

.Install on Windows v5.9

This documentation is a quick reference for internal usage. Not meant to be given to a customer.

Prerequisites

The following installation procedure assumes that you

- have a Microsoft Windows Server available with administrative permissions
- have a Microsoft SQL Server available with SA permissions

Install Oracle Java

Go to the Oracle webpage <http://www.oracle.com/technetwork/java/javase/downloads/index.html> and download the Windows installer for **Java SE 8**. Make sure to download the JDK and not the JRE.

Install the JDK and set the JAVA_HOME environment variable to the path you installed the JDK to. It should be similar to: C:\Programme\Java\jdkVERSION

Extend the PATH environment variable by the path to the bin folder of the JDK installation, it should be similar to: C:\Programme\Java\jdkVERSION\bin
Make sure to separate the additional path element with a semicolon from the already existing path entry.

Database creation

The database used to automate processes should be separated from the database used for the iGrafx Platform repository. The following steps guide you through the steps to create the database and configure it appropriately for the use of the process automation component.

1. Create a new Database in your Microsoft SQL Server instance
SQL_Latin1_General_CP1_CI_AS
if the above isn't available use this alternative: Collation Latin1_General_100_CI_AS

Installation of iPA server

Quick Tutorial
Following quick steps can help you through a simple installation.

Unpack

Zip file extracted into
C:\Automation
which will create a folderstructure looking like this:
C:\Automation\jboss-eap-7.2\standalone\
If this is not the case adjust the folder structure to match the sample. If this is not possible adjust the properties files in the standalone/configuration folder.

SQL Database

New Installation

1. Run the scripts 1 to 4 for the initial setup
2. Run the update scripts in the C:\Automation\Installation\1 SQL Scripts folder

Update from Earlier Versions

1. Do NOT run scripts 1 to 4 in this folder.
2. Run the update scripts in all folders for versions newer than the one you currently have installed.

Configuration of property files

Adjust the DB configuration and host name/IP where applicable in the following files:

C:\Automation\jboss-eap-7.2\standalone\configuration\ACM.properties
C:\Automation\jboss-eap-7.2\standalone\configuration\cba.properties
C:\Automation\jboss-eap-7.2\standalone\configuration\CMD.properties
C:\Automation\jboss-eap-7.2\standalone\configuration\tim-cba.properties
C:\Automation\jboss-eap-7.2\standalone\configuration\standalone.xml

In the standalone.xml file you have to change the DB configuration but also the binding parameter to match the IP address of your machine. You can decide to leave this on localhost until after the test run, but to make the machine publicly available this parameter has to be changed.

Updating to 5.10.x+

On update from older versions make sure to use the page 'loom-portal/migrate.htm' to migrate from the previous version. Before migrating the DB, the license needs to be installed - otherwise migrate.htm will give a login error.

The login dialog looks like this:

Do leave the "Client" selection unchanged!

Temporary note, it showed 'not migrated" despite that I was doing a fresh installation. Running it resulted in one error:

Migrate to v5.10+

This page allows you to migrate resources and context roles from older versions to releases after v5.10. Please don't refresh this page during the migration process. Keep in mind that all status indicators will be lost after refreshing this page.

Resource Migration

Resources will be migrated for all clients.

Status: An error occurred during migration.

sys.timer User Migration

sys.timer user will be created for all clients.

Status: sys.timer users successfully created!

Context Role Migration

Context roles can be migrated for all clients at once or individually for certain clients. To manually call a specific migration service, click the "Start" button in the corresponding row.

INFO: Migration not started.

| Client ID | Client Name | Service | Status | Count | Start Time | End Time | Migrate |
|-----------|-------------|---------------------------------------|--------------|-------|------------|----------|--------------------------------------|
| 1 | super | assignStarterPermissionsOnInstances | Not migrated | - | - | - | <input type="button" value="Start"/> |
| 1 | super | assignStarterPermissionsOnDefinitions | Not migrated | - | - | - | <input type="button" value="Start"/> |
| 1 | super | assignParticipantPermissions | Not migrated | - | - | - | <input type="button" value="Start"/> |
| 1 | super | assignOwnerPermissions | Not migrated | - | - | - | <input type="button" value="Start"/> |
| 1 | super | assignTeamManagePermissions | Not migrated | - | - | - | <input type="button" value="Start"/> |
| 27 | igrafx | assignStarterPermissionsOnInstances | Not migrated | - | - | - | <input type="button" value="Start"/> |
| 27 | igrafx | assignStarterPermissionsOnDefinitions | Not migrated | - | - | - | <input type="button" value="Start"/> |
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--- all clients ---

