

INFRASTRUCTURE APPLICATION REQUIREMENTS – WBS   
Werk Bemiddelings Service

Version: 0.2

Date: 08-12-2023

Document purpose

This requirements document (REQ) is used to:

* Gain a common understanding of the application requirements
* Document the requirements relevant for the DXC Infrastructure Application design (IA HLD)

The document outlines:

* External entities
* Functional and non-functional requirements

Relation to other documents

The following documents may be relevant as context to this REQ:

* The Software Architecture Document (SAD)
* The Project Start Architecture (PSA) document
* Infrastructure Application design produced by DXC for related applications (interfaces)

Structure of the document

High level flow: first the application overview and architecture are described followed by the functional and non-functional requirements that ‘drive’ the solution as it will be described in the DXC HLD.

Content of the document

UWV has prepared this document in good faith and is based on the information gathered during the requirement determination phase with all parties involved; application vendors, UWV architects, developers and UWV functional management.

Table of Contents

[1 Application Overview 4](#_Toc152918209)

[1.1 Introduction 4](#_Toc152918210)

[1.2 Scope of the desired change 4](#_Toc152918211)

[1.3 Out of Scope 4](#_Toc152918212)

[2 Architecture 5](#_Toc152918213)

[2.1 Conceptual 5](#_Toc152918214)

[2.2 Context diagram 6](#_Toc152918215)

[3 Functional Requirements 16](#_Toc152918216)

[4 Non-Functional Requirements 17](#_Toc152918217)

[4.1 Security & Compliance classifications 17](#_Toc152918218)

[4.1 System and Software requirements 17](#_Toc152918219)

[4.2 Availability 18](#_Toc152918220)

[4.3 Security requirements 18](#_Toc152918221)

[4.4 System management 18](#_Toc152918222)

[4.5 Backup and Recovery 18](#_Toc152918223)

[4.6 Storage replication 19](#_Toc152918224)

[4.7 Scalability 19](#_Toc152918225)

[4.8 Disaster Recovery 19](#_Toc152918226)

[4.9 Infrastructure Technical Constraints 19](#_Toc152918227)

[4.10 DXC TAB requirements 19](#_Toc152918228)

[Appendix A: Template version control 21](#_Toc152918229)

[Appendix B: Document version control 23](#_Toc152918230)

[Appendix C: Legenda 24](#_Toc152918231)

[Legenda Context Diagram 24](#_Toc152918232)

[Appendix D: MCPaaS – Capacity allocation details 25](#_Toc152918233)

# Application Overview

## Introduction

WBS stands for “Werk Bemiddeling Service” and is used by the UWV (CWI) advisors for the mediation of job seekers.

## Scope of the desired change

This changes will require an additional integration (Dutch: koppeling) from KVB to DIM. The exiting integration from KVB to DWH must stay alive.   
  
Functional; the same data sending to DWH must also send to DIM.  
Technical; We must sending data to DIM on the same way as we do to DWH, by using DBlink.

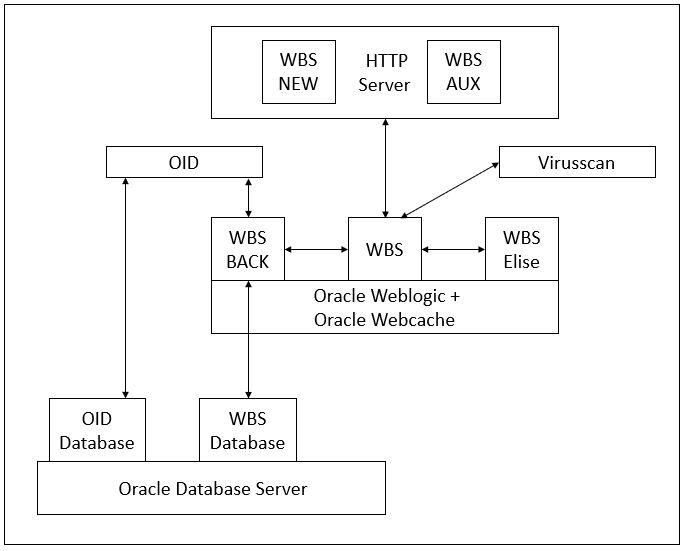
This new integration is to be established in the Production and all Accept environments (including KATO)  
  
Remark: During the fase 2 of the BMS project the integration with DWH will stop. A new HLD requirement document wil be created for this change. So this is out of scpe of this HLD.

## Out of Scope

* The development and test environment are not managed by DXC and are out of scope of this HLD
* All components that belong to the UWV Office Infrastructure such as workstations, web browsers are out of scope.

# Architecture

## Conceptual



**Key concepts:**

* Three environments: One in the Production domain and 2 in Acceptance domain (WATO and KATO)
* 3-tier setup, Web Frontend, Application Backend and database tier.
* There will be 2 webservers in a load balanced configuration (both in production and acceptance). KATO will not be loadbalanced and will only have 1 frontend en 1 backend server.
* Weblogic systems run on RHEL.
* Application backend will be deployed in Weblogic containers. There will be separate containers for WBS, WBS Back and WBS Elise connector.
* The Web Frontend is split into two parts WBS-New and WBS-Aux: two separate Web applications
* WBS web applications use a Windows Virus scanning server for scanning uploaded documents,
* The databases will run on Oracle database server on RHEL.
* WBS OID is considered as part of the WBS application and runs on a separate server, also on RHEL

**KATO**

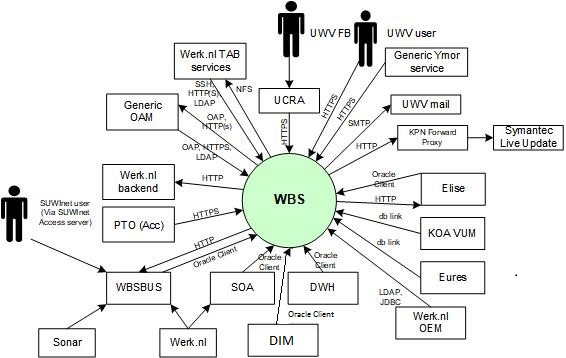
Next to Production and Acceptance (WATO) there is also a KATO environment. The KATO (Kanban Acceptatie Test Omgeving) environment was formerly known as the TST environment.

KATO is a 'light version' of the official acceptance environment of Werkbedrijf. Acceptance tests are performed on this environment without a load and performance test. In Werkbedrijf KATO chain traceable personal data is used, because only then a correct test can be done. The AVG laws and regulations requires the KATO environment to be placed under a stricter regime and therefore it is now hosted in the acceptance domain, and it is managed by DXC.

To summarize there is 1 production environment and 2 acceptance environments:

* WATO - official acceptance
* KATO - light version of acceptance

## Context diagram



### External entities

#### UWV FB

|  |  |
| --- | --- |
| **Description** | System adminstrator of the WBS-system accessing the Adminstrations functions of the system. These administration functions exist on the application web interface |
| **Protocol and Port** | HTTPS:443 |
| **DC (Datacenter) connection** | Internal |
| **Direction** | Inbound |
| **Direct connection** | No: via UCRA |
| **Security Controls** | Authorisation method or authentication method: WBS OID  Authorisation method or authentication method: OAM  Use certificates: Yes (Entrust)  Service account: No  Other: <(only mention if applicable) other applicable security control related configuration> |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### UWV user

|  |  |
| --- | --- |
| **Description** | Workcoaches (from UWV Werkplek and SUWI portaal) using the WBS -system to collect information, support workseekers and mediate between them and employers. |
| **Protocol and Port** | HTTPS: 443 |
| **DC (Datacenter) connection** | External |
| **Direction** | Inbound: communication is initiated by the entity |
| **Direct connection** | Yes: direct connection between application and entity |
| **Security Controls** | Authorisation method or authentication method: WBS OID  Use certificates: Yes (Entrust)  Service account: No |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### SUWInet user

|  |  |
| --- | --- |
| **Description** | SUWInet user (including SBR) is a user that is using SUWI Inkijk to get information from WBS. |
| **Protocol and Port** | HTTP: 80 |
| **DC (Datacenter) connection** | External |
| **Direction** | Inbound: communication is initiated by the entity |
| **Direct connection** | No: via SUWnet access server and WBSBUS |
| **Security Controls** | Authorisation method or authentication method: SUWI  Use certificates: No  Service account: No |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### Generic Ymor service

