#### **Stack Information**

Name: Project ofi2004

Description: Description of ofi2004.

Version: 3.0

Date Created: 2021-10-20T17:09:30.841049800

Git Commit: 1e84b5100e09d9b6c5ea1b6c2ccee8957391beec

Git Tag: ods-generated-v3.0-3.0-0b11-D

Git URL: https://bitbucket/scm/ofi2004/ofi2004-release.git

OpenShift Cluster API URL: https://openshift-sample

Created by Jenkins Job Name: ofi2004-cd/ofi2004-cd-release-master

Created by Jenkins Build Number: 666

# System and Software Design Specification incl. Source Code Review Plan for 'Project ofi2004'

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### 1 INTRODUCTION

#### 2 OVERVIEW

#### 2.1 SYSTEM DESIGN OVERVIEW INCL. SYSTEM DIAGRAM

#### 2.2 SOFTWARE DESIGN OVERVIEW

#### 2.3 SOURCE CODE REVIEW OVERVIEW

The scope of the automated review, performed by SonarQube, during the build process, is all modules listed below, based on defined quality rule sets (Quality Profiles).

The installation of SonarQube is part of OpenDevStack (BI-IT-DEVSTACK) and hence qualified.

The review is automated. In case the review passes, based on quality gates, the pipeline will continue. Otherwise it will fail and stop further processes.

SonarQube identifies at least three types of code issues:

- Bug A coding error that will break your code and needs to be fixed.
- Vulnerability A point in your code that's open to attack.
- Code Smell A maintainability issue that makes your code confusing and difficult to maintain.

Each issue has one of five severities:

- BLOCKER Bug with a high probability to impact the behavior of the application in production: memory leak, unclosed JDBC connection, .... The code should be immediately fixed.
- CRITICAL Either a bug with a low probability to impact the behavior of the application in production or an issue which represents a security flaw: empty catch block, SQL injection, ... The code must be immediately reviewed.
- MAJOR Quality flaw which can highly impact the developer productivity: uncovered piece of code, duplicated blocks, unused parameters, ...
- MINOR Quality flaw which can slightly impact the developer productivity: lines should not be too long, "switch" statements should have at least 3 cases, ...
- INFO Neither a bug nor a quality flaw, just a finding.

#### 3 SYSTEM DESIGN PROFILE AND SYSTEM DESCRIPTION

#### 3.1 SYSTEM DESIGN PROFILE

The system has the following system design specifications:

| SSDS #      | Detailed Technical/Functional Specification | Traces To:  |
|-------------|---------------------------------------------|-------------|
| OFI2004-127 | TST CONTINUED                               | OFI2004-125 |
| OFI2004-203 | TST ADDED                                   | OFI2004-201 |
| OFI2004-137 | TST MODIFIED                                | OFI2004-245 |

#### 3.2 SYSTEM DESCRIPTION

Curabitur molestie, massa sed condimentum posuere, tellus elit ornare nibh, eget interdum orci mauris convallis libero. Sed et metus id odio pellentesque tincidunt. Aenean at iaculis felis. Phasellus et ante consequat, eleifend nibh at, porttitor orci. Pellentesque tempus nibh elementum, laoreet urna a, tempus augue. Quisque dictum, lacus mollis laoreet congue, velit leo mollis eros, vel imperdiet tortor mauris sit amet arcu. Praesent euismod imperdiet nisi sed tincidunt. Maecenas commodo faucibus massa, sit amet lobortis lectus eleifend id. Fusce dignissim, metus sed vulputate ultricies, quam nulla molestie diam, ac condimentum arcu felis vel nisl. Nunc maximus ex quis neque ultrices, elementum volutpat metus fringilla. Praesent suscipit eleifend augue, at aliquet metus finibus sit amet. Sed tristique mattis aliquet.

