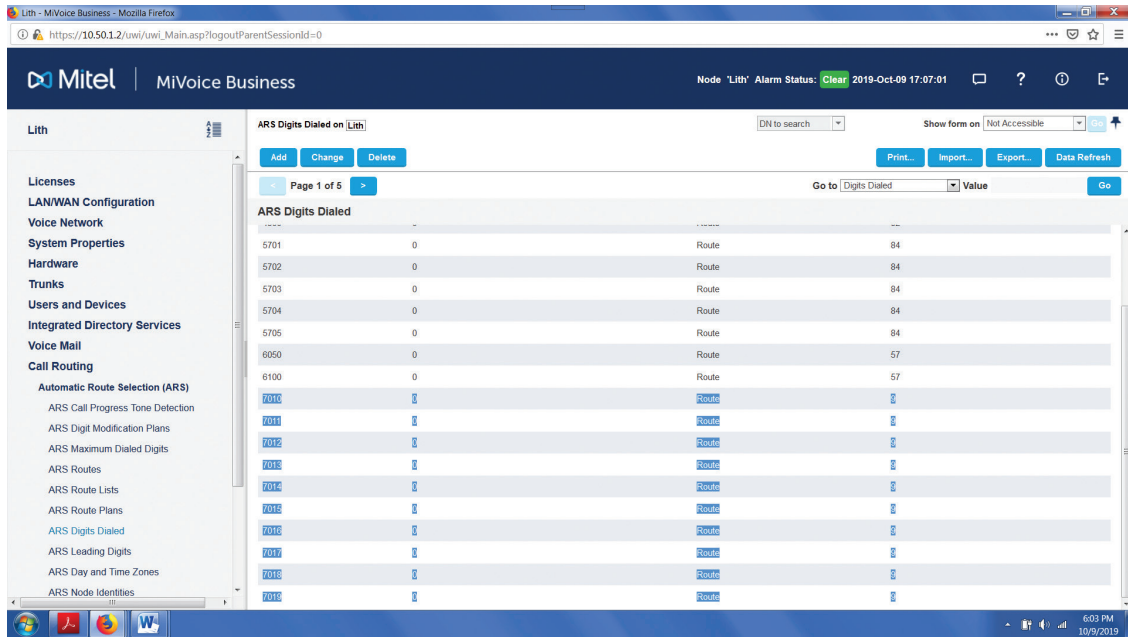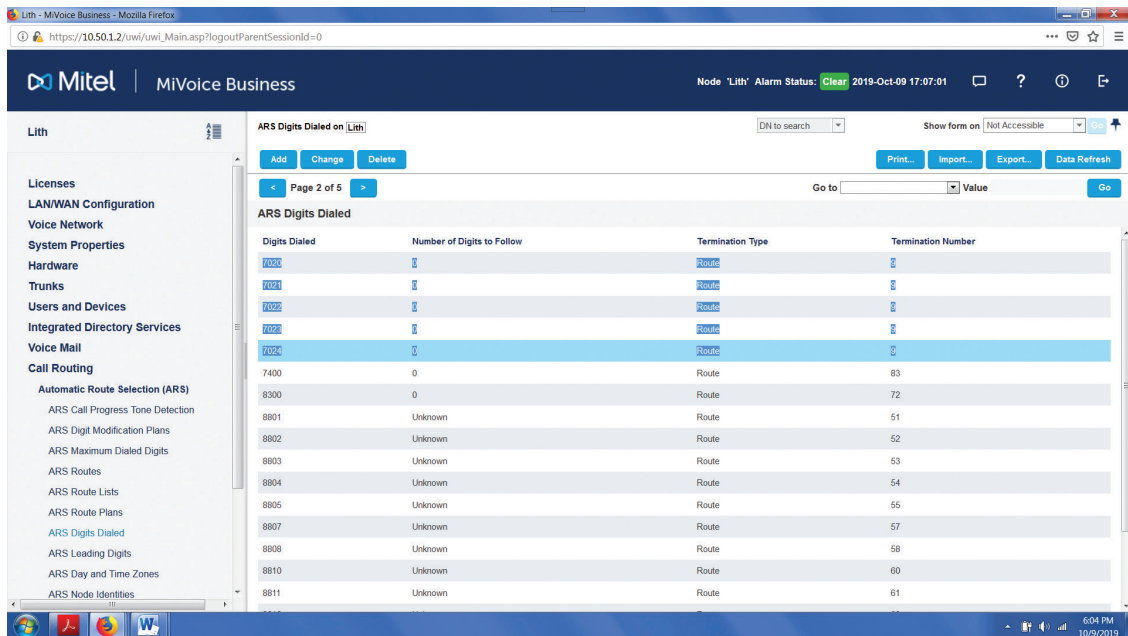
Build Route 9

Figure 12 - Building Route in MiVB

Built Digits Dialed. In this example, dialstrings 7010 through 7024 are set to go out Route 9 to allow for future use. Only 7010 and 7024 will be defined in GCK, so only those will work.

Figure 13 - Build Dialed Digits (Part 1) in MiVB

Figure 14 - Build Dialed Digits (Part 2) in MiVB

GCK Configuration

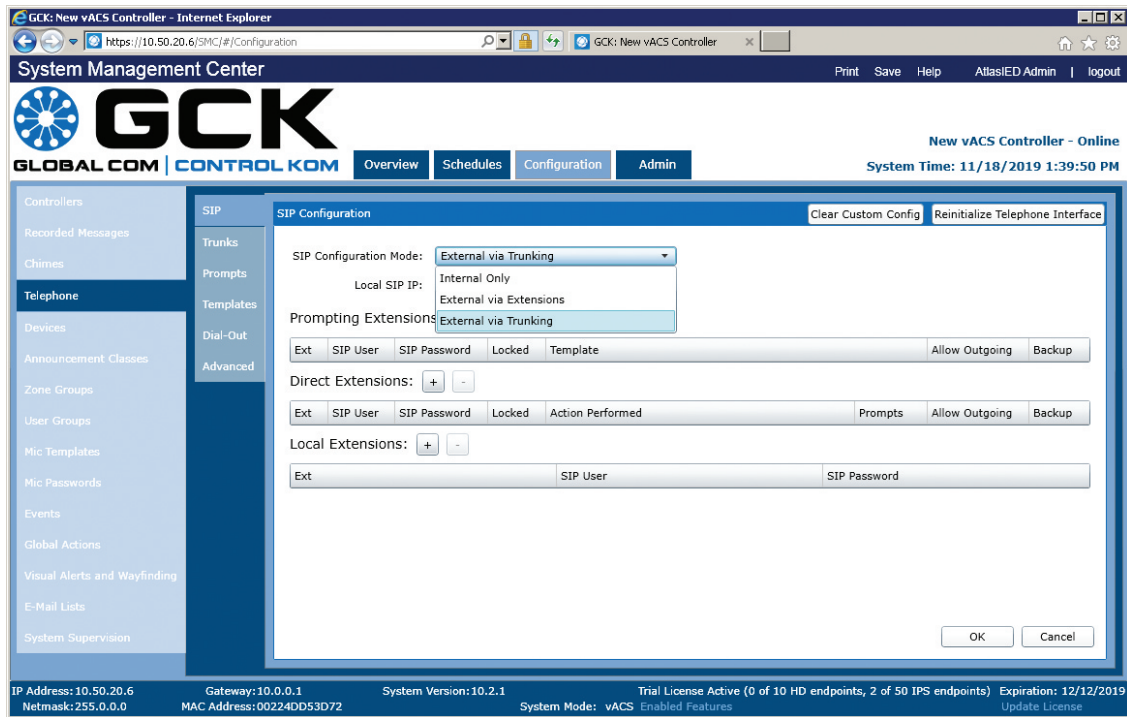Using Internet Explorer, open the SMC. Set Trunking Mode in GCK.

Figure 15 - Setting GCK to External via Trunking

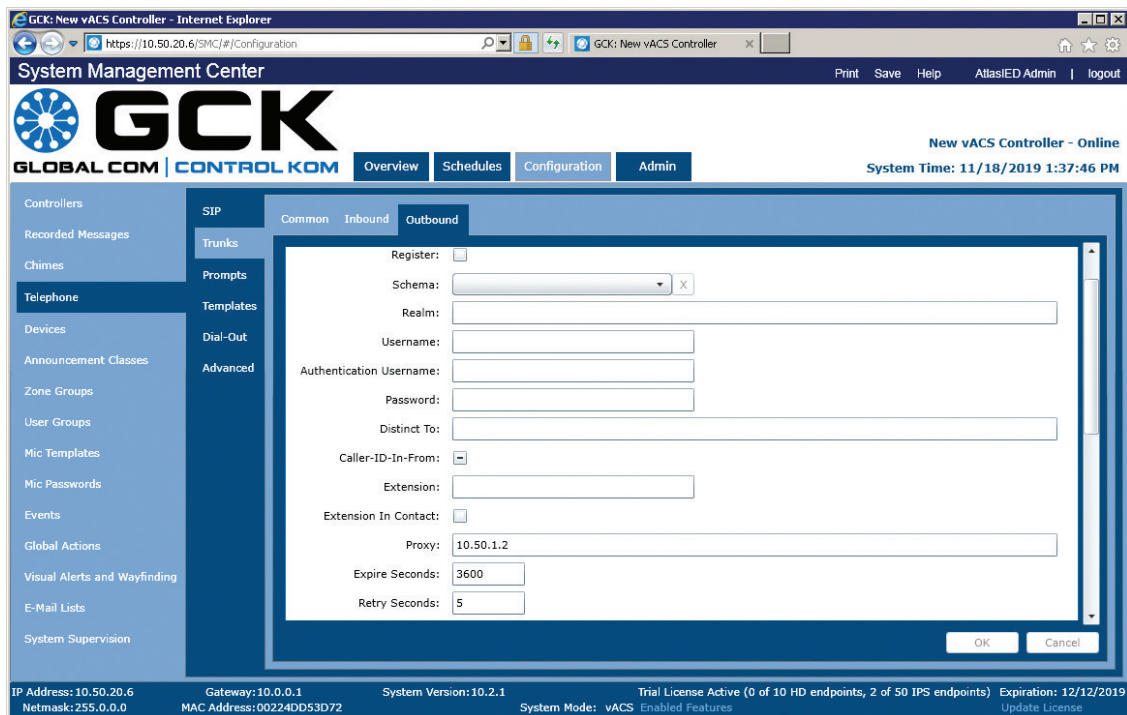Set the Proxy Address (IP address of MiVB) in GCK.

Figure 16 - Setting Proxy in GCK

Create the Extensions in GCK. In this example, Prompting Extension x7010 and Direct Extension x7011 are created for announcements, and Local Extensions x3333 is created for testing. Enter the data, click OK, then click Save.
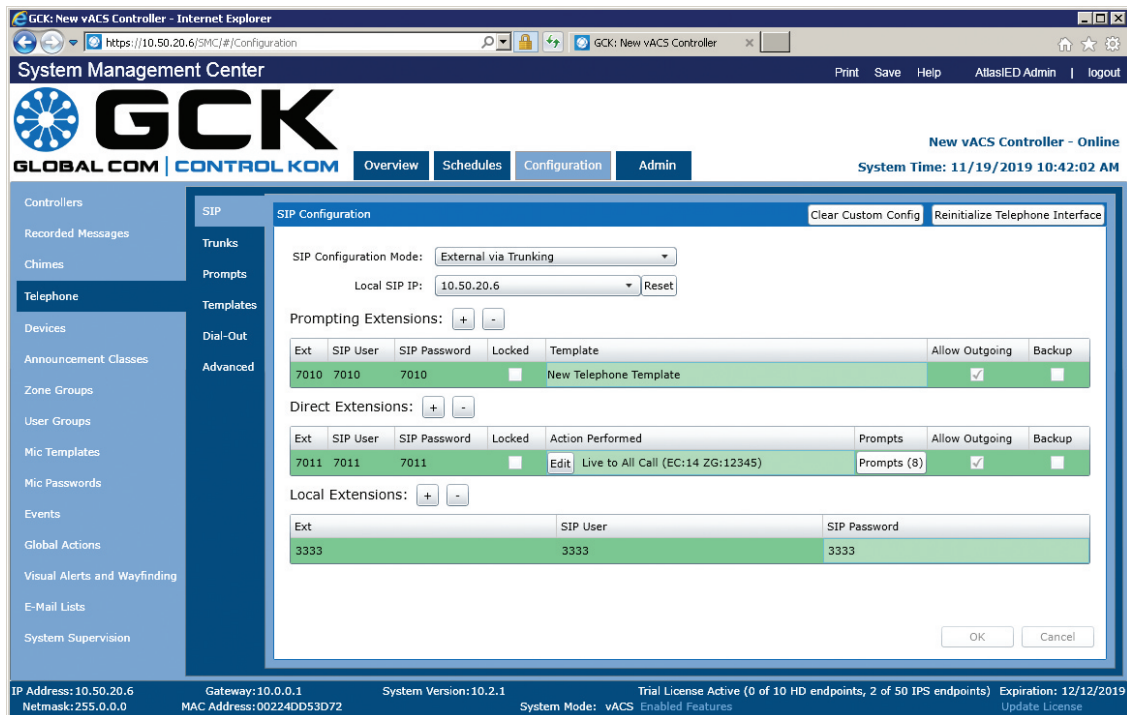

Figure 17 - Creating Extensions in GCK

Testing

The following tests use a softphone as a stand-in for AtlasIED paging equipment in order to limit the scope of the tests to merely be the telephony communications. This also allows integration testing at sites where full installation has not been completed, or where paging would be disruptive. For full verification, announcements to zones and intercom calls should also be made as necessary to fully test the system.

Prior to Testing

1. Install the free Phonerlite softphone on a separate PC, such as a technician's laptop. This PC must have a microphone and speakers. Any other SIP softphone or hardphone may be used as long as it is compatible. AtlasIED has a separate whitepaper on how to configure Phonerlite as a Local Extension in GCK.

2. Connect the PC to the same network as GCK.

3. Ensure that basic TCP/IP configuration is compatible between the PC and GCK. Verify connectivity using ping.

4. Configure Phonerlite to register to GCK as extension 3333.

5. Ensure that the softphone only has CODECs G.711u, G.711A, and G.722 enabled.

Inbound Call

1. Place a call from MiVB to GCK extension 3333.

2. Verify two-way audio between the caller phone and Phonerlite softphone. This will ensure that subsequent inbound calls to GCK for announcements will work.

Outbound Call

This test is only necessary in installations where GCK will perform automated dialing to MiVB (e.g. room-initiated intercom).

1. Using Phonerlite, place a call to *NUMBER, where NUMBER is an extension reachable in MiVB. The asterisk (*) indicates that the call is routed via the trunk to MiVB and will be stripped off the dialstring before the call is initiated to MiVB.

2. Answer the MiVB phone.

3. Verify two-way audio between the caller phone and softphone. This will ensure that subsequent outbound calls from GCK for announcements will work.