|  |  |
| --- | --- |
| **Description** | Werkbedrijf service to be able to perform end-user performance measurements (in production only) of the WBS application. |
| **Protocol and Port** | HTTPS: 443 |
| DC (Datacenter) connection | External |
| **Direction** | Inbound: communication is initiated by the entity |
| **Direct connection** | Yes: direct connection between application and entity |
| **Security Controls** | Authorisation method or authentication method: None required  Use certificates: Yes (Entrust)  Service account: No |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### UWV mail

|  |  |
| --- | --- |
| **Description** | Used to route e-mails for automatic notifications.  The acceptance environment uses the “Werkbedrijf” Generieke services mail relay. Production uses the KPN/UWV Mail relay. |
| **Protocol and Port** | SMTP: 25 |
| **DC (Datacenter) connection** | External |
| **Direction** | Outbound - Communication is initiated by the application |
| **Direct connection** | Yes: direct connection between application and entity |
| **Security Controls** | Authorisation method or authentication method: None required  Use certificates: No  Service account: No  Other: WBS server must be whitelisted at Mail Relay |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### Symantec Live Update

|  |  |
| --- | --- |
| **Description** | Symantec’s sytems to update the AntiVirus software within the WBS-system. |
| **Protocol and Port** | HTTP: 3128 (proxy.voorzieningen.uwv.nl) |
| **DC (Datacenter) connection** | External |
| **Direction** | Outbound: communication is initiated by the application |
| **Direct connection** | No: via KPN forward proxy. |
| **Security Controls** | Authorisation method or authentication method: None required  Use certificates: No  Service account: No  Other: Required communication added to the browse profile for the system at the KPN forward Proxy |
| **Number of users** | 1 antivirus host in acceptance and 1 antivirus host in production. |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### Elise

|  |  |
| --- | --- |
| **Description** | Elise WBS is an application specialised in accurately matching vacancies with CVs of candidates.   1. Elise Data replicator 2. Retrieve Matching information |
| **Protocol and Port** | 1. Oracle client:1526 2. HTTP: 80, 2800, 2801 |
| **DC (Datacenter) connection** | 1. Internal 2. Internal |
| **Direction** | 1. Inbound: communication is initiated by the entity 2. Outbound: communication is initiated by the application |
| **Direct connection** | 1. Yes: direct connection 2. Yes: direct connection |
| **Security Controls** | Connection 1:  Authorisation method or authentication method: WBS db account  Use certificates: No  Service account: No  Connection 2:  Authorisation method or authentication method: None required  Use certificates: No  Service account: No |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### KOA VUM

|  |  |
| --- | --- |
| **Description** | A KOA application combining data of job vacancies and resumes to exchange that with external parties. |
| **Protocol and Port** | DB link:1526 |
| **DC (Datacenter) connection** | Internal |
| **Direction** | Inbound: communication is initiated by the entity |
| **Direct connection** | Yes |
| **Security Controls** | Authorisation method or authentication method: WBS db account  Use certificates: No  Service account: No |
| **Number of users** | 1 |
| **Number of transactions** | Daily scheduled retrieval updated vacancies |
| **Frequency of transactions** | Daily |
| **Volume of data** | Low/Medium |

#### Eures

|  |  |
| --- | --- |
| **Description** | Eures is a portal accessible for people looking for a job in Europe. UWV provides vacancies (vacatures) infromation from WBS to this portal. |
| **Protocol and Port** | DB link:1526 |
| **DC (Datacenter) connection** | Internal |
| **Direction** | Inbound: communication is initiated by the entity |
| **Direct connection** | Yes |
| **Security Controls** | Authorisation method or authentication method: WBS db account  Use certificates: No  Service account: No |
| **Number of users** | 1 |
| **Number of transactions** | Daily scheduled retrieval of ± 3.000 updated vacancies |
| **Frequency of transactions** | Daily |
| **Volume of data** | 3.000 x 10 kB ~ 30 MB1 |

#### Werk.nl

|  |  |
| --- | --- |
| **Description** | 1. Werk.nl environment with different application components interacting with WBS. 2. Vacancies updates from WBS to Elise WBS via Werk.nl servicebus (SOA) |
| **Protocol and Port** | 1. Oracle client: 1526 2. Oracle client: 1526 |
| **DC (Datacenter) connection** | 1. Internal 2. Internal |
| **Direction** | 1. Inbound 2. Inbound |
| **Direct connection** | 1. No, via WBSBUS 2. No, via SOA |
| **Security Controls** | Connection 1:  Authorisation method or authentication method: WBS db account  Use certificates: No  Service account: No  Connection 2:  Authorisation method or authentication method: WBS db account  Use certificates: No  Service account: No |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### Sonar

|  |  |
| --- | --- |
| **Description** | Sonar requests information from WBS to support business processes within Sonar. |
| **Protocol and Port** | HTTP: 80 |
| **DC (Datacenter) connection** | Internal |
| **Direction** | Outbound |
| **Direct connection** | No, via WBSBUS |
| **Security Controls** | Authorisation method or authentication method: none required  Use certificates: No  Service account: No |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### Werk.nl backend

|  |  |
| --- | --- |
| **Description** | Werkbedrijf Enterprise Java applications: Werk.nl backend application, VWS, BO&C en CDK. WBS uses VWS and BO&C |
| **Protocol and Port** | HTTP: 80 |
| **DC (Datacenter) connection** | Internal |
| **Direction** | Outbound: communication is initiated by the application |
| **Direct connection** | Yes |
| **Security Controls** | Authorisation method or authentication method: None required  Use certificates: No  Service account: No |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### Generic OAM

|  |  |
| --- | --- |
| **Description** | Generic Oracle Access Manager (OAM) enables the use of Windows AD as the single source for the authentication for Single Sign On (SSO) for the UWV users. |
| **Protocol and Port** | HTTP: 80, HTTPS: 443 , LDAP: 389, OAP: 5575 |
| **DC (Datacenter) connection** | Internal |
| **Direction** | Both: communication is initiated by the application and the entity |
| **Direct connection** | Yes: direct connection between application and entity |
| **Security Controls** | Authorisation method or authentication method: None required  Use certificates: Yes (Entrust)  Service account: No |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### Werk.nl TAB services

|  |  |
| --- | --- |
| **Description** | The Werk.nl TAB services contain several services to support TAB, these services include:   1. TAB Deployment server: used to support configuration and deployment of the Werkbedrijf applications and middleware. 2. TAB NFS: This NFS server is used as shared storage for Werkbedrijf middleware or applications supported by TAB. |
| **Protocol and Port** | 1. For protocol and port details see chapter 4.11 2. NFS: 111, 2049 |
| **DC (Datacenter) connection** | 1. Internal 2. Internal |
| **Direction** | 1. Inbound: communication is initiated by the entity 2. Outbound: communication is initiated by the application |
| **Direct connection** | 1. Yes 2. Yes |
| **Security Controls** | Connection 1:  Authorisation method or authentication method: None required  Use certificates: No  Service account: No  Connection 2:  Authorisation method or authentication method: None required  Use certificates: No  Service account: No |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### PTO (Acc)

|  |  |
| --- | --- |
| **Description** | Performance Tests only on WATO environment, accessing LB & Webservers. |
| **Protocol and Port** | HTTPS: 443 |
| **DC (Datacenter) connection** | Internal |
| **Direction** | Inbound |
| **Direct connection** | Yes |
| **Security Controls** | Authorisation method or authentication method: WBS OID  Use certificates: Yes (Entrust)  Service account: No |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### Werk.nl OEM

|  |  |
| --- | --- |
| **Description** | Werk.nl OEM Cloud Control has connection with the WBS database and Identity provider to gather WBS data for the scheduled jobs. |
| **Protocol and Port** | JDBC (1526). LDAP (389) |
| **DC (Datacenter) connection** | Internal |
| **Direction** | Inbound: communication is initiated by the entity |
| **Direct connection** | Yes: direct connection between application and entity |
| **Security Controls** | Jdbc Connection:  Authorisation method or authentication method: None required  Use certificates: No  Service account: Yes  LDAP Connection:  Authorisation method or authentication method: None required  Use certificates: No  Service account: Yes |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | **DWI Job**  Acceptance: Once every day on workdays at noon  Production: Every hour on workdays between 7:00 – 19:00  **DWH Job**  Acceptance: Once every Wednesday at 18:30  Production: Every Friday at 18:30 **DIM Job (toegevoegd)**  Acceptance: Once every Wednesday at 18:30  Production: Every Friday at 18:30 **User Privileges**  Acceptance: Once every third Monday of the month at 3:00  Production: Once every third Monday of the month at 3:00 |
| **Volume of data** | **DWI Job**  7 queries resulting in csv-files.  **DWH Job**  37 queries resulting in text-files. **DIM Job (toegevoegd)**  37 queries resulting in text-files.  **User Privileges**  1 query resulting in csv-files. |

#### DWH

|  |  |
| --- | --- |
| **Description** | Data Warehouse DB connection |
| **Protocol and Port** | HTTPS: 1526 |
| **DC (Datacenter) connection** | Internal |
| **Direction** | Inbound |
| **Direct connection** | Yes |
| **Security Controls** | Authorisation method or authentication method: None required  Use certificates: No  Service account: Yes |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

#### DIM

|  |  |
| --- | --- |
| **Description** | Data Integratie Magazijn DB connection |
| **Protocol and Port** | HTTPS: 1526 ??? |
| **DC (Datacenter) connection** | Internal |
| **Direction** | Inbound |
| **Direct connection** | Yes |
| **Security Controls** | Authorisation method or authentication method: None required  Use certificates: No  Service account: Yes |
| **Number of users** | Not specified |
| **Number of transactions** | Not specified |
| **Frequency of transactions** | Not specified |
| **Volume of data** | Not specified |

# Functional Requirements

No functional requirements specified.

# Non-Functional Requirements

## Security & Compliance classifications

For the BIV Rating the following repository is used: “2022 UWV-brede Risico Applicatie Lijst v1.0”

|  |  |
| --- | --- |
| **Application** | WBS |
| **Owner** | WB |
| **Availability (Beschikbaarheid)** | 2 |
| **Integrity (Integriteit)** | 2 |
| **Confidentiality (Vertrouwelijkheid)** | 2+ |
| **Type of information /Data Classification** | Personal data of clients |

### Risk analysis UWV

No risk analysis provided by UWV

### Applicable security and compliance frameworks

|  |  |
| --- | --- |
| Security & Compliance Framework | Applicable |
| BIO | Yes |
| AVG / GDPR | Yes |
| DIGID | No |
| SUWI | Yes |
| Additional frameworks | Not applicable |

## System and Software requirements

### System (Operating system (OS))

| **Operating System** | **Version** |
| --- | --- |
| Windows (virusscan server) | 2019 |
| RHEL (remaining servers) | 7.9 |

### Software (Licenses)

| **Software product / component** | **Version** |
| --- | --- |
| Oracle Database server | 19c |
| Oracle OID | 12.2.1.4 |
| Oracle Weblogic Server | 12.2.1.4 |
| Oracle HTTP server (includes Webgate) | 12.2.1.4 |
| Symantec Endpoint Protection | 14.3 |
| Symantec Protection Engine | 8.2 |
| Extended support for Java | 8 |

### Capacity and performance

The web servers should be responsive even during peak loads, the design should allow for upscaling of resources in order to improve performance.

No numbers provided by UWV on the required response times therefore current sizing is considered as enough. Vertical scaling is possible in case needed.

## Availability

|  |  |  |  |
| --- | --- | --- | --- |
| **Environment** | **Application Target** | **Application Service Hours** | **Infra Target** |
| Production | 98% | 5 x 12 (Mo-Fr, 7 - 19h) | 99,5% |
| Acceptance | 98% | 5 x 12 (Mo-Fr, 7 - 19h) | 98% |

## Security requirements

No specific security requirements are applicable

### System logging

No specific system logging requirements are applicable

## System management

No specific system management requirements are applicable.

