OpenERP Custom Integration

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Overview

This document outlines the steps required to integrate the OpenERP with Swivel using dual or single channel authentication.

The Swivel install requires configuring an agent on the Swivel server and setting up a shared secret with the code being added to OpenERP 7.0 server to allow communication for authentication.

Due to the complexity of OpenERP, several files need to be changed (or replaced) on the server, then recompiled. Integration with Swivel is made through Agent-XML.

NOTE: This document uses the files from version 7.0 of OpenERP, however, the principle is that either customized, or from another version, the functions should be similar, making integration easyer.

For an article specific for version OpenERP 7.0, please check article Open_ERP7_Integration

Prerequisites

OpenERP server (version 7.0 assumed in this example)

PINsafe server

Text Editor or Code editor

It is recommended to read the following Kowledgebase articles (to better understand how Swivel Agent-XM works):

https://kb.swivelsecure.com/wiki/index.php/Agent-XML

https://kb.swivelsecure.com/wiki/index.php/AuthenticationAPI]

Swivel Configuration

On the Swivel server configure the agent that is permitted to request authentication. On the Swivel Administration Console select from the server menu Agents and enter the details of the OpenERP IP address and a shared key, then click on apply. Example:

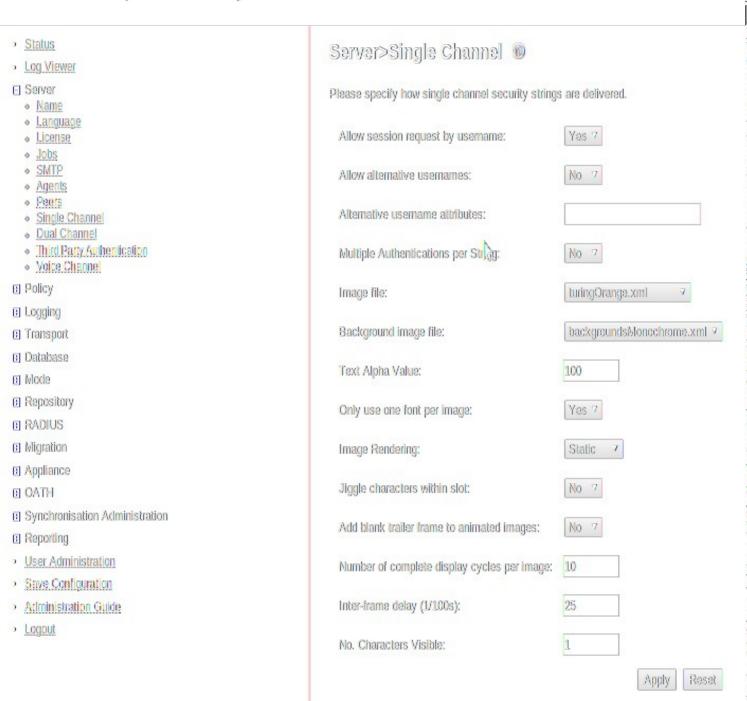
Name : OpenERP, Hostname/IP : 10.10.10.252, shared secret : secret



| Status Log Viewer | Server | Ag | ents 🖲 | | | |
|---|-------------|--|------------------------------------|--------------------|--|--|
| E Server • Name | Please ente | Please enter the details for any PINsafe agents below. Agents are permitted to access the at | | | | |
| Language License Jobs SMTP Agents | Agents: | | logal | | | |
| Pages Simple Chappel | | | Name: | OpenERP | | |
| Single Channel Dual Channel | | | Can act as Repository: | Yes 7 | | |
| <u>Ilhird Party Authentication</u> <u>Voice Channel</u> | | | Hostname/IP: | 10.10.10.252 | | |
| □ Policy | | | Shared secret | 222222222222222222 | | |
| ■ Logging■ Transport | | | Group: | 230 AMAccc | | |
| Database | | | Authentication Modes: | ALL 7 | | |
| Mode | | | Check password with Repository: | No 7 | | |
| ☐ Repository | | | Username attribute for repository: | | | |
| RADIUS | | | Allow alternative usernames: | Mo 7 | | |
| Migration | | | | עי עוין | | |
| Appliance | | | Alternative username attributes: | | Delei | |
| B OATH | | | | | | |
| Synchronisation Administration | | | <u>New Entry</u> | | | |
| ■ Reporting | | | | | | |
| User Administration | | | | | Apply R | |
| Save Configuration | | | | | A CONTRACTOR OF THE PARTY OF TH | |
| Administration Guide | | | | | | |
| - Lagout | | | | | | |

