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| **Pre-Migration Azure Cloud Assessment Report**  **Application: Primion** | **Revision:** | 0.1 |
| **Author:** | HCL America Inc. |
| **Effective Date:** | August 05, 2020 |
| **Page:** | 1 of 8 |
| **Assessment Period** | **August 2020** | |

# Application Introduction

PRIMION is time capture system used in Germany commercial business. We have time capture terminals in both Marl and Hamburg. Primion is also a former vacation planning system. Also this system manages the access to the building in Marl and is coupled with the Alarm system. This was introduced in July 2014. This is vendor supported application.

The server is running a local SQL Express database. It does run IE11 native and no web-plugins/add-ons required. There is both web based and Client-Server Application. Web Based application interface is used by the SNI Employee in Marl and Client Interface is used by the Admin in the Marl facility for authorizing time-clocking Terminals and devices, Door alarms etc.

# Migration Strategy

**Primion**

**Target Platform**

**Current Platform**

Applications

A fresh VM build with OS TBD for Primion, MS SQL Cluster DB 2019 on Windows 2019, Apache Tomcat 8.0 and upgraded Software version for Primion.

**OS:** TBD (To be provided by Paul)

**DB**: Cluster SQL DB 2019 on Windows Server 2019

**Dev Tech:**TBD(To be provided by Paul)

**Web Server**: Apache

**OS:**

Windows Server

2012 Standard

**DB**: Cluster SQL DB 2005 on Windows Server 2008 R2 Enterprise

**Dev Tech:** Apache Tomcat 7.0

**Web Server**: Apache

**Final**

**COTS**

Treatment

**Final**

Azure Cloud

On-Premise

**Treatment**

**REPLATFORM**

# Application Assessment Final Ratings

Primion application is classified as ‘**Medium’** on the below highlighted complexity parameters, and also Based on the [SDM responses](#_Appendix:_Questionnaires_Responses), and [Cloudscape data input](#_Appendix:_CloudScape_Data).



# Application Current & Target Landscape

|  |  |
| --- | --- |
| Current Technology Landscape **OS**: App - Windows Server 2012 Standard – Dedicated VM, DB - Windows Server 2008 R2 Enterprise – Physical Servers  **DB**: MS Cluster SQL Database 2005 – PWS on SMRTHSQL2 Server  **Dev Tech**: Apache Tomcat 7.0.42  **Web Server**: Apache | Target Technology Landscape **OS**: App - TBD, DB – Windows 2019  **DB**: MS SQL Cluster 2019  **Dev Tech**: Apache Tomcat 8.0  **Web Server**: Apache |

# Application Characteristics

1. Is a COTS application
2. Low Impact on application outage. This is a Business Essential application.
3. No transactions expected to increase in the future
4. There are 2 ways this application is configured. One way to access is via Web browser where SNI employees can check in their time attendance, Vacation planning, another way is via Client Interface which the facility Admin users accessing and authorizing access to Time Stamping Terminals, Devices, Door Alarms, etc. This application is in turn integrated with Payroll of employees.
5. There are around 100 users in total including 4 Admin users.
6. Application is accessed within SNI Internal.
7. No specific test cases, Scenario like – “Swipe Batch Card and the records are reflecting correctly in time attendance sheet” can be validated.
8. Multi Lingual – English, German, French. Language selection from website.
9. Weekend Downtime is acceptable for Azure Migration.
10. There are no other external systems this application connects to except – that there are number of time-stamping machines and connectivity to the door access solution in Marl site connected to this.
11. Vendor Support is via Primion Technology AG.
12. There is no AD specific Authentication or authorization for this application. The users and their roles are configured within the application database.
13. Customer is planning to invest on this application to rollout it in Malaysian Plant. There are lot of modules in built for this application provided by Siemens.
14. Had a dedicated VM for Application, but the Cluster SQL Database is shared across with other applications within SNI.

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| --- |
| UKRTHSMAPPVW23 – Dedicated App VM |
| UKRTHSMDBPW04 – Cluster SQL DB 2005 |
| UKRTHSMDBPW03 - Cluster SQL DB 2005 |

**Dependent Applications: (Sharing Cluster SQL DB Physical Servers)**

1. QA Change Control
2. Nomino Security
3. Encore
4. No existing issues.

# Application Challenges/Risk

|  |  |
| --- | --- |
| Risk | Mitigation |
| Cluster SQL Database is shared across with other applications in SNI | Other applications are also using these servers.   1. QA Change Control 2. Nomino Security 3. Encore   MS SQL Cluster 2019 will be setup which will host all the dependent application |
| IP Address Change – Hardcoding | Client and all terminal devices, door access, alarm solution all needs to be referred to new IP. |
| Customer is expecting an upgrade | As per SME, Upgrade is recommended, based on the experience with Hydra which was tried and tested in AWS cloud and brought back to On-prem.  Software Upgrade to be carried out by the Vendor and SME. As per SDM, the vendor and SME support is available and would need funding. |
| OS Upgrade | With Primion Software upgrade, it also requires an OS upgrade as well. Assumption from SDM is for Windows 2019. Similarly for SQL Server which is on 2005 version running on 2008 R2 would also required an upgrade. |

# Critical Factors Considered

|  |  |
| --- | --- |
| Application Name | Primion |
| Application Type | COTS |
| Critically | Low |
| SDM Opinion | Complex migration |
| Authentication | Within Application SQL Database Locally |
| Authorization | User Based |
| OS | Application - Windows Server 2012 Standard Database – Windows Server 2008 R2 Enterprise |
| DB | Custer SQL Database - MS Cluster SQL 2005 + Windows Server 2008 R2 Enterprise |
| Servers | 3, Cluster SQL in 2 Physical Servers. Application is in Dedicated VM. |
| DR | Not applicable |
| DR Details | NA |
| Dependency | 1. Client and all terminal devices, door access, alarm solution all needs to be referred to new IP. 2. Other applications are also using these servers. Need to sort out dependency and plan it effectively. Both VMs are shared by others apps as mentioned below:   UKRTHSMDBPW04  UKRTHSMDBPW03   |  | | --- | | QA Change Control | | Nomino Security | | Encore | |
| SLA | NA |
| User Access Method | Thick Client- Ex:-Local client software & Web based |
| Vendor | Primion Technology AG |
| Customization | Marl Facility Time Stamping Terminals, Devices, Door Alarms, Client Interface. |
| Architecture | Web Based & Client Server Based N Tier |
| License Model | NA |
| Batch | None |
| SOX+GxP | SOX - No, GxP - No |
| Multi Lingual | English, German, French |
| Certificates | None |
| Technology | NA |
| Region | Germany |

# High Level Treatment

| # | Treatment Steps |
| --- | --- |
|  | **Pre-migration Tasks** |
|  | Inventory validation - Server wise detail & access validation (input from Assessment Phase) |
|  | Finalize - Configuration need to be changed   IP, firewall port, DMZ/Public IP,  AD,DNS, SMTP, NFS  Monitoring, backup, patching etc. |
|  | Finalize - Required target Infra capacity & configuration requirements |
|  | Collect - application dependencies ( IP address,3rd Party etc.) is captured in Runbooks |
|  | Record shutdown and start-up process for app servers & DBs |
|  | App Teams readiness - finalize application test requirements |
|  | Review - plan and timeline with migration stakeholders |
|  | Open the CR for OS Image & Data Replication (Initial & Delta) Setup & related tasks. |
|  | Configure initial replication - Azure Migrate server tool for the Servers part of the application move group |
|  | Finalize cutover plan and signoff from Stakeholders |
|  | **Migration Day - Tasks** |
|  | **Source Location - On-Prem** |
|  | Ensure latest backup for Servers / Databases |
|  | Freeze all scheduled tasks if any by scheduler |
|  | Ensure servers are in maintenance window and alerts are supressed |
|  | Application shutdown |
|  | Database shutdown |
|  | Server shutdown |
|  | Run Delta sync for server replication |
|  | **Target Location -Azure Cloud** |
|  | Restore VM from the OS image from replicated data. |
|  | Re-configuration of settings like IP and any other recorded during pre-migration steps |
|  | Health Check of migrated servers & DB (if any) |
|  | App Team to execute test cases - UAT |
|  | **Roll Back Plan** |
|  | Receive communication from App Team for Test failure |
|  | Shut down VM at Azure Cloud |
|  | Start up VM at the Source DC - On-prem |
|  | App Team to execute test cases - UAT |
|  | **Post Migration - Activity** |
|  | Receive communication from App Team for Test pass |
|  | Add server to Azure backup |
|  | Add servers to Monitoring |
|  | Send communication on stakeholders for successful migration |
|  | Hypercare support start (OS & App) |
|  | **Post Migration warrantee sign off (2 weeks)** |

# Appendix: Cloudscape Data Inputs

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| UKRTHSMAPPVW23 | 172.20.17.37 | Production | Europe | Windows 2012 Standard |
| UKRTHSMDBPW04 | 172.20.16.154 | Production | Europe | Windows 2008 R2 Enterprise |
| UKRTHSMDBPW03 | 172.20.16.153 | Production | Europe | Windows 2008 R2 Enterprise |

[Teamsite](https://smithandnephew.sharepoint.com/:f:/r/sites/HostingMigrationSharedDocuments/Shared%20Documents/04.%20Questionnaires/pre%20migration%20question%20forms/Paul%20Davison/Primion_Assessment/Supporting%20Documents?csf=1&web=1&e=OoUcOc)

# Appendix: Questionnaires Responses

