HHS HR BizFlow USA Staffing Batch Interface for WHRSC Deployment Guide

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# Introduction

This document describes how to deploy the USA Staffing interface for WHRSC Datastore 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

# Development directory structure

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

/usas/whrsc-batch/

/usas/whrsc-batch/src/main/java/

/usas/whrsc-batch/src/main/resources/

/usas/whrsc-batch/lib/

## Root Directory Contents

The /usas/whrsc-batch/ 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 executable jar file when the build script is run. A new executable jar for the interface application is created and will be stored in the /usas/whrsc-batch/dist/ directory with the dependency jars. The root directory also stores a usaswhrsc.properties file which contains the JDK path.

## Source Code Directory Contents

The /usas/batch/src/main/java/ directory contains the java source code for running the interface batch job.

## Resources Directory Contents

The /usas/whrsc-batch/src/main/resources/ directory contains the application.properties and whrsc-report.properties files which have configurable properties that need to be updated based on the target execution environment. The resources directory also has the shell scripts and manifest file used to execute the job.

## Library Directory Contents

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

## Logs Directory Contents

The *<usas\_batch\_whrsc\_installation\_dir>*/logs/ directory will contain the usas\_whrsc.log file generated at runtime, which contains logging information for each time the code is executed.

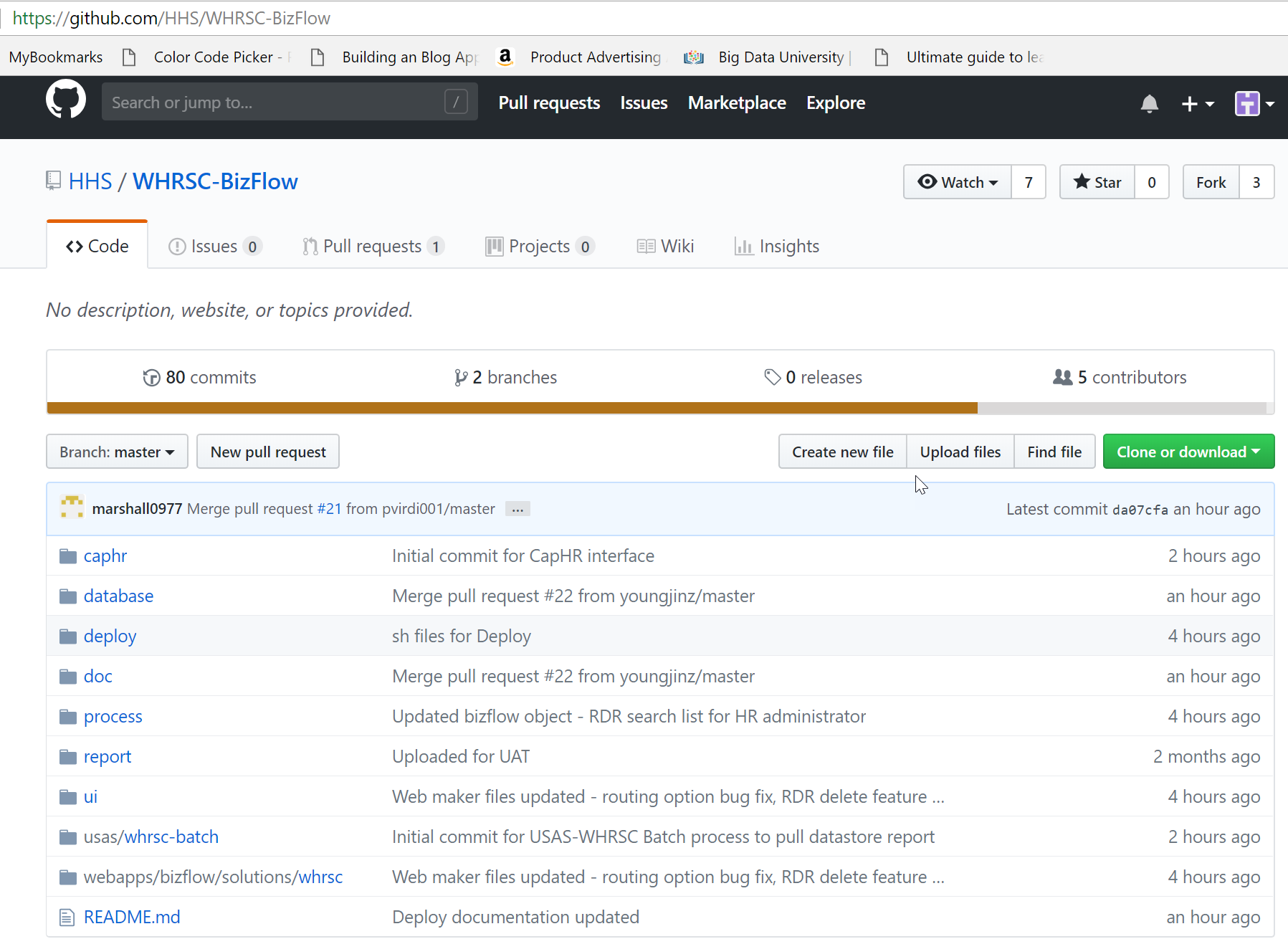
# Methods of deployment file delivery

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 WHRSC-BizFlow GitHub site (https://github.com/HHS/WHRSC-BizFlow) by HHS personnel

## Development file location in GitHub

1. Log in to GitHub and navigate to the WHRSC-BizFlow repository
2. Review the README.md for the USA Staffing Interface module
3. The USA Staffing code is in the usas/whrsc-batch directory.
4. The database scripts are in the database folder with the prefix ‘WHRSC\_HR\_DB\_USAS\_’



# Confirm the USA Staffing Reports Exist in Cognos

Confirm that all of the USA Staffing Reports exist in the source USA Staffing environment. If these reports do not exist, there will be errors at runtime.

## WHRSC Applicant Notifications Report

The WHRSC Applicant Notificationst is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Applicant Notifications

## WHRSC Certificate Series Locations Report

The WHRSC Certificate Series Locations Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Certificate Series Locations

## WHRSC Certificates

The WHRSC Certificates Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Certificates

## WHRSC New Hire Forms

The WHRSC New Hire Forms Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC New Hire Forms