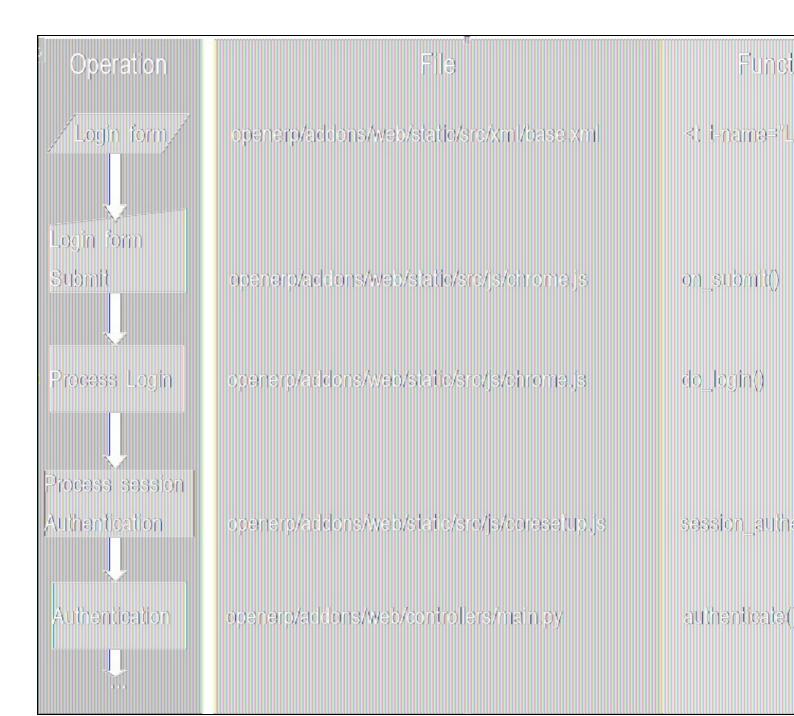
If Single Channel communication is to be used, select from the Swivel Administration Console Single Channel, and set the Allow image request by username to Yes then click on apply.



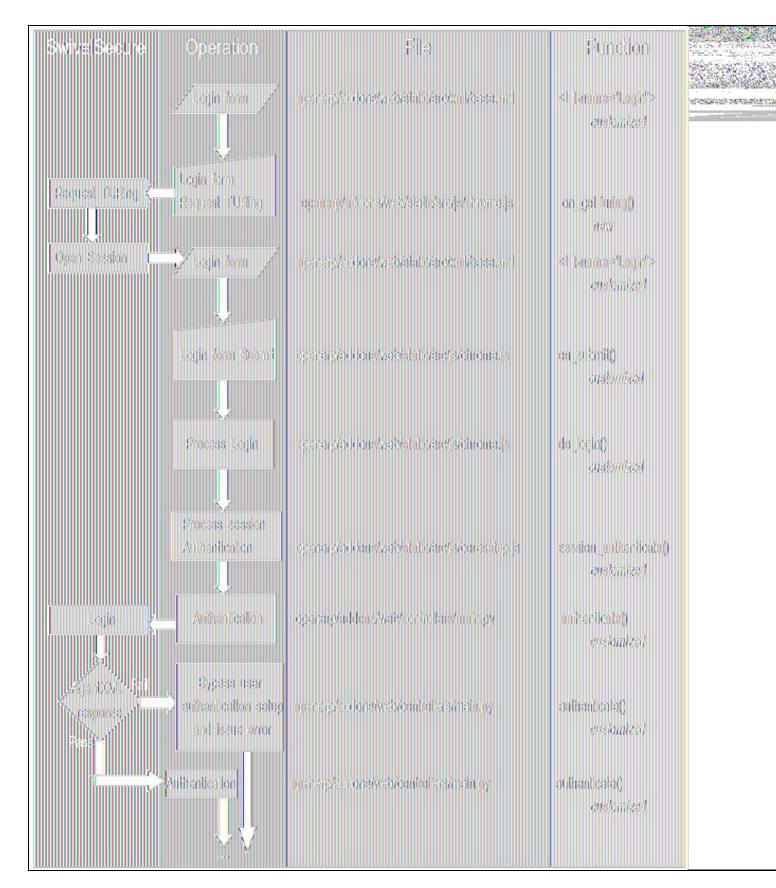


OpenERP User Authentication flow Integration

The Standard OpenERP User Authentication flow



The Swivel Integrated OpenERP User Authentication flow



Configuring the OpenERP Files

openerp/addons/web/static/src/xml/base.xml

Unchanged code in black

Added code in green

Changed code in orange

In this file we are transforming the form to support the Get TURing button and the OTC password field.

Search for the login form code, usually called ?<t t-name="Login">? and place in line nr 61

```
Code
<t t-name="Login">
   <div class='oe_login'>
       <div class='oe_login_bottom'> </div>
       <div class='be_login_error_message'/>
       <div class='be_lagin_pane'>
           <div class="oe_login_logo"><img_src=//web/static/src/img/logo2.png//></div>
                                                                                                                                                            C. Parental Co.
           <iom action=" method='post'>
               <div class="be_login_dbpane" >
                   Database:
                  <input name="do" l-att-value="widget.selected_db || ""/>
               </ri>
               <U>
                   <DUsemame</b>
                   <ip<ingut name="login" type="text" value=" autofocus="autofocus"/>
                   < Password</P>
                   <b-<th><button name="getfURing">Request TURingbutton>
                  <div class='TURing'><img name='TURingimg' dass='myTURingimg' /></div>
                   <DOTO</b>
                   <D<irput name="password2" type="password" value="/></i>
                   <bulleton name="submit">Log in
in
in
in

               «/y/»
           </form>
           <div class="oe_login_fcoter">
               <a href="#" class="oe_login_manage_db">Nanage Databases</a> |
               <a href='hitp://www.cpenerp.com' larget='_blank'>Powered by <span>OpenERP</apan></a>
           </div>
       </1/ib)>
   </div>
                                                                                                                                                              S120000
KID
                                                                                                                                                            2444500000
```

openerp/addons/web/static/src/js/chrome.js

Unchanged code in black

Added code in green

Changed code in orange

In this file we will be adding the functions that support automation and control over the form displaying the TURing image and Get TURing button.

First we need to hide the TURing image and register the link from the Get TURing button to the respective function.

Search for the form initiation routine, usually called ? start: function() {? and place in line nr 640

```
Code
    start: function() {
        var self = this;
        self.(}al.find("form"), sub mit(salf.on_sub mit);
        this.$('div.TURing').hide();
        self.Gal.find("form_button(name=getTURing)").click(self.on_getTuring);
        self.($el.find(".oe_login_manage_db").click(function()) {
             self.do_action("database_manager");
        1/4
        self.on('change:database_selector', this, function() (
             this, database_selected (this, gel ("database_selector"));
        11
        var d = 3.when();
        if ($.param.fragment().token) {
             self.params.token = $.param.fragment().token;
        // used by dbmanager.do_create via internal client action
        if (self.params.db && self.params.login && self.params.password) (
             d = self.do_login(self.params.db, self.params.login, self.params.password);
        } else (
             d = self.rpc("/web/database/get_list", {))
                  .done(self.on_db_loaded)
                  .fail(self.on_db_failed)
                 .always(function() {
                      if (self.selected_db && self.has_local_storage && self.remember_credentials) (
                          self. $("[name=login]").va \(localStorage.gettem(self.selected_db + "llast_login") || "");
                 33;
        return d;
                                                                                                                                                                                      PELKINE
```

Then we need to create the function. Find space right after the ?on_db_failed: function? on lines 703 to 707.

Change the IP address on the example with your swivel appliance IP or domain name.

```
COCID

on_do_failed_function (error, event) {
    if (error.data.fault_code === 'AccessDenisd') {
        event.preventDefault();
    }
},
on_getTuring: function() {
    ver_login = this.8("form_input[name=login]").vet();
    ver_login = this.8("form_input[name=login]").vet();
    ver_serivatURL = "https://10.10.10.201:3443/proxySCImage?usemame=" + login + "arandom=" + Math.floor(Math.random() * 10000);
    this.8("invTURinging).abt/"srd,SvivetURL);
    this.8("invTURinging).abtow();
    return_false;
},
```

Finally, we need to change the functions that support the original form submit, so we can add OTC (called "password2" in this example).

Function ?on_submit: function(ev)? should be immediately after your recently added function code, on line nr 715.

You will also update function ?do_login?, placed immediately after ?on_submit? function.

```
Code
   on_submit: function(ev) {
        if(av) {
            ev.preventDefault();
        var db = this.$("form [name=db]").val();
        if (ldb) (
            this.do_warn(_t("Login"), _t("No database selected !"));
            return false;
        var login = this.8("form input(name=login)").val();
        var password = this.S("form input[name=password[").val();
                                                                                                                                                                                  Partia views
        var passwork? * this.S("form input(name*password?").val();
        Inis.do_login/db login cassword, password2)
   ],
   po
    * Performs actual login operation, and UI-related stuff
    * Operam (String) do database to log in
    * @param (String) login user login
    2 @param (String) password user password
                                                                                                                                                                                  10001001001
    do_login; function (db login password, password2)
        var self = this;
        self.hide_error();
        self.3(".ce_login_pane").fadeCut('slow");
        return this session session authenicals (dt., login, password password?).then (function() {
        self.remember_last_used_database(db);
            if (self.has_local_storage && self.remember_oredentials) (
                 localStorage.sefftem(db + "last_login", login);
                                                                                                                                                                                  vio Service Div
                                                                                                                                                                                  o in i
            self.trigger('login_successful');
       ), function () {
            self.§(".oe_login_pane").fadeIn("fast", function() {
                 self.show_error(_b("Invalid username or password"));
            1);
       1/2
   },
```

openerp/addons/web/static/src/js/coresetup.js

Unchanged code in black

Added code in green

Changed code in orange

In this file we will be adding the parameter ?password2? to the function that creates the bridge between the user interface (in XML, javascript and jquery) and the OpenERP server core (in python).

Search for the ?session_authenticate: function?, usualy place on line nr101

```
Code
                                    session_aufrenticate_function(db_login, password2_valatile) (
                                     var self = this;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 3 0
2 3 0
1 1 1 1
                                     var base_location = document.location.protocol + "// + document.location.hos!;
                                    ver parama = { the db, logic logic, password | password
                                    return this.rpc("Aveb/session/authenticate", params).then(function(result) {
                                                        if (!result.uid) (
                                                                           return (3.Deferred ().reject();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _.extend(self, result);
                                                       if (!_volatile) (
                                                                           self.set_cookie('session_id', self.session_id);
                                                        return self.load_modules();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . . . . . .
                                     });
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1
```

openerp/addons/web/controllers/main.py

Unchanged code in black

Added code in green

Changed code in orange

In this file we will be changing the OpenERP core authentication function, so that it calls the Swivel Secure server with a login function request, and then continues on the consideration of the reply given by swivel software.

First we need to add a library module to handle and parse the XML sent by the Swivel Agent-XML.

