

Veeam Backup & Replication As Built Report

Zen Pr Solutions

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| --- | --- |
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# 1 VEEAM-VBR

The following section provides an overview of the implemented components of Veeam Backup & Replication.

## 1.1 Backup Infrastructure

The following section details configuration information about the Backup Server: VEEAM-VBR

Backup Infrastructure Inventory

|  |  |
| --- | --- |
| Backup Proxies | 4 |
| Managed Servers | 44 |
| Backup Repositories | 6 |
| SOBR Repositories | 3 |
| Object Repository | 3 |
| WAN Accelerator | 4 |
| Cloud Service Providers | 2 |
| SureBackup Application Group | 2 |
| SureBackup Virtual Lab | 2 |
| Locations | 7 |
| Instance Licenses (Total/Used) | 1000/0 |
| Socket Licenses (Total/Used) | 0/0 |
| Capacity Licenses (Total/Used) | 0TB/0TB |

Table 1 - Backup Infrastructure Inventory - VEEAM-VBR

### 1.1.1 Backup Server

|  |  |
| --- | --- |
| Server Name | VEEAM-VBR.pharmax.local |
| Version | 12.0.0.1420 |
| Database Server | VEEAM-SQL.pharmax.local |
| Database Instance | - |
| Database Name | VeeamBackup |
| Connection Ports | Backup Server Port: 9392 Secure Connections Port: 9401 Cloud Server Port: 10003 Cloud Service Port: 6169 |
| Install Path | C:\Program Files\Veeam\Backup and Replication\Backup\ |
| Audit Logs Path | C:\ProgramData\Veeam\Backup\Audit |
| Compress Old Audit Logs | Yes |
| Fips Compliant Mode | Disabled |
| Logging Level | 4 |
| Log Directory | C:\ProgramData\Veeam\Backup |

Table 2 - Backup Server - VEEAM-VBR

#### 1.1.1.1 Non-Default Registry Keys

| Registry Key | Registry Value |
| --- | --- |
| AzureArchiveFreezingUnSupportedRegions | brazilsoutheast, germanynorth, westindia, norwaywest, qatarcentral, swedencentral, swedensouth, uaecentral |
| HighestDetectedVMCVersion | 7.0.3.0 |
| LogDirectory | C:\ProgramData\Veeam\Backup |
| SOBRArchivingScanPeriod | 36 |

Table 3 - Non-Default Registry Keys - VEEAM-VBR

#### 1.1.1.2 HealthCheck - Services Status

| Display Name | Short Name | Status |
| --- | --- | --- |
| Veeam AWS Service | VeeamAWSSvc | Running |
| Veeam Azure Service | VeeamAzureSvc | Running |
| Veeam CDP Coordinator Service | VeeamBackupCdpSvc | Running |
| Veeam Backup Server RESTful API Service | VeeamBackupRESTSvc | Running |
| Veeam Backup Service | VeeamBackupSvc | Running |
| Veeam Broker Service | VeeamBrokerSvc | Running |
| Veeam Guest Catalog Service | VeeamCatalogSvc | Running |
| Veeam CDP Proxy Service | VeeamCdpProxySvc | Running |
| Veeam Cloud Connect Service | VeeamCloudSvc | Running |
| Veeam Installer Service | VeeamDeploySvc | Running |
| Veeam Distribution Service | VeeamDistributionSvc | Running |
| Veeam Explorers Recovery Service | VeeamExplorersRecoverySvc | Running |
| Veeam Backup VSS Integration Service | VeeamFilesysVssSvc | Running |
| Veeam Cloud Gateway Service | VeeamGateSvc | Running |
| Veeam GCP Service | VeeamGCPSvc | Running |
| Veeam Kubernetes Service | VeeamKastenSvc | Running |
| Veeam Management Agent Service | VeeamManagementAgentSvc | Running |
| Veeam Mount Service | VeeamMountSvc | Running |
| Veeam vPower NFS Service | VeeamNFSSvc | Running |
| Veeam Tape Access Service | VeeamTapeSvc | Running |
| Veeam Data Mover Service | VeeamTransportSvc | Running |
| Veeam VSS Hardware Provider Service | VeeamVssProviderSvc | Running |
| Veeam WAN Accelerator Service | VeeamWANSvc | Running |

Table 4 - HealthCheck - Services Status - VEEAM-VBR

#### 1.1.1.3 HealthCheck - Network Statistics

| Proto | Local IP | Local Port | Remote IP | Remote Port | State | Process Name | PID |
| --- | --- | --- | --- | --- | --- | --- | --- |
| UDP | 0.0.0.0 | 1063 | \* | \* |  | VeeamNFSSvc | 3240 |
| UDP | 0.0.0.0 | 111 | \* | \* |  | VeeamNFSSvc | 3240 |
| UDP | 0.0.0.0 | 2049 | \* | \* |  | VeeamNFSSvc | 3240 |
| UDP | 127.0.0.1 | 50685 | \* | \* |  | Veeam.Backup.CatalogDataService | 6712 |
| UDP | 127.0.0.1 | 50686 | \* | \* |  | Veeam.Backup.CloudService | 2936 |
| UDP | 127.0.0.1 | 50806 | \* | \* |  | Veeam.Backup.Agent.ConfigurationService | 3104 |
| UDP | 127.0.0.1 | 51935 | \* | \* |  | Veeam.Backup.Cdp.Service | 7960 |
| UDP | 0.0.0.0 | 58991 | \* | \* |  | VeeamGateSvc | 3192 |
| UDP | 0.0.0.0 | 6180 | \* | \* |  | VeeamGateSvc | 3192 |
| UDP | 127.0.0.1 | 63035 | \* | \* |  | Veeam.Backup.Service | 1872 |
| UDP | 127.0.0.1 | 65244 | \* | \* |  | Veeam.Backup.MountService | 2204 |
| TCP | [fe80 | 10003 | [fe80 | 55983 | ESTABLISHED | Veeam.Backup.CloudService | 2936 |
| TCP | 192.168.7.73 | 50992 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 51424 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.UIServer | 5544 |
| TCP | 192.168.7.73 | 51451 | 185.230.149.8 | 6180 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 52324 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Manager | 1504 |
| TCP | 192.168.7.73 | 53078 | 185.230.149.8 | 6180 | ESTABLISHED | veeam.backup.shell | 9760 |
| TCP | 192.168.7.73 | 53179 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.UIServer | 5544 |
| TCP | 192.168.7.73 | 53263 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 53896 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Cdp.Service | 7960 |
| TCP | 192.168.7.73 | 54070 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.UIServer | 5544 |
| TCP | 192.168.7.73 | 54071 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.UIServer | 5544 |
| TCP | 192.168.7.73 | 54139 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.UIServer | 5544 |
| TCP | 192.168.7.73 | 54662 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Manager | 5200 |
| TCP | 192.168.7.73 | 54700 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.ExternalInfrastructure.DbProvider | 2356 |
| TCP | 192.168.7.73 | 54785 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.CloudService | 2936 |
| TCP | 192.168.7.73 | 54861 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.WmiServer | 4224 |
| TCP | 192.168.7.73 | 54907 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Cdp.Service | 7960 |
| TCP | 192.168.7.73 | 54958 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.RestAPIService | 1296 |
| TCP | 192.168.7.73 | 55451 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.UIServer | 5544 |
| TCP | 192.168.7.73 | 55634 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Satellite | 11604 |
| TCP | 192.168.7.73 | 55809 | 192.168.5.2 | 443 | ESTABLISHED | Veeam.Backup.BrokerService | 2576 |
| TCP | [fe80 | 55907 | [fe80 | 9392 | ESTABLISHED | Veeam.Backup.RestAPIService | 1296 |
| TCP | [fe80 | 55908 | [fe80 | 9392 | ESTABLISHED | Veeam.Backup.Manager | 5200 |
| TCP | [fe80 | 55913 | [fe80 | 9392 | ESTABLISHED | Veeam.Backup.Cdp.Service | 7960 |
| TCP | [fe80 | 55928 | [fe80 | 9392 | ESTABLISHED | Veeam.Backup.ExternalInfrastructure.DbProvider | 2356 |
| TCP | [fe80 | 55929 | [fe80 | 9392 | ESTABLISHED | Veeam.Backup.WmiServer | 4224 |
| TCP | [fe80 | 55930 | [fe80 | 9501 | ESTABLISHED | Veeam.Backup.Cdp.Service | 7960 |
| TCP | [fe80 | 55933 | [fe80 | 9392 | ESTABLISHED | Veeam.Backup.Manager | 7412 |
| TCP | [fe80 | 55938 | [fe80 | 9392 | ESTABLISHED | Veeam.Backup.Manager | 1504 |
| TCP | [fe80 | 55956 | [fe80 | 9392 | ESTABLISHED | Veeam.Backup.UIServer | 5544 |
| TCP | [fe80 | 55983 | [fe80 | 10003 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 56532 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 57703 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 59223 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 59383 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 60147 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 61452 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.BrokerService | 2576 |
| TCP | 192.168.7.73 | 62675 | 192.168.7.75 | 1433 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | 127.0.0.1 | 6290 | 127.0.0.1 | 65503 | ESTABLISHED | Veeam.Guest.Interaction.Proxy | 4288 |
| TCP | 192.168.7.73 | 63409 | 192.168.5.2 | 443 | ESTABLISHED | Veeam.Backup.BrokerService | 2576 |
| TCP | 127.0.0.1 | 65503 | 127.0.0.1 | 6290 | ESTABLISHED | VeeamTransportSvc | 3208 |
| TCP | [fe80 | 9392 | [fe80 | 55938 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | [fe80 | 9392 | [fe80 | 55933 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | [fe80 | 9392 | [fe80 | 55928 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | [fe80 | 9392 | [fe80 | 55956 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | [fe80 | 9392 | [fe80 | 55913 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | [fe80 | 9392 | [fe80 | 55907 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | [fe80 | 9392 | [fe80 | 55908 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | [fe80 | 9392 | [fe80 | 55929 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 9392 | 192.168.7.250 | 33696 | ESTABLISHED | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 9396 | 192.168.7.250 | 33699 | ESTABLISHED | Veeam.Backup.UIServer | 5544 |
| TCP | [fe80 | 9501 | [fe80 | 55930 | ESTABLISHED | Veeam.Backup.BrokerService | 2576 |
| TCP | 0.0.0.0 | 10001 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.Service | 1872 |
| TCP | 0.0.0.0 | 10002 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.Service | 1872 |
| TCP | 0.0.0.0 | 10003 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.CloudService | 2936 |
| TCP | 0.0.0.0 | 10005 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.Service | 1872 |
| TCP | 0.0.0.0 | 10006 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.Service | 1872 |
| TCP | 0.0.0.0 | 1063 | 0.0.0.0 | 0 | LISTENING | VeeamNFSSvc | 3240 |
| TCP | 0.0.0.0 | 111 | 0.0.0.0 | 0 | LISTENING | VeeamNFSSvc | 3240 |
| TCP | 0.0.0.0 | 11731 | 0.0.0.0 | 0 | LISTENING | VeeamDeploymentSvc | 3092 |
| TCP | 127.0.0.1 | 16170 | 0.0.0.0 | 0 | LISTENING | Veeam.StandBy.Service | 7208 |
| TCP | 0.0.0.0 | 20443 | 0.0.0.0 | 0 | LISTENING | Veeam.Azure.PlatformSvc | 5420 |
| TCP | 0.0.0.0 | 2049 | 0.0.0.0 | 0 | LISTENING | VeeamNFSSvc | 3240 |
| TCP | 0.0.0.0 | 33032 | 0.0.0.0 | 0 | LISTENING | VeeamCDPSvc | 2892 |
| TCP | 0.0.0.0 | 33033 | 0.0.0.0 | 0 | LISTENING | VeeamCDPSvc | 2892 |
| TCP | 0.0.0.0 | 6160 | 0.0.0.0 | 0 | LISTENING | VeeamDeploymentSvc | 3092 |
| TCP | 0.0.0.0 | 6161 | 0.0.0.0 | 0 | LISTENING | VeeamNFSSvc | 3240 |
| TCP | 0.0.0.0 | 6162 | 0.0.0.0 | 0 | LISTENING | VeeamTransportSvc | 3208 |
| TCP | 0.0.0.0 | 6164 | 0.0.0.0 | 0 | LISTENING | VeeamWANSvc | 3232 |
| TCP | 0.0.0.0 | 6165 | 0.0.0.0 | 0 | LISTENING | VeeamWANSvc | 3232 |
| TCP | 0.0.0.0 | 6166 | 0.0.0.0 | 0 | LISTENING | VeeamTapeSvc | 3224 |
| TCP | 0.0.0.0 | 6168 | 0.0.0.0 | 0 | LISTENING | VeeamGateSvc | 3192 |
| TCP | 0.0.0.0 | 6169 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.CloudService | 2936 |
| TCP | 0.0.0.0 | 6170 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.MountService | 2204 |
| TCP | 0.0.0.0 | 6180 | 0.0.0.0 | 0 | LISTENING | VeeamGateSvc | 3192 |
| TCP | 0.0.0.0 | 6182 | 0.0.0.0 | 0 | LISTENING | VeeamCDPSvc | 2892 |
| TCP | 0.0.0.0 | 6185 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.Cdp.Service | 7960 |
| TCP | 0.0.0.0 | 6190 | 0.0.0.0 | 0 | LISTENING | Veeam.Guest.Interaction.Proxy | 4288 |
| TCP | 0.0.0.0 | 6210 | 0.0.0.0 | 0 | LISTENING | VeeamFilesysVssSvc | 3160 |
| TCP | 0.0.0.0 | 6290 | 0.0.0.0 | 0 | LISTENING | Veeam.Guest.Interaction.Proxy | 4288 |
| TCP | 0.0.0.0 | 8190 | 0.0.0.0 | 0 | LISTENING | VeeamNetworkRedirector | 5928 |
| TCP | 0.0.0.0 | 8191 | 0.0.0.0 | 0 | LISTENING | VeeamNetworkRedirector | 5928 |
| TCP | 0.0.0.0 | 9380 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.Agent.ConfigurationService | 3104 |
| TCP | 0.0.0.0 | 9381 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.Agent.ConfigurationService | 3104 |
| TCP | 0.0.0.0 | 9392 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.Service | 1872 |
| TCP | 0.0.0.0 | 9393 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.CatalogDataService | 6712 |
| TCP | 0.0.0.0 | 9396 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.UIServer | 5544 |
| TCP | 0.0.0.0 | 9401 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.Service | 1872 |
| TCP | 0.0.0.0 | 9402 | 0.0.0.0 | 0 | LISTENING | Veeam.CloudBackup.PlatformService | 6088 |
| TCP | 0.0.0.0 | 9403 | 0.0.0.0 | 0 | LISTENING | Veeam.GCP.PlatformService.WebService | 7736 |
| TCP | 0.0.0.0 | 9403 | 0.0.0.0 | 0 | LISTENING | Veeam.GCP.PlatformService.WebService | 7736 |
| TCP | 0.0.0.0 | 9404 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.PlatformServices.Kasten | 8104 |
| TCP | 0.0.0.0 | 9404 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.PlatformServices.Kasten | 8104 |
| TCP | 0.0.0.0 | 9405 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.Service | 1872 |
| TCP | 0.0.0.0 | 9501 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.BrokerService | 2576 |
| TCP | 0.0.0.0 | 9509 | 0.0.0.0 | 0 | LISTENING | Veeam.Backup.Cdp.Service | 7960 |
| TCP | 192.168.7.73 | 55906 | 192.168.6.14 | 6160 | SYN\_SENT | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 55981 | 192.168.7.215 | 6168 | SYN\_SENT | Veeam.Backup.Service | 1872 |
| TCP | 192.168.7.73 | 55982 | 10.10.30.40 | 443 | SYN\_SENT | Veeam.Backup.BrokerService | 2576 |
| TCP | 192.168.7.73 | 55985 | 10.10.33.42 | 443 | SYN\_SENT | Veeam.Backup.BrokerService | 2576 |

Table 5 - HealthCheck - Network Statistics - VEEAM-VBR

### 1.1.2 Enterprise Manager Information

The following table details information about Veeam Enterprise Manager

|  |  |
| --- | --- |
| Server Name | VEEAM-EM.pharmax.local |
| Server URL | https://VEEAM-EM.pharmax.local:9443 |
| Skip License Push | No |
| Is Connected | Yes |

Table 6 - Enterprise Manager - VEEAM-VBR

### 1.1.3 License Information

The following section provides a summary about the installed licenses

#### 1.1.3.1 Installed License Information

|  |  |
| --- | --- |
| Licensed To | Veeam Software Group GmbH |
| Edition | EnterprisePlus |
| Type | Evaluation |
| Status | Valid |
| Expiration Date | Thursday, August 31, 2023 |
| Support Id | N/A |
| Support Expiration Date | - |
| Auto Update Enabled | No |
| Free Agent Instance | Yes |
| Cloud Connect | Enterprise |

Table 7 - Licenses - VEEAM-VBR

Instance License Usage

| Instances Capacity | Used Instances | New Instances | Rental Instances |
| --- | --- | --- | --- |
| 1000 | 0 | 0 | 0 |

Table 8 - Instance License Usage - VEEAM-VBR

### 1.1.4 General Options

The following section details Veaam Backup & Replication general setting. General settings are applied to all jobs, backup infrastructure components and other objects managed by the backup server.

#### 1.1.4.1 Configuration Backup

|  |  |
| --- | --- |
| Name | Backup Configuration Job |
| Run Job Automatically | Yes |
| Schedule Type | Daily |
| Schedule Options | Type: Everyday Period: 10:00:00 Day Of Week: Sunday Monday Tuesday Wednesday Thursday Friday Saturday |
| Restore Points To Keep | 10 |
| Encryption Enabled | Yes |
| Encryption Key | Password Global |
| Additional Address | veeam\_admin@pharmax.local |
| Email Subject | [%JobResult%] %JobName% (%Time%) |
| Notify On | Notify On Success: No Notify On Warning: Yes Notify On Error: Yes Notify On Last Retry Only: Yes |
| NextRun |  |
| Target | Linux - Hardened Repository |
| Enabled | No |
| LastResult | Failed |

Table 9 - Configuration Backup Settings - VEEAM-VBR

***Health Check:***

***Best Practice: Its a recommended best practice to enable the Backup Configuration j ob***

#### 1.1.4.2 Email Notification

|  |  |
| --- | --- |
| Email Recipient | veeam\_admin@pharmax.local,jcolonf@zenprsolutions.com |
| Email Sender | veeam\_admin@pharmax.local |
| SMTP Server | veeam-ex.pharmax.local |
| Email Subject | [%JobResult%] %JobName% (%VmCount% machines) %Issues% |
| SSL Enabled | Yes |
| Auth Enabled | Yes |
| Credentials | rebelinux@gmail.com |
| Daily Reports Time | 10:00 PM |
| Enabled | No |
| Notify On | Notify On Success: Yes Notify On Warning: Yes Notify On Failure: Yes Notify On Last Retry Only: Yes |

Table 10 - Email Notification Settings - VEEAM-VBR

***Health Check:***

***Best Practice: Veeam recommends configuring email notifications to be able to receive alerts with the results of jobs performed on the backup server.***

#### 1.1.4.3 Global Notifications

Backup Storage

|  |  |
| --- | --- |
| Warn me when free disk space is below | Disabled |

Table 11 - Backup Storage Notification - VEEAM-VBR

Production Datastore

|  |  |
| --- | --- |
| Warn me when free disk space is below | 11% |
| Skip VM processig when free disk space is below | 5% |

Table 12 - Production Datastore Notification - VEEAM-VBR

Support Expiration

|  |  |
| --- | --- |
| Enable notification about support contract expiration | Yes |

Table 13 - Support Expiration Notification - VEEAM-VBR

Update Notification

|  |  |
| --- | --- |
| Check for product and hypervisor updates periodically | Yes |

Table 14 - Update Notification Notification - VEEAM-VBR

#### 1.1.4.4 Storage Latency Control

| Latency Limit | Throttling IO Limit | Enabled |
| --- | --- | --- |
| 20/ms | 30/ms | Yes |

Table 15 - Storage Latency Control - VEEAM-VBR

Per Datastore Latency Control Options

| Datastore Name | Latency Limit | Throttling IO Limit |
| --- | --- | --- |
| HDD-VM-MED-PERF-01 | 10/ms | 15/ms |

Table 16 - Per Datastore Latency Control Options - VEEAM-VBR

#### 1.1.4.5 Backup Server TLS Certificate

|  |  |
| --- | --- |
| Friendly Name | Veeam Backup Server Certificate |
| Subject Name | CN=Veeam Backup Server Certificate |
| Issuer Name | CN=Veeam Backup Server Certificate |
| Expiration Date | 6/27/2032 |
| Issued Date | 6/27/2022 |
| Thumbprint | 958974015EB6E49D6B381229D2521966CB25B9BE |
| Serial Number | 4369014BA8DF88B344C2B090F1D19974 |

Table 17 - TLS Certificate - VEEAM-VBR

#### 1.1.4.6 Network Traffic Rules

The following section details network traffic rules settings configured on Veeam Backup & Replication.

|  |  |
| --- | --- |
| Name | Inter-Site-to-DR |
| Source IP Start | 192.168.7.1 |
| Source IP End | 192.168.7.255 |
| Target IP Start | 10.10.33.1 |
| Target IP End | 10.10.33.255 |
| Encryption Enabled | No |
| Throttling | Throttling Enabled: Yes Throttling Unit: MbytePerSec Throttling Value: 10 Throttling Windows: Yes |

Table 18 - Network Traffic Rules - Inter-Site-to-DR

|  |  |
| --- | --- |
| Name | Internet |
| Source IP Start | Any |
| Source IP End | - |
| Target IP Start | Internet |
| Target IP End | - |
| Encryption Enabled | Yes |
| Throttling | Throttling Enabled: No Throttling Unit: MbitPerSec Throttling Value: 1 Throttling Windows: No |

Table 19 - Network Traffic Rules - Internet

Preferred Networks

| IP Address | Subnet Mask | CIDR Notation |
| --- | --- | --- |
| 192.168.7.0 | 255.255.255.0 | 192.168.7.0/24 |

Table 20 - Preferred Networks - VEEAM-VBR

### 1.1.5 Roles and Users

The following section provides information about roles assigned to users or groups.

| Name | Type | Role |
| --- | --- | --- |
| Administrators | Group | BackupAdmin |
| PHARMAX\veeam\_admin | User | BackupOperator |
| PHARMAX\vrauser | User | BackupOperator |

Table 21 - Roles and Users - VEEAM-VBR

### 1.1.6 Security Credentials

The following table provide information about the credentials managed by Veeam Backup & Replication.

| Name | Change Time | Description |
| --- | --- | --- |
| admin | 12/14/2019 | admin netapp |
| admin | 2/24/2022 | ONTAP-HQ-SAN |
| admin | 1/16/2022 | Isilon Account |
| administrator | 12/2/2022 | vCD administrator |
| administrator@pharmax.local | 12/16/2019 | administrator@pharmax.local |
| administrator@vsphere.local | 2/27/2021 | administrator@vsphere.local |
| backup\_admin1 | 5/29/2020 | veeam\_admin netapp nmdp |
| backup\_admin1 | 2/24/2022 | backup\_admin1 |
| god | 12/28/2021 | god |
| god | 12/28/2021 | god |
| rebelinux@gmail.com | 12/28/2021 | rebelinux@gmail.com |
| root | 12/14/2019 | Azure helper appliance credentials |
| root | 7/20/2022 | ESXi root account |
| root | 12/14/2019 | Helper appliance credentials |
| root | 12/14/2019 | Provider-side network extension appliance credentials |
| root | 12/18/2019 | root |
| root | 12/14/2019 | Tenant-side network extension appliance credentials |
| SYS | 12/18/2019 | SYS |
| veeam | 7/6/2021 | veeam\_dxi |
| VEEAM | 12/18/2019 | VEEAM |
| VEEAM\_ADMIN | 12/18/2019 | VEEAM\_ADMIN |
| veeam\_admin | 12/15/2019 | veeam\_admin |
| veeam\_admin@pharmax.local | 12/14/2019 | veeam\_admin@pharmax.local |
| VEEAM-VBR | 2/6/2022 | VEAM-VBR |
| VEEAM-VBR | 6/30/2021 | HP StoreOne VSA |
| ZenPRSolutions-130858420/ZenPRSolutions-130858420 | 6/9/2022 | ZenPRSolutions-130858420/ZenPRSolutions-130858420 |

Table 22 - Security Credentials - VEEAM-VBR

### 1.1.6.1 Service Provider Credentials

The following table provide information about the service provider credentials managed by Veeam Backup & Replication.

| Name | Description |
| --- | --- |
| godadmin | ACME Inc. Provider |
| jcolonfzenpr | jcolonfzenpr |
| ultra\_super\_god\_admin | Super Duper Backup Provider Credential |
| VCC-ZenPRSolutions | VCC-ZenPRSolutions |

Table 23 - Service Provider Credentials - VEEAM-VBR

### 1.1.7 Geographical Locations

The following section provide a summary about geographical locations.

| Name | id |
| --- | --- |
| Brazil | ceadd22f-3872-4152-9dca-9b27af11b144 |
| Cayey | 1f13b88a-d8c0-4048-a79c-0f4575dc904a |
| Florida | 39a4cbc6-c715-484e-b976-00560946aea9 |
| Gurabo | 39928575-1581-4f81-bd8f-348b1391bfc0 |
| Mexico | e9ccc857-5620-48e7-b229-5bef94293cc3 |
| San Juan | a7643c0e-ed73-4803-85f1-eef451169a54 |
| Texas | 21037406-af0a-4f39-9393-13c8f3d0c8be |

Table 24 - Location - VEEAM-VBR

### 1.1.8 Virtualization Servers and Hosts

| Name | Description | Status |
| --- | --- | --- |
| veeam-lnx-px.pharmax.local | Linux host | Unavailable |
| 192.168.7.65 | Linux host | Unavailable |
| pharmax-cluster.pharmax.local | Microsoft Hyper-V cluster | Available |
| VEEAM-HV-01 | Microsoft Hyper-V server | Unavailable |
| VEEAM-HV-02 | Microsoft Hyper-V server | Unavailable |
| VEEAM-HV-03.pharmax.local | Microsoft Hyper-V server | Unavailable |
| VEEAM-VBR-02V.pharmax.local | Microsoft Windows server | Available |
| VEEAM-HV-02.pharmax.local | Microsoft Windows server | Unavailable |
| VEEAM-REPO-01V.pharmax.local | Microsoft Windows server | Unavailable |
| VEEAM-HVPRX-01V.pharmax.local | Microsoft Windows server | Unavailable |
| VEEAM-HV-03.pharmax.local | Microsoft Windows server | Unavailable |
| VEEAM-VBR.pharmax.local | Microsoft Windows server | Available |
| VEEAM-TPS-01V.pharmax.local | Microsoft Windows server | Unavailable |
| VEEAM-WAN-01V.pharmax.local | Microsoft Windows server | Unavailable |
| VEEAM-HV-01.pharmax.local | Microsoft Windows server | Unavailable |
| server-dc-01v | Microsoft Windows server | Available |
| ONTAP-HQ-SAN-IC.pharmax.local | NDMP server | Unavailable |
| 192.168.5.18:/oracle | NFS file share | Available |
| ONTAP-HQ-SAN\NAS-VEEAM:/DATA | NFS filer | Available |
| ONTAP-HQ-SAN\NAS-VEEAM:/oracle | NFS filer | Available |
| \\isilon\_nas.pharmax.local\DATA | SMB file share | Available |
| \\server-dc-01v\UEMConfig | SMB file share | Available |
| PHARMAX-ISILON\System:\DATA | SMB filer | Available |
| ONTAP-HQ-SAN\NAS-VEEAM:\data | SMB filer | Available |
| ONTAP-HQ-SAN\NAS-VEEAM:\c$ | SMB filer | Available |
| ONTAP-HQ-SAN\NAS-VEEAM:\ipc$ | SMB filer | Available |
| ONTAP-DR-SAN | Storage | Available |
| VEEAM-NTAP-CLUSTER | Storage | Available |
| PHARMAX-ISILON | Storage | Available |
| ONTAP-HQ-SAN | Storage | Available |
| PHARMAX-DR | Storage | Available |
| PHARMAX-HQ | Storage | Available |
| vcd-srv-01v.pharmax.local | VMware Cloud Director server | Available |
| comp-02a.pharmax.local | VMware ESXi server | Available |
| esxsvr-00f.pharmax.local | VMware ESXi server | Available |
| disaster-01a.pharmax.local | VMware ESXi server | Available |
| comp-01a.pharmax.local | VMware ESXi server | Available |
| comp-02a.pharmax.local | VMware ESXi server | Available |
| esxsvr-00f.pharmax.local | VMware ESXi server | Available |
| comp-01a.pharmax.local | VMware ESXi server | Available |
| edge-01a.pharmax.local | VMware ESXi server | Available |
| vcenter-03v.pharmax.local | VMware vCenter server | Available |
| 192.168.5.2 | VMware vCenter server | Available |
| vcenter-01v.pharmax.local | VMware vCenter server | Available |

Table 25 - Managed Servers - VEEAM-VBR

### 1.1.9 Backup Proxies

The following section provides a summary of the Veeam Backup Proxies

#### 1.1.9.1 VMware Backup Proxies

|  |  |
| --- | --- |
| Name | veeam-lnx-px.pharmax.local |
| Host Name | veeam-lnx-px.pharmax.local |
| Type | Vi |
| Disabled | No |
| Max Tasks Count | 2 |
| Use Ssl | No |
| Failover To Network | Yes |
| Transport Mode | Auto |
| Chassis Type | ViVirtual |
| OS Type | Linux |
| Services Credential | - |
| Status | Unavailable |

Table 26 - Backup Proxy - veeam-lnx-px.pharmax.local

|  |  |
| --- | --- |
| Name | VMware Backup Proxy |
| Host Name | VEEAM-VBR.pharmax.local |
| Type | Vi |
| Disabled | No |
| Max Tasks Count | 2 |
| Use Ssl | No |
| Failover To Network | Yes |
| Transport Mode | Auto |
| Chassis Type | ViVirtual |
| OS Type | Local |
| Services Credential | - |
| Status | Available |

Table 27 - Backup Proxy - VMware Backup Proxy

|  |  |
| --- | --- |
| Name | VEEAM-VBR-02V.pharmax.local |
| Host Name | VEEAM-VBR-02V.pharmax.local |
| Type | Vi |
| Disabled | No |
| Max Tasks Count | 2 |
| Use Ssl | No |
| Failover To Network | Yes |
| Transport Mode | Auto |
| Chassis Type | ViVirtual |
| OS Type | Windows |
| Services Credential | administrator@pharmax.local |
| Status | Available |

Table 28 - Backup Proxy - VEEAM-VBR-02V.pharmax.local

HealthCheck - VEEAM-VBR-02V Services Status

| Display Name | Short Name | Status |
| --- | --- | --- |
| Veeam Backup VSS Integration Service | VeeamFilesysVssSvc | Running |
| Veeam Cloud Gateway Service | VeeamGateSvc | Running |
| Veeam Data Mover Service | VeeamTransportSvc | Running |
| Veeam Explorers Recovery Service | VeeamExplorersRecoverySvc | Running |
| Veeam Installer Service | VeeamDeploySvc | Running |
| Veeam Mount Service | VeeamMountSvc | Running |
| Veeam Tape Access Service | VeeamTapeSvc | Running |
| Veeam vPower NFS Service | VeeamNFSSvc | Running |
| Veeam VSS Hardware Provider Service | VeeamVssProviderSvc | Running |
| Veeam WAN Accelerator Service | VeeamWANSvc | Running |

Table 29 - HealthCheck - Services Status - VEEAM-VBR-02V

#### 1.1.9.2 Hyper-V Backup Proxies

|  |  |
| --- | --- |
| Name | VEEAM-HVPRX-01V.pharmax.local |
| Host Name | VEEAM-HVPRX-01V.pharmax.local |
| Type | HvOffhost |
| Disabled | No |
| Max Tasks Count | 2 |
| AutoDetect Volumes | Yes |
| OS Type | Windows |
| Services Credential | administrator@pharmax.local |
| Status | Unavailable |

Table 30 - Backup Proxy - VEEAM-HVPRX-01V

### 1.1.10 WAN Accelerators

The following section provides information about WAN Accelerator. WAN accelerators are responsible for global data caching and data deduplication.

|  |  |
| --- | --- |
| Name | VEEAM-REPO-01V.pharmax.local |
| Host Name | VEEAM-REPO-01V.pharmax.local |
| Is Public | Yes |
| Management Port | 6164\TCP |
| Service IP Address |  |
| Traffic Port | 6165\TCP |
| Max Tasks Count | 1 |
| Download Stream Count | 5 |
| Enable Performance Mode | No |
| Configured Cache | Unknown |
| Cache Path | E:\VeeamWAN |
| Max Cache Size | 10 GB |

Table 31 - Wan Accelerator - VEEAM-REPO-01V.pharmax.local

|  |  |
| --- | --- |
| Name | VEEAM-VBR |
| Host Name | VEEAM-VBR.pharmax.local |
| Is Public | Yes |
| Management Port | 6164\TCP |
| Service IP Address |  |
| Traffic Port | 6165\TCP |
| Max Tasks Count | 1 |
| Download Stream Count | 5 |
| Enable Performance Mode | Yes |
| Configured Cache | No |
| Cache Path | E:\VeeamWAN |
| Max Cache Size | 10 GB |

Table 32 - Wan Accelerator - VEEAM-VBR.pharmax.local

|  |  |
| --- | --- |
| Name | VEEAM-VBR-02V.pharmax.local |
| Host Name | VEEAM-VBR-02V.pharmax.local |
| Is Public | Yes |
| Management Port | 6164\TCP |
| Service IP Address |  |
| Traffic Port | 6165\TCP |
| Max Tasks Count | 1 |
| Download Stream Count | 5 |
| Enable Performance Mode | No |
| Configured Cache | Unknown |
| Cache Path | E:\VeeamWAN |
| Max Cache Size | 100 GB |

Table 33 - Wan Accelerator - VEEAM-VBR-02V.pharmax.local

|  |  |
| --- | --- |
| Name | VEEAM-WAN-01V.pharmax.local |
| Host Name | VEEAM-WAN-01V.pharmax.local |
| Is Public | Yes |
| Management Port | 6164\TCP |
| Service IP Address |  |
| Traffic Port | 6165\TCP |
| Max Tasks Count | 1 |
| Download Stream Count | 5 |
| Enable Performance Mode | No |
| Configured Cache | Unknown |
| Cache Path | C:\VeeamWAN |
| Max Cache Size | 10 GB |

Table 34 - Wan Accelerator - VEEAM-WAN-01V.pharmax.local

### 1.1.11 Service Providers

The following section provides a summary about configured Veeam Cloud Service Providers.

| DNS Name | Cloud Connect Type | Managed By Provider |
| --- | --- | --- |
| uk-rep04.peasoup.net | BaaS | No |
| vcc.virtualdcs.co.uk | Unknown | Yes |

Table 35 - Service Providers - VEEAM-VBR

### 1.1.12 Backup Repository

The following section provides Backup Repository summary information.

| Name | Total Space | Free Space | Used Space % | Status |
| --- | --- | --- | --- | --- |
| cloud-jcolonfzenpr-01 | 1000 Gb | 923 Gb | 8 | Available |
| HQ - Backups | 199 Gb | 198 Gb | 1 | Unavailable |
| Linux - Hardened Repository | 199 Gb | 187 Gb | 6 | Unavailable |
| VEEAM-DD | 351 Gb | 291 Gb | 17 | Unavailable |
| VEEAM-HPE-StoreOnce-VSA | 0 Gb | 0 Gb | 0 | Unavailable |
| VEEAM-VBR - E:\ | 499 Gb | 344 Gb | 31 | Available |
| VEEAM-VBR - F:\ | 99 Gb | 95 Gb | 4 | Available |
| VEEAM-VBR-02V - E:\ | 99 Gb | 5 Gb | 95 | Available |
| VEEAM-VBR-02V - F:\ | 99 Gb | 90 Gb | 9 | Available |

Table 36 - Backup Repository - VEEAM-VBR

#### 1.1.12.1 Backup Repository Configuration

The following section provides a detailed information of the Veeam Backup Repository Configuration.

cloud-jcolonfzenpr-01

|  |  |
| --- | --- |
| Backup Proxy | uk-rep04.peasoup.net |
| Integration Type | Cloud |
| Path |  |
| Connection Type | Cloud |
| Max Task Count | -1 |
| Use Nfs On Mount Host | No |
| San Snapshot Only | No |
| Dedup Storage | No |
| Split Storages Per Vm | Yes |
| Immutability Supported | Yes |
| Immutability Enabled | No |
| Immutability Interval | 7 |
| Version Of Creation | 11.0.1.1261 |
| Has Backup Chain Length Limitation | No |

Table 37 - Backup Repository - cloud-jcolonfzenpr-01

***Health Check:***

***Best Practice: Veeam recommend to implement Immutability where it is supported. It is done for increased security: immutability protects your data from loss as a result of attacks, malware activity or any other injurious actions.***

HQ - Backups

|  |  |
| --- | --- |
| Backup Proxy | VEEAM-REPO-01V.pharmax.local |
| Integration Type | Windows |
| Path | E:\Backups |
| Connection Type | WinLocal |
| Max Task Count | 4 |
| Use Nfs On Mount Host | Yes |
| San Snapshot Only | No |
| Dedup Storage | No |
| Split Storages Per Vm | Yes |
| Immutability Supported | No |
| Immutability Enabled | No |
| Immutability Interval | 7 |
| Version Of Creation | 11.0.1.1261 |
| Has Backup Chain Length Limitation | No |

Table 38 - Backup Repository - HQ - Backups

Linux - Hardened Repository

|  |  |
| --- | --- |
| Backup Proxy | veeam-lnx-px.pharmax.local |
| Integration Type | Linux |
| Path | /backup\_data/backups |
| Connection Type | LinuxLocal |
| Max Task Count | 4 |
| Use Nfs On Mount Host | Yes |
| San Snapshot Only | No |
| Dedup Storage | No |
| Split Storages Per Vm | No |
| Immutability Supported | No |
| Immutability Enabled | No |
| Immutability Interval | 7 |
| Version Of Creation | 11.0.1.1261 |
| Has Backup Chain Length Limitation | No |

Table 39 - Backup Repository - Linux - Hardened Repository

VEEAM-DD

|  |  |
| --- | --- |
| Backup Proxy | VEEAM-VBR.pharmax.local |
| Integration Type | Dell Data Domain |
| Path | ddboost://VEEAM-DD.pharmax.local:VEEAM\_BACKUP@/ |
| Connection Type | DDBoost |
| Max Task Count | 15 |
| Use Nfs On Mount Host | Yes |
| San Snapshot Only | No |
| Dedup Storage | Yes |
| Split Storages Per Vm | Yes |
| Immutability Supported | No |
| Immutability Enabled | No |
| Immutability Interval | 7 |
| Version Of Creation | 9.5.4.2866 |
| Has Backup Chain Length Limitation | Yes |

Table 40 - Backup Repository - VEEAM-DD

VEEAM-HPE-StoreOnce-VSA

|  |  |
| --- | --- |
| Backup Proxy | VEEAM-VBR.pharmax.local |
| Integration Type | HPE StoreOnce |
| Path | storeonce://veeam-hsv.pharmax.local:VEEAM-VLT-HPE@/ |
| Connection Type | HPStoreOnceIntegration |
| Max Task Count | 4 |
| Use Nfs On Mount Host | Yes |
| San Snapshot Only | No |
| Dedup Storage | Yes |
| Split Storages Per Vm | Yes |
| Immutability Supported | Yes |
| Immutability Enabled | No |
| Immutability Interval | 7 |
| Version Of Creation | 11.0.0.837 |
| Has Backup Chain Length Limitation | Yes |

Table 41 - Backup Repository - VEEAM-HPE-StoreOnce-VSA

***Health Check:***

***Best Practice: Veeam recommend to implement Immutability where it is supported. It is done for increased security: immutability protects your data from loss as a result of attacks, malware activity or any other injurious actions.***

VEEAM-VBR - E:\

|  |  |
| --- | --- |
| Extent of ScaleOut Backup Repository | SOBR - Minio |
| Backup Proxy | VEEAM-VBR.pharmax.local |
| Integration Type | Windows |
| Path | E:\Backups |
| Connection Type | WinLocal |
| Max Task Count | 4 |
| Use Nfs On Mount Host | Yes |
| San Snapshot Only | No |
| Dedup Storage | No |
| Split Storages Per Vm | No |
| Immutability Supported | No |
| Immutability Enabled | No |
| Immutability Interval | 7 |
| Version Of Creation | 10.0.0.4461 |
| Has Backup Chain Length Limitation | No |

Table 42 - Backup Repository - VEEAM-VBR - E:\

VEEAM-VBR - F:\

|  |  |
| --- | --- |
| Extent of ScaleOut Backup Repository | SOBR - AWS S3 |
| Backup Proxy | VEEAM-VBR.pharmax.local |
| Integration Type | Windows |
| Path | F:\Backup |
| Connection Type | WinLocal |
| Max Task Count | 4 |
| Use Nfs On Mount Host | Yes |
| San Snapshot Only | No |
| Dedup Storage | No |
| Split Storages Per Vm | No |
| Immutability Supported | No |
| Immutability Enabled | No |
| Immutability Interval | 7 |
| Version Of Creation | 9.0.0.0 |
| Has Backup Chain Length Limitation | No |

Table 43 - Backup Repository - VEEAM-VBR - F:\

VEEAM-VBR-02V - E:\

|  |  |
| --- | --- |
| Extent of ScaleOut Backup Repository | SOBR - AWS S3 |
| Backup Proxy | VEEAM-VBR-02V.pharmax.local |
| Integration Type | Windows |
| Path | E:\Backups |
| Connection Type | WinLocal |
| Max Task Count | 4 |
| Use Nfs On Mount Host | Yes |
| San Snapshot Only | No |
| Dedup Storage | No |
| Split Storages Per Vm | No |
| Immutability Supported | No |
| Immutability Enabled | No |
| Immutability Interval | 7 |
| Version Of Creation | 11.0.1.1261 |
| Has Backup Chain Length Limitation | No |

Table 44 - Backup Repository - VEEAM-VBR-02V - E:\

VEEAM-VBR-02V - F:\

|  |  |
| --- | --- |
| Extent of ScaleOut Backup Repository | SOBR - Azure Blob |
| Backup Proxy | VEEAM-VBR-02V.pharmax.local |
| Integration Type | Windows |
| Path | F:\Backups |
| Connection Type | WinLocal |
| Max Task Count | 4 |
| Use Nfs On Mount Host | Yes |
| San Snapshot Only | No |
| Dedup Storage | No |
| Split Storages Per Vm | No |
| Immutability Supported | No |
| Immutability Enabled | No |
| Immutability Interval | 7 |
| Version Of Creation | 11.0.1.1261 |
| Has Backup Chain Length Limitation | No |

Table 45 - Backup Repository - VEEAM-VBR-02V - F:\

### 1.1.13 Object Storage Repository

The following section provides a summary about the Veeam Object Storage Repository.

| Name | Type | Connection Type | Gateway Server |
| --- | --- | --- | --- |
| AWS - S3 - Backup | AmazonS3 | Gateway | VEEAM-VBR.pharmax.local |
| Object storage repository - Minio | AmazonS3Compatible | Direct | Direct Mode |
| OS - Azure Blob | AzureBlob | Gateway | VEEAM-VBR.pharmax.local |

Table 46 - Object Storage Repository - VEEAM-VBR

#### 1.1.13.1 Object Storage Repository Configuration

The following section provides detailed information about Object Storage Backup Repository

AWS - S3 - Backup

|  |  |
| --- | --- |
| Name | AWS - S3 - Backup |
| Type | AmazonS3 |
| Amazon S3 Folder | backuptest |
| Immutability Period | 30 |
| Immutability Enabled | No |
| Size Limit Enabled | No |
| Size Limit | 10240 |
| Connection Type | Gateway |
| Gateway Server | VEEAM-VBR.pharmax.local |
| Use IA Storage Class | No |
| Use OZ IA Storage Class | No |

Table 47 - Object Storage Repository - AWS - S3 - Backup

***Health Check:***

***Best Practice: Veeam recommend to implement Immutability where it is supported. It is done for increased security: immutability protects your data from loss as a result of attacks, malware activity or any other injurious actions.***

Object storage repository - Minio

|  |  |
| --- | --- |
| Name | Object storage repository - Minio |
| Service Point | https://veeam-minio.pharmax.local:9000/ |
| Type | AmazonS3Compatible |
| Amazon S3 Folder | SOBR |
| Immutability Period | 30 |
| Immutability Enabled | No |
| Size Limit Enabled | Yes |
| Size Limit | 10240 |
| Connection Type | Direct |

Table 48 - Object Storage Repository - Object storage repository - Minio

***Health Check:***

***Best Practice: Veeam recommend to implement Immutability where it is supported. It is done for increased security: immutability protects your data from loss as a result of attacks, malware activity or any other injurious actions.***

OS - Azure Blob

|  |  |
| --- | --- |
| Name | OS - Azure Blob |
| Type | AzureBlob |
| Immutability Enabled | No |
| Size Limit Enabled | No |
| Size Limit | 10240 |
| Connection Type | Gateway |
| Gateway Server | VEEAM-VBR.pharmax.local |
| Azure Blob Name | Veeam |
| Azure Blob Container | veeam-backup |

Table 49 - Object Storage Repository - OS - Azure Blob

***Health Check:***

***Best Practice: Veeam recommend to implement Immutability where it is supported. It is done for increased security: immutability protects your data from loss as a result of attacks, malware activity or any other injurious actions.***

### 1.1.14 Archive Object Storage Repository

The following section provides detailed information about Archive Object Storage Backup Repository

AWS - S3 Glacier

|  |  |
| --- | --- |
| Gateway Server | veeam-lnx-px |
| Gateway Server Enabled | - |
| Immutability Enabled | No |
| Archive Type | AmazonS3Glacier |
| Deep Archive | Yes |
| Proxy Instance Type | m5a.large |
| Proxy Instance vCPU | 2 |
| Proxy Instance Memory | 8 |
| Proxy Subnet | 172.31.32.0/20 |
| Proxy Security Group | veeam-auto-cfdff081-b091-4108-a943-a03340a08644 |
| Proxy Availability Zone | us-east-1b |

Table 50 - Archive Object Storage Repository - AWS - S3 Glacier

***Health Check:***

***Best Practice: Veeam recommend to implement Immutability where it is supported. It is done for increased security: immutability protects your data from loss as a result of attacks, malware activity or any other injurious actions.***

Azure - Blob Archives

|  |  |
| --- | --- |
| Gateway Server | veeam-lnx-px |
| Gateway Server Enabled | - |
| Immutability Enabled | No |
| Archive Type | AzureArchive |
| Service Type | ArchiveTier |
| Archive Container | veeamarchive |
| Archive Folder | Archive |
| Proxy Resource Group |  |
| Proxy Network |  |
| Proxy VM Size |  |
| Proxy VM vCPU |  |
| Proxy VM Memory | 0 |
| Proxy VM Max Disks |  |
| Proxy VM Location |  |

Table 51 - Archive Object Storage Repository - Azure - Blob Archives

***Health Check:***

***Best Practice: Veeam recommend to implement Immutability where it is supported. It is done for increased security: immutability protects your data from loss as a result of attacks, malware activity or any other injurious actions.***

### 1.1.15 ScaleOut Backup Repository

The following section provides a summary about ScaleOut Backup Repository

| Name | Performance Tier | Capacity Tier | Archive Tier |
| --- | --- | --- | --- |
| SOBR - AWS S3 | VEEAM-VBR - F:\ VEEAM-VBR-02V - E:\ | AWS - S3 - Backup | AWS - S3 Glacier |
| SOBR - Azure Blob | VEEAM-VBR-02V - F:\ | OS - Azure Blob | Azure - Blob Archives |
| SOBR - Minio | VEEAM-VBR - E:\ | Object storage repository - Minio | Not configured |

Table 52 - Scale Backup Repository - VEEAM-VBR

#### 1.1.15.1 ScaleOut Backup Repository Configuration

The following section provides a detailed information about the ScaleOut Backup Repository

##### 1.1.15.1.1 SOBR - AWS S3

General Settings

|  |  |
| --- | --- |
| Placement Policy | Performance |
| Use Per VM Backup Files | Yes |
| Perform Full When Extent Offline | No |
| Use Capacity Tier | Yes |
| Encrypt data uploaded to Object Storage | No |
| Encryption Key | Disabled |
| Move backup file older than | 14 |
| Override Policy Enabled | No |
| Override Space Threshold | 90 |
| Use Archive GFS Tier | Yes |
| Archive GFS Backup older than | 90 days |
| Store archived backup as standalone fulls | No |
| Cost Optimized Archive Enabled | Yes |
| Description | Created by PHARMAX\jocolon at 12/21/2021 8:08 PM. |

Table 53 - General Settings - SOBR - AWS S3

***Health Check:***

***Best Practice: Veeam Backup & Replication allows you to encrypt offloaded data. With the Encrypt data uploaded to object storage setting selected, the entire collection of blocks along with the metadata will be encrypted while being offloaded regardless of the jobs encryption settings. This helps you protect the data from an unauthorized access.***

Performance Tier

|  |  |
| --- | --- |
| Name | VEEAM-VBR - F:\ |
| Repository | VEEAM-VBR - F:\ |
| Path | F:\Backup |
| Total Space | 99 99 GB |
| Used Space | 95 5 GB |
| Status | Normal |

Table 54 - Performance Tier - VEEAM-VBR - F:\

Performance Tier

|  |  |
| --- | --- |
| Name | VEEAM-VBR-02V - E:\ |
| Repository | VEEAM-VBR-02V - E:\ |
| Path | E:\Backups |
| Total Space | 99 99 GB |
| Used Space | 95 5 GB |
| Status | Normal |

Table 55 - Performance Tier - VEEAM-VBR-02V - E:\

Capacity Tier

|  |  |
| --- | --- |
| Name | AWS - S3 - Backup |
| Type | AmazonS3 |
| Amazon S3 Folder | backuptest |
| Use Gateway Server | - |
| Gateway Server | VEEAM-VBR.pharmax.local |
| Immutability Period | 30 |
| Immutability Enabled | No |
| Size Limit Enabled | No |
| Size Limit | 10240 |
| Use IA Storage Class | No |
| Use OZ IA Storage Class | No |

Table 56 - Capacity Tier - AWS - S3 - Backup

Offload Window Time Period

**Permited \ Denied**

| H | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sun | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Mon | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Tue | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Wed | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Thu | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Fri | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sat | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Table 57 - Offload Window - AWS - S3 - Backup

Archive Tier

|  |  |
| --- | --- |
| Name | AWS - S3 Glacier |
| Type | AmazonS3Glacier |
| Use Gateway Server | - |
| Gateway Server | veeam-lnx-px.pharmax.local |

Table 58 - Archive Tier - AWS - S3 Glacier

##### 1.1.15.1.2 SOBR - Azure Blob

General Settings

|  |  |
| --- | --- |
| Placement Policy | Data Locality |
| Use Per VM Backup Files | Yes |
| Perform Full When Extent Offline | No |
| Use Capacity Tier | Yes |
| Encrypt data uploaded to Object Storage | Yes |
| Encryption Key | Password Global |
| Move backup file older than | 14 |
| Override Policy Enabled | No |
| Override Space Threshold | 90 |
| Use Archive GFS Tier | Yes |
| Archive GFS Backup older than | 90 days |
| Store archived backup as standalone fulls | No |
| Cost Optimized Archive Enabled | Yes |
| Description | Created by PHARMAX\jocolon at 12/22/2021 8:15 PM. |

Table 59 - General Settings - SOBR - Azure Blob

Performance Tier

|  |  |
| --- | --- |
| Name | VEEAM-VBR-02V - F:\ |
| Repository | VEEAM-VBR-02V - F:\ |
| Path | F:\Backups |
| Total Space | 99 GB |
| Used Space | 90 GB |
| Status | Normal |

Table 60 - Performance Tier - VEEAM-VBR-02V - F:\

Capacity Tier

|  |  |
| --- | --- |
| Name | OS - Azure Blob |
| Type | AzureBlob |
| Use Gateway Server | - |
| Gateway Server | VEEAM-VBR.pharmax.local |
| Immutability Period | 30 |
| Immutability Enabled | No |
| Size Limit Enabled | No |
| Size Limit | 10240 |
| Azure Blob Name | Veeam |
| Azure Blob Container | veeam-backup |

Table 61 - Capacity Tier - OS - Azure Blob

Offload Window Time Period

**Permited \ Denied**

| H | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sun | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Mon | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Tue | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Wed | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Thu | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Fri | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sat | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Table 62 - Offload Window - OS - Azure Blob

Archive Tier

|  |  |
| --- | --- |
| Name | Azure - Blob Archives |
| Type | AzureArchive |
| Use Gateway Server | - |
| Gateway Server | veeam-lnx-px.pharmax.local |
| Azure Service Type | ArchiveTier |
| Azure Blob Name | Archive |
| Azure Blob Container | veeamarchive |

Table 63 - Archive Tier - Azure - Blob Archives

##### 1.1.15.1.3 SOBR - Minio

General Settings

|  |  |
| --- | --- |
| Placement Policy | Data Locality |
| Use Per VM Backup Files | Yes |
| Perform Full When Extent Offline | No |
| Use Capacity Tier | Yes |
| Encrypt data uploaded to Object Storage | Yes |
| Encryption Key | Password Global |
| Move backup file older than | 14 |
| Override Policy Enabled | No |
| Override Space Threshold | 90 |
| Use Archive GFS Tier | No |
| Archive GFS Backup older than | 90 days |
| Store archived backup as standalone fulls | No |
| Cost Optimized Archive Enabled | Yes |
| Description | Created by PHARMAX\administrator at 2/27/2021 7:29 PM. |

Table 64 - General Settings - SOBR - Minio

Performance Tier

|  |  |
| --- | --- |
| Name | VEEAM-VBR - E:\ |
| Repository | VEEAM-VBR - E:\ |
| Path | E:\Backups |
| Total Space | 499 GB |
| Used Space | 344 GB |
| Status | Normal |

Table 65 - Performance Tier - VEEAM-VBR - E:\

Capacity Tier

|  |  |
| --- | --- |
| Name | Object storage repository - Minio |
| Service Point | https://veeam-minio.pharmax.local:9000/ |
| Type | AmazonS3Compatible |
| Amazon S3 Folder | SOBR |
| Use Gateway Server | - |
| Gateway Server | VEEAM-WAN-01V.pharmax.local VEEAM-VBR.pharmax.local VEEAM-HVPRX-01V.pharmax.local server-dc-01v VEEAM-REPO-01V.pharmax.local VEEAM-HV-01 VEEAM-HV-01.pharmax.local VEEAM-HV-03.pharmax.local VEEAM-HV-03.pharmax.local VEEAM-TPS-01V.pharmax.local VEEAM-HV-02 VEEAM-HV-02.pharmax.local VEEAM-VBR-02V.pharmax.local veeam-lnx-px.pharmax.local |
| Immutability Period | 30 |
| Immutability Enabled | No |
| Size Limit Enabled | Yes |
| Size Limit | 10240 |

Table 66 - Capacity Tier - Object storage repository - Minio

Offload Window Time Period

**Permited \ Denied**

| H | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mon | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Tue | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Wed | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Thu | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Fri | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 67 - Offload Window - Object storage repository - Minio

### 1.1.16 SureBackup Configuration

The following section provides configuration information about SureBackup.