DONE: Migration for all started services successful!

| Client ID | Client Name | Service | Status | Count | Start Time | End Time | Migrate |
|-----------|-------------|---------------------------------------|--------|-------|------------|------------|--------------------------------------|
| 1 | super | assignStarterPermissionsOnInstances | Done | 9 | 3:17:39 PM | 3:17:40 PM | <input type="button" value="Start"/> |
| 1 | super | assignStarterPermissionsOnDefinitions | Done | 9 | 3:17:40 PM | 3:17:40 PM | <input type="button" value="Start"/> |
| 1 | super | assignParticipantPermissions | Done | 9 | 3:17:40 PM | 3:17:40 PM | <input type="button" value="Start"/> |
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| 1 | super | assignTeamManagerPermissions | Done | 9 | 3:17:40 PM | 3:17:40 PM | <input type="button" value="Start"/> |
| 27 | igrati | assignStarterPermissionsOnInstances | Done | 9 | 3:17:40 PM | 3:17:40 PM | <input type="button" value="Start"/> |
| 27 | igrati | assignStarterPermissionsOnDefinitions | Done | 9 | 3:17:40 PM | 3:17:41 PM | <input type="button" value="Start"/> |
| 27 | igrati | assignParticipantPermissions | Done | 9 | 3:17:41 PM | 3:17:41 PM | <input type="button" value="Start"/> |
| 27 | igrati | assignOwnerPermissions | Done | 9 | 3:17:41 PM | 3:17:41 PM | <input type="button" value="Start"/> |
| 27 | igrati | assignTeamManagerPermissions | Done | 9 | 3:17:41 PM | 3:17:41 PM | <input type="button" value="Start"/> |

Logfile shows:

2019-08-14 22:17:07,00160 ERROR [org.jboss.as.ejb3.invocation:77] [STGK5zLlz63N] [admin] (default task-3) WFLYEJB0034: EJB Invocation failed on component ResourceManagerImpl for method public abstract java.util.Map com.dooris.resource.beans.ResourceManager.convertDeprecatedContentOfResource(): javax.ejb.EJBException: com.dooris.bpm.exceptions.GenericException: Something went wrong while database search of resource contents for migration. Maybe there is no old content to migrate

I guess that indeed there was no content to migrate, no idea why it says "Not migrated" though. that made me think I have to migrate.

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Test run

Run web server via console

C:\Automation\jboss-eap-7.2\bin\standalone.bat

Access the server from the local machine.

<http://localhost:8080/loom-portal>

You need to adjust localhost to the address you specified in the binding parameter of the standalone.xml file.

**** See "Additional Notes by Chris Palmer" for more information about Port numbers.**

Firewall

Create a firewall rule and allow jboss default port 8080 to be accessible from the outside.

**** See "Additional Notes by Chris Palmer" for more information about Port numbers.**

Local Service

Open a command line window. Make sure you open it as administrator!
Go to C:\Automation\jboss-eap-7.2\bin and run:
service.bat install

Open the local services management window and go to the service "iGrafx Automation", change the start type to automatic and start the service manually.

Initialize DB from the application

Access <http://hostname:8080/loom-portal/init/InitDB> in a browser.
The expected result is a clean white page. In case of an error the error will be displayed on screen and written to the log file.

Starting with version 5.10.5, initializing via /init/initDB throws an error. The working method for initializing the database is to navigate to <http://hostname:8080/loom-portal/hidden.htm> and start the initialization process from there.

Upload License File

<http://localhost:8080/loom-portal/license.htm>

Login as: super/admin
Password: t1m5up3r

Paste the content of the license file in the text box.

Setting up SSL

Certificates for SSL are located in c:\Media\ssl\<date>. Unfortunately the certificates we receive from GoDaddy are not in a format that can be directly used in JBoss and need to be converted.