## WHRSC New Hire Onboarding Documents

The WHRSC New Hire Onboarding Documents Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC New Hire Onboarding Documents

## WHRSC New Hire Tasks

The WHRSC New Hire Tasks Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC New Hire Tasks

## WHRSC New Hire Vacancy Request

The WHRSC New Hire Vacancy Request Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC New Hire Vacancy Request

## WHRSC New Hires

The WHRSC New Hires Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC New Hires

## WHRSC Permission Profiles

The WHRSC Permission Profiles Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Permission Profiles

## WHRSC Request Locations

The WHRSC Request Locations Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Request Locations

## WHRSC Request Rating Combinations

The WHRSC Request Rating Combinations Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Request Rating Combinations

## WHRSC Request Vacancy Combinations

The WHRSC Request Vacancy Combinations Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Request Vacancy Combinations

## WHRSC Requests

The WHRSC Requests Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Requests

## WHRSC Vacancy

The WHRSC Vacancy Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Vacancy

## WHRSC Vacancy Eligibilities

The WHRSC Vacancy Eligibilities Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Vacancy Eligibilities

## WHRSC Vacancy Locations

The WHRSC Vacancy Locations Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Vacancy Locations

## WHRSC Vacancy Mission Critical Occupations

The WHRSC Vacancy Mission Critical Occupations Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Vacancy Mission Critical Occupations

## WHRSC Vacancy Rating Combinations

The WHRSC Vacancy Rating Combinations Report is located in the following pathway:

Team Content 🡪 USA Staffing Packages and Folders 🡪 Office Shared 🡪 WHRSC Human Resources 🡪 WHRSC Datastore Reports 🡪 WHRSC Vacancy Rating Combinations

# Deployment Steps

## Database Deployment

Navigate to the database directory on GitHub. A DBA should perform the following steps using Oracle database client.

### Database Object Pre-requisites

Confirm that the table, ERROR\_LOG, and stored procedure, SP\_ERROR\_LOG, exist in the WHRSC database schema.

If they do not exist then execute the following script using the HHS\_WHRSC\_HR user login:

WHRSC\_HR\_DB\_05\_create\_core\_table.sql

Then run the following script using the Oracle system user login:

WHRSC\_HR\_DB\_07\_grant\_permission\_core.sql

### Create database tables to store the report output

Log in to the database system as the HHS\_WHRSC\_HR database user, execute the following script

WHRSC\_HR\_DB\_USAS\_01\_dss\_table\_ddl.sql

Then run the following script using the Oracle system user login:

WHRSC\_HR\_DB\_USAS\_02\_dss\_table\_permission.sql

They will perform the following actions.

