

Multiple Companies

About

Note: *There is also some useful information on the [Multi-tenant](#) page, which needs merging.*

This is HOWTO to make one FreeSWITCH server act as a multi-tenant system for two or more companies, each with its own domain/users and independent [dialplans](#).

Basically, we want to have one FS server provide phone services to several separate companies, as if we are a VoIP provider. Let's start with two companies and give both companies the same two users (1000 for company-a and 1000 for company-b). These companies should be completely independent of each other, their identically-numbered extensions should not overlap or have anything to do with each other, and each company (and all of its users/extensions) should have independent dialplans.

Enabling Multiple Domains

This is from the SIP Profiles section of [Multi-tenant](#):

Edit `conf/sip_profiles/internal.xml` to comment the params "force-register-domain" and "force-register-db-domain":

```
<!--
  These are enabled to make the default config work better out of the box.
  If you need more than ONE domain you **MUST DISABLE** these options.

-->
<!--all inbound reg will look in this domain for the users -->
<param name="force-register-domain" value="${domain}"/>
<!--all inbound reg will stored in the db using this domain -->
<param name="force-register-db-domain" value="${domain}"/>
```

Update 2011-12-23

File `conf/sip_profiles/internal.xml` should have its newest option, "force-subscription-domain" (present as of FS git date 2011-12-23), also commented out. Current correct setting:

```
<!--all inbound reg will look in this domain for the users -->
<!--<param name="force-register-domain" value="${domain}"/>-->
<!--force the domain in subscriptions to this value -->
<!--<param name="force-subscription-domain" value="${domain}"/>-->
<!--all inbound reg will stored in the db using this domain -->
<!--<param name="force-register-db-domain" value="${domain}"/>-->
```

Creating the Files and Directories

Assuming FreeSWITCH is installed in `/usr/local/freeswitch/`, cd there and create the files and directories:

```
$ cp conf/directory/default.xml conf/directory/company-a.org.xml
$ cp conf/directory/default.xml conf/directory/company-b.org.xml
$ cp -a conf/directory/default conf/directory/company-a.org
$ cp -a conf/directory/default conf/directory/company-b.org
```

`/usr/local/freeswitch/conf/directory` now should look like this:

```
$ ls -l

total 24
drwxr-xr-x 3 diego diego 4096 2009-09-23 04:30 company-a.org
-rw-r--r-- 1 diego diego 2656 2009-09-29 22:21 company-a.org.xml
drwxr-xr-x 3 diego diego 4096 2009-09-23 04:30 company-b.org
-rw-r--r-- 1 diego diego 2656 2009-09-29 22:21 company-b.org.xml
drwxr-xr-x 3 diego diego 4096 2009-09-23 04:30 default
-rw-r--r-- 1 diego diego 2656 2009-09-23 04:30 default.xml
$
```

Let's edit the files now:

conf/directory/company-a.org.xml

```
<include>
  <!--the domain or ip (the right hand side of the @ in the addr-->
  <domain name="company-a.org">
    <params>
      <param name="dial-string" value="{presence_id=${dialed_user}@${dialed_domain}}${sofia_contact
(${dialed_user}@${dialed_domain})}"/>
    </params>

    <variables>
      <variable name="record_stereo" value="true"/>
      <variable name="default_gateway" value="${default_provider}"/>
      <variable name="default_areacode" value="${default_areacode}"/>
      <variable name="transfer_fallback_extension" value="operator"/>
      <variable name="user_context" value="company-a.org"/>
    </variables>

    <groups>
      <group name="company-a.org">
        <users>
          <X-PRE-PROCESS cmd="include" data="company-a.org/*.xml"/>
        </users>
      </group>
    </groups>

  </domain>
</include>
```

Notice the lines into which "company-a.org" has been inserted. Do the same for company-b below, and extend to however many other companies are to be hosted on this FreeSWITCH server.

