HHS HR BizFlow USA Staffing Real-Time Interface Deployment Guide

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# Introduction

This document describes how to deploy the USA Staffing real-time interface to the HHS BizFlow HR system. It is assumed that there are 3 environments, DEV, QA, and PROD for HHS BizFlow. There are only 2 environments, STAGE and PROD, for the USA Staffing system. The USA Staffing STAGE environment will be connected with both the HHS BizFlow DEV and QA enviornments. Meanwhile, the USA Staffing PROD environment only feeds into the HHS BizFlow PROD environment. The instructions for deployment for each environment will be the same except for configuration. Configuration should be done specifically for each target environment.

# Required system version information

1. BizFlow: BizFlow Server version 12.4
2. Database: Oracle 12c
3. Java: JDK 1.7
   1. Confirm that the JAVA\_HOME system variable points to the correct JDK 1.7 path
4. Apache ANT version 1.9.1
   1. Confirm that the ANT\_HOME system variable points to the ANT path
5. Apache Tomcat version 8.0.37

# Development directory structure

The following directory capture will be delivered as part of the release of the system.

/usas/web/

/usas/web/src/main/java/

/usas/web/src/main/resources/

/usas/web/lib/

## Root Directory Contents

The /usas/web/ directory contains the build script, build.xml, required for building the source code with Apache Ant. The dependency jars will be copied into the generated war file when the build script is run. A new war file for the interface application is created and will be stored in the /usas/web/dist/ directory with the dependency jars. The root directory also stores a usasrwsc.properties file which contains the JDK path.

## Source Code Directory Contents

The /usas/web/src/main/java/ directory contains the java source code for running the interface as REST client web application.

## Resources Directory Contents

The /usas/web/src/main/resources/ directory contains the application.properties file which have configurable properties that need to be updated based on the target execution environment. The resources directory also has the log4j.properties and manifest files used to execute the web application.

## Library Directory Contents

The /usas/web/lib/ directory contains the dependency jar files needed to run the application. These jar files will be copied onto the generated war file when the code is compiled with Apache Ant.

## Logs Directory Contents

The *<tomcat\_dir>*/logs/ directory will contain the usa\_staffing.log file which contains logging information for the web application.

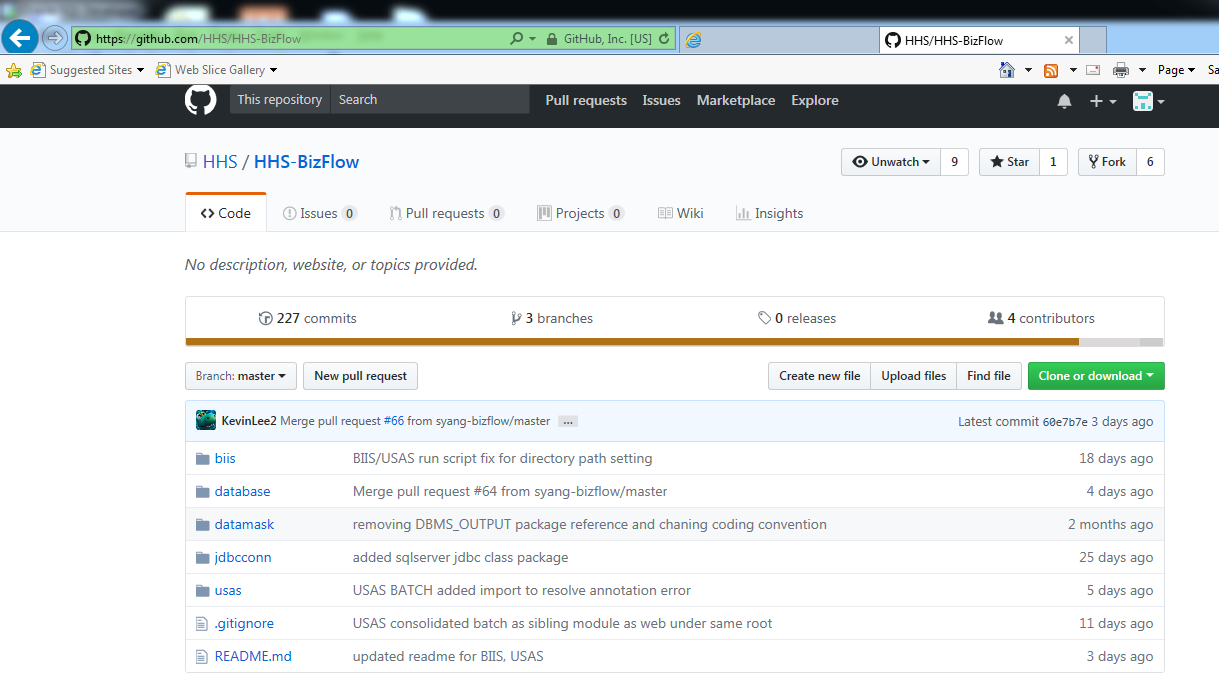
# Methods of deployment file delivery

The following methods of deployment file delivery may be considered:

* USB drive to HHS team
* Upload to a designated ftp/sftp site in HHS network by authorized Deloitte team
* Upload from HHS issued laptop by authorized Deloitte team
* Download from the HHS-BizFlow GitHub site (https://github.com/HHS/HHS-BizFlow) by HHS personnel

## Development file location in GitHub

1. Log in to GitHub and navigate to the HHS-BizFlow repository
2. Review the README.md for the USA Staffing Interface module
3. The USA Staffing web application code is in the usas/web directory.
4. Download or clone the application code by clicking the ‘Clone or Download’ button, shown in the image below (the green button).