#### 3.2.1 Modules to be developed

The following modules (components) will be developed.

| Name of module | Purpose         |
|----------------|-----------------|
| release        | myDescription-A |
| thefirst       | myDescription-A |
| thesecond      | myDescription-A |

#### 3.2.2 Interfaces between Modules

| Interface   | Between Module | And Module | Purpose |
|-------------|----------------|------------|---------|
| Interface A | backend        | frontend   |         |

#### 3.2.3 Interfaces to External Systems

| Interface | Between Module | And External System | Purpose |
|-----------|----------------|---------------------|---------|
| BI-IF-    | backend        |                     |         |

#### 3.2.4 System Diagram

< A system diagram to graphically represent the module and interface information should be included here. > - Only if different from the diagram in the 2.1 section

### 4 ARCHITECTURE OF THE SYSTEM

#### **5 SYSTEM COMPONENTS**

#### 5.1 SYSTEM COMPONENTS LIST

This system is composed of the following components:

| SSDS #               | Type of Component            | Identification<br>(Config.<br>Item) | Functionality/Purpose | Components Specifications (Section/Doc ID) |
|----------------------|------------------------------|-------------------------------------|-----------------------|--------------------------------------------|
| Technology-spock     | Automated tests              | spock                               | myDescription-A       | see <u>Section 5.2</u>                     |
| Technology-release   | ODS<br>Software<br>Component | release                             | myDescription-A       | see <u>Section 5.2</u>                     |
| Technology-thefirst  | ODS<br>Software<br>Component | thefirst                            | myDescription-A       | see <u>Section 5.2</u>                     |
| Technology-thesecond | ODS<br>Software<br>Component | thesecond                           | myDescription-A       | see <u>Section 5.2</u>                     |

#### 5.2 SYSTEM COMPONENTS SPECIFICATIONS

The installation comprises the following software-defined components:

| SSDS #               | Name of<br>Software | Supplier         | Version     | Description<br>of<br>Functionality | References         |
|----------------------|---------------------|------------------|-------------|------------------------------------|--------------------|
| Technology-spock     | spock               | mySupplier-<br>A | myVersion-A | myDescription-<br>A                | myReferences-<br>A |
| Technology-release   | release             | mySupplier-<br>A | WIP         | myDescription-<br>A                | myReferences-<br>A |
| Technology-thefirst  | thefirst            | mySupplier-<br>A | WIP         | myDescription-<br>A                | myReferences-<br>A |
| Technology-thesecond | thesecond           | mySupplier-<br>A | WIP         | myDescription-<br>A                | myReferences-<br>A |

#### 5.3 UTILISATION OF EXISTING INFRASTRUCTURE SYSTEMS

| Name of Infrastructure System                                      | Documentation<br>Reference |
|--------------------------------------------------------------------|----------------------------|
| BI-IT-APPL-LOAD-BALANCING                                          |                            |
| ITEMS doc ID 20108828                                              |                            |
| BI-IT-AD                                                           |                            |
| ITEMS doc ID 20095172                                              |                            |
| BI-RT-WINDOWSSERVER                                                |                            |
| Infrastructure Release Design and Management ITEMS doc ID 20184916 |                            |

## 5.4 UTILISATION OF EXISTING INFRASTRUCTURE SERVICES

| Name of Infrastructure<br>Service | Documentation Reference                                                                                                            |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Monitoring                        | Standard Monitoring (Baseline Monitoring) on component level is sufficient System specific Monitoring Plan required ITEMS doc ID ? |
| Backup                            | Standard Backup on component level is sufficient System specific Backup Plan required ITEMS doc ID ? **                            |
| Restore & Recovery                | Standard Restore & Recovery on component level is sufficient<br>System specific Restore & Recovery Plan required<br>ITEMS doc ID ? |

#### **6 CONFIGURATIONS FOR ADDITIONAL ENVIRONMENTS**

#### 6.1 DEVELOPMENT ENVIRONMENT

N/A

#### **6.2 QA/TEST ENVIRONMENT**

N/A

#### **6.3 TRAINING ENVIRONMENT**

< Insert statements, if applicable >

< Set the colour to black in the 'EDP Content' field before marking this issue as DONE >

#### **7 ENVIRONMENTAL CONDITIONS**

< Describe the environmental conditions required for the system. A reference to an existing qualified computer room may be given. The following conditions should be considered: e.g. temperature, humidity, power conditions, physical security, etc. >

#### **8 SOFTWARE DESIGN PRINCIPLES**

#### < The principles that may be included are:

- General layout rules for windows and reports
- Audit trail implementation
- Access control measures
- User administration
- Function key assignments
- Minimum requirements (resources) needed for the application to run properly, both hardware (e.g. storage space) as well as software (such as operating system, drivers).>

## 9 SYSTEM DATA

#### 10 MODULE DESCRIPTION

This system contains the following modules (components) that are going to be developed.