* Create database tables required for the USA Staffing reports data
* Grant permissions to the USA Staffing tables

### Create integration data detail table

Log in to the database system as the HHS\_WHRSC\_HR database user, execute the following script

WHRSC\_HR\_DB\_USAS\_03\_integ\_table\_ddl.sql

Then run the following script using the Oracle system user login:

WHRSC\_HR\_DB\_USAS\_04\_integ\_table\_permission.sql

They will perform the following actions.

* Creates the table INTG\_DATA\_DTL

Grant permissions to the integration data detail table

### Create stored procedures to parse the report output

Log in to the database system as the HHS\_WHRSC\_HR database user, execute the following script

WHRSC\_HR\_DB\_USAS\_05\_integ\_program\_ddl.sql

Using the Oracle system user login, execute the following scripts.

WHRSC\_HR\_DB\_USAS\_06\_integ\_program\_permission.sql

They will perform the following actions.

* Create stored procedures required for parsing the USA Staffing reports
* Grant permission to USA Staffing parsing procedures

### Create stored procedures for truncating the DSS tables

Log in to the database system as the HHS\_WHRSC\_HR database user, execute the following script

WHRSC\_HR\_DB\_USAS\_07\_sp\_trunc\_dss\_table.sql

Using the Oracle system user login, execute the following scripts.

WHRSC\_HR\_DB\_USAS\_08\_sp\_trunc\_dss\_permission.sql

They will perform the following actions.

* Create stored procedures required for truncating the USA Staffing tables
* Grant permission to USA Staffing truncating procedures

If there are any errors, run the following query:

SELECT \* FROM DBA\_ERRORS

WHERE OWNER = ‘HHS\_HR’;

## Configuration

The application.properties and whrsc-reports.properties files need to be updated depending on the target environment the interface is deployed. The files are located in the /usas/whrsc-batch/src/main/resources/ directory.

### application.properties configuration

#### Target Database

Update the highlighted fields with the connection details for the target database. This should connect to the HHS HR BizFlow Oracle database WHRSC schema (HHS\_WHRSC\_HR).

#Target database Configuration

whrsc.target.datasource.url=jdbc:oracle:thin:@host:port/service name

whrsc.target.datasource.username=username

whrsc.target.datasource.password=password

whrsc.target.datasource.driver-class-name=oracle.jdbc.driver.OracleDriver

whrsc.target.datasource.initialize=false

#### Email Notifications

The following property turns on/off the email functionality. If the property is set to false then no email notifications will be sent out. If the property is set to true then email notifications will be sent out. Make sure to fill out the rest of the email account properties if the property is set to true.

#Send Email Notifications –true or false

send.email.notification=false

If the HHS email account requires authentication, then fill out the blank fields below with the username and password. Make sure that the spring.mail.properties.mail.smtp.auth is ‘true’. If the email account does not require authentication, then leave the username and password fields blank. The spring.mail.properties.mail.smtp.auth property should be ‘false’. If the HHS email server requires a TLS connection then set the spring.mail.properties.mail.smtp.starttls.enable to ‘true’, otherwise set it to ‘false’.

#Email Notification Account

spring.mail.default-encoding=UTF-8

spring.mail.host=smtp.host

spring.mail.username=

spring.mail.password=

spring.mail.port=25

spring.mail.protocol=smtp

spring.mail.test-connection=false

spring.mail.properties.mail.smtp.auth=false

spring.mail.properties.mail.smtp.starttls.enable=false

Update the emailid.from with the email address of the user account that is sending out the email notifications. Update the emailid.to with the recipient email addresses. Separate email addresses with a comma.

#Email Notification properties

emailid.from=user email

emailid.to=recipient emails

The email subject and message configuration properties should not be updated. The job name, status, and parameters will be dynamically passed into the fields each time the batch job is executed.

email.subject=DATE\_TODAY - INTERFACE\_NAME: Batch Job 'JOB\_NAME' STATUS

email.message=The batch job 'JOB\_NAME' completed with the following status: [STATUS] and the following parameters: [PARAMETERS].

email.html.message=<Message in HTML>

#### 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 location of the log file will be generated at runtime. If specificed as an absolute path, i.e. /logs/usas\_dss.log, then this is the exact location of the log file. If specificed as a relative path, i.e. logs/usas\_dss.log, it will be located under the runtime installation/deployment directory.