# Confirm the USA Staffing Reports Exist in Cognos

Confirm that all of the USA Staffing Reports, custom developed for Washington HR Service Center, exist in the source USA Staffing environment. If these reports do not exist, there will be errors at runtime.

## WHRSC Recruitment Report

The WHRSC Recruitment Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 HHS 🡪 Organization Shared 🡪 Washington HR Service Center 🡪 Custom DSS 🡪 WHRSC Recruitment Report

## WHRSC Appointment Report

The WHRSC Appointment Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 HHS 🡪 Organization Shared 🡪 Washington HR Service Center 🡪 Custom DSS 🡪 WHRSC Appointment Report

## Applicant Roster

The Applicant Roster is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 HHS 🡪 Organization Shared 🡪 Washington HR Service Center 🡪 Custom DSS 🡪 Applicant Roster

## Applicant Notification

The Applicant Notification is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 HHS 🡪 Organization Shared 🡪 Washington HR Service Center 🡪 Custom DSS 🡪 Applicant Notification

# Deployment Steps

## Configuration

The application.properties file need to be updated depending on the target environment the interface is deployed. The file is located in the /usas/web/src/main/resources/ directory.

### Log Properties

Keep the logging root at ‘INFO’ unless the interface is not running correctly. If there are any issues, then change the logging root to ‘DEBUG’.

#Logging properties

#Must be one of ("trace", "debug", "info", "warn", or "error")

logging.level.root=INFO

The default location of the log file will be the logs folder inside Apache Tomcat installation directory, i.e. *<tomcat\_dir>*/logs/usa\_staffing.log.

#Log file location

logging.file=../logs/usa\_staffing.log

### USA Staffing - Cognos Credentials

Update the highlighted fields with the connection details of the source USA Staffing system.

#Authentication properties

cognos.url=USA Staffing Cognos URL

cognos.namespace=USA Staffing Cognos namespace

cognos.username=USA Staffing Cognos username

cognos.password=USA Staffing Cognos password

### Cognos Mashup Service REST Request

The following group of properties are used to prepare the HTTP request for CMS REST interface. Other than the highlighted properties, these properties should not be changed.

#CMS REST Request Properties

#CMS Paths

path.logon=/rds/auth/logon

path.logoff=/rds/auth/logoff

path.reportdata=/rds/reportData/path/

#Request Parameters Template

xml.data.property=xmlData

xml.data.login.template=<credentials><credentialElements><name>CAMNamespace</name><label>NAMESPACE\_PLACEHOLDER</label><value><actualValue>NAMESPACE\_PLACEHOLDER</actualValue></value></credentialElements><credentialElements><name>CAMUsername</name><label>User ID:</label><value><actualValue>USERNAME\_PLACEHOLDER</actualValue></value></credentialElements><credentialElements><name>CAMPassword</name><label>Password:</label><value><actualValue>PASSWORD\_PLACEHOLDER</actualValue></value></credentialElements></credentials>

xml.data.report.template=<promptAnswers><promptValues><name>PROMPT\_ID</name><values><item><SimplePValue><inclusive>true</inclusive><useValue>USE\_VALUE</useValue><displayValue>DISPLAY\_VALUE</displayValue></SimplePValue></item></values></promptValues></promptAnswers>

report.format.property=fmt

report.format.dataset=dataset

report.format.html=HTML

#HTTP Request Properties

request.user.agent.property=User-Agent

request.user.agent=Mozilla/5.0

request.accept.language.property=Accept-Language

request.accept.language=en-US,en;q=0.5

request.cookie.property=Cookie

request.content.type.property=Content-Type

request.content.type=application/x-www-form-urlencoded

The following set of properties belong to the reports created in USA Staffing Cognos. The **report.path.xxx** contains the report path of the Cognos report. This property should not be updated unless the saved location of the report is moved in Cognos.

The **report.name.xxx** indicates the name of the report as used by the web application for processing. This property should not be changed.

The **report.prompt.id** is the promptID for both Recruitment and Appointment reports. This property should not be updated unless the prompt name is changed for the reports.

