Milestone 2 : LowTech GMmBH Migration to Azure

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Abstract

1 Overview of the Problem

2 Objectives of the Migration

3 Migration Strategy

After reviewing the company landscape we have evaluated several options for the migration to a public/private cloud context depending on the application. For each one we detail the Cloud Context to deploy, which tools to use, and, if relevant, details on the service models of each product.

3.1 Finance Legacy Application

As the finance department still needs to use this application for the next 3 years, we are only going to migrate to our own private cloud context. In this case, it is going to be deployed into a virtual machine with the ability to scale in terms of memory and CPU thanks to PoxMox. For backup purposes, we will create a file share specific to this application using Azure Files. We are also going to use Ansible playbooks to automate the configuration and installation of the application.

Cloud Context	Products And Technologies	Service Models
Private Cloud	ProxMox, Ansible	N/A
Public Cloud	Azure Files	PaaS

Table 1: Finance Legacy Application Deployment Strategy

3.2 Finance SAP PPM, ERP, IAM and ERM

These applications will also be deployed in the new private cloud context. Since the finance department is the only one that needs access, this system will be somewhat isolated. We are going to configure networking access only for the finance department clients. Following the same patterns as for the Legacy application, we are also going to use Ansible to automate and make the installation and configuration repeatable.

Cloud Context	Products And Technologies	Service Models
Private Cloud	ProxMox, Ansible	N/A

Table 2: Finance SAP PPM, ERP, IAM and ERM Deployment Strategy

3.3 Production Reporting Management

This application will be newly developed, for this, we are going to deploy the backend using Azure App Service, the front end using Azure Static Web Apps, Azure Blob Storage to save reports, and Azure CosmosDB if a database is needed. To secure all newly developed applications we are going to use Microsoft Entra ID, and make them accessible only with the company VPN.

Cloud Context	Products And Technologies	Service Models
Public Cloud	Azure App Service	PaaS or CaaS
Public Cloud	Azure Static Web App	PaaS or CaaS
Public Cloud	Azure Blob Storage	PaaS
Public Cloud	Microsoft Entra ID	PaaS
Public Cloud	Azure Cosmos DB	PaaS

Table 3: Production Reporting Management Deployment Strategy

3.4 Production, HR Shift Management

This application will be newly developed. Following the standard for new applications, we will deploy the backend using Azure App Service, the front end using Azure Static Web Apps, and Azure Database For PostgreSQL if a database is needed. To secure all newly developed applications we are going to use Microsoft Entra ID, and make them accessible only with the company VPN.

Cloud Context	Products And Technologies	Service Models
Public Cloud	Azure App Service	PaaS or CaaS
Public Cloud	Azure Static Web App	PaaS or CaaS
Public Cloud	Microsoft Entra ID	PaaS
Public Cloud	Azure Database For PostgreSQL	PaaS

Table 4: Production, HR, Shift Management Deployment Strategy

3.5 Supply Management SCM

This application is supplied by a third party. It will be installed in a linux virtual machine, using Azure Linux Virtual Machines + Azure Virtual Machine Scale Sets, to enable autoscaling. Same as all other internal applications, it will only be accessible through the company VPN.

Cloud Context	Products And Technologies	Service Models
Public Cloud	Azure Linux Virtual Machines + Azure Virtual Machine Scale Sets	IaaS

Table 5: Supply Management SCM Deployment Strategy

3.6 Quality Management QM Software

This application is supplied by a third party. It will be installed in a windows virtual machine, using Azure Windows Virtual Machines + Azure Virtual Machine Scale Sets, to enable autoscaling. Same as all other internal applications, it will only be accessible through the company VPN.

Cloud Context	Products And Technologies	Service Models
Public Cloud	Azure Windows Virtual Machines + Azure Virtual Machine Scale Sets	IaaS

Table 6: Quality Management QM Software Deployment Strategy

3.7 Warehouse Warehouse Management

This application will be newly developed. Following the standard for new applications, we will deploy the backend using Azure App Service, the front end using Azure Static Web Apps, and Azure Database For PostgreSQL if a database is needed. To secure all newly developed applications we are going to use Microsoft Entra ID, and make them accessible only with the company VPN.

Cloud Context	Products And Technologies	Service Models
Public Cloud	Azure App Service	PaaS or CaaS
Public Cloud	Azure Static Web App	PaaS or CaaS
Public Cloud	Microsoft Entra ID	PaaS
Public Cloud	Azure Database For PostgreSQL	PaaS

Table 7: Production, HR, Shift Management Deployment Strategy

3.8 Warehouse Deliforce

This application will be installed on premise. As other on premise deployments we will automate it with Ansible. It will communicate with other internal applications using Azure Express Route, enabling us to transfer information between our private cloud and its public counterpart.

Cloud Context	Products And Technologies	Service Models
Public Cloud	Azure Express Route	PaaS
Private Cloud	ProxMox, Ansible	N/A

Table 8: Warehouse Deliforce Deployment Strategy

3.9 Sales, Operations, Customer Service CRM

Cloud Context

Products And Technologies

Service Models

3.10 Sales Lead Management

Cloud Context

Products And Technologies

Service Models

3.11 Sales Business Analytics

Cloud Context

Products And Technologies

Service Models

3.12 Sales Tableu (Market Development)

Cloud Context

Products And Technologies

Service Models

3.13 HR HR Software

Cloud Context

Products And Technologies

Service Models

3.14 Facility Management Facility Management Software

Cloud Context

Products And Technologies

Service Models

3.15 Several Departments Office Suite

Cloud Context

Products And Technologies

Service Models

3.16 Webshop Website

Cloud Context