#### 1.1.16.1 Application Groups

The following section provides a summary about Application Groups.

| Name | VM List |
| --- | --- |
| HV - APPGroup | LNX-WEB-01 |
| PHARMAX-AG | smallserver-01v, LINUX-VM |

Table 68 - Application Group - VEEAM-VBR

##### 1.1.16.2 HV - APPGroup VM Settings

LNX-WEB-01

|  |  |
| --- | --- |
| VM Name | LNX-WEB-01 |
| Credentials | administrator@pharmax.local |
| Role | WebServer |
| Test Script | WebServer |
| Startup Options | Allocated Memory: 100 Heartbeat Check: Yes Maximum Boot Time: 600 App Init Timeout: 120 Ping Check: Yes |

Table 69 - Application Group VM Settings - LNX-WEB-01

##### 1.1.16.3 PHARMAX-AG VM Settings

smallserver-01v

|  |  |
| --- | --- |
| VM Name | smallserver-01v |
| Credentials | - |
| Role | - |
| Test Script | - |
| Startup Options | Allocated Memory: 100 Heartbeat Check: Yes Maximum Boot Time: 600 App Init Timeout: 120 Ping Check: Yes |

Table 70 - Application Group VM Settings - smallserver-01v

LINUX-VM

|  |  |
| --- | --- |
| VM Name | LINUX-VM |
| Credentials | root |
| Role | DNSServer, DomainControllerAuthoritative, GlobalCatalog, MailServer, SQLServer, VBO, WebServer |
| Test Script | WebServer, SQLServer, DNSServer, DomainController, GlobalCatalog, MailServer, VBO |
| Startup Options | Allocated Memory: 100 Heartbeat Check: No Maximum Boot Time: 7800 App Init Timeout: 120 Ping Check: No |

Table 71 - Application Group VM Settings - LINUX-VM

#### 1.1.16.4 Virtual Labs

The following section provides a summary about SureBackup Virtual Lab.

| Name | Platform | Physical Host | Physical Host Version |
| --- | --- | --- | --- |
| PHARMAX-VLAB | VMWare | esxsvr-00f | VMware ESXi 8.0.1 build-21495797 |
| PHARMAX-VLAB-HYPER-V | HyperV | VEEAM-HV-03 | Microsoft Windows Server 2022 Datacenter Evaluation 64-bit (10.0.20348 build:20348) |

Table 72 - Virtual Lab - VEEAM-VBR

##### 1.1.16.4.1 vSphere Virtual Labs Configuration

###### 1.1.16.4.1.1 PHARMAX-VLAB Settings

|  |  |
| --- | --- |
| Host | esxsvr-00f.pharmax.local |
| Resource Pool | PHARMAX-VLAB |
| VM Folder | PHARMAX-VLAB |
| Cache Datastore | SSD-VM-HIGH-CAPACITY-PERF-KN |
| Proxy Appliance Enabled | Yes |
| Proxy Appliance | PHARMAX-VLAB |
| Networking Type | Advanced |
| Production Network | DVS-Esxi-VM-Network-DR DVS-ESXi-MANAGEMENT |
| Isolated Network | PHARMAX-VLAB DVS-Esxi-VM-Network-DR PHARMAX-VLAB DVS-ESXi-MANAGEMENT |
| Routing Between vNics | No |
| Multi Host | No |
| Static IP Mapping | Yes |

Table 73 - Virtual Lab Settings - PHARMAX-VLAB

vNIC Settings

| Isolated Network | VLAN ID | DHCP Enabled | Network Properties |
| --- | --- | --- | --- |
| PHARMAX-VLAB DVS-ESXi-MANAGEMENT | 5 | Yes | IP Address: 192.168.5.254 Subnet Mask: 255.255.255.0 Masquerade IP: 192.168.255.0 DNS Server: 192.168.5.1 |
| PHARMAX-VLAB DVS-Esxi-VM-Network-DR | 33 | Yes | IP Address: 10.10.33.254 Subnet Mask: 255.255.255.0 Masquerade IP: 10.255.255.0 DNS Server: 192.168.5.1 |

Table 74 - vNIC Settings - PHARMAX-VLAB

IP Address Mapping

| Production Network | Isolated IP Address | Access IP Address | Notes |
| --- | --- | --- | --- |
| DVS-Esxi-VM-Network-DR | 10.10.33.4 | 192.168.5.3 |  |

Table 75 - IP Address Mapping - PHARMAX-VLAB

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined notes. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

## 1.2 Tape Infrastructure

The following section details Tape Infrastructure configuration information

Tape Infrastructure

|  |  |
| --- | --- |
| Tape Servers | 4 |
| Tape Library | 4 |
| Tape MediaPool | 9 |
| Tape Vault | 2 |
| Tape Drives | 17 |
| Tape Medium | 50 |

Table 76 - Tape Infrastructure Inventory - VEEAM-VBR

### 1.2.1 Tape Servers

| Name | Description | Status |
| --- | --- | --- |
| VEEAM-REPO-01V.pharmax.local | Created by PHARMAX\administrator at 10/21/2022 11:18 AM. | Unavailable |
| VEEAM-TPS-01V.pharmax.local | Created by PHARMAX\administrator at 10/13/2022 10:06 AM. | Unavailable |
| VEEAM-VBR | Pharmax HQ Tape Server | Available |
| VEEAM-VBR-02V.pharmax.local | Created by PHARMAX\jocolon at 1/6/2022 9:16 PM. | Unavailable |

Table 77 - Tape Server - VEEAM-VBR

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

### 1.2.2 Tape Libraries

The following section provides summary information about Tape Server connected Tape Library.

#### 1.2.2.1 ATL P3000 6.24

|  |  |
| --- | --- |
| Library Name | ATL P3000 6.24 |
| Library Model | P3000 |
| Library Type | Automated |
| Number of Slots | 20 |
| Connected to | VEEAM-VBR-02V.pharmax.local |
| Enabled | Yes |
| Status | Unavailable |

Table 78 - Tape Library - ATL P3000 6.24

Tape Drives

| Name | Model | Serial Number | Medium | Enabled | Is Locked | State |
| --- | --- | --- | --- | --- | --- | --- |
| Tape1 | QUANTUM SDLT600 | 45C5500101 | - | No | No | Offline |
| Tape3 | QUANTUM SDLT600 | 45C5500102 | - | No | No | Offline |
| Tape4 | QUANTUM SDLT600 | 45C5500103 | - | No | No | Offline |

Table 79 - Tape Drives - ATL P3000 6.24

Tape Mediums

| Name | Expiration Date | Total Space | Free Space | Locked | Retired | Worm |
| --- | --- | --- | --- | --- | --- | --- |
| vbr02vS | - | 320 GB | 320 GB | No | No | No |
| vbr03vS | - | 320 GB | 320 GB | No | No | No |
| vbr04vS | - | 320 GB | 320 GB | No | No | No |
| vbr05vS | - | 320 GB | 320 GB | No | No | No |
| vbr06vS | - | 320 GB | 320 GB | No | No | No |
| vbr07vS | - | 320 GB | 320 GB | No | No | No |
| vbr08vS | - | 320 GB | 320 GB | No | No | No |
| vbr09vS | - | 320 GB | 320 GB | No | No | No |

Table 80 - Tape Mediums - ATL P3000 6.24

#### 1.2.2.2 ATL P7000 6.24

|  |  |
| --- | --- |
| Library Name | ATL P7000 6.24 |
| Library Model | P7000 |
| Library Type | Automated |
| Number of Slots | 20 |
| Connected to | VEEAM-TPS-01V.pharmax.local |
| Enabled | Yes |
| Status | Unavailable |

Table 81 - Tape Library - ATL P7000 6.24

Tape Drives

| Name | Model | Serial Number | Medium | Enabled | Is Locked | State |
| --- | --- | --- | --- | --- | --- | --- |
| Tape1 | IBM ULT3580-TD5 | 6809000813 | - | No | No | Offline |
| Tape2 | IBM ULT3580-TD5 | 8610160196 | - | No | No | Offline |
| Tape3 | IBM ULT3580-TD5 | 0741559482 | - | No | No | Offline |

Table 82 - Tape Drives - ATL P7000 6.24

Tape Mediums

| Name | Expiration Date | Total Space | Free Space | Locked | Retired | Worm |
| --- | --- | --- | --- | --- | --- | --- |
| tps01vL5 | - | 0 KB | 0 KB | No | No | No |
| tps02vL5 | - | 0 KB | 0 KB | No | No | No |
| tps03vL5 | - | 0 KB | 0 KB | No | No | No |
| tps04vL5 | - | 0 KB | 0 KB | No | No | No |
| tps05vL5 | - | 0 KB | 0 KB | No | No | No |
| tps06vL5 | - | 0 KB | 0 KB | No | No | No |
| tps07vL5 | - | 0 KB | 0 KB | No | No | No |
| tps08vL5 | - | 0 KB | 0 KB | No | No | No |

Table 83 - Tape Mediums - ATL P7000 6.24

#### 1.2.2.3 QUANTUM Scalar i2000 7000

|  |  |
| --- | --- |
| Library Name | QUANTUM Scalar i2000 7000 |
| Library Model | Scalar i2000 |
| Library Type | Automated |
| Number of Slots | 20 |
| Connected to | VEEAM-VBR |
| Enabled | Yes |
| Status | Unavailable |

Table 84 - Tape Library - QUANTUM Scalar i2000 7000

Tape Drives

| Name | Model | Serial Number | Medium | Enabled | Is Locked | State |
| --- | --- | --- | --- | --- | --- | --- |
| Tape1 | IBM ULT3580-TD8 | 0527746823 | - | No | No | Offline |
| Tape3 | IBM ULT3580-TD8 | 1657072330 | - | No | No | Offline |
| Tape5 | IBM ULT3580-TD8 | 1260008002 | - | No | No | Offline |

Table 85 - Tape Drives - QUANTUM Scalar i2000 7000

Tape Mediums

| Name | Expiration Date | Total Space | Free Space | Locked | Retired | Worm |
| --- | --- | --- | --- | --- | --- | --- |
| affe23L8 | 3/26/2022 | 12 TB | 12 TB | No | No | No |
| affe24L8 | 6/4/2022 | 12 TB | 12 TB | No | No | No |
| affe25L8 | - | 12 TB | 12 TB | No | No | No |
| affe26L8 | 3/5/2022 | 12 TB | 12 TB | No | No | No |
| affe27L8 | - | 12 TB | 12 TB | No | No | No |
| affe28L8 | - | 12 TB | 12 TB | No | No | No |
| affe29L8 | - | 12 TB | 12 TB | No | No | No |
| affe30L8 | - | 12 TB | 12 TB | No | No | No |
| TEK000L8 | 6/30/2021 | 12 TB | 12 TB | No | No | No |
| TEK001L8 | 7/5/2022 | 12 TB | 12 TB | No | No | No |
| TEK002L8 | 1/3/2023 | 12 TB | 12 TB | No | No | No |
| WRM232LY | - | 12 TB | 12 TB | No | No | Yes |
| WRM233LY | - | 12 TB | 12 TB | No | No | Yes |
| WRM234LY | - | 12 TB | 12 TB | No | No | Yes |
| WRM235LY | - | 12 TB | 12 TB | No | No | Yes |
| WRM236LY | - | 12 TB | 12 TB | No | No | Yes |
| WRM237LY | - | 12 TB | 12 TB | No | No | Yes |
| WRM238LY | - | 12 TB | 12 TB | No | No | Yes |
| WRM239LY | - | 12 TB | 12 TB | No | No | Yes |
| WRM240LY | - | 12 TB | 12 TB | No | No | Yes |
| WRM241LY | - | 12 TB | 12 TB | No | No | Yes |

Table 86 - Tape Mediums - QUANTUM Scalar i2000 7000

#### 1.2.2.4 QUANTUM Scalar i2000 7000

|  |  |
| --- | --- |
| Library Name | QUANTUM Scalar i2000 7000 |
| Library Model | Scalar i2000 |
| Library Type | Automated |
| Number of Slots | 20 |
| Connected to | VEEAM-TPS-01V.pharmax.local |
| Enabled | Yes |
| Status | Unavailable |

Table 87 - Tape Library - QUANTUM Scalar i2000 7000

Tape Drives

| Name | Model | Serial Number | Medium | Enabled | Is Locked | State |
| --- | --- | --- | --- | --- | --- | --- |
| Tape0 | IBM ULT3580-TD8 | 0410608996 | - | No | No | Offline |
| Tape10 | IBM ULT3580-TD8 | 8545474151 | - | No | No | Offline |
| Tape4 | IBM ULT3580-TD8 | 9848941746 | - | No | No | Offline |
| Tape5 | IBM ULT3580-TD8 | 6950900071 | - | No | No | Offline |
| Tape6 | IBM ULT3580-TD8 | 2773846603 | - | No | No | Offline |
| Tape7 | IBM ULT3580-TD8 | 9352972755 | - | No | No | Offline |
| Tape8 | IBM ULT3580-TD8 | 7825242222 | - | No | No | Offline |
| Tape9 | IBM ULT3580-TD8 | 2508671867 | - | No | No | Offline |

Table 88 - Tape Drives - QUANTUM Scalar i2000 7000

Tape Mediums

| Name | Expiration Date | Total Space | Free Space | Locked | Retired | Worm |
| --- | --- | --- | --- | --- | --- | --- |
| tps02vL8 | - | 0 KB | 0 KB | No | No | No |
| tps03vL8 | - | 0 KB | 0 KB | No | No | No |
| tps04vL8 | - | 0 KB | 0 KB | No | No | No |
| tps05vL8 | - | 0 KB | 0 KB | No | No | No |
| tps06vL8 | - | 0 KB | 0 KB | No | No | No |
| tps07vL8 | - | 0 KB | 0 KB | No | No | No |
| tps08vL8 | - | 0 KB | 0 KB | No | No | No |
| tps09vL8 | - | 0 KB | 0 KB | No | No | No |
| tps10vL8 | - | 0 KB | 0 KB | No | No | No |
| tps11vL8 | - | 0 KB | 0 KB | No | No | No |

Table 89 - Tape Mediums - QUANTUM Scalar i2000 7000

### 1.2.3 Tape Media Pools

| Name | Type | Tape Count | Total Space | Free Space | Tape Library |
| --- | --- | --- | --- | --- | --- |
| Free | Free | 9 | 2 TB | 2 TB | QUANTUM Scalar i2000 7000 ATL P7000 6.24 ATL P3000 6.24 QUANTUM Scalar i2000 7000 |
| GFS Media Pool 1 | Gfs | 1 | 70 TB | 70 TB | QUANTUM Scalar i2000 7000 |
| Imported | Imported | 0 | 0 KB | 0 KB | QUANTUM Scalar i2000 7000 ATL P7000 6.24 ATL P3000 6.24 QUANTUM Scalar i2000 7000 |
| Oracle - Media Pool | Custom | 4 | 24 TB | 24 TB | QUANTUM Scalar i2000 7000 ATL P3000 6.24 QUANTUM Scalar i2000 7000 |
| Retired | Retired | 0 | 0 KB | 0 KB | QUANTUM Scalar i2000 7000 ATL P7000 6.24 ATL P3000 6.24 QUANTUM Scalar i2000 7000 |
| Standard Media Pool | Custom | 3 | 35 TB | 35 TB | QUANTUM Scalar i2000 7000 |
| Unrecognized | Unrecognized | 18 | 0 KB | 0 KB | QUANTUM Scalar i2000 7000 ATL P7000 6.24 ATL P3000 6.24 QUANTUM Scalar i2000 7000 |
| WORM GFS Media Pool 1 | Gfs | 0 | 59 TB | 59 TB | QUANTUM Scalar i2000 7000 |
| WORM Media Pool 1 | Custom | 5 | 59 TB | 59 TB | QUANTUM Scalar i2000 7000 |

Table 90 - Tape Media Pools - VEEAM-VBR

### 1.2.4 Tape Media Pools Configuration

#### 1.2.4.1 GFS Media Pool 1

Tape Library

|  |  |
| --- | --- |
| Library Name | QUANTUM Scalar i2000 7000 |
| Library Id | 8e943722-c1a5-451a-9fa1-a1e5ebda79a3 |
| Type | Automated |
| State | Offline |
| Model | Scalar i2000 |
| Drives | Drive 1, Drive 2, Drive 3 |
| Slots | 20 |
| Tape Count | 1 |
| Total Space | 70 TB |
| Free Space | 70 TB |
| Add Tape from Free Media Pool Automatically when more Tape are Required | Yes |
| Description |  |
| Library Mode | Active (Used Always) |

Table 91 - Tape Library - GFS Media Pool 1

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Tape Mediums

| Name | Is Worm? | Total Space | Free Space | Tape Library |
| --- | --- | --- | --- | --- |
| affe27L8 | No | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| affe29L8 | No | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| affe30L8 | No | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| TEK000L8 | No | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| TEK001L8 | No | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| TEK002L8 | No | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |

Table 92 - Tape Mediums - QUANTUM Scalar i2000 7000

Gfs Media Set

Daily Media Set Options

|  |  |
| --- | --- |
| Override Protection Period | 0 |
| Medium | TEK000L8 |
| Media Set Name | Daily media set #%id% %date% |
| Add Tapes from Media Pool Automatically | Yes |
| Append Backup Files to Incomplete Tapes | Yes |
| Move All Offline Tape into the following Media Vault | Yes |
| Vault | DR - Tape Vault |