#output logs to a file

logging.file=logs/usas\_dss.log

#### Saving the Report Output to the Sever Directory

When the USA Staffing data is downloaded via the web service, the report output is directly inserted into the INTG\_DATA\_DTL table. The data is then parsed and stored into individual tables. If a copy of the report output is desired to be saved to the server directory, then the save.report.file property should be set to true. The defaut property value is false. If the property is changed to true, then the system administrator should create a folder called ‘WHRSCDatastoreReports’ under the root directory of where the executable-jar file is deployed.

#Save a file of the report to the directory for debugging purposes – true or false

save.report.file=false

#### Cognos Credentials

Update the highlighted fields with the connection details of the source USA Staffing system. The report format property, cognos.format, should not be changed.

cognos.username=usa staffing username

cognos.password=usa staffing password

cognos.namespace=usa staffing DSS namespace

cognos.url=usa staffing cognos url

cognos.format=DataSet

### whrsc-report.properties configuration

The whrsc-report.properties file contains configurable properties that are specific to each USA Staffing report that is being downloaded. The ‘xxx’ prefix used below, will change depending on the report.

#### Seach Path

The ***xxx.search.path*** property contains the report search path of the Cognos report. This property should not be updated unless the saved location of the report is moved in Congos.

#### Integration Type

The ***xxx.intg.type*** property corresponds to the INTG\_TYPE column on the INTG\_DATA\_DTL table. Each Cognos Report has its own unique integration type name. When the Cognos report output is pulled down via the web service, the report output is logged to the INTG\_DATA\_DTL table under the column name, FIELD\_DATA and the report is specified by the INTG\_TYPE. This property should not be updated unless the integration type is changed in the stored procedure, SP\_UPDATE\_INTG\_TYPE.

#### File Name

The ***xxx.file.name*** property is the name under which the report output will be saved as an XML file in the /reports directory. This property name can be changed but should not be left null.

#### Report Name

The property ***xxx.report.name*** represents the name of the Cognos report.

#### Truncate Stored Procedure

The ***xxx.truncate*** property states the stored procedure used for truncating the database tables that store the report values. Each time, the batch step starts the report tables are truncated before inserting new data onto the tables. This property should not be updated unless the stored procedure name changes for a report.

#### Run Report

The ***xxx.run.report*** property specifies if the report should be run. This value must be true or false. If the value is set to true then the report will run. If the property is set to false then the report will not run.

## 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/whrsc-batch directory, ex: ‘cd usas/whrsc-batch
3. Using a text editor, open the usaswhrsc.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.exejar’
2. Capture the generated module JAR file, configuration files, and shell script to run the module.

usas/whrsc-batch/dist/run-jar.sh

usas/whrsc-batch/dist/application.properties

usas/whrsc-batch/dist/whrsc-report.properties

usas/whrsc-batch/dist/log4j.properties

usas/whrsc-batch/dist/usaswhrsc-<version>.jar

## Deployment on Sever

1. Log in to the target environment server as the BizFlow service owner (or sudo).
2. Create a directory where the USA Staffing Interface module will be installed

For example: mkdir –p *<server\_dir>*/usas/

1. Copy the module JAR file, configuration files and shell script
   1. From the build machine:
      1. usas/whrsc-batch/dist/\*
   2. To the target environment:
      1. <*server\_dir*>/usas-whrsc/
2. Make sure the script has the correct JAVA\_HOME environment variable set. Open and edit run-jar.sh script.

JAVA\_HOME=<*path\_to\_java\_runtime\_home\_dir*>

1. Configure the properties as outlined above by opening and editing the application.properties and whrsc-report.properties files.

## Setting up the Cron Job

As a system administrator (admin user of Linux), create a cron job to run the interface job. Complete the following steps:

1. Switch the current user to a BizFlow system user.
2. Make the run.sh script executable. Type the following into the command line:

cd <server\_dir>/usas

$chmod 744 run-jar.sh

1. The job will run before normal business hours, e.g. 6AM, every morning. Create a new crontab with the following command:

crontab -e

#USA Staffing WHRSC Batch job

0 6 \* \* \* /bin/sh <server\_dir>/usas-whrsc/run-jar.sh

Update the crontab command with the correct time if it is to run at a time other than 6AM.

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