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| 1 | Image Gallery Resource Group | Create Resource group to store image gallery components |
| 2 | Spin VM | Spin a virtual machine of type D4s\_v3 of image Window Server 2022 Datacenter -Azure Edition Gen2 |
| 3 | Customize & Install software on VM Manually | Download SHIR MSI, 7zip software, azure cli, azure modules and PowerShell scripts (as applicable) |
| 4 | Capture Specialized VM Image and Store in Image Gallery | Capture specialized VM Image and store it in Image Gallery |
| 5 | Delete VM | Delete VM and components |

Diagram, schematic

Description automatically generated

**One Time Components**

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| A | Resource Groups | Create Resource Group for CFS Data Migration |
| B | vnet, subnets and service endpoints | Create Virtual network, subnets within CFS DM Resource group and link vm subnet with service endpoint for Storage Accounts |
| C | Data Lake Storage account Gen2 and private endpoints | Create Data Lake Storage Gen2 with private endpoints |
| D | App Service Plan and Azure Function | Create App Service Plan and deploy Azure function |
| E | Azure Function PowerShell Code | PowerShell code in Azure Function for reading Encryption or Decryption key from keyvault |
| F | Key Vault | KeyVault stores Encryption/Decryption keys |
| G | Spin Small VM using **Image Gallery** | Spin Small VM from image Gallery image |
| H | ADF with SHIR | Create ADF and Connect it with small VM (mentioned in G) using SHIR Auth Key |
| I | Azure Function to Feed Run Logs to SQL Server | Azure Function write logs to SQL DB |
| J | SQL Server (For Meta Data Store) | Spin SQL server to store metaData |
| K | VM Start/Shutdown Automation Code | Code to Start/Shut down VM |
| L | Trigger via Function or Azure Automation Account | Azure Function to trigger shutdown/Start of VM |