conf/directory/company-b.org.xml

```
<include>
  <!--the domain or ip (the right hand side of the @ in the addr-->
  <domain name="company-b.org">
    <params>
      <param name="dial-string" value="{presence_id=${dialled_user}@${dialled_domain}}${sofia_contact
({dialled_user}@${dialled_domain})}" />
    </params>

    <variables>
      <variable name="record_stereo" value="true"/>
      <variable name="default_gateway" value="${default_provider}"/>
      <variable name="default_areacode" value="${default_areacode}"/>
      <variable name="transfer_fallback_extension" value="operator"/>
      <variable name="user_context" value="company-b.org"/>
    </variables>

    <groups>
      <group name="company-b.org">
        <users>
          <X-PRE-PROCESS cmd="include" data="company-b.org/*.xml"/>
        </users>
      </group>

    </groups>

  </domain>
</include>
```

Adding Users to the Directories

Now let's create the users in the newly created directories: For example, add two users, one in `conf/directory/company-a.org` and another one in `conf/directory/company-b.org`, something like this:

conf/directory/company-a.org/1000.xml

```
<include>
  <user id="1000">
    <params>
      <param name="password" value="${default_password}"/>
      <param name="vm-password" value="1000"/>
    </params>
    <variables>
      <variable name="toll_allow" value="domestic,international,local"/>
      <variable name="accountcode" value="1000"/>
      <!--<variable name="user_context" value="default"/>-->
      <variable name="effective_caller_id_name" value="Extension 1000"/>
      <variable name="effective_caller_id_number" value="1000"/>
      <variable name="outbound_caller_id_name" value="${outbound_caller_name}"/>
      <variable name="outbound_caller_id_number" value="${outbound_caller_id}"/>
      <variable name="callgroup" value="techsupport"/>
    </variables>
  </user>
</include>
```

conf/directory/company-b.org/1000.xml

```
<include>
  <user id="1000">
    <params>
      <param name="password" value="${default_password}"/>
      <param name="vm-password" value="1000"/>
    </params>
    <variables>
      <variable name="toll_allow" value="domestic,international,local"/>
      <variable name="accountcode" value="1000"/>
      <!--<variable name="user_context" value="default"/>-->
      <variable name="effective_caller_id_name" value="Extension 1000"/>
      <variable name="effective_caller_id_number" value="1000"/>
      <variable name="outbound_caller_id_name" value="${outbound_caller_name}"/>
      <variable name="outbound_caller_id_number" value="${outbound_caller_id}"/>
      <variable name="callgroup" value="techsupport"/>
    </variables>
  </user>
</include>
```

- **NOTE:** Delete or comment-out the `user_context` option line inside all the extension (user) *.xml files and instead put that option line inside the master XML file for each domain (i.e., the `conf/directory/company-a.org.xml` file and also the `conf/directory/company-b.org.xml` file), as doing so will save time by obviating specification of `user_context` inside every extension (user) file subsequently created under `conf/directory/company-a.org/` or `conf/directory/company-b.org/`.

Setting Up the SIP Profile

Comment `force-register-domain` and `force-register-db-domain` from the profile, it should look like this:

conf/sip_profiles/internal.xml

```
<!--<param name="force-register-domain" value="${domain}"/>-->
<!--<param name="force-register-db-domain" value="${domain}"/>-->
<!--<param name="force-subscription-domain" value="${domain}"/>-->
```

Creating a Dialplan for Each Domain

You could copy `conf/dialplan/default.xml` to `conf/dialplan/company-a.org.xml` and `conf/dialplan/company-b.org.xml` and edit the context on each to match the context from the users/directories.

conf/dialplan/company-a.org.xml

```
<include>
  <context name="company-a.org">
    <!-- your extensions here -->
  </context>
</include>
```

conf/dialplan/company-b.org.xml

```
<include>
  <context name="company-b.org">
    <!-- your extensions here -->
  </context>
</include>
```

Usage

Now if the 1000@company-a.org user tries to dial a extension, it should look into the company-a.org context/dialplan and if 1000@company-b.org tries to dial it should look into the company-b.org context/dialplan. Bow to the power of FreeSWITCH!

Gotchas

As I painfully found and noted [[old wiki here](#)] I just relearned the same thing, painfully, a different way. The domain established in vars.xml must not be the same as any of the tenant's domains you're hosting; otherwise, that tenant's domain will not work while all the others will. Yes, maddening.

`<X-PRE-PROCESS cmd="set" data="domain=boxen.mydom.net" />` present in vars.xml file must be different from all other tenant's domains!

See also

- [Multi-tenant](#)
- [Music on hold](#)