This is added in the very beginning of the code file.

```
Code
# - coding: uif-8 - -
import ast
                                                                                                                                                                              decree a real
import base84
                                                                                                                                                                              ... 7.5
import cay
import glob
import itertools
import lagging
import operator
import datelime
import hashlib
import os
                                                                                                                                                                              Townson Access
import re
                                                                                                                                                                              EVETTO -
import simplejson
import time
import urlib
import urlib2
import uriparse
import xmtrpelib
                                                                                                                                                                              CONTRACT STATE
import zlib
irom xml.etree import ElementTree
from cStringIO import StringIO
from xml.dom.minidom import parseString
import babelmessages.poile
import wertzeug.utils
import werkzeug.wrappers
   import alwit
except ImportError:
   xhwt = None
import openerp
import openerp.modules.registry
irom openero.tools.translate import
irom openero.taols import coning
                                                                                                                                                                              from ... import http
openeroweb ≥ http
```

Finally, we need to change the ?def authenticate? function to handle the the new ?password2? parameter, call the Swivel Server, parse the response and make decision based on the response.

The ?def authenticate? function should start in line nr 857 or 858

Don't forget to change the server IP in the code by your own Swivel server IP or domain path and the "secret".

```
Code
    @openeroweb.jeonrequest
   tef authenicate(self-reg, db, login, passwort, password2, base_location=None);
       url = "https://10.10.10.10.201:8080/pinsafe/AgeniXML"
       params = \%3FvmHversion%3D*1.0*\encoding%3D*UTF-8*%3F\>8A$Requesb\\version\>3.6\%2FVersion\>8ecret\>secret\$2F8ecret\
Action>login<%2FAction><Usemerre>' + login + '<%2FUsemerre><Pessword><%2FPassword><0TC>' + password2 + '<%2FOTC><%2FSASRequest>
       data = udlib.udopen(ud + 191 + params).read()
       dom = parseString(data)
       xmiling = dom.getElementsByTegName('Result')[0].tccml()
       xmData = xmffag.replace("<Result>",").replace("<Result>",")
       if xmlData == 'PASS':
           wagiany = req.httprequest.anviron
           eny = digl(
               base_location=base_location,
               HTTP_HOST=wsgienv['HTTP_HOST'],
               REMOTE_ADDR=wsgienv('REMOTE_ADDR'),
           requisession.authenticate(db, login, password, env)
           return self.session_info(req)
         if contData == FAIL':
           return ('enor): _[Eiror, Irwalid credentials !), 'title': _(No access'))
```

Pyhton 3.x changes

openerp/addons/web/controllers/main.py

Unchanged code in black

Added code in green

Changed code in orange

If running Python 3.0, then you have a call to the urllib module.

The urllib http://docs.python.org/2/library/urllib.html#module-urllib> module has been split into parts and renamed in Python 3 to urllib.request, urllib.parse, and urllib.error.

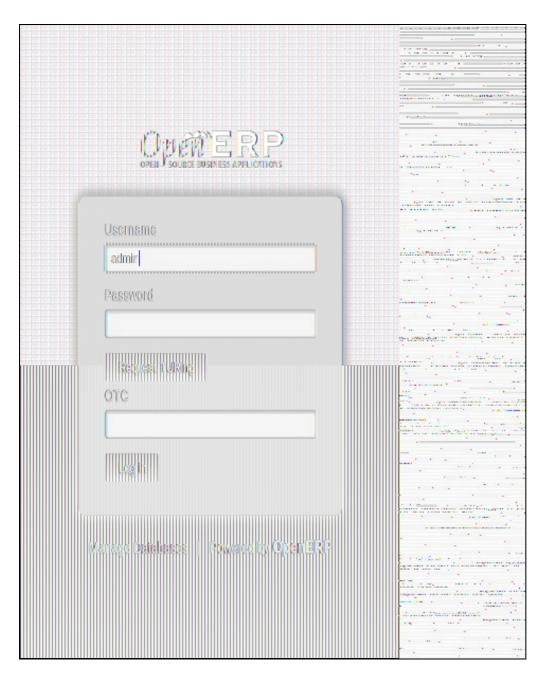
This is shown in RED in the example from the changes to be done on file ?openerp/addons/web/controllers/main.py?