Table 93 - Gfs Media Set - Daily Media Set Options

Weekly Media Set Options

|  |  |
| --- | --- |
| Override Protection Period | 4 |
| Medium | affe27L8 |
| Media Set Name | Weekly media set #%id% %date% |
| Add Tapes from Media Pool Automatically | Yes |
| Append Backup Files to Incomplete Tapes | No |

Table 94 - Gfs Media Set - Weekly Media Set Options

Monthly Media Set Options

|  |  |
| --- | --- |
| Override Protection Period | 12 |
| Medium | affe29L8 |
| Media Set Name | Monthly media set #%id% %date% |
| Add Tapes from Media Pool Automatically | Yes |
| Append Backup Files to Incomplete Tapes | No |

Table 95 - Gfs Media Set - Monthly Media Set Options

Quarterly Media Set Options

|  |  |
| --- | --- |
| Override Protection Period | 4 |
| Medium | TEK001L8 |
| Media Set Name | Quarterly media set #%id% %date% |
| Add Tapes from Media Pool Automatically | No |
| Append Backup Files to Incomplete Tapes | No |

Table 96 - Gfs Media Set - Quarterly Media Set Options

Yearly Media Set Options

|  |  |
| --- | --- |
| Override Protection Period | 1 |
| Medium | TEK002L8 |
| Media Set Name | Yearly media set #%id% %date% |
| Add Tapes from Media Pool Automatically | Yes |
| Append Backup Files to Incomplete Tapes | No |
| Move All Offline Tape into the following Media Vault | Yes |
| Vault | Pharmax - Veeam Tape Vault |

Table 97 - Gfs Media Set - Yearly Media Set Options

Options

|  |  |
| --- | --- |
| Enable Parallel Processing for Tape Jobs using this Media Pool | Yes |
| Jobs Pointed to this Media Pool can use up to | 2 Tape Drives Simultaneously |
| Enable Parallel Processing of Backup Chains within a Single Tape Job | Yes |
| Use Encryption | Yes |
| Encryption Password | Password Global |

Table 98 - Media Set - GFS Media Pool 1

#### 1.2.4.2 Oracle - Media Pool

Tape Library

|  |  |
| --- | --- |
| Library Name | QUANTUM Scalar i2000 7000 |
| Library Id | 8e943722-c1a5-451a-9fa1-a1e5ebda79a3 |
| Type | Automated |
| State | Offline |
| Model | Scalar i2000 |
| Drives | Drive 1, Drive 2, Drive 3 |
| Slots | 20 |
| Tape Count | 4 |
| Total Space | 24 TB |
| Free Space | 24 TB |
| Add Tape from Free Media Pool Automatically when more Tape are Required | Yes |
| Description |  |
| Library Mode | Active (Used Always) |

Table 99 - Tape Library - Oracle - Media Pool

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Tape Mediums

| Name | Is Worm? | Total Space | Free Space | Tape Library |
| --- | --- | --- | --- | --- |
| affe28L8 | No | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |

Table 100 - Tape Mediums - QUANTUM Scalar i2000 7000

|  |  |
| --- | --- |
| Library Name | ATL P3000 6.24 |
| Library Id | 50053ba6-e4b7-49fe-bebf-98fd9d58ff83 |
| Type | Automated |
| State | Offline |
| Model | P3000 |
| Drives | Drive 1, Drive 2, Drive 3 |
| Slots | 20 |
| Tape Count | 4 |
| Total Space | 24 TB |
| Free Space | 24 TB |
| Add Tape from Free Media Pool Automatically when more Tape are Required | Yes |
| Description |  |
| Library Mode | Active (Used Always) |

Table 101 - Tape Library - Oracle - Media Pool

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Tape Mediums

| Name | Is Worm? | Total Space | Free Space | Tape Library |
| --- | --- | --- | --- | --- |
| vbr02vS | No | 320 GB | 320 GB | ATL P3000 6.24 |
| vbr07vS | No | 320 GB | 320 GB | ATL P3000 6.24 |

Table 102 - Tape Mediums - ATL P3000 6.24

|  |  |
| --- | --- |
| Library Name | QUANTUM Scalar i2000 7000 |
| Library Id | 9b7ed595-5922-48f3-bd80-375af07096bb |
| Type | Automated |
| State | Offline |
| Model | Scalar i2000 |
| Drives | Drive 1, Drive 2, Drive 3, Drive 4, Drive 5, Drive 6, Drive 7, Drive 8 |
| Slots | 20 |
| Tape Count | 4 |
| Total Space | 24 TB |
| Free Space | 24 TB |
| Add Tape from Free Media Pool Automatically when more Tape are Required | Yes |
| Description |  |
| Library Mode | Active (Used Always) |

Table 103 - Tape Library - Oracle - Media Pool

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Media Set

|  |  |
| --- | --- |
| Name | Oracle Media set # %id% %date% |
| Automatically Create New Media Set | Daily at 12:00:00, on these days [Monday Tuesday Wednesday Thursday Friday] |

Table 104 - Media Set - Oracle - Media Pool

Retention

|  |  |
| --- | --- |
| Data Retention Policy | Protect Data for 1 Weeks |
| Offline Media Tracking | No |

Table 105 - Media Set - Oracle - Media Pool

Options

|  |  |
| --- | --- |
| Enable Parallel Processing for Tape Jobs using this Media Pool | Yes |
| Jobs Pointed to this Media Pool can use up to | 2 Tape Drives Simultaneously |
| Enable Parallel Processing of Backup Chains within a Single Tape Job | Yes |
| Use Encryption | Yes |
| Encryption Password | Password Global |

Table 106 - Media Set - Oracle - Media Pool

#### 1.2.4.3 Standard Media Pool

Tape Library

|  |  |
| --- | --- |
| Library Name | QUANTUM Scalar i2000 7000 |
| Library Id | 8e943722-c1a5-451a-9fa1-a1e5ebda79a3 |
| Type | Automated |
| State | Offline |
| Model | Scalar i2000 |
| Drives | Drive 1, Drive 2, Drive 3 |
| Slots | 20 |
| Tape Count | 3 |
| Total Space | 35 TB |
| Free Space | 35 TB |
| Add Tape from Free Media Pool Automatically when more Tape are Required | Yes |
| Description |  |
| Library Mode | Active (Used Always) |

Table 107 - Tape Library - Standard Media Pool

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Tape Mediums

| Name | Is Worm? | Total Space | Free Space | Tape Library |
| --- | --- | --- | --- | --- |
| affe25L8 | No | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |

Table 108 - Tape Mediums - QUANTUM Scalar i2000 7000

Media Set

|  |  |
| --- | --- |
| Name | Standard Media set # %id% %date% |
| Automatically Create New Media Set | Create new Media Set for every backup session |

Table 109 - Media Set - Standard Media Pool

Retention

|  |  |
| --- | --- |
| Data Retention Policy | Protect Data for 1 Months |
| Offline Media Tracking | Yes |
| Move all Offline Tape from this Media Pool into The following Media Vault | DR - Tape Vault |

Table 110 - Media Set - Standard Media Pool

Options

|  |  |
| --- | --- |
| Enable Parallel Processing for Tape Jobs using this Media Pool | Yes |
| Jobs Pointed to this Media Pool can use up to | 2 Tape Drives Simultaneously |
| Enable Parallel Processing of Backup Chains within a Single Tape Job | Yes |
| Use Encryption | No |

Table 111 - Media Set - Standard Media Pool

#### 1.2.4.4 WORM GFS Media Pool 1

Tape Library

|  |  |
| --- | --- |
| Library Name | QUANTUM Scalar i2000 7000 |
| Library Id | 8e943722-c1a5-451a-9fa1-a1e5ebda79a3 |
| Type | Automated |
| State | Offline |
| Model | Scalar i2000 |
| Drives | Drive 1, Drive 2, Drive 3 |
| Slots | 20 |
| Tape Count | 0 |
| Total Space | 59 TB |
| Free Space | 59 TB |
| Add Tape from Free Media Pool Automatically when more Tape are Required | Yes |
| Description |  |
| Library Mode | Active (Used Always) |

Table 112 - Tape Library - WORM GFS Media Pool 1

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Tape Mediums

| Name | Is Worm? | Total Space | Free Space | Tape Library |
| --- | --- | --- | --- | --- |
| WRM237LY | Yes | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| WRM238LY | Yes | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| WRM239LY | Yes | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| WRM240LY | Yes | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| WRM241LY | Yes | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |

Table 113 - Tape Mediums - QUANTUM Scalar i2000 7000

Gfs Media Set

Daily Media Set Options

|  |  |
| --- | --- |
| Override Protection Period | 14 |
| Medium | WRM237LY |
| Media Set Name | Daily media set #%id% %date% |
| Add Tapes from Media Pool Automatically | Yes |
| Append Backup Files to Incomplete Tapes | Yes |

Table 114 - Gfs Media Set - Daily Media Set Options

Weekly Media Set Options

|  |  |
| --- | --- |
| Override Protection Period | 4 |
| Medium | WRM238LY |
| Media Set Name | Weekly media set #%id% %date% |
| Add Tapes from Media Pool Automatically | Yes |
| Append Backup Files to Incomplete Tapes | No |

Table 115 - Gfs Media Set - Weekly Media Set Options

Monthly Media Set Options

|  |  |
| --- | --- |
| Override Protection Period | 12 |
| Medium | WRM239LY |
| Media Set Name | Monthly media set #%id% %date% |
| Add Tapes from Media Pool Automatically | Yes |
| Append Backup Files to Incomplete Tapes | No |

Table 116 - Gfs Media Set - Monthly Media Set Options

Quarterly Media Set Options

|  |  |
| --- | --- |
| Override Protection Period | 4 |
| Medium | WRM240LY |
| Media Set Name | Quarterly media set #%id% %date% |
| Add Tapes from Media Pool Automatically | Yes |
| Append Backup Files to Incomplete Tapes | No |

Table 117 - Gfs Media Set - Quarterly Media Set Options

Yearly Media Set Options

|  |  |
| --- | --- |
| Override Protection Period | 1 |
| Medium | WRM241LY |
| Media Set Name | Yearly media set #%id% %date% |
| Add Tapes from Media Pool Automatically | Yes |
| Append Backup Files to Incomplete Tapes | No |

Table 118 - Gfs Media Set - Yearly Media Set Options

Options

|  |  |
| --- | --- |
| Enable Parallel Processing for Tape Jobs using this Media Pool | Yes |
| Jobs Pointed to this Media Pool can use up to | 2 Tape Drives Simultaneously |
| Enable Parallel Processing of Backup Chains within a Single Tape Job | Yes |
| Use Encryption | Yes |
| Encryption Password | Password Global |

Table 119 - Media Set - WORM GFS Media Pool 1

#### 1.2.4.5 WORM Media Pool 1

Tape Library

|  |  |
| --- | --- |
| Library Name | QUANTUM Scalar i2000 7000 |
| Library Id | 8e943722-c1a5-451a-9fa1-a1e5ebda79a3 |
| Type | Automated |
| State | Offline |
| Model | Scalar i2000 |
| Drives | Drive 1, Drive 2, Drive 3 |
| Slots | 20 |
| Tape Count | 5 |
| Total Space | 59 TB |
| Free Space | 59 TB |
| Add Tape from Free Media Pool Automatically when more Tape are Required | Yes |
| Description |  |
| Library Mode | Active (Used Always) |

Table 120 - Tape Library - WORM Media Pool 1

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Tape Mediums

| Name | Is Worm? | Total Space | Free Space | Tape Library |
| --- | --- | --- | --- | --- |
| WRM232LY | Yes | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| WRM233LY | Yes | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| WRM234LY | Yes | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| WRM235LY | Yes | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |
| WRM236LY | Yes | 12 TB | 12 TB | QUANTUM Scalar i2000 7000 |

Table 121 - Tape Mediums - QUANTUM Scalar i2000 7000

Media Set

|  |  |
| --- | --- |
| Name | WORM media set # %id% %date% |
| Automatically Create New Media Set | Do not Create, Always continue using current Media Set |

Table 122 - Media Set - WORM Media Pool 1

Retention

|  |  |
| --- | --- |
| Data Retention Policy | Never Overwrite Data |
| Offline Media Tracking | Yes |
| Move all Offline Tape from this Media Pool into The following Media Vault | DR - Tape Vault |

Table 123 - Media Set - WORM Media Pool 1

Options

|  |  |
| --- | --- |
| Enable Parallel Processing for Tape Jobs using this Media Pool | Yes |
| Jobs Pointed to this Media Pool can use up to | 2 Tape Drives Simultaneously |
| Enable Parallel Processing of Backup Chains within a Single Tape Job | Yes |
| Use Encryption | Yes |
| Encryption Password | Password Global |

Table 124 - Media Set - WORM Media Pool 1

### 1.2.5 Tape Vaults

| Name | Description | Automatic Protect | Location |
| --- | --- | --- | --- |
| DR - Tape Vault | Created by PHARMAX\jocolon at 1/4/2022 11:10 PM. | No | - |
| Pharmax - Veeam Tape Vault | Pharmax - HQ Tape Vault | Yes | - |

Table 125 - Tape Vault - VEEAM-VBR

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

### 1.2.6 NDMP Servers

| Name | Credentials | Port | Gateway |
| --- | --- | --- | --- |
| ONTAP-HQ-SAN-IC.pharmax.local | backup\_admin1 | 10000 | VEEAM-VBR.pharmax.local |

Table 126 - NDMP Servers - VEEAM-VBR

## 1.3 Inventory

The following section provides inventory information about the Virtual Infrastructure managed by Veeam Server veeam-vbr.pharmax.local.

Inventory

|  |  |
| --- | --- |
| vCenter Servers | 3 |
| ESXi Servers | 8 |
| Hyper-V Clusters | 1 |
| Hyper-V Servers | 3 |
| Protection Groups | 6 |
| File Shares | 10 |

Table 127 - Inventory Summary - VEEAM-VBR

### 1.3.1 Virtual Infrastructure

The following sections detail the configuration about managed virtual servers backed-up by Veeam Server veeam-vbr.pharmax.local.

#### 1.3.1.1 VMware vSphere

The following section details information about VMware Virtual Infrastructure backed-up by Veeam Server veeam-vbr.pharmax.local.

VMware vCenter

| Name | Version | Child Host |
| --- | --- | --- |
| 192.168.5.2 | VMware vCenter Server 8.0.1 build-21560480 | comp-02a.pharmax.local, comp-01a.pharmax.local, esxsvr-00f.pharmax.local |
| vcenter-01v.pharmax.local | VMware vCenter Server 8.0.1 build-21560480 | comp-02a.pharmax.local, esxsvr-00f.pharmax.local, comp-01a.pharmax.local |
| vcenter-03v.pharmax.local | VMware vCenter Server 7.0.3 build-20990077 | edge-01a.pharmax.local |

Table 128 - vCenter Servers - VEEAM-VBR

Esxi Host

| Name | Version |
| --- | --- |
| comp-01a.pharmax.local | VMware ESXi 7.0.3 build-20328353 |
| comp-01a.pharmax.local | VMware ESXi 7.0.3 build-20328353 |
| comp-02a.pharmax.local | VMware ESXi 7.0.3 build-20328353 |
| comp-02a.pharmax.local | VMware ESXi 7.0.3 build-20328353 |
| disaster-01a.pharmax.local | VMware ESXi 7.0.3 build-20036589 |
| edge-01a.pharmax.local | VMware ESXi 7.0.3 build-20036589 |
| esxsvr-00f.pharmax.local | VMware ESXi 8.0.1 build-21495797 |
| esxsvr-00f.pharmax.local | VMware ESXi 8.0.1 build-21495797 |

Table 129 - Esxi Hosts - VEEAM-VBR

#### 1.3.1.2 Microsoft Hyper-V

Hyper-V Clusters

| Name | Credentials | Child Host |
| --- | --- | --- |
| pharmax-cluster.pharmax.local | administrator@pharmax.local | VEEAM-HV-02, VEEAM-HV-01 |

Table 130 - Hyper-V Clusters - VEEAM-VBR

Hyper-V Host

| Name | Version |
| --- | --- |
| VEEAM-HV-01 | Microsoft Windows Server 2022 Datacenter Evaluation 64-bit (10.0.20348 build:20348) |
| VEEAM-HV-02 | Microsoft Windows Server 2022 Datacenter Evaluation 64-bit (10.0.20348 build:20348) |
| VEEAM-HV-03.pharmax.local | Microsoft Windows Server 2022 Datacenter Evaluation 64-bit (10.0.20348 build:20348) |

Table 131 - Hyper-V Hosts - VEEAM-VBR

### 1.3.2 Physical Infrastructure

The following sections detail configuration information about managed physical infrastructure.

#### 1.3.2.1 Protection Groups Summary

| Name | Type | Container | Schedule | Enabled |
| --- | --- | --- | --- | --- |
| Gurabo PC - Backup | Custom | ActiveDirectory | Periodically | Yes |
| HQ - Manual Packet | Custom | ManuallyDeployed | Daily | Yes |
| Linux Protection Group | Custom | IndividualComputers | Daily | Yes |
| Manually Added | ManuallyAdded | IndividualComputers | Daily | Yes |
| Others | Custom | ManuallyDeployed | Daily | Yes |
| Server with Netapp LUNS | Custom | ActiveDirectory | Daily | Yes |

Table 132 - Protection Groups - VEEAM-VBR

##### 1.3.2.1.1 Protection Group Configuration

Gurabo PC - Backup

|  |  |
| --- | --- |
| Domain | pharmax.local |
| Backup Objects | Name: VDI-Computers Type: OrganizationUnit Distinguished Name: OU=VDI-Computers,DC=pharmax,DC=local  Name: VEEAM WorkStations Type: OrganizationUnit Distinguished Name: OU=VEEAM WorkStations,DC=pharmax,DC=local |
| Exclude VM | No |
| Exclude Computers | No |
| Exclude Offline Computers | Yes |
| Excluded Entity |  |
| Master Credentials | administrator@pharmax.local |
| Deployment Options | Install Agent: Yes Upgrade Automatically: Yes Install Driver: No Reboot If Required: No |
| Notification Options | Send Time: 08:00:00 Additional Address: [veeam\_admin@pharmax.local] Use Notification Options: No Subject: [%JobResult%] %PGName%: (%FoundCount% new hosts found (%TotalCount% total, %SeenCount% seen) |

Table 133 - Protection Group Configuration - Gurabo PC - Backup

Manually Added

|  |  |
| --- | --- |
| Deployment Options | Install Agent: Yes Upgrade Automatically: Yes Install Driver: No Reboot If Required: No |
| Notification Options | Send Time: 10:00:00 Additional Address: [jcolonf@zenprsolutions.com, rebelinux@gmail.com] Use Notification Options: No Subject: [%JobResult%] %JobName% (%ObjectCount% machines) %Issues% |

Table 134 - Protection Group Configuration - Manually Added

Server with Netapp LUNS

|  |  |
| --- | --- |
| Domain | pharmax.local |
| Backup Objects | Name: NTAPSVR-01v.pharmax.local Type: Computer Distinguished Name: CN=NTAPSVR-01V,OU=Member Servers,DC=pharmax,DC=local |
| Exclude VM | No |
| Exclude Computers | No |
| Exclude Offline Computers | Yes |
| Excluded Entity |  |
| Master Credentials | administrator@pharmax.local |
| Deployment Options | Install Agent: Yes Upgrade Automatically: Yes Install Driver: Yes Reboot If Required: Yes |

Table 135 - Protection Group Configuration - Server with Netapp LUNS

### 1.3.3 File Shares

The following table provides a summary about the file shares backed-up by Veeam Server veeam-vbr.pharmax.local.

| Path | Type | Backup IO Control | Credentials | Cache Repository |
| --- | --- | --- | --- | --- |
| \\192.168.5.18\c$ | NAS Filler | Medium | admin | Linux - Hardened Repository |
| \\192.168.5.18\DATA | NAS Filler | Medium | admin | Linux - Hardened Repository |
| \\192.168.5.18\ipc$ | NAS Filler | Medium | admin | Linux - Hardened Repository |
| \\192.168.7.90\data | NAS Filler | Highest | admin | Linux - Hardened Repository |
| \\isilon\_nas.pharmax.local\DATA | SMB Share | Low | administrator@pharmax.local | Linux - Hardened Repository |
| \\server-dc-01v\UEMConfig | SMB Share | Medium | administrator@pharmax.local | Linux - Hardened Repository |
| 192.168.5.18:/DATA | NAS Filler | Medium | None | Linux - Hardened Repository |
| 192.168.5.18:/oracle | NFS Share | Low | None | Linux - Hardened Repository |
| 192.168.5.18:/oracle | NAS Filler | Medium | None | Linux - Hardened Repository |
| server-dc-01v | File Server | Medium | administrator@pharmax.local | Linux - Hardened Repository |

Table 136 - File Shares - VEEAM-VBR

## 1.4 Storage Infrastructure

The following section provides information about the storage infrastructure managed by Veeam Server veeam-vbr.pharmax.local.

Storage Infrastructure Inventory

|  |  |
| --- | --- |
| NetApp Ontap Storage | 5 |
| NetApp Ontap Volumes | 5 |
| Dell Isilon Storage | 1 |
| Dell Isilon Volumes | 1 |

Table 137 - Storage Infrastructure Inventory - VEEAM-VBR

### 1.4.1 NetApp Ontap Storage

The following section details information about NetApp storage infrastructure.

#### 1.4.1.1 ONTAP-DR-SAN

|  |  |
| --- | --- |
| DNS Name | ONTAP-DR-SAN.pharmax.local |
| Description | Created by PHARMAX\jocolon at 1/9/2022 7:40 PM. |
| Storage Type | NaCluster |
| Used Credential | admin - (ONTAP-HQ-SAN) |
| Connection Address | ONTAP-DR-SAN-01V.pharmax.local, 10.10.30.17, 10.10.30.16 |
| Connection Port | 443\TCP |
| Installed Licenses | FlexClone, SnapRestore, Iscsi, Nfs, SnapVaultPrimary, SnapVaultSecondary, SnapMirror, Cifs |

Table 138 - NetApp Host - ONTAP-DR-SAN

Volumes

| Name | Total Space | Used Space | Thin Provision |
| --- | --- | --- | --- |
| SAN\_DR\_root | 973 MB | 664 KB | No |
| SRM\_EDGE\_PLACEHOLDER\_01 | 10 GB | 85 MB | Yes |
| SRM\_EDGE\_STORAGE\_01 | 50 GB | 4 GB | Yes |
| SRM\_LAB\_STORAGE\_DR\_01 | 50 GB | 956 MB | Yes |
| SRM\_PLACEHOLDER\_01 | 10 GB | 341 MB | Yes |
| vol\_SRM\_HQ\_EDGE\_01\_dest | 833 MB | 669 MB | Yes |
| vol\_SRM\_LAB\_STORAGE\_01\_dest | 40 GB | 32 GB | Yes |
| vol\_SRM\_LAB\_STORAGE\_02\_dest | 31 GB | 848 MB | Yes |
| vol\_SRM\_POL\_DEDUP\_01\_dest | 30 GB | 26 GB | Yes |

Table 139 - NetApp Volumes - ONTAP-DR-SAN

#### 1.4.1.2 ONTAP-HQ-SAN

|  |  |
| --- | --- |
| DNS Name | ONTAP-HQ-SAN.pharmax.local |
| Description | Created by PHARMAX\jocolon at 12/23/2021 9:12 PM. |
| Storage Type | NaCluster |
| Used Credential | admin - (ONTAP-HQ-SAN) |
| Connection Address | 192.168.5.16, 192.168.5.17 |
| Connection Port | 443\TCP |
| Installed Licenses | FlexClone, SnapRestore, Iscsi, Nfs, SnapVaultPrimary, SnapVaultSecondary, SnapMirror, Cifs |

Table 140 - NetApp Host - ONTAP-HQ-SAN

Volumes

| Name | Total Space | Used Space | Thin Provision |
| --- | --- | --- | --- |
| DATA | 10 GB | 2 GB | No |
| HYPERV\_QUORUM\_STORAGE | 15 GB | 109 MB | No |
| HYPERV\_VM\_STORAGE | 50 GB | 123 MB | No |
| NAS\_VEEAM\_root | 973 MB | 4 MB | No |
| oracle | 10 GB | 4 MB | No |
| SAN\_HQ\_root | 973 MB | 4 MB | No |

Table 141 - NetApp Volumes - ONTAP-HQ-SAN

#### 1.4.1.3 VEEAM-NTAP-CLUSTER

|  |  |
| --- | --- |
| DNS Name | VEEAM-NTAP-CLUSTER.pharmax.local |
| Description | Created by PHARMAX\administrator at 5/5/2022 12:54 PM. |
| Storage Type | NaCluster |
| Used Credential | admin - (admin netapp) |
| Connection Address | VEEAM-NTAP-CLUSTER, 192.168.5.131, 192.168.5.130 |
| Connection Port | 443\TCP |
| Installed Licenses | FlexClone, SnapRestore, Iscsi, Nfs, SnapVaultPrimary, SnapVaultSecondary, SnapMirror, Cifs |

Table 142 - NetApp Host - VEEAM-NTAP-CLUSTER

#### 1.4.1.4 PHARMAX-DR

|  |  |
| --- | --- |
| DNS Name | pharmax-dr.pharmax.local |
| Description | Created by PHARMAX\administrator at 6/29/2021 7:48 PM. |
| Storage Type | NaCluster |
| Used Credential | admin - (admin netapp) |
| Connection Address | pharmax-dr.pharmax.local, 10.10.33.14, 10.10.33.15, 10.10.33.16 |
| Connection Port | 443\TCP |
| Installed Licenses | FlexClone, SnapRestore, Fcp, Iscsi, Nfs, SnapVaultPrimary, SnapVaultSecondary, SnapMirror, Cifs |

Table 143 - NetApp Host - PHARMAX-DR

Volumes

| Name | Total Space | Used Space | Thin Provision |
| --- | --- | --- | --- |
| DP\_Server\_Home | 15 GB | 42 MB | Yes |
| NAS\_DR\_root | 19 MB | 1 MB | No |
| Oracle\_Data\_Volumes\_dest | 5 GB | 2 GB | Yes |
| Oracle\_Data\_Volumes\_dest\_clone\_36 | 5 GB | 2 GB | Yes |
| SAN\_DR\_root | 19 MB | 1 MB | No |
| SERVER\_DATASTORE\_DR | 50 GB | 288 MB | Yes |
| SnapLock\_COM | 10 GB | 552 KB | No |
| SnapLock\_ENT | 10 GB | 552 KB | No |
| SRM\_PlaceHolder\_DR | 10 GB | 31 MB | Yes |
| vol\_NTAPSOL\_LUN\_1\_dest | 192 MB | 16 MB | Yes |
| vol\_NTAPSOL\_LUN\_1\_dest\_clone\_807 | 192 MB | 16 MB | Yes |
| vol\_SERVER\_DATASTORE\_2\_dest | 122 MB | 404 KB | Yes |
| vol\_SERVER\_DATASTORE\_dest | 15 GB | 8 GB | Yes |
| VVOL\_REPLICATION\_MIRROR | 122 MB | 364 KB | Yes |

Table 144 - NetApp Volumes - PHARMAX-DR

#### 1.4.1.5 PHARMAX-HQ

|  |  |
| --- | --- |
| DNS Name | pharmax-hq.pharmax.local |
| Description | Created by PHARMAX\administrator at 6/29/2021 12:10 PM. |
| Storage Type | NaCluster |
| Used Credential | admin - (admin netapp) |
| Connection Address | pharmax-hq.pharmax.local, 192.168.7.61, 192.168.7.62, 192.168.7.60 |
| Connection Port | 443\TCP |
| Installed Licenses | FlexClone, SnapRestore, Fcp, Iscsi, Nfs, SnapVaultPrimary, SnapVaultSecondary, SnapMirror, Cifs |

Table 145 - NetApp Host - PHARMAX-HQ

Volumes

| Name | Total Space | Used Space | Thin Provision |
| --- | --- | --- | --- |
| ESX\_RDM\_TEST | 48 GB | 89 MB | Yes |
| HYPERV\_CLUSTER\_QUORUM | 10 GB | 5 MB | Yes |
| HYPERV\_LOG\_DATASTORE | 50 GB | 8 GB | Yes |
| HYPERV\_VM\_DATASTORE | 50 GB | 9 GB | Yes |
| SAN\_root | 19 MB | 996 KB | No |
| SERVER\_DATASTORE | 50 GB | 5 GB | Yes |
| SERVER\_DATASTORE\_DR\_dest | 300 MB | 231 MB | Yes |
| SQL\_SERVER\_01\_V | 80 GB | 109 MB | Yes |

Table 146 - NetApp Volumes - PHARMAX-HQ

### 1.4.2 Dell Isilon Storage

The following section details information about Dell storage infrastructure.

#### 1.4.2.1 PHARMAX-ISILON

|  |  |
| --- | --- |
| DNS Name | isilon\_nas.pharmax.local |
| Description | Created by PHARMAX\jocolon at 1/16/2022 12:33 PM. |
| Used Credential | admin - (Isilon Account) |
| Connection Address | 192.168.7.90 |
| Connection Port | 8080\TCP |

Table 147 - Isilon Host - PHARMAX-ISILON

Volumes

| Name | Total Space | Used Space | Thin Provision |
| --- | --- | --- | --- |
| DATA | 0 KB | 0 KB | No |

Table 148 - Isilon Volumes - PHARMAX-ISILON

## 1.5 Replication

The following section provides information about the replications managed by Veeam Server veeam-vbr.pharmax.local.

Replication Inventory

|  |  |
| --- | --- |
| Replicas | 5 |
| Failover Plans | 3 |

Table 149 - Replication Inventory - VEEAM-VBR

### 1.5.1 Replicas

The following section details replica information from Veeam Server veeam-vbr.pharmax.local.

|  |  |
| --- | --- |
| VM Name | Linux-VM-Siem |
| Target Vm Name | Tenant2\_Linux-VM-Siem\_replica |
| Original Location | vcenter-03v.pharmax.local\RegionA01-EDGE |
| Destination Location | vcenter-01v.pharmax.local\RegionHQ-MGMT |
| Job Name | Replication Job 1 |
| State | Ready |
| Type | VMware Replication |
| Restore Points | 1 |
| Creation Time | 11/15/2022 11:23:46 |

Table 150 - Replication Job 1 - Linux-VM-Siem

|  |  |
| --- | --- |
| VM Name | Linux-VM-SOAR |
| Target Vm Name | Tenant2\_Linux-VM-SOAR\_replica |
| Original Location | vcenter-03v.pharmax.local\RegionA01-EDGE |
| Destination Location | vcenter-01v.pharmax.local\RegionHQ-MGMT |
| Job Name | Replication Job 1 |
| State | Ready |
| Type | VMware Replication |
| Restore Points | 1 |
| Creation Time | 11/15/2022 11:23:46 |

Table 151 - Replication Job 1 - Linux-VM-SOAR

|  |  |
| --- | --- |
| VM Name | csr-mapserver |
| Target Vm Name | csr-mapserver\_replica |
| Original Location | vcenter-01v.pharmax.local\RegionHQ-MGMT |
| Destination Location | vcenter-03v.pharmax.local\edge-01a.pharmax.local |
| Job Name | Cisco-CSR-Replication |
| State | Ready |
| Type | VMware Replication |
| Restore Points | 3 |
| Creation Time | 05/08/2022 18:21:32 |

Table 152 - Cisco-CSR-Replication - csr-mapserver

|  |  |
| --- | --- |
| VM Name | Tiny-VM |
| Target Vm Name | Tiny-VM\_replica |
| Original Location | pharmax-cluster.pharmax.local\VEEAM-HV-02 |
| Destination Location | VEEAM-HV-03.pharmax.local |
| Job Name | HVCluster-To-HVStandalone |
| State | Ready |
| Type | Hyper-V Replication |
| Restore Points | 2 |
| Creation Time | 05/07/2022 13:38:35 |

Table 153 - HVCluster-To-HVStandalone - Tiny-VM

|  |  |
| --- | --- |
| VM Name | VEEAM-Linux-VM |
| Target Vm Name | VEEAM-Linux-VM\_replica |
| Original Location | vcenter-01v.pharmax.local\RegionA01-COMP |
| Destination Location | vcenter-03v.pharmax.local\edge-01a.pharmax.local |
| Job Name | HQ-to-EDGE |
| State | Ready |
| Type | VMware Replication |
| Restore Points | 5 |
| Creation Time | 05/05/2022 14:22:24 |

Table 154 - HQ-to-EDGE - VEEAM-Linux-VM

|  |  |
| --- | --- |
| VM Name | VEEAM-VM |
| Target Vm Name | VEEAM-VM\_replica |
| Original Location | vcenter-01v.pharmax.local\RegionA01-COMP |
| Destination Location | vcenter-03v.pharmax.local\edge-01a.pharmax.local |
| Job Name | HQ-to-EDGE |
| State | Ready |
| Type | VMware Replication |
| Restore Points | 1 |
| Creation Time | 05/05/2022 14:22:24 |

Table 155 - HQ-to-EDGE - VEEAM-VM

### 1.5.2 Failover Plans

The following section details failover plan information from Veeam Server veeam-vbr.pharmax.local.

#### 1.5.2.1 Cisco-CSR-FailoverPlan

|  |  |
| --- | --- |
| Platform | VMWare |
| Status | Ready |
| Pre Failover Script Enabled | No |
| Pre Failover Command | - |
| Post Failover Script Enabled | No |
| Post Failover Command | - |
| VM Count | 1 |
| Description | Created by PHARMAX\administrator at 5/6/2022 11:54 AM. |

Table 156 - Failover Plan - Cisco-CSR-FailoverPlan

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Machines

| VM Name | Boot Order | Boot Delay |
| --- | --- | --- |
| Unknown | 0 | 60 |

Table 157 - Virtual Machines - Cisco-CSR-FailoverPlan

#### 1.5.2.2 HQ-To-DR-HV

|  |  |
| --- | --- |
| Platform | HyperV |
| Status | Ready |
| Pre Failover Script Enabled | Yes |
| Pre Failover Command | predbsetup.ps1 |
| Post Failover Script Enabled | Yes |
| Post Failover Command | postdbsetup.ps1 |
| VM Count | 1 |
| Description | Created by PHARMAX\administrator at 5/8/2022 12:00 PM. |

Table 158 - Failover Plan - HQ-To-DR-HV

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Machines

| VM Name | Boot Order | Boot Delay |
| --- | --- | --- |
| Unknown | 0 | 60 |

Table 159 - Virtual Machines - HQ-To-DR-HV

#### 1.5.2.3 HQ-to-EDGE FailOver Plan

|  |  |
| --- | --- |
| Platform | VMWare |
| Status | Ready |
| Pre Failover Script Enabled | No |
| Pre Failover Command | mysql |
| Post Failover Script Enabled | No |
| Post Failover Command | - |
| VM Count | 2 |
| Description | Created by PHARMAX\administrator at 5/5/2022 9:43 PM. |

Table 160 - Failover Plan - HQ-to-EDGE FailOver Plan

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Machines

| VM Name | Boot Order | Boot Delay |
| --- | --- | --- |
| Unknown | 1 | 60 |
| Unknown | 0 | 60 |

Table 161 - Virtual Machines - HQ-to-EDGE FailOver Plan

## 1.6 Cloud Connect

The following section provides information about Cloud Connect components from server veeam-vbr.pharmax.local.

Cloud Connect Infrastructure

|  |  |
| --- | --- |
| Cloud Gateways | 3 |
| Gateway Pools | 2 |
| Tenants | 6 |
| Backup Storage | 8 |
| Public IP Addresses | 18 |
| Hardware Plans | 4 |

Table 162 - Cloud Connect Inventory - VEEAM-VBR

### 1.6.1 Service Status

The following section provides information about Cloud Gateways SSL Certificate.

|  |  |
| --- | --- |
| Server Name | VEEAM-VBR |
| Global Status | Active |
| Service State | Normal |
| Service Response Delay | 0 |

Table 163 - Service Status - VEEAM-VBR

### 1.6.2 Public IP

The following section provides information about Cloud Public IP.

| IP Address | Assigned Tenant |
| --- | --- |
| 66.66.66.66 | Tenant3 |
| 66.66.66.67 | Tenant3 |
| 66.66.66.68 | Tenant2 |
| 66.66.66.69 | - |
| 66.66.66.70 | - |
| 66.66.66.71 | - |
| 66.66.66.72 | - |
| 66.66.66.73 | - |
| 66.66.66.74 | - |
| 66.66.66.75 | - |
| 66.66.66.76 | - |
| 66.66.66.77 | - |
| 66.66.66.78 | - |
| 66.66.66.79 | - |
| 66.66.66.80 | - |
| 66.66.66.81 | - |
| 66.66.66.82 | - |
| 66.66.66.83 | - |

Table 164 - Public IP - VEEAM-VBR

### 1.6.3 Cloud Gateways

The following section provides summary information about configured Cloud Gateways.

|  |  |
| --- | --- |
| Name | VEEAM-HVPRX-01V.pharmax.local |
| DNS/IP | 192.168.7.215 |
| Network Mode | Direct |
| NAT Port | 6180 |
| Incoming Port | 6180 |
| Enabled | Yes |
| Cloud Gateway Pool | Cloud gateway pool 2 |
| Description | Created by PHARMAX\administrator at 11/8/2022 9:29 AM. |

Table 165 - Cloud Gateways - VEEAM-HVPRX-01V.pharmax.local

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

|  |  |
| --- | --- |
| Name | VEEAM-VBR |
| DNS/IP | 192.168.7.73 |
| Network Mode | Direct |
| NAT Port | 6180 |
| Incoming Port | 6180 |
| Enabled | Yes |
| Cloud Gateway Pool | Cloud gateway pool 1 |
| Description | Created by PHARMAX\administrator at 2/18/2023 1:21 PM. |

Table 166 - Cloud Gateways - VEEAM-VBR

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

|  |  |
| --- | --- |
| Name | VEEAM-VBR-02V.pharmax.local |
| DNS/IP | 192.168.7.189 |
| Network Mode | Direct |
| NAT Port | 6180 |
| Incoming Port | 6180 |
| Enabled | Yes |
| Cloud Gateway Pool | - |
| Description | Created by PHARMAX\administrator at 11/7/2022 9:05 AM. |

Table 167 - Cloud Gateways - VEEAM-VBR-02V.pharmax.local

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

### 1.6.4 Gateways Pools

The following section provides summary information about configured Cloud Gateways Pools.

| Name | Cloud Gateway Servers | Description |
| --- | --- | --- |
| Cloud gateway pool 1 | VEEAM-VBR | Created by PHARMAX\administrator at 11/7/2022 8:57 AM. |
| Cloud gateway pool 2 | VEEAM-HVPRX-01V.pharmax.local | Created by PHARMAX\administrator at 11/8/2022 9:36 AM. |

Table 168 - Gateways Pools - VEEAM-VBR

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

### 1.6.5 Tenants

The following table provides status information about Cloud Connect Tenants.

| Name | Type | Last Active | Last Result |
| --- | --- | --- | --- |
| pharmax\veeam\_admin | Active Directory |  | Success |
| PHARMAX-VEEAM | vCloud Director |  | Success |
| Tenant2 | Standalone | 11/17/2022 10:29 PM | Failed |
| Tenant3 | Standalone |  | Success |
| Tenant4 | Standalone |  | Success |
| Tenant5 | Standalone |  | Success |

Table 169 - Tenants Summary - VEEAM-VBR

***Health Check:***

***Best Practice: Validate if the tenant's resources are being utilized***

### 1.6.6 Backup Storage

The following section provides information about Veeam Cloud Connect configured Backup Storage.

#### 1.6.6.1 HQ - Backups

|  |  |
| --- | --- |
| Type | Windows |
| Path | E:\Backups |
| Total Space | 199 GB |
| Free Space | 198 GB |
| Used Space % | 1 |
| Status | Unavailable |
| Description | Created by PHARMAX\administrator at 7/16/2022 9:57 PM. |

Table 170 - Backup Storage - HQ - Backups

Tenant Utilization

| Name | Quota | Used Space | Used Space % | Path |
| --- | --- | --- | --- | --- |
| Tenant2 | 10 GB | 0.3008 GB | 3 | E:\Backups\Tenant2 |
| Tenant4 | 100 GB | 0 GB | 0 | E:\Backups\Tenant4 |
| Tenant5 | 10 GB | 0 GB | 0 | E:\Backups\Tenant5 |

Table 171 - Tenant Utilization - HQ - Backups

#### 1.6.6.2 Linux - Hardened Repository

|  |  |
| --- | --- |
| Type | Linux |
| Path | /backup\_data/backups |
| Total Space | 199 GB |
| Free Space | 187 GB |
| Used Space % | 6 |
| Status | Unavailable |
| Description | Created by PHARMAX\jocolon at 12/28/2021 1:25 PM. |

Table 172 - Backup Storage - Linux - Hardened Repository

Tenant Utilization

| Name | Quota | Used Space | Used Space % | Path |
| --- | --- | --- | --- | --- |
| PHARMAX-VEEAM | 10 GB | 0 GB | 0 | /backup\_data/backups/PHARMAX-VEEAM |
| Tenant2 | 1024 GB | 0.001 GB | 0 | /backup\_data/backups/Tenant2 |
| Tenant4 | 10 GB | 0 GB | 0 | /backup\_data/backups/Tenant4 |

Table 173 - Tenant Utilization - Linux - Hardened Repository

#### 1.6.6.3 SOBR - Minio

|  |  |
| --- | --- |
| Type | Scale-out |
| Path | - |
| Total Space | 499 GB |
| Free Space | 344 GB |
| Used Space % | 31 |
| Status | Available |
| Description | Created by PHARMAX\administrator at 2/27/2021 7:29 PM. |

Table 174 - Backup Storage - SOBR - Minio

Tenant Utilization

| Name | Quota | Used Space | Used Space % | Path |
| --- | --- | --- | --- | --- |
| pharmax\veeam\_admin | 2 GB | 0 GB | 0 | pharmax\_veeam\_admin |
| PHARMAX-VEEAM | 10 GB | 0 GB | 0 | PHARMAX-VEEAM |

Table 175 - Tenant Utilization - SOBR - Minio

### 1.6.7 Replica Resources

The following table provides a summary of Replica Resources.

| Name | Platform | CPU | Memory | Storage Quota | Network Count | Subscribers Count |
| --- | --- | --- | --- | --- | --- | --- |
| Hardware plan 1 | VMWare | 9.2 Ghz | 52.56 GB | 20 GB | 2 | 2 |
| Hardware plan 2 | VMWare | Unlimited | Unlimited | 10240 GB | 9 | 1 |
| Hardware plan 3 | HyperV | 0.7 Ghz | Unlimited | 20 GB | 2 | 1 |
| Hardware plan 4 | VMWare | 0.9 Ghz | 5.27 GB | 43 GB | 2 | 0 |

Table 176 - Replica Resources - VEEAM-VBR

#### 1.6.7.1 Replica Resources Configuration

##### 1.6.7.1.1 Hardware plan 1

Host Hardware Quota

|  |  |
| --- | --- |
| Host or Cluster | RegionHQ-MGMT (Cluster) |
| Platform | VMWare |
| CPU | 9.2 Ghz |
| Memory | 52.56 GB |
| Network Count | 2 |
| Subscribed Tenant | Tenant2, Tenant3 |
| Description | Created by PHARMAX\administrator at 11/7/2022 9:01 AM. |

Table 177 - Host Hardware Quota - Hardware plan 1

Storage Quota

|  |  |
| --- | --- |
| Datastore Name | HDD-MED-PERF |
| Friendly Name | Storage 1 |
| Platform | VMWare |
| Storage Quota | 10 GB |
| Storage Policy | VM Encryption Policy |

Table 178 - Storage Quota - HDD-MED-PERF

|  |  |
| --- | --- |
| Datastore Name | HDD-VM-ISO-LOW-PERF |
| Friendly Name | Storage 2 |
| Platform | VMWare |
| Storage Quota | 10 GB |
| Storage Policy | VM Encryption Policy |

Table 179 - Storage Quota - HDD-VM-ISO-LOW-PERF

Network Quota

|  |  |
| --- | --- |
| Specify number of networks with Internet Access | 2 |
| Specify number of internal networks | 1 |
| Host or Cluster | RegionHQ-MGMT (Cluster) |
| Platform | VMWare |
| Virtual Switch | PHARMAX-DVS |
| VLANs With Internet | 1 - 200 |
| VLANs Without Internet | 201 - 210 |

Table 180 - Network Quota - Hardware plan 1

Tenant Utilization

| Name | CPU Usage | Memory Usage | Storage Usage |
| --- | --- | --- | --- |
| Tenant2 | 0 | 0 | 0 GB (Storage 1) 0 GB (Storage 2) |
| Tenant3 | 0 | 0 | 0 GB (Storage 2) 0 GB (Storage 1) |

Table 181 - Tenant Utilization - Hardware plan 1

##### 1.6.7.1.2 Hardware plan 2

Host Hardware Quota

|  |  |
| --- | --- |
| Host or Cluster | esxsvr-00f.pharmax.local (ESXi) |
| Platform | VMWare |
| CPU | Unlimited |
| Memory | Unlimited |
| Network Count | 9 |
| Subscribed Tenant | Tenant3 |
| Description | Created by PHARMAX\administrator at 11/10/2022 9:09 PM. |

Table 182 - Host Hardware Quota - Hardware plan 2

Storage Quota

|  |  |
| --- | --- |
| Datastore Name | SSD-VM-HIGH-CAPACITY-PERF-MK |
| Friendly Name | Storage 1 |
| Platform | VMWare |
| Storage Quota | 10240 GB |
| Storage Policy | VM Encryption Policy |

Table 183 - Storage Quota - SSD-VM-HIGH-CAPACITY-PERF-MK

Network Quota

|  |  |
| --- | --- |
| Specify number of networks with Internet Access | 9 |
| Specify number of internal networks | 5 |
| Host or Cluster | esxsvr-00f.pharmax.local (ESXi) |
| Platform | VMWare |
| Virtual Switch | vSwitch0 |
| VLANs With Internet | 1 - 9 |
| VLANs Without Internet | 10 - 20 |

Table 184 - Network Quota - Hardware plan 2

Tenant Utilization

| Name | CPU Usage | Memory Usage | Storage Usage |
| --- | --- | --- | --- |
| Tenant3 | 0 | 0 | 0 GB (Storage 1) |

Table 185 - Tenant Utilization - Hardware plan 2

##### 1.6.7.1.3 Hardware plan 4

Host Hardware Quota

|  |  |
| --- | --- |
| Host or Cluster | RegionHQ-MGMT (Cluster) |
| Platform | VMWare |
| CPU | 0.9 Ghz |
| Memory | 5.27 GB |
| Network Count | 2 |
| Subscribed Tenant | None |
| Description | Created by PHARMAX\administrator at 11/15/2022 3:22 PM. |

Table 186 - Host Hardware Quota - Hardware plan 4

Storage Quota

|  |  |
| --- | --- |
| Datastore Name | HDD-VM-MED-PERF-02 |
| Friendly Name | Storage 2 |
| Platform | VMWare |
| Storage Quota | 23 GB |
| Storage Policy | VM Encryption Policy |

Table 187 - Storage Quota - HDD-VM-MED-PERF-02

|  |  |
| --- | --- |
| Datastore Name | HDD-VM-ISO-LOW-PERF |
| Friendly Name | Storage 1 |
| Platform | VMWare |
| Storage Quota | 20 GB |
| Storage Policy | VM Encryption Policy |

Table 188 - Storage Quota - HDD-VM-ISO-LOW-PERF

Network Quota

|  |  |
| --- | --- |
| Specify number of networks with Internet Access | 2 |
| Specify number of internal networks | 0 |
| Host or Cluster | RegionHQ-MGMT (Cluster) |
| Platform | VMWare |
| Virtual Switch | PHARMAX-DVS |
| VLANs With Internet | 1 - 200 |
| VLANs Without Internet | 201 - 210 |

Table 189 - Network Quota - Hardware plan 4

##### 1.6.7.1.4 Hardware plan 3

Host Hardware Quota

|  |  |
| --- | --- |
| Host or Cluster | VEEAM-HV-03.pharmax.local (HvServer) |
| Platform | HyperV |
| CPU | 0.7 Ghz |
| Memory | Unlimited |
| Network Count | 2 |
| Subscribed Tenant | Tenant5 |
| Description | Created by PHARMAX\administrator at 11/13/2022 8:19 PM. |

Table 190 - Host Hardware Quota - Hardware plan 3

Storage Quota

|  |  |
| --- | --- |
| Datastore Name | C:\Recovery |
| Friendly Name | Storage 1 |
| Platform | HyperV |
| Storage Quota | 10 GB |
| Storage Policy | - |

Table 191 - Storage Quota - C:\Recovery

|  |  |
| --- | --- |
| Datastore Name | C:\DATA |
| Friendly Name | Storage 2 |
| Platform | HyperV |
| Storage Quota | 10 GB |
| Storage Policy | - |

Table 192 - Storage Quota - C:\DATA

Network Quota

|  |  |
| --- | --- |
| Specify number of networks with Internet Access | 2 |
| Specify number of internal networks | 1 |

Table 193 - Network Quota - Hardware plan 3

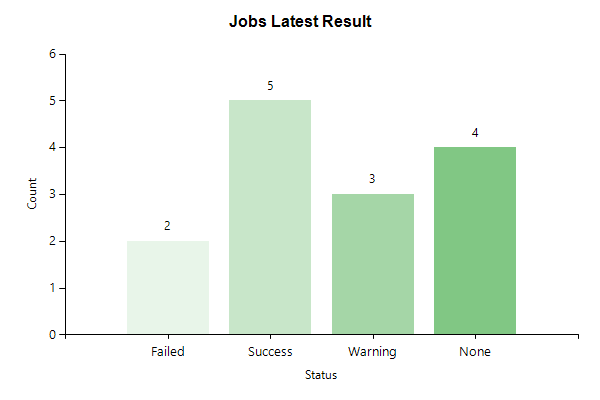
Tenant Utilization

| Name | CPU Usage | Memory Usage | Storage Usage |
| --- | --- | --- | --- |
| Tenant5 | 0 | 0 | 0 GB (Storage 1) 0 GB (Storage 2) |

Table 194 - Tenant Utilization - Hardware plan 3

## 1.7 Jobs Summary

The following section provides information about the configured jobs in Veeam Server: veeam-vbr.pharmax.local.



### 1.7.1 Backup Jobs

The following section list backup jobs created in Veeam Backup & Replication.

| Name | Type | Status | Latest Result | Scheduled? |
| --- | --- | --- | --- | --- |
| Agent Backup Policy 2 | Linux Agent Policy | Enabled | Failed | Yes |
| Backup - Replicated VM - Cloud Virtualdcs | VMware Backup | Enabled | Success | No |
| Backup Copy Job 1 | Backup Copy | Enabled | Warning | Yes |
| COMP-CLUSTER-NFS | VMware Backup | Enabled | Failed | Yes |
| File Backup Job 1 | File Backup | Enabled | Failed | Yes |
| File Backup Job 1 (Copy) 1 | Backup Copy | Enabled | None | Yes |
| Gurabo PC - Backup Job | Windows Agent Policy | Enabled | None | Yes |
| HPE-StoreOnce-Copy-Job | Backup Copy | Enabled | Success | Yes |
| Hyper-V-Backup-Copy | Backup Copy | Disabled | None | Yes |
| HyperV-Backup-Job | Hyper-V Backup | Disabled | Failed | No |
| Linux Agent Backup Job | Linux Agent Backup | Enabled | Failed | Yes |
| PHARMAX-HQ-SVR | VMware Backup | Disabled | None | No |
| Server - Share Backup | File Backup | Enabled | Failed | Yes |
| SOBR - TEST | VMware Backup | Enabled | Success | No |
| VM - Test - AWS | VMware Backup | Enabled | Failed | No |
| VM Copy Job 1 | VM Copy | Enabled | Failed | Yes |
| WIN HyperV VM Backup | Hyper-V Backup | Disabled | Failed | No |

Table 195 - Backup Jobs - VEEAM-VBR

### 1.7.2 VMware Backup Jobs Configuration

The following section details the configuration of VMware type backup jobs.

| Name | Creation Time | VM Count |
| --- | --- | --- |
| Backup - Replicated VM - Cloud Virtualdcs | 06/27/2022 16:57:50 | 3 |
| COMP-CLUSTER-NFS | 06/02/2021 20:31:27 | 1 |
| PHARMAX-HQ-SVR | 06/29/2021 12:15:23 | 1 |
| Servers Backup Daily | 12/15/2019 19:25:18 | 0 |
| SOBR - TEST | 02/27/2021 21:07:32 | 6 |
| SQL Server Backup | 12/15/2019 20:46:10 | 0 |
| VEEAM-SP Server Backup | 12/15/2019 23:22:23 | 0 |
| VM - Test - AWS | 12/20/2021 12:57:43 | 1 |

Table 196 - VMware Backup Summary - VEEAM-VBR

#### 1.7.2.1 Backup - Replicated VM - Cloud Virtualdcs

Common Information

|  |  |
| --- | --- |
| Name | Backup - Replicated VM - Cloud Virtualdcs |
| Type | VMware Backup |
| Total Backup Size | 5 GB |
| Target Address | /backup\_data/backups |
| Target File | Backup - Replicated VM - Cloud Virtualdcs |
| Description | Created by PHARMAX\administrator at 6/27/2022 4:56 PM. |
| Modified By | PHARMAX\administrator |

Table 197 - Common Information - Backup - Replicated VM - Cloud Virtualdcs

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Machines

| Name | Resource Type | Role | Approx Size | Disk Filter Mode |
| --- | --- | --- | --- | --- |
| csr-mapserver | Virtual Machine | Include | 1.5 GB | AllDisks |
| csr-pharmax-dr | Virtual Machine | Include | 1.5 GB | AllDisks |
| csr-pharmax-hq | Virtual Machine | Include | 1.5 GB | AllDisks |

Table 198 - Virtual Machines - Backup - Replicated VM - Cloud Virtualdcs

Storage

|  |  |
| --- | --- |
| Backup Proxy | veeam-lnx-px.pharmax.local |
| Backup Repository | Linux - Hardened Repository |
| Retention Type | Days |
| Retain Days To Keep | 7 |
| Keep First Full Backup | No |
| Enable Full Backup | No |
| Integrity Checks | Yes |
| Storage Encryption | No |
| Backup Mode | Incremental |
| Active Full Backup Schedule Kind | Daily |
| Active Full Backup Days | Saturday |
| Transform Full To Synthetic | Yes |
| Transform Increments To Synthetic | No |
| Transform To Synthetic Days | Saturday |

Table 199 - Storage Options - Backup - Replicated VM - Cloud Virtualdcs

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | Yes |
| SLCG Schedule Type | Monthly |
| SLCG Schedule Day | Friday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | No |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Remove deleted item data after | 14 |

Table 200 - Advanced Settings (Maintenance) - Backup - Replicated VM - Cloud Virtualdcs

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Exclude Swap Files Block | Yes |
| Exclude Deleted Files Block | Yes |
| Compression Level | OPTIMAL (Default) |
| Storage optimization | Local target |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 201 - Advanced Settings (Storage) - Backup - Replicated VM - Cloud Virtualdcs

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (vSphere)

|  |  |
| --- | --- |
| Enable VMware Tools Quiescence | No |
| Use Change Block Tracking | Yes |
| Enable CBT for all protected VMs | Yes |
| Reset CBT On each Active Full Backup | Yes |

Table 202 - Advanced Settings (vSphere) - Backup - Replicated VM - Cloud Virtualdcs

Advanced Settings (Integration)

|  |  |
| --- | --- |
| Enable Backup from Storage Snapshots | Yes |
| Limit processed VM count per Storage Snapshot | No |
| VM count per Storage Snapshot | 10 |
| Failover to Standard Backup | No |
| Failover to Primary Storage Snapshot | No |

Table 203 - Advanced Settings (Integration) - Backup - Replicated VM - Cloud Virtualdcs

#### 1.7.2.2 COMP-CLUSTER-NFS

Common Information

|  |  |
| --- | --- |
| Name | COMP-CLUSTER-NFS |
| Type | VMware Backup |
| Total Backup Size | 0 KB |
| Target Address |  |
| Target File | COMP-CLUSTER-NFS |
| Description | Created by PHARMAX\administrator at 6/2/2021 8:15 PM. |
| Modified By | PHARMAX\administrator |

Table 204 - Common Information - COMP-CLUSTER-NFS

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Machines

| Name | Resource Type | Role | Approx Size | Disk Filter Mode |
| --- | --- | --- | --- | --- |
| RocaWeb | Virtual Machine | Include | 0 B | AllDisks |

Table 205 - Virtual Machines - COMP-CLUSTER-NFS

Storage

|  |  |
| --- | --- |
| Backup Proxy | Automatic |
| Backup Repository | SOBR - Minio |
| Retention Type | Days |
| Retain Days To Keep | 7 |
| Keep First Full Backup | No |
| Enable Full Backup | No |
| Integrity Checks | Yes |
| Storage Encryption | No |
| Backup Mode | Incremental |
| Active Full Backup Schedule Kind | Daily |
| Active Full Backup Days | Saturday |
| Transform Full To Synthetic | Yes |
| Transform Increments To Synthetic | No |
| Transform To Synthetic Days | Saturday |

Table 206 - Storage Options - COMP-CLUSTER-NFS

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | No |
| SLCG Schedule Type | Monthly |
| SLCG Schedule Day | Friday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | No |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Remove deleted item data after | 14 |

Table 207 - Advanced Settings (Maintenance) - COMP-CLUSTER-NFS

***Health Check:***

***Best Practice: It is recommended to use storage-level corruption guard for any backup job with no active full backups scheduled. Synthetic full backups are still 'incremental forever' and may suffer from corruption over time. Storage-level corruption guard was introduced to provide a greater level of confidence in integrity of the backups.***

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Exclude Swap Files Block | Yes |
| Exclude Deleted Files Block | Yes |
| Compression Level | OPTIMAL (Default) |
| Storage optimization | Local target |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 208 - Advanced Settings (Storage) - COMP-CLUSTER-NFS

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (vSphere)

|  |  |
| --- | --- |
| Enable VMware Tools Quiescence | No |
| Use Change Block Tracking | Yes |
| Enable CBT for all protected VMs | Yes |
| Reset CBT On each Active Full Backup | Yes |

Table 209 - Advanced Settings (vSphere) - COMP-CLUSTER-NFS

Schedule

|  |  |
| --- | --- |
| Retry Failed item | 3 |
| Wait before each retry | 10/min |
| Backup Window | Yes |
| Shedule type | Daily |
| Shedule Options | Kind: Everyday, Days: Monday Tuesday Wednesday Thursday Friday Saturday Sunday |
| Start Time | 10:00 PM |
| Latest Run | 06/03/2023 22:00:13 |

Table 210 - Schedule Options - COMP-CLUSTER-NFS

Backup Window Time Period

**Permited \ Denied**

| H | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sun | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mon | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Tue | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Wed | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Thu | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Fri | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 211 - Backup Window - COMP-CLUSTER-NFS

#### 1.7.2.3 PHARMAX-HQ-SVR

Common Information

|  |  |
| --- | --- |
| Name | PHARMAX-HQ-SVR |
| Type | VMware Backup |
| Total Backup Size | 31 GB |
| Target Address |  |
| Target File | PHARMAX-HQ-SVR |
| Description | Created by PHARMAX\administrator at 6/29/2021 12:12 PM. |
| Modified By | PHARMAX\administrator |

Table 212 - Common Information - PHARMAX-HQ-SVR

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Machines

| Name | Resource Type | Role | Approx Size | Disk Filter Mode |
| --- | --- | --- | --- | --- |
| Linux-Mon-01v | Virtual Machine | Exclude | 0 B | SelectedDisks |
| PHARMAX-HQ-SVR | Resource Pool | Include | 30.6 GB | SelectedDisks |

Table 213 - Virtual Machines - PHARMAX-HQ-SVR

Storage

|  |  |
| --- | --- |
| Backup Proxy | veeam-lnx-px.pharmax.local |
| Backup Repository | SOBR - Minio |
| Retention Type | Cycles |
| Retain Cycles | 8 |
| Keep First Full Backup | No |
| Enable Full Backup | No |
| Integrity Checks | Yes |
| Storage Encryption | Yes |
| Backup Mode | Incremental |
| Active Full Backup Schedule Kind | Daily |
| Active Full Backup Days | Saturday |
| Transform Full To Synthetic | No |
| Transform Increments To Synthetic | No |
| Transform To Synthetic Days | Saturday |
| Keep certain full backup longer for archival purposes (GFS) | Yes |
| Keep Weekly full backup for | 1 weeks, If multiple backup exist use the one from: Sunday |
| Keep Monthly full backup | Disabled |
| Keep Yearly full backup | Disabled |

Table 214 - Storage Options - PHARMAX-HQ-SVR

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | Yes |
| SLCG Schedule Type | Daily |
| SLCG Schedule Day | Friday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | No |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Remove deleted item data after | 15 |

Table 215 - Advanced Settings (Maintenance) - PHARMAX-HQ-SVR

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Exclude Swap Files Block | Yes |
| Exclude Deleted Files Block | Yes |
| Compression Level | OPTIMAL (Default) |
| Storage optimization | Local target (large blocks) |
| Enabled Backup File Encryption | Yes |
| Encryption Key | Password Global |

Table 216 - Advanced Settings (Storage) - PHARMAX-HQ-SVR

Advanced Settings (Notification)

|  |  |
| --- | --- |
| Send Snmp Notification | Yes |
| Send Email Notification | Yes |
| Email Notification Additional Addresses | rebelinux@gmail.com |
| Email Notify Time | 10:00 PM |
| Use Custom Email Notification Options | Yes |
| Use Custom Notification Setting | [%JobResult%] %JobName% (%ObjectCount% machines) %Issues% |
| Notify On Success | Yes |
| Notify On Warning | Yes |
| Notify On Error | Yes |
| Suppress Notification until Last Retry | Yes |
| Set Results To Vm Notes | Yes |
| VM Attribute Note Value | Notes |
| Append to Existing Attribute | Yes |

Table 217 - Advanced Settings (Notification) - PHARMAX-HQ-SVR

Advanced Settings (vSphere)

|  |  |
| --- | --- |
| Enable VMware Tools Quiescence | Yes |
| Use Change Block Tracking | Yes |
| Enable CBT for all protected VMs | No |
| Reset CBT On each Active Full Backup | No |

Table 218 - Advanced Settings (vSphere) - PHARMAX-HQ-SVR

Advanced Settings (Integration)

|  |  |
| --- | --- |
| Enable Backup from Storage Snapshots | Yes |
| Limit processed VM count per Storage Snapshot | No |
| VM count per Storage Snapshot | 10 |
| Failover to Standard Backup | Yes |
| Failover to Primary Storage Snapshot | Yes |

Table 219 - Advanced Settings (Integration) - PHARMAX-HQ-SVR

Advanced Settings (Script)

|  |  |
| --- | --- |
| Run the Following Script Before | Yes |
| Run Script Before the Job | sql\_prefreeze.cmd |
| Run the Following Script After | Yes |
| Run Script After the Job | sql\_postunfreeze.cmd |
| Run Script Frequency | Days |
| Run Script on the Selected Days | Saturday |

Table 220 - Advanced Settings (Script) - PHARMAX-HQ-SVR

Secondary Target

| Job Name | Type | State | Description |
| --- | --- | --- | --- |
| Backup Copy Job 1 | Backup Copy | Warning | Created by PHARMAX\administrator at 2/12/2022 9:10 PM. |
| PHARMAX-HQ-SVR-TAPE | Backup to Tape | Failed | Created by PHARMAX\administrator at 6/29/2021 7:24 PM. |

Table 221 - Secondary Destination Jobs - PHARMAX-HQ-SVR

Guest Processing

|  |  |
| --- | --- |
| Name | PHARMAX-HQ-SVR |
| Enabled | Yes |
| Resource Type | Resource Pool |
| Ignore Errors | Yes |
| Guest Proxy Auto Detect | Yes |
| Default Credential | administrator@pharmax.local |
| Object Credential | administrator@vsphere.local |
| Application Processing | Yes |
| Transaction Logs | Process Transaction Logs |
| Use Persistent Guest Agent | Yes |
| SQL Transaction Logs Processing | Backup logs periodically |
| SQL Backup Log Every | 15 min |
| SQL Retain Log Backups | Keep Only Last 15 days of log backups |
| Oracle Account Type | Oracle |
| Oracle Sysdba Creds | backup\_admin1 |
| Oracle Backup Logs Every | 5 min |
| Oracle Archive Logs | Delete Log Over 45 GB |
| Oracle Retain Log Backups | Keep Only Last 15 days of log backups |
| File Exclusions | Yes |
| Include only the following file and folders | c:\data2,c:\Windows |
| Scripts | Yes |
| Scripts Mode | Ignore script execution failures |
| Windows Pre-freeze script | c:\superduperscript.cmd |
| Windows Post-thaw script | c:\superduperscriptpost.cmd |

Table 222 - Guest Processing Options - PHARMAX-HQ-SVR

|  |  |
| --- | --- |
| Name | Linux-Mon-01v |
| Enabled | Yes |
| Resource Type | Virtual Machine |
| Ignore Errors | No |
| Guest Proxy Auto Detect | Yes |
| Default Credential | administrator@pharmax.local |
| Object Credential | Default Credential |
| Application Processing | Yes |
| Transaction Logs | Process Transaction Logs |
| Use Persistent Guest Agent | No |
| SQL Transaction Logs Processing | Do not truncate logs |
| SQL Backup Log Every | 15 min |
| SQL Retain Log Backups | Until the corresponding image-level backup is deleted |
| Oracle Account Type | Oracle |
| Oracle Sysdba Creds | Guest OS Credential |
| Oracle Backup Logs Every | 15 min |
| Oracle Archive Logs | Delete Log Older Than 24 hours |
| Oracle Retain Log Backups | Until the corresponding image-level backup is deleted |
| File Exclusions | Yes |
| Exclude the following file and folders | c:\data,c:\Users |
| Scripts | Yes |
| Scripts Mode | Require successfull script execution |
| Linux Pre-freeze script | /sbin/premysql.sh |
| Linux Post-thaw script | /sbin/postmysql.sh |

Table 223 - Guest Processing Options - Linux-Mon-01v

#### 1.7.2.4 SOBR - TEST

Common Information

|  |  |
| --- | --- |
| Name | SOBR - TEST |
| Type | VMware Backup |
| Total Backup Size | 78 GB |
| Target Address |  |
| Target File | SOBR - TEST |
| Description |  |
| Modified By | PHARMAX\administrator |

Table 224 - Common Information - SOBR - TEST

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Machines

| Name | Resource Type | Role | Approx Size | Disk Filter Mode |
| --- | --- | --- | --- | --- |
| LINUX-VM | Virtual Machine | Include | 8.4 GB | AllDisks |
| AD-LAB | Virtual Application | Include | 69.5 GB | AllDisks |

Table 225 - Virtual Machines - SOBR - TEST

Storage

|  |  |
| --- | --- |
| Backup Proxy | Automatic |
| Backup Repository | SOBR - Minio |
| Retention Type | Days |
| Retain Days To Keep | 7 |
| Keep First Full Backup | No |
| Enable Full Backup | Yes |
| Integrity Checks | Yes |
| Storage Encryption | No |
| Backup Mode | Incremental |
| Active Full Backup Schedule Kind | Daily |
| Active Full Backup Days | Saturday |
| Transform Full To Synthetic | Yes |
| Transform Increments To Synthetic | No |
| Transform To Synthetic Days | Saturday |
| Keep certain full backup longer for archival purposes (GFS) | Yes |
| Keep Weekly full backup | Disabled |
| Keep Monthly full backup for | 2 months, Use weekly full backup from the following week of the month: First |
| Keep Yearly full backup for | 1 years, Use monthly full backup from the following month: July |

Table 226 - Storage Options - SOBR - TEST

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | No |
| SLCG Schedule Type | Monthly |
| SLCG Schedule Day | Friday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | No |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Remove deleted item data after | 14 |

Table 227 - Advanced Settings (Maintenance) - SOBR - TEST

***Health Check:***

***Best Practice: It is recommended to use storage-level corruption guard for any backup job with no active full backups scheduled. Synthetic full backups are still 'incremental forever' and may suffer from corruption over time. Storage-level corruption guard was introduced to provide a greater level of confidence in integrity of the backups.***

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Exclude Swap Files Block | Yes |
| Exclude Deleted Files Block | Yes |
| Compression Level | OPTIMAL (Default) |
| Storage optimization | Local target |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 228 - Advanced Settings (Storage) - SOBR - TEST

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (vSphere)

|  |  |
| --- | --- |
| Enable VMware Tools Quiescence | No |
| Use Change Block Tracking | Yes |
| Enable CBT for all protected VMs | Yes |
| Reset CBT On each Active Full Backup | Yes |

Table 229 - Advanced Settings (vSphere) - SOBR - TEST

Guest Processing

|  |  |
| --- | --- |
| Name | LINUX-VM |
| Enabled | Yes |
| Resource Type | Virtual Machine |
| Ignore Errors | No |
| Guest Proxy Auto Detect | Yes |
| Default Credential | administrator@vsphere.local |
| Object Credential | Default Credential |
| Application Processing | Yes |
| Transaction Logs | Process Transaction Logs |
| Use Persistent Guest Agent | No |
| SQL Transaction Logs Processing | Truncate logs |
| SQL Backup Log Every | 15 min |
| SQL Retain Log Backups | Until the corresponding image-level backup is deleted |

Table 230 - Guest Processing Options - LINUX-VM

|  |  |
| --- | --- |
| Name | AD-LAB |
| Enabled | Yes |
| Resource Type | Virtual Application |
| Ignore Errors | No |
| Guest Proxy Auto Detect | Yes |
| Default Credential | administrator@vsphere.local |
| Object Credential | Default Credential |
| Application Processing | Yes |
| Transaction Logs | Process Transaction Logs |
| Use Persistent Guest Agent | No |
| SQL Transaction Logs Processing | Truncate logs |
| SQL Backup Log Every | 15 min |
| SQL Retain Log Backups | Until the corresponding image-level backup is deleted |

Table 231 - Guest Processing Options - AD-LAB

#### 1.7.2.5 VM - Test - AWS

Common Information

|  |  |
| --- | --- |
| Name | VM - Test - AWS |
| Type | VMware Backup |
| Total Backup Size | 26 MB |
| Target Address |  |
| Target File | VM - Test - AWS |
| Description | Created by PHARMAX\jocolon at 12/20/2021 12:56 PM. |
| Modified By | PHARMAX\jocolon |

Table 232 - Common Information - VM - Test - AWS

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Machines

| Name | Resource Type | Role | Approx Size | Disk Filter Mode |
| --- | --- | --- | --- | --- |
| VEEAM-VM-TINY | Virtual Machine | Include | 26 MB | AllDisks |

Table 233 - Virtual Machines - VM - Test - AWS

Storage

|  |  |
| --- | --- |
| Backup Proxy | Automatic |
| Backup Repository | SOBR - AWS S3 |
| Retention Type | Days |
| Retain Days To Keep | 7 |
| Keep First Full Backup | No |
| Enable Full Backup | No |
| Integrity Checks | Yes |
| Storage Encryption | No |
| Backup Mode | Incremental |
| Active Full Backup Schedule Kind | Daily |
| Active Full Backup Days | Saturday |
| Transform Full To Synthetic | Yes |
| Transform Increments To Synthetic | No |
| Transform To Synthetic Days | Saturday |

Table 234 - Storage Options - VM - Test - AWS

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | No |
| SLCG Schedule Type | Monthly |
| SLCG Schedule Day | Friday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | No |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Remove deleted item data after | 14 |

Table 235 - Advanced Settings (Maintenance) - VM - Test - AWS

***Health Check:***

***Best Practice: It is recommended to use storage-level corruption guard for any backup job with no active full backups scheduled. Synthetic full backups are still 'incremental forever' and may suffer from corruption over time. Storage-level corruption guard was introduced to provide a greater level of confidence in integrity of the backups.***

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Exclude Swap Files Block | Yes |
| Exclude Deleted Files Block | Yes |
| Compression Level | OPTIMAL (Default) |
| Storage optimization | Local target |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 236 - Advanced Settings (Storage) - VM - Test - AWS

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (vSphere)

|  |  |
| --- | --- |
| Enable VMware Tools Quiescence | No |
| Use Change Block Tracking | Yes |
| Enable CBT for all protected VMs | Yes |
| Reset CBT On each Active Full Backup | Yes |

Table 237 - Advanced Settings (vSphere) - VM - Test - AWS

Advanced