### Additional application related infra requirements

|  |  |
| --- | --- |
| **Requirements** | **Status** |
| Use STARTTLS option for UWV mail | No |
| Is Microsoft DTC used for inflight transactions | Not applicable |
| Is HTTPS cookie stickiness required on the load balancer | No |

## Backup and Recovery

|  |  |  |
| --- | --- | --- |
|  | **Default** | **Deviation (when applicable)** |
| Backup | standard backup | Not applicable |
| Restore | no specific restore order | Not applicable |
| Dependency | no dependencies | Not applicable |

## Storage replication

|  |  |
| --- | --- |
| **Environment** | **Storage Replication\*** |
| Production | Replicated storage |
| Acceptance | Replicated storage |
| Acceptance (KATO) | Non-replicated storage |

\* Storage replication is available for all Private Cloud systems (with SLA Gold, Silver and Bronze) and Legacy (AIX) systems with SLA Gold and Silver. Storage replication is not available for Legacy (AIX) systems with SLA Bronze, in this case only Backup / Restore is available

## Scalability

The design should allow for upscaling of resources to improve performance. The initial systems setup will be vertically and horizontally scalable.

Scalability limitations from the application are not defined, not applicable, or unknown to DXC.

## Disaster Recovery

No specific disaster recovery requirements applicable.

## Infrastructure Technical Constraints

No infrastructure technical constraints.

## DXC TAB requirements

|  |  |
| --- | --- |
| **Category** | **Description** |
| Deployment (TAB Deployment server) | * TCP (22, 80, 443) connection from Werk.nl TAB deployment to WBS Web * TCP (22, 7001, 8003, 8005, 8007) connection from Werk.nl TAB deployment to WBS App * TCP (22, 7001, 389, 80, 3060) connection from Werk.nl TAB deployment to WBS OID * TCP (7001, 389, 80, 3060) connection from Werk.nl TAB deployment to WBS OID on AIX (or “the old” WBS OID system) for data export purposes. * TCP (1526) connection from Werk.nl TAB deployment to WBS DB * X11-forwarding enabled for MobaXterm on Linux web-, application- and OID/IDM servers. |
| Deployment (XL Deploy) | * XL Deploy connection (SSH (22)) required to WBS Servers   + WBS web servers   WBS application servers |
| Shared Storage (TAB NFS server) | * NFS (111, 2049) connection from the WBS servers to the TAB NFS server is required |
| Application monitoring (Sitescope) | Below ports and interfaces are relevant Sitescope to WBS application monitoring:   * TCP (7001,389) for OID server, * TCP (5556, 8003, 8005, 8007, 7001) for app servers, * TCP (80, 443) for web servers, * HTTPS (443) for load balancer, |

# Appendix A: Template version control

**TEMPLATE CHANGE HISTORY**

|  |  |  |
| --- | --- | --- |
| Version | Date | Summary of Changes |
| 0.1 | 08-07-2022 | * Initial version UWV requirements template, ready for review |
| 0.2 | 13-07-2022 | * Included review comments Giuliana to prepare for follow-up meeting |
| 0.3 | 14-07-2022 | * Included review comments Giuliana and Henk-Jan to prepare for REQ template pilot |
| 0.8 | 14-07-2022 | * Cora marked the REQ template v0.8.  Prepared for final UWV review and the additional writer’s instruction from Thomas H, Remco H and Walter |
| 0.9 | 25-07-2022 | * Pre-pilot version |
| 0.91 | 27-07-2022 | * Split Appendix A in A and B for document control |
| 0.92 | 11-08-2022 | * improved instructions after 1st workshop with IO&R hosting team and evaluation of pilot (use case: edit HLD for existing application) |
| 0.93 | 24-08-2022 | * improved instructions after 2nd workshop with IO&R hosting team |
| 0.99 | 28-10-2022 | * Improved and added instructions by Henk-Jan after evaluation of first use in production and to finalize template to v1.0 |
| 1.0 | 11-01-2022 | Finalized with the following adjustments   * Updated 4.4 includes service level and service hours * Updated 4.8 Added note for AIX Bronze systems |
| 1.1 | 02-01-2023 | * Updated instructions for certificate selection |
| 1.2 | 23-02-2023 | Updated the template with MCPaaS (Managed Container Platform as a Service) specific requirements   * Removed Chapter 3 (functional requirements), Evaluation shows that this is either not filled or when it is filled the requirements are non-funtional. Functional requirements for the application are documented in the application design (SAD) * Moved chapter 4.8 (storage replication) under 3.2.1 to bundle the Private Cloud (build)requirements together * Moved chapter 4.4 (Availibility), 4.6 (System management) and 4.10 (TAB requirements) under 3.2.1 and 3.2.2 to bundle the Private Cloud system and Container application requirements together * Moved chapter under 3.2.1 and 3.2.2 to bundle the Private Cloud system and Container application requirements together * Updated 4.2 System and Software requirements: seperate section for Private Cloud and MCPaaS * Updated 4.4 Availability: seperate section for Private Cloud and MCPaaS * 4.6.1 – added addition MCPaaS related infra requirement: Can the standard azure container registry be used by the MCPaaS application |
| 1.21 |  | Added Chapter 3 again: Functional requirements, to keep all chapter the same also for old documentation and to have the possibility to document functional requirements that might seem relevant  Updated 4.2.1.5 System management   * Added load balancer requirements * Added known application scalability limitations |

# Appendix B: Document version control

**USED TEMPLATE**

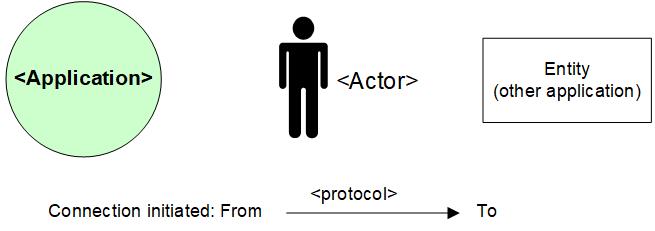
|  |
| --- |
| Based on REQ Template: UWV REQ – TEMPLATE 1.2.docx |

**CHANGE HISTORY**

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Author | Summary of Changes |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# Appendix C: Legenda

## Legenda Context Diagram



# Appendix D: MCPaaS – Capacity allocation details

**EXAMPLE**

**Capacity allocation for <CompetentNL>**

To manage the resource allocation and assure the project uses only appropriate or agreed resources on the cluster, the quotas and limits to compute resources for the CompetentNL projects on the MCPaaS will be based on below details.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Service (pod)** | **Mem Reservation** | **Mem Limit** | **CPU Reservation** | **CPU Limit** | **Scale - nr of containers (Development)** | **Scale - nr of containers (Test)** |
| CNL-Backend | 256M | 512M | 0,1 | 0,3 | 1 | 1 |
| CNL-Frontend | 128M | 256M | 0,1 | 0,5 | 1 | 1 |
| CNL-IAM | 256M | 512M | 0,1 | 0.5 | 1 | 1 |
| CNL-Dataloader | 256M | 512M | 0,1 | 0,2 | 1 | 1 |
| CNL ActiveMQ | 256M | 512M | 0,1 | 0,3 | 1 | 1 |
| CNL-Config-server | 128M | 256M | 0,1 | 0,2 | 1 | 1 |
| CNL-api | 256M | 512M | 0,1 | 0,5 | 1 | 1 |
| CNL-Synchronization | 128M | 256M | 0,1 | 0,3 | 1 | 1 |
| CNL-DB Management | 128M | 256M | 0,1 | 0,2 | 1 | 1 |
| CNL-Search | 1024M | 3072M | 0,1 | 1 | 1 | 1 |

*Total Required resource allocation*

*Note: Required resource allocation for Development and Test is an initial estimation. After initial tests on these environments resource allocation for all environments will be finalized and updated. Besides the resource allocation for Acceptance and Production are based on the experiences from Development and Test.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Size description** | **Development** | **Test** | **Acceptance** | **Production** |
| Mem minimum run | 2816M | 2816M | TBD | |
| Mem maximum run | 6656M | 6656M |
| CPU reservations | 1 | 1 |
| CPU reservations limit | 4 | 4 |