Do not forget to change the IP an "secret" in the code by your own Swivel server IP or domain path.

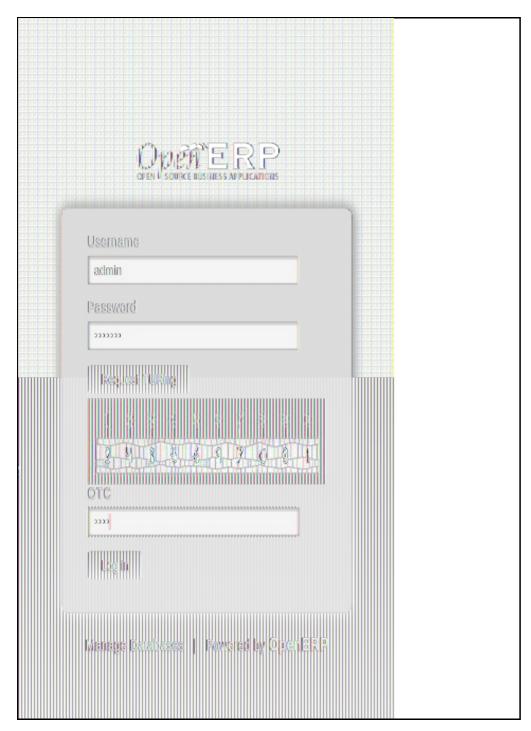
```
Code
   @openerpweb.jscnrequest
   def authenticare(self, rec., db login, passizerd, password2 trase_focarion=None);
       url = "https://10.10.10.201:8080/pinsefe/AgentXVIL"
       params = "<%37:unlt-yeasion%30"1.0"+encoding%30"UTF-8"%2F><$A$Request></ersion>3.6<%2FVersion></ersion></ersion>
<Action>login<%2FAction><Username>' + login + '<%2FUsername><Password><%2FPassword><0TC>' + password2 + '<%2FDTC><%2FSASRequest>'
       data = urllib.request.urlopen(url + "?" + params).read()
       dom = parseString(data)
       xmlTag = dom.gatElements8yTagName(Result')[0].toxml()
       xm/Data = :mffag.replace('<Result>',').replace('</Result>',')
       if conl Data == PASS:
           wsgienv ≥ req.hillprequest.environ
                                                                                                                                                            env = dict(
                                                                                                                                                            base_location=base_location,
                                                                                                                                                            HTTP_HOST=wsgienv['HTTP_HOST'],
               REMOTE_ADDR=wsgienv['REMOTE_ADDR'],
           req.session.authenlicate(db, login, password, env)
           return self.session_info(req)
        if xmlData == 'FAJL':
           return ['error': _('Error, Invalid credentials !'), 'title': _('No access')}
```

Testing

Open a browser and point to http://yourserverip:8069



After clicking the ?request TURing? button, the swivel appliance log should show ?127.0.0.1:Session started for user: admin.? And this should be the result:



Then after login, the swivel appliance log should read:

?OPENERP SERVER IP? OpenERP:Login successful for user: admin.

Error Messages

On OpenERP stack trace

"ImportError: No module named urllib.urlopen"

Please refer to the this article, section Python 3.0 changes.

On the Swivel Log

AgentXML request failed, error: The agent is not authorized to access the server

User fails to authenticate with the above error message in the Swivel log.

This means that an Agent on Swivel server has not been defined for the OpenERP server.

Go to Server/Agents in the PINsafe admin console, and add a new entry, using the IP address of the OpenERP server.

| Make sure the agent secret is the same as on the OpenERP configuration. | | | | | | | |
|---|--|--|--|--|--|--|--|
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