Application Migration Technical Reference

Table of Contents

[1. Document History 2](#_Toc150507740)

[2. Application Non-Technical Details 2](#_Toc150507741)

[3. Business Contacts 4](#_Toc150507742)

[4. Legacy Solution 4](#_Toc150507743)

[4.1 Architecture Overview 4](#_Toc150507744)

[4.2 Short description 4](#_Toc150507745)

[4.3 Technical Details 4](#_Toc150507746)

[5. New Azure Solution 8](#_Toc150507747)

[5.1 High-Level Architecture 8](#_Toc150507748)

[5.2 Technical Details 9](#_Toc150507749)

[5.2.1 Application Tier 9](#_Toc150507750)

[5.2.2 Data Tier 9](#_Toc150507751)

[5.2.3 Network Security Groups – Inbound Rules 10](#_Toc150507752)

[5.2.4 Network Security Groups – Outbound Rules 10](#_Toc150507753)

[5.3 Backup and Restore 11](#_Toc150507754)

[5.3.1 Database Tier 11](#_Toc150507755)

[5.4 Monitoring and Alerting 11](#_Toc150507756)

[6. Migration Activities 11](#_Toc150507757)

[6.1 Pre-migration activities 11](#_Toc150507758)

[6.2 Migration activities 11](#_Toc150507759)

[6.3 Cut-over Activities. 11](#_Toc150507760)

[6.4 Post-Migration activities 11](#_Toc150507761)

# Document History

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Change | Author |
| 0.1 | 26.10.2023 | Initial Draft | Bidyendu Dey |
| 0.2 | 06.11.2023 | Detailed information | Bidyendu Dey |
|  |  |  |  |
|  |  |  |  |

# 

# Application Non-Technical Details

|  |  |
| --- | --- |
| Technical Contact Persons: |  |
| ApplicationID (SAP): |  |
| Business Area : |  |
| Cost allocation code (WBS): |  |
| Business Critical: NO |  |
| Operational Unit: |  |
| Product Owner: |  |

# Business Contacts

|  |  |  |  |
| --- | --- | --- | --- |
|  | GASSCO | Vendor | GASSCO |
|  |  | DNV |  |
|  |  |  |  |
|  |  |  |  |

# Legacy Solution

## Architecture Overview

## Short description

## Technical Details

Fill in relevant questions and answers from Essential’s questionnaire.

|  |  |
| --- | --- |
| Application Architecture |  |
| Application tier architecture;  Single/Two Tier / Three Tier / N-Tier/Monolith/Distributed? Tier 1 (highly important, 24x7 mission-critical) Tier 2 (moderately important) Tier 3 (low importance, dev/test) | Two Tier Application    Low |
| What is the RPO? | 1 |
| What is the RTO? | 8 |
| What is the technology stack of the application with version? (Programming Language, Framework,Runtime,middleware..etc) |  |
| Does the hosting location of this application have an impact on user experience?  i.e. is there a requirement to locate in close proximity to the user base? If yes please provide details in comments section | Yes, west Europe is the location of user |
| How is the Application accessed? (Eg: Web browser,Thick client, Citrix, Mobile, Multiple) | Web Browser |
| What is the URL of the application? |  |
| What are the present scalability requirements of the application? (Load Balancers, Multiple AppServers etc) | Load Balancer, Multiple App Server & Oracle Database hosted in Cluster |
| What is the current application authentication mechanism in place? | Domain Authentication |
| Deployed manually or via automation |  |

|  |  |
| --- | --- |
| Infrastructure Information |  |
| Is the application running on a virtualized platform? If No, can it be virtualized? If not, why? | Yes on VMware Virtual Machine |
| In case the servers cannot be moved out AS-IS, is it possible to re-install this application in a freshly deployed server in the Cloud? | Yes new environment would be provisioned |
| Does this application have any stringent network latency requirements? Does latency impact end-user experience or functions of the application and its modules? For eg. very low latency requirement etc. | NO |
| Does this application have High Availability (HA) Requirements? If Yes how is HA implemented | Yes, HA requirements 99.99% in Azure - ?? |
| Does this application require a DR? If YES, how is DR Implemented? What kind of DR - HOT/ Warm/ Cold, Replication strategy, Stretched cluster etc.… | Yes, HA requirements 99.99% in Azure - ?? |
| Does the application need clustering using shared storage? Provide details on cluster solution (Ex: MSCS, VCS etc) If YES, Is there a workaround (Ex: SQL Always on without shared storage) , If yes please provide details in comments section | NO |
| Does the application is dependent on any shared infrastructure services? If yes, please provide the details in comments section | NA |
| Does this application have any hardware requirements? For eg. Hardware Key / Hardware License Dependency / Dongle etc? | NA |
| Are there any restriction of licenses for the application to move to cloud? | Cots Application by DNV, GASSCO App owner has taken the App licensing |

|  |  |
| --- | --- |
| Platform Information |  |
| Server name |  |
| Number of CPUs |  |
| Memory size |  |
| RAID configuration |  |
| GASSCOacity of disks |  |
| Dynamic volumes |  |
| Layout of disk |  |
| C: Content |  |
| E: Content |  |
| F: Content |  |
| G: Content |  |
| H: Content |  |
| OS |  |
| OS Update level |  |

|  |  |
| --- | --- |
| Platform Information |  |
| IP Address: |  |
| Subnet Mask: |  |
| Default Gateway: |  |
| Primary DNS Server: |  |
| Secondary DNS Server: |  |
| TTL Values |  |
| specific DNS servers |  |
| Mac Address: |  |
| Joined to which domain |  |
| Host file modifications (static entries) |  |
| VLAN |  |
| VPN connections |  |

|  |  |
| --- | --- |
| Database Information |  |
| Enter Oracle, SQL Server, PostgreSQL, MySQL, etc |  |
| Enter the Release and Version Number, Edition, Patch, Service Pack |  |
| Enter the DB & Application for Shared/Dedicated |  |
| Enter the Database or Instance name(s) associated with this application |  |
| What is the size of your database? |  |
| How many schemas do you have? |  |
| How many big tables do you have (200 gigabytes or 200 million rows in size)? |  |
| What do the transaction boundaries look like? |  |
| Do you have engine-specific data types that won’t be migrated by your migration tool? |  |
| How hot (busy) is your source database? |  |
| What kind of users, roles, and permissions do you have on the source database? |  |
| When was the last time you vacuumed, or compacted, your database? |  |
| How can your database be accessed (firewalls, tunnels, VPNs)? |  |
| Can you afford downtime? How much? |  |
| Do you need the source database to stay alive after the migration? For how long? |  |
| Do you know why you preferred one target database engine over another? |  |
| What are your high availability (HA) requirements? |  |
| Does all the data need to move? |  |
| Does it need to move to the same place? |  |
| Logins with hashed passwords or an SIDs |  |
| Jobs with owner accounts (including SIDs) |  |
| Server configuration settings | AS-IS |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Application Firewall Rules |  |  |  |  |
| Initiator App Group / Server Name / IP Address | **Target App Group / Server Name / IP Address** | **PORT** | **Firewall** | **Comments** |
| Inbound/outbound |  |  |  |  |
| Inbound/outbound |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# New Azure Solution

## High-Level Architecture

## Technical Details

**Platform (IaaS/PaaS) – Rehost**

**Resource groups -**

**Subscription -**

### Application Tier

|  |  |
| --- | --- |
| Platform Information – Application Tier |  |
| Virtual Machine Name |  |
| Image |  |
| VM Size |  |
| Location |  |
| VirtualNetworkName |  |
| SubnetName |  |
| SecurityGroupName |  |
| PublicIpAddressName |  |
| Disks |  |
| OS |  |
|  |  |
| IP Address: |  |
| Subnet Mask: |  |
| Default Gateway: |  |
| Primary DNS Server: |  |
| Secondary DNS Server: |  |
| TTL Values |  |
| specific DNS servers |  |
| Mac Address: |  |
| Joined to which domain |  |
| Host file modifications (static entries) |  |

### Data Tier

|  |  |
| --- | --- |
| Platform Information – Data tier |  |
| Database service |  |
| Server version |  |
| Database instance |  |
| Database size |  |
| Compute tier |  |
| Service tier |  |
| Dymamic scalability |  |
| Security |  |
| Backup retention |  |
| Pricing tier |  |
| Location |  |
|  |  |

### Network Security Groups – Inbound Rules

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Priority | Name | Port/Protocol | Source | Destination | Action |
| 65000 | AllowVnetInBound | Any/Any | VirtualNetwork | VirtualNetwork | Allow |
| 65001 | AllowAzureLoadBalancerInBound | Any/Any | AzureLoadBalancer | Any | Allow |
| 65500 | DenyAllInbound | Any/Any | Any | Any | Deny |

### Network Security Groups – Outbound Rules

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Priority | Name | Port/Protocol | Source | Destination | Action |
| 65000 | AllowVnetOutBound | Any/Any | VirtualNetwork | VirtualNetwork | Allow |
| 65001 | AllowInternetOutBound | Any/Any | Any | Internet | Allow |
| 65500 | DenyAllOutbound | Any/Any | Any | Any | Deny |

## Backup and Restore

### Database Tier

|  |  |  |  |
| --- | --- | --- | --- |
| Type | Active | Weeks kept | Comment |
| Weekly | Yes |  |  |
| Monthly | Yes |  |  |
| Yearly | No |  |  |

## Monitoring and Alerting

# Migration Activities

## Pre-migration activities

|  |  |  |  |
| --- | --- | --- | --- |
| Step | Activity | Responsible | Comment |
| 1 | Download software and copy license file/info | NA |  |
|  |  |  |  |
|  |  |  |  |

## Migration activities

|  |  |  |  |
| --- | --- | --- | --- |
| Step | Activity | Responsible | Comment |
| 1 | Install/configure software | DNV |  |
| 2 | Install license | DNV |  |
| 3 | Verify connectivity | Gassco |  |

## Cut-over Activities.

|  |  |  |  |
| --- | --- | --- | --- |
| Step | Activity | Responsible | Comment |
| 1 | Cutover |  |  |
|  |  |  |  |
|  |  |  |  |

## Post-Migration activities

|  |  |  |  |
| --- | --- | --- | --- |
| Step | Activity | Responsible | Comment |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |