

Lua DISA Example

About

Lua script contributed by [Brian Foster](#) to perform D.I.S.A. (Direct Inward System Access) function in FreeSWITCH™.

Usage



SECURITY WARNING

NOTICE: There are some inherit security concerns when allowing DISA. Mainly, we're transferring an untrusted external call into the default context after first collecting credentials in the form of an extension number and a voicemail PIN. You need to be aware of what's happening on YOUR phone system. The author disclaims any liability and places the script here for purposes of proof of concept.

Having said that, this script is pretty easy to use. Place 'disa' in the toll_allow variable in any user's directory record to allow DISA access (you can have multiple comma separated values in toll_allow). This script checks for the existence of the letter combination 'disa' somewhere in the toll_allow variable.

Dialplan

Call this script using the following dialplan:

DISA dialplan example

```
<extension name="disa">
  <condition field="destination_number" expression="^disa$">
    <action application="lua" data="disa.lua"/>
  </condition>
</extension>
```

Code

Name the following file 'disa.lua' and place under your FreeSWITCH scripts folder. This script was tested on FreeSWITCH version 1.4.15 and using Lua 5.1 (sorry, we use libraries in other scripts that require 5.1 so we're already set up for it). If it doesn't work in 5.2, please send me a message at [Brian Foster](#).

disa.lua

```
api = freeswitch.API();
domain = freeswitch.getGlobalVariable("domain_name");
user_id = "";
creds_tries = 0;
creds_tries_limit = 3;
authorized = false;
invalid_entry_sound = "ivr/ivr-that_was_an_invalid_entry.wav";
no_permissions_sound = "ivr/ivr-not_have_permission.wav";
dialtone = "tone_stream://%(10000,0,350,440)";
end_call_sound = "tone_stream://%L=3;(100,100,350,440)";

session:answer();

if (session:ready()) then
  -- Line is live, start talking
  session:flushDigits();
  session:execute("playback", "silence_stream://1500");
```

```

session:execute("playback", "ivr/ivr-hello.wav");

-- Try authentication
while (creds_tries_limit >= creds_tries) do
  -- Prompt for user id
  user_id = session:playAndGetDigits(1, 10, creds_tries_limit, 3000, "#", "ivr/ivr-
please_enter_extension_followed_by_pound.wav", invalid_entry_sound, "\\d+", "", 3000);

  if (user_id == "") then
    -- Exceeded tries
    creds_tries = creds_tries_limit;

  elseif (api:executeString("user_exists id .. user_id .. " " .. domain)) then
    -- User id exists, prompt for pin
    pin = session:playAndGetDigits(1, 64, 3, 3000, "#", "ivr/ivr-please_enter_pin_followed_by_pound.
wav", invalid_entry_sound, "\\d+", "", 3000);
    pin_valid = "";
    freeswitch.consoleLog("info", "PIN valid: " .. pin_valid);

    if (pin == "") then
      -- Exceeded tries
      creds_tries = creds_tries_limit;
    else
      pin_valid = api:executeString("vm_fsdb_auth_login default " .. domain .. " " .. user_id .. " "
.. pin);
      freeswitch.consoleLog("info", "PIN valid: " .. pin_valid);

      if (pin_valid == "-OK") then
        -- DISA Authenticated
        -- Make sure user is authorized for DISA

        toll_allow = api:executeString("user_data " .. user_id .. "@" .. domain .. " var
toll_allow");

        if(string.match(toll_allow, "disa")) then
          -- Authorized for service
          authorized = true;
          break;
        else
          -- Not authorized for service
          session:execute("playback", no_permissions_sound);
          break;
        end
      else
        -- Bad pin
        session:execute("playback", invalid_entry_sound);
        creds_tries = creds_tries + 1;
      end
    end
  else
    -- Bad user id
    session:execute("playback", invalid_entry_sound);
    creds_tries = creds_tries + 1;
  end
end

if (authorized) then
  -- Authorized for service, play instructions and give dialtone
  session:execute("playback", "ivr/ivr-please_enter_the_phone_number.wav");
  session:execute("playback", "ivr/ivr-followed_by_pound.wav");

  digits = session:playAndGetDigits(2, 15, 1, 15000, "#", dialtone, invalid_entry_sound, "\\d+", "",
"3000");

  if (digits == "") then
    session:execute("playback", "voicemail/vm-goodbye.wav");
  else
    -- Set user using set_user dialplan application, then transfer the call
    session:execute("set_user", user_id .. "@" .. domain);
    session:execute("transfer", digits .. " XML default");
  end
end

```

```
else
  session:execute("playback", "voicemail/vm-goodbye.wav");
end
end
```