1. Add the CACert certificate to the Java CACerts store and to JBoss's truststore using keytool

```
keytool -import -file c:\media\ssl\<date>\CACert.cer -keystore c:\Program files\Java\jdk1.8.0
_201\jre\lib\security\cacerts
```

```
keytool -import -file c:\media\ssl\<date>\CACert.cer -keystore c:\Automation\jboss-eap-7.1.0
\ssl\truststore.jks
```

The default password for both stores is changeit

2. Convert the pfx certificate:

- Install the pfx certificate in Windows by double-clicking it. When prompted, enter the password from pfx_password.txt in the same folder. Make sure the options "mark as exportable" and "include all extended properties" are checked, leave all other options on default
- Open certmgr.msc and open the folder "Personal > Certificates". You should see a wildcard certificate named *.igrafxcloud.com
- Right-click this certificate and select "All Tasks > Export"
- Check the option "Yes, export private key"
- On the next page, select PKCS #12 (should be selected by default) and make sure the options "include all certificates from path" and "export all extended properties" are checked
- On the next page, set a password for the certificate
- Save the file to c:\Automation\jboss-eap-7.1.0\standalone\configuration
- This step needs to be repeated every time our certificates expire and need to be renewed.

3. Edit the following lines in standalone_igrafx.xml:

```
52 | <ssl>
53 |   <keystore path="keystore.pfx" relative-to="jboss.server.config.dir" keystore-password="changeit" />
54 | </ssl>
```

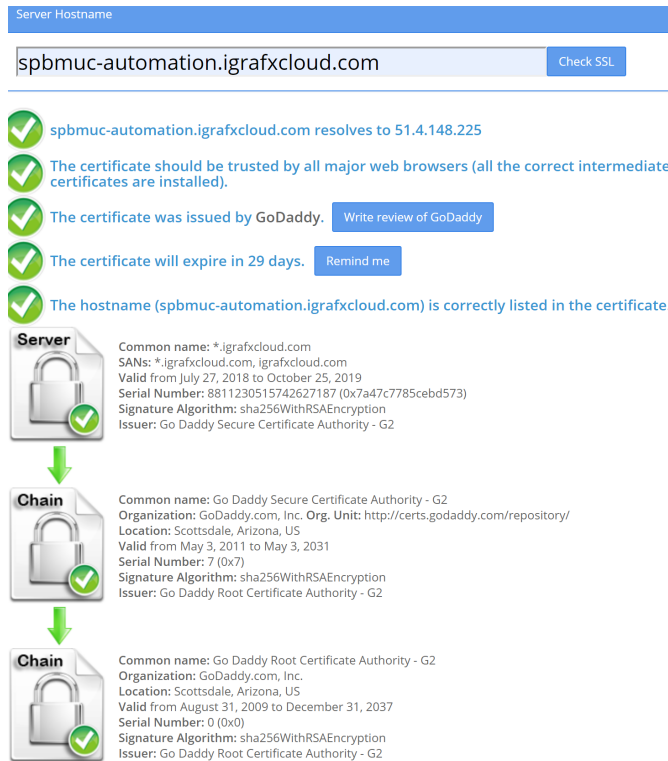
Replace "keystore.pfx" with the filename you used when saving the exported certificate, and "changeit" with whatever password you used.

```
599 | <server name="default-server">
600 |   <http-listener name="default" socket-binding="http" redirect-socket="https" enable-http2="true" max-post-size="52428800"/>
601 |   <https-listener name="https" socket-binding="https" security-realm="ApplicationRealm" enable-http2="true" max-post-size="52428800"/>
```

```
652 | <socket-binding name="http" port="80"/>
653 | <socket-binding name="https" port="443"/>
```

4. Restart igrafx automation service

5. Check SSL configuration by going to <https://www.sslshopper.com/ssl-checker.html>. If all went well, the output should look like this:



Server Hostname

spbmuc-automation.igrafxcloud.com [Check SSL](#)

- ✓ spbmuc-automation.igrafxcloud.com resolves to 51.4.148.225
- ✓ The certificate should be trusted by all major web browsers (all the correct intermediate certificates are installed).
- ✓ The certificate was issued by GoDaddy. [Write review of GoDaddy](#)
- ✓ The certificate will expire in 29 days. [Remind me](#)
- ✓ The hostname (spbmuc-automation.igrafxcloud.com) is correctly listed in the certificate.