#Report Properties

report.prompt.id=parm\_RequestNumber

report.path.recruitment=Team%20Content/USA%20Staffing%20Packages%20and%20Folders/HHS/Organization%20Shared/Washington%20HR%20Service%20Center/Custom%20DSS/WHRSC%20Recruitment%20Report

report.path.appointment=Team%20Content/USA%20Staffing%20Packages%20and%20Folders/HHS/Organization%20Shared/Washington%20HR%20Service%20Center/Custom%20DSS/WHRSC%20Appointment%20Report

report.path.applicant-roster=Team%20Content/USA%20Staffing%20Packages%20and%20Folders/HHS/Organization%20Shared/Washington%20HR%20Service%20Center/Custom%20DSS/Applicant%20Roster

report.path.applicant-notification=Team%20Content/USA%20Staffing%20Packages%20and%20Folders/HHS/Organization%20Shared/Washington%20HR%20Service%20Center/Custom%20DSS/Applicant%20Notification

report.name.recruitment=Recruitment

report.name.appointment=Appointment

report.name.applicant-roster=Applicant Roster

report.name.applicant-notification=Applicant Notification

### Error Handling Properties

The following set of properties are used for error handling and used to display error messages to the end user.

#Error Handling Properties

response.code.success=Success

response.code.connection-error=Connection Error

response.code.report-error=ReportData Error

response.code.no-data-error=No Content

response.code.parse-error=Parse Error

response.code.file-error=File Error

exception.connection=An exception occurred while trying to connect to USA Staffing server.

exception.reportdata=An exception occurred while requesting report data from USA Staffing server.

exception.nodata=No data available for this request number.

exception.parse=An exception occurred while trying to parse the XML report.

exception.nofile=The requested file could not be found.

exception=An exception occurred. Please check the logs.

### Response Codes

The following HTTP response status codes are used for processing and logging through the web application.

#HTTP Response Status Codes

http.success.ok=200

http.success.no-content=204

http.client-error.bad-request=400

### Program Mode

The following set of properties is used to run the application in production or test mode. You must always run the application in production mode. The program.mode property should always be set to production. The test mode is for testing and debugging the reports in the Dev and QA environment.

#Program mode - test or production

mode.test=test

mode.production=production

program.mode=production

The application can run in ‘test mode’ in the scenario when the test server does not have direct connection to USA Staffing website, and we want the USAS Rest Web Service Client module to respond to the request from consumer system with realistic data. When the web application is run in test mode, the location for pre-downloaded USA Staffing reports is provided in the properties below.

#Report Location for pre-downloaded XML reports

#Use only when program is executed in 'test' mode

location.recruitment=C:\\Reports\\Recruitment

location.appointment=C:\\Reports\\Appointment

location.applicant-notification=C:\\Reports\\ApplicantNotification

location.applicant-roster=C:\\Reports\\ApplicantRoster

## Build the Source Code

As a system administrator, complete the following steps to build the source code using Apache Ant:

1. Open up a command terminal.
2. Change the directory to the usas/web directory, ex: ‘cd usas/web’
3. Using a text editor, open the usasrwsc.properties file and modify the JDK location in the following property

jdk.home.1.7=<full\_path\_to\_jdk\_home\_dir>

1. In the command line, run the ant build script, ex: ‘ant package’
2. Capture the generated WAR file to run the module.

usas/web/dist/usasrwsc-<version>.war

1. Following are the contents of the WAR after it gets published.

META-INF/MANIFEST.MF

WEB-INF/classes

WEB-INF/classes/application.properties

WEB-INF/classes/log4j.properties

WEB-INF/lib

## Deployment on Server

1. Log in to the target environment server as the BizFlow service owner (or sudo).
2. Navigate to the Apache Tomcat installation directory. Copy the module WAR file to the designated web application (i.e., tomcat/webapps) directory. Make sure exclude the version number part of the WAR file since the file name will become the application context name.

* From (build machine):
  + usas/web/dist/usasrwsc-<version>.war
* To (target environment):
  + <webapps\_dir>/usasrwsc.war

1. Make sure Tomcat web server is running. If the Tomcat server is not running, start the Tomcat server by running the startup script located at <tomcat\_dir>/bin/startup.
2. Wait until the web application is fully deployed. You may watch that the usasrwsc directory is created under the web application directory, and check properties file under it.

<tomcat\_dir>/webapps/usasrwsc

<tomcat\_dir>/webapps/usasrwsc/WEB-INF/classes/application.properties

1. Configure the properties as outlined above by opening and editing the application.properties file.

## Starting and Testing

After the USA Staffing REST Client web application is deployed and configured, perform the following steps:

1. Stop the Tomcat server by running the shutdown script located at <tomcat\_dir>/bin/shutdown.
2. Wait until the Tomcat process (i.e. the java process that runs the Tomcat service) is completely shut down.
3. Start the Tomcat by running the startup script located at <tomcat\_dir>/bin/startup.
4. The deployed module can be accessed by web service call with the designated service URL and parameters. For example,
   * http://localhost:8080/usasrwsc/usas/reportXML/appointment/{requestNumber}
   * http://localhost:8080/usasrwsc/usas/reportXML/recruitment/{requestNumber}
   * http://localhost:8080/usasrwsc/usas/reportHTML/applicantnotification/{vacancyNumber}
   * http://localhost:8080/usasrwsc/usas/reportHTML/applicantroster/{vacancyNumber}

Replace the protocol, server DNS name, port, and report identifying information as appropriate.

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