#### **RELEASE**

| Component Name | Type of Module         | Source code location | Version |
|----------------|------------------------|----------------------|---------|
| release        | ODS Software Component | mySupplier-A         | WIP     |

myDescription-A

#### **THEFIRST**

| Component Name | Type of Module         | Source code location | Version |
|----------------|------------------------|----------------------|---------|
| thefirst       | ODS Software Component | mySupplier-A         | WIP     |

myDescription-A

For the GAMP topic *uncategorized*, the following requirements are covered by the SSDS above:

| Req #       | Requirement                                      |
|-------------|--------------------------------------------------|
| OFI2004-245 | story MODIFIED (from OFI2004-135) story MODIFIED |
| OFI2004-201 | story ADDED story ADDED                          |
| OFI2004-125 | story CONTINUED story CONTINUED                  |

#### THESECOND

| Component Name | Type of Module         | Source code location | Version |
|----------------|------------------------|----------------------|---------|
| thesecond      | ODS Software Component | mySupplier-A         | WIP     |

myDescription-A

### 11 MODULES TO BE REVIEWED

The following modules will be reviewed.

| Name of module | Functionality   | References to SSDS    |
|----------------|-----------------|-----------------------|
| release        | myDescription-A | see <u>Section 10</u> |
| thefirst       | myDescription-A | see <u>Section 10</u> |
| thesecond      | myDescription-A | see <u>Section 10</u> |

#### 12 CODING REVIEW RESULTS

The results of the (automated) coding review can be seen in the appended Code Analysis generated by SonarQube for:

- release
- thefirst
- thesecond

< Identify the outcome of coding review. Identify standards that were not met and their corrective actions. The corrective actions should include evidence of agreement by developer and reviewer.

### 13 DEFINITIONS AND ABBREVIATIONS

#### 13.1 **DEFINITIONS**

| Term    | Definition                                                                 |
|---------|----------------------------------------------------------------------------|
| Jenkins | Build engine supplied by cloudbees - part of OpenDevStack (BI-IT-DEVSTACK) |
| xUnit   | Unit testing framework, aggregaults across multiple languages              |

#### 13.2 ABBREVIATIONS

| Abbreviation | Meaning                         |
|--------------|---------------------------------|
| ODS          | OpenDevStack                    |
| EDP          | Enterprise Development Platform |

#### 14 REFERENCE DOCUMENTS

- Combined Specification Document (version BI-IT-DEVSTACK / 4-WIP)
- Reference document 1
- Reference document 2

#### 15 DOCUMENT HISTORY

| Version | Date                                                                                                | Author | Change Reference                                                                                                                                                                                                                         |  |
|---------|-----------------------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1       | See Summary<br>of electronic<br>document or<br>signature page<br>of printout.                       |        | Initial document version.                                                                                                                                                                                                                |  |
| 2       | See Summary of electronic document or signature page of printout.                                   |        | of electronic document or signature page                                                                                                                                                                                                 |  |
| 3       | See Summary of electronic document or signature page of printout.  The foll  OF  The foll  The foll |        | Modifications for project version '3.0'. The following requirements were removed:  • OFI2004-130 The following requirements were changed:  • OFI2004-245 was previously OFI2004-135 The following techSpecs were removed:  • OFI2004-132 |  |

| 4 | See Summary<br>of electronic<br>document or<br>signature page<br>of printout. | Modifications for project version '3.0'. This document version invalidates the changes done in document version '3'. The following requirements were removed:  • OFI2004-130  The following requirements were changed:  • OFI2004-245 was previously OFI2004-135  The following techSpecs were removed:  • OFI2004-132 |
|---|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|---|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### The following table provides extra history of the document.

| Version | Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Author | Reference |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------|
|         | Curabitur molestie, massa sed condimentum posuere, tellus elit ornare nibh, eget interdum orci mauris convallis libero. Sed et metus id odio pellentesque tincidunt. Aenean at iaculis felis. Phasellus et ante consequat, eleifend nibh at, porttitor orci. Pellentesque tempus nibh elementum, laoreet urna a, tempus augue. Quisque dictum, lacus mollis laoreet congue, velit leo mollis eros, vel imperdiet tortor mauris sit amet arcu. Praesent euismod imperdiet nisi sed tincidunt. Maecenas commodo faucibus massa, sit amet lobortis lectus eleifend id. Fusce dignissim, metus sed vulputate ultricies, quam nulla molestie diam, ac condimentum arcu felis vel nisl. Nunc maximus ex quis neque ultrices, elementum volutpat metus fringilla. Praesent suscipit eleifend augue, at aliquet metus finibus sit amet. Sed tristique mattis aliquet. |        |           |