Server

Common name: *.igrafxcloud.com
SANs: *.igrafxcloud.com, igrafxcloud.com
Valid from July 27, 2018 to October 25, 2019
Serial Number: 8811230515742627187 (0x7a47c7785cebd573)
Signature Algorithm: sha256WithRSAEncryption
Issuer: Go Daddy Secure Certificate Authority - G2

Chain

Common name: Go Daddy Secure Certificate Authority - G2
Organization: GoDaddy.com, Inc. Org. Unit: http://certs.godaddy.com/repository/
Location: Scottsdale, Arizona, US
Valid from May 3, 2011 to May 3, 2031
Serial Number: 7 (0x7)
Signature Algorithm: sha256WithRSAEncryption
Issuer: Go Daddy Root Certificate Authority - G2

Chain

Common name: Go Daddy Root Certificate Authority - G2
Organization: GoDaddy.com, Inc.
Location: Scottsdale, Arizona, US
Valid from August 31, 2009 to December 31, 2037
Serial Number: 0 (0x0)
Signature Algorithm: sha256WithRSAEncryption
Issuer: Go Daddy Root Certificate Authority - G2

Configuration in browser

Access <http://hostname:8080/loom-portal/>

Login as: super/admin

Password: t1m5up3r

Client: Administration Client

Right click on Roles, "Create System Role", name it: resource-manager

Right click on Users, "Create User"

Configure the user and assign all of the following roles:

- administrator
- member
- resource-manager
- super

Set a password for the new user.

Right click on root, "Create Client" and name it igrafx (all lowercase). Do not use the customer name or anything else, if you do the jboss configuration need to be adjusted!

Save and close user window. Log out of the admin client.

Login as: super/username

Password: yourpassword

Client: Administration Client

Open the tab TSS-Resources.

In the drop downs make the following selections and upload the appropriate files via the button on the table which will appear once the dropdowns are selected:

Application: CFG

Dokumententyp: Konfigurationsdateien

File to upload: cfg.config

Application: CFG

Dokumententyp: CSS-Dateien

File to upload: cba.css

Application: CFG

Dokumententyp: Logo-Dateien

File to upload: logo.png

Application: CMD
Dokumententyp: Konfigurationsdateien
File to upload: CMD.config

Application: TIM-Smartform
Dokumententyp: CSS-Dateien
File to upload: cba.css

Configuration in Database

Open the database in SQL Management Studio
Table ACM_APPLICATION change the names from TIM Smartform ... to iGrafx Smartform ...

Test

Deploy a test process to:
<http://hostname:8080/loom-portal/Deploy.iGrafx>
Check in the smarform repository the process appears and the smartform editor opens.

Configure users

For customer installations it is very important to create a second tenant.

This will then be the tenant that we pass on to our customers.

- **open the administration client with the super/admin user**
- **right click on root and choose create tenant.**
- **create a tenant with name=customer name**
- **sometimes we create a second tenant with the name=customer name-test**

This is very important because the super/admin user is a user for administration. Some tasks are not possible for this super/admin.

Open the administration client for the igrafx client created above and create the required users and groups.

Login as: admin
Password: t1m4dm1n
Client: Administration Client

The default password for new users is: task!nmotion

Change system user passwords

To be able to change the password of admin users you need to change the SystemIdentity value to 0 in the table loom_identity with the username admin in the Name_ column.

Configure timers and everything else

Basic configuration is done now. You most likely want to configure appropriate DNS entries and reverse proxies etc, which goes beyond the scope of the quick tutorial to setup the automation server.
You can now add the required timers or hook up Active Directory synchronization and authentication if required.

Additional Notes from Chris Palmer

- I was unable to use port 8080 as it was already being used. Keep this in mind as you could run into port conflicts. I changed mine to port 9090 instead and it worked fine.
- Make sure to look to the "System Requirements Automation" page in the iGrafx Platform guide. This will tell you what version of Java you need to install. I updated the version in this document as of 09/29/2020, but they can change in the future.