



CHAPTER 3

Provisioning Voice Mail

Revised: October 21, 2008, OL-5351-10

The following example provisions a SIP trunk to a voice mail server located at 'vm.domainname.com:5060.' Typically, local subscriber dial plans have a route defined to this trunk when issuing forwarding calls to the voice mail server.



Note

For a description of SIP VM features, see the [“Voice-Mail Support”](#) section in the *Cisco BTS 10200 Softswitch SIP Protocol Provisioning Guide*. For general VM provisioning details, see the [VM provisioning section](#) in the *Cisco BTS 10200 Softswitch Provisioning Guide*.

Provisioning Access to the Voice Mail Server

Step 1 Add the destination ID for the voice mail main subscriber.

```
add destination dest-id=tb16-local; call-type=LOCAL; route-type=SUB;
```

Step 2 Add a dial plan profile and dial plan for a SIP trunk to the VM server.

```
add dial-plan-profile id=tb16;
```

```
add dial-plan id=tb16; digit-string=469-555; dest-id=tb16-local; min-digits=10; max-digits=10
```

Step 3 Add the softswitch trunk group profile for voice mail.

```
add softsw-tg-profile id=VM_Profile; protocol-type=SIP; voice_mail_trunk_grp=Y;
```



Note

As an option, you can provision the diversion-header-supp token in the softsw-tg-profile table to Y. This instructs the VM server to select the target inbox based on the original called number in the Diversion header of the SIP message.

Step 4 Add the SIP trunk group.



Note

This SIP trunk group serves several purposes. It is used (1) by the subscriber to access the VM server, (2) by the Cisco BTS 10200 to forward incoming calls to the VM server, and (3) by the VM server to notify the Cisco BTS 10200 that a message is waiting for the subscriber.

```
add trunk-grp id=80032; softsw-tsap-addr=vm.domainname.com:5060;
call-agent-id=CA146; tg-type=softsw; tg-profile-id=VM_Profile; dial-plan-id=tb16
```

- Step 5** Add a subscriber associated with the SIP trunk group. The value of dn1 is the DN that a subscriber can call to access the VM server.

```
add subscriber id=VMPilot; category=PBX; dn1=469-555-1001; tgn-id=80032;
sub-profile-id=sp1; term-type=TG;
```

- Step 6** If your voice-mail server does not support FQDN hostnames, a serving-domain-name record must be provisioned in the Cisco BTS 10200 Softswitch using the IP addresses resolved from the sia-xxxCAAnnn.domain address. Otherwise, the VMWI status from SIP voice-mail platforms fails authentication with the Cisco BTS 10200 Softswitch.



Note This step is not necessary if your voice-mail server supports FQDN hostnames.

The address, sia-xxxCAAnnn.domain, consists of the following parts:

- sia- is a required field
 - xxx = site ID
 - CAAnnn = CA ID, such as CA146
 - domain = a FQDN such as cisco.area777.com
- a. Determine the two IP addresses associated with the sia-xxxCAAnnn.domain address. These are available in the [NIDS DNS table](#) that was supplied with your system. You can also query the system for these two IP addresses through the **nslookup** command on the EMS host machine.
 - b. Add the two sia-xxxCAAnnn.domain IP addresses to the serving-domain-name table:

```
add serving-domain-name domain-name=10.10.10.14; auth-reqd=n;
add serving-domain-name domain-name=10.10.11.14; auth-reqd=n;
```

Provisioning Centrex Voice Mail

The following examples show commands for provisioning Centrex voice mail. Before you perform the following steps you must already have a Centrex group provisioned on your system. See the procedure in the [“Provisioning a Centrex Group”](#) section of the *Cisco BTS 10200 Softswitch Provisioning Guide*.

- Step 1** Add the destination ID for the voice mail main subscriber.

```
add destination dest-id=tb16-local; call-type=LOCAL; route-type=SUB;
```

- Step 2** Add a dial plan profile and dial plan for a SIP trunk to the VM server.

```
add dial-plan-profile id=tb16;
```

```
add dial-plan id=tb16; digit-string=469-555; dest-id=tb16-local; min-digits=10;
max-digits=10
```

- Step 3** Add the softswitch trunk group profile for voice mail.

```
add softsw-tg-profile id=VM_Profile; protocol-type=SIP; voice_mail_trunk_grp=Y;
```

**Note**

As an option, you can provision the diversion-header-supp token in the softsw-tg-profile table to Y. This instructs the VM server to select the target inbox based on the original called number in the Diversion header of the SIP message.

Step 4 Add the SIP trunk group.

**Note**

This SIP trunk group serves several purposes. It is used (1) by the subscriber to access the VM server, (2) by the Cisco BTS 10200 to forward incoming calls to the VM server, and (3) by the VM server to notify the Cisco BTS 10200 that a message is waiting for the subscriber.

```
add trunk-grp id=80032; softsw-tsap-addr=vm.domainname.com:5060;
call-agent-id=CA146; tg-type=softsw; tg-profile-id=VM_Profile; dial-plan-id=tb16
```

Step 5 Add a subscriber to the Centrex group to serve as the VM main subscriber.

```
add subscriber id=vmctxg1; CATEGORY=ctxg; BILLING-DN=469-555-4444;
DN1=469-555-4444; SUB-PROFILE-ID=Centrex_sp2; TERM-TYPE=TG; ctxg_id=ctxgsip1;
tgn_id=80032;
```

Step 6 Link the VM main subscriber with the trunk group.

```
change trunk-grp; id=80032; main_sub_id=vmctxg1;
```

Step 7 Map the voice mail Centrex extension to the VM main subscriber.

```
add ext2subscriber CTXG-ID=ctxgsip1; EXT=54444; CAT-CODE=1; SUB-ID=vmctxg1;
```

Step 8 If your voice-mail server does not support FQDN hostnames, a serving-domain-name record must be provisioned in the Cisco BTS 10200 Softswitch using the IP addresses resolved from the sia-xxxCAnnn.domain address. Otherwise, the VMWI status from SIP voice-mail platforms fails authentication with the Cisco BTS 10200 Softswitch. The details for this step are provided in [Step 6](#) of the “Provisioning Access to the Voice Mail Server” section on page 3-1,

Provisioning Voice Mail Across Multiple Centrex Groups

The following provisioning steps illustrate how to provide voice mail service for Cisco BTS 10200 Centrex subscribers across multiple Centrex groups. The following information is required at the time of provisioning:

- Associate a unique business group identifier for each centrex group. For example: 'bg1', 'bg2' and 'bg3', for three centrex groups.
- Identify the fully qualified domain name and port of the voice mail server used for SIP message exchange. For example: 'vmserver:5060'.
- Create a dial plan for calls received on the SIP trunks, so that they can be routed based on the called party number. For example, the identifier for this dial plan is 'dp'.

Step 1 Add a SIP trunk profile for voice mail trunks. Qualify voice mail trunks by setting the voice mail flag, and set the trunk sub-group type to indicate use of business group identifier:

```
add softsw_tg_profile ID=<profile_id>; PROTOCOL_TYPE=SIP;
VOICE_MAIL_TRUNK_GRP=Y; TRUNK_SUB_GRP_TYPE=BGID;
```

- Step 2** Add a SIP trunk for each business group identifier. Each trunk points to the address of the voice mail sever:

```
add trunk_grp ID=<trk_grp_id1>; TG_TYPE=SOFTSW; TG_PROFILE_ID=<profile_id>;
SOFTSW_TSAP_ADDR=vmserver:5060; DIAL_PLAN_ID=dp; TRUNK_SUB_GRP=bg1;
```

```
add trunk_grp ID=<trk_grp_id2>; TG_TYPE=SOFTSW; TG_PROFILE_ID=<profile_id>;
SOFTSW_TSAP_ADDR=vmserver:5060; DIAL_PLAN_ID=dp; TRUNK_SUB_GRP=bg2;
```

```
add trunk_grp ID=<trk_grp_id3>; TG_TYPE=SOFTSW; TG_PROFILE_ID=<profile_id>;
SOFTSW_TSAP_ADDR=vmserver:5060; DIAL_PLAN_ID=dp; TRUNK_SUB_GRP=bg3;
```

Centrex group routing and dial plan tables are provisioned (not shown) so that calls originating from a specific Centrex group subscriber are sent out the SIP trunk with the business group identifier representing that centrex group.