**Main Process**

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| 1 | Migration Requirements | Migration Requirements |
| 2 | Stakeholders | All the key stakeholders involved in the process |
| 2a | CFS CC Approver | CFS person approves jira requests |
| 2b | CBA DM SME | CBA person provides information about DataBox/sFTP uri |
| 2c | CFS Requester | CFS Person who initiates requests |
| 2d | Migration Service Agent | Avanade’ team person |
| 3 | Request Details Obtained Data Box or sFTP Storage initiated | Request Details Obtained Data Box or sFTP Storage initiated |
| 4 | Initiates the request | Initiates the request for Data Migration |
| 5 | Details Provided to CFS Requester | Details Provided to CFS Requester |
| 6 | Migration Agent Raises the Jira Ticket | Migration Agent Raises the Jira Ticket |
| 7 | Approval Obtained from CC Owner | Approval Obtained from CC Owner |
| 8 | Jira Ticket Updated with Mandatory parameters | Jira Ticket Updated with Mandatory parameters like Project, CostCenter, Source location, Destination location and file Size etc |
| 8a | SFTP Endpoint Details for third party access | SFTP uri location should be entered into Jira ticket |
| 9 | Hourly ADF/DevOps Job Assessing Jira Ticket Pool (Open/Approved) | Hourly ADF/DevOps Job Assessing Jira Ticket Pool (Open/Approved) |
| 10 | Leverage Azure Functions to map parameters from Jira to Azure Devops pipeline | Leverage Azure Functions to map parameters from Jira to Azure Devops pipeline |
| 11 | File Size? | Check Jira ticket for size of File. If <=100 MB, choose ADF path. If >100MB choose Azure DevOps Path |
| 12 | Validate Parameters Requirements based on values from Jira | Validate Parameters Requirements based on values from Jira |
| 13 | Internal or External Access | Target audience for data. |
| 14 | Target is Data Lake V2 | If it is for internal Apps usage, then target is Azure Data Lake Gen2 Storage |
| 15 | sFTP BLOB as Target | Else, if it is for 3rd party, then target is sFTP Blob storage Account |
| 16 | Copy file from sFTP to Landing Zone | Copy Zipped/encrypted file to Azure storage account Landing location |
| 17 | Leverage Core Services required | Use resources provisioned by onetime pipeline mentioned earlier |
| 18 | Read File from Landing Zone | ADF will read file from Landing Zone Storage Account |
| 19 | Obtain Key from Key Vault | Call Azure Function to read decrypt key from keyVault |
| 20 | Obtain Target Location | Fetch details of target location (Azure DataLake Storage Account or sFTP) from Jira |
| 21 | Unzip, Decrypt & Encrypt (sFTP Target only) | Unzip and decrypt file using (Key provided by CBA). In case, you need to write it to sFTP for 3rd party. Encrypt file (using key provided by CFS) |
| 22 | Write MetaData to SQL Server | Write logs to SQL DB on completion of copy process |
| 23 | Trigger SHIR VM Status change | Call Azure function to shutdown VM |
| 24 | Report Success/Error to Jira Ticket | Update Jira ticket for Succes/Failure |
| 25 | > 10TB + ? | Check the jira ticket for size of file. |
| 26 | Large VM | If File size if > 10TB. Choose Large VM of type D16s\_v5 |
| 27 | Small VM | Else choose Small VM of type D8as\_v5 |
| 28 | Leverage Existing DM Resource Group | Use existing resources like vnet, subnet, resource groups created by one time pipeline |
| 29 | Spin VM using **Image Gallery** | Spin VM from image gallery based on selected type earlier |
| 30 | Pull Code from GitHub (Azure DevOps) | Use git clone command to pull code from github |
| 31 | Copy Landing Zone to S Drive Code | PowerShell Script to copy zipped/encrypted files to landing storage account |
| 32 | Decrypt and Unzip from S to T drive | PowerShell Script to unzip/decrypt files (based on CBA Key) and copy to T drive |
| 33 | Encrypt for Third Party with new Key Code | PowerShell Script to encrypt files (based on CFS key) and copy it to T |
| 34 | Copy to sFTP location/Azure DataLake | PowerShell script to copy file from T drive to sFTP location for 3rd party or Azure Data Lake Gen2 |
| 35 | Mount source disk (S) & Destination Disk (T)  Striped Disks (Powershell Leverage Core) | Attach striped Disks as S and T drive to VM |
| 36 | Trigger Powershell Script to copy from Landing Zone to S Drive (Leverage from Core) | Use script 31 |
| 36a | Decrypt file and store on to T drive | Copy Unzipped/decrypted file to T drive using Script 32 |
| 37 | Internal or External Access | Who is intended Audience? |
| 38 | Target is Data Lake V2 | For Internal Audience, target location is Azure Data Lake Gen2 |
| 39 | sFTP BLOB as Target | For 3rd Party, target location is sFTP storage Account |
| 40 | copy Decrypted file to Data Lake Storage | Copy decrypted file to Azure Data Lake Gen2 using Scipt 34 |
| 41 | Encrypt Files with Shared Vendor Key | Encrypt file using script 33 |
| 42 | Copy to sFTP Data Lake Storage | Copy encrypted file using script 33 |
| 43 | Report Success/Error to Jira Ticket | Update Jira ticket with Success/Failure |
| 44 | Write MetaData to SQL Server | Write logs to SQLDB with required columns |
| 45 | Trigger VM Status change to shut down, followed by manual terminattion | ShutDown the VM after completion of process using trigger generated in step44 |

**Housekeeping**

Diagram

Description automatically generated

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| 1 | Schedule Kick Off Every Night | Schedule kick off every day |
| 2 | Azure Automation to read Metadata from SQL Server | Automation to read data from SQL DB |
| 3 | Delete VM Condition Met? | Check if deleteVM condition met |
| 4 | Stop Condition for SHIR met? | Check If stop condition met |
| 5 | Storage for 3 Months Expired? | Check If expiry date comes |
| 6 | Delete VM & S and T Drives | Delete Large VM and disk to save costs |
| 7 | Stop Compute Resources | Stop SHIR VM |
| 8 | Delete from sFTP or Data Lake Gen2 | Delete files from sFTP/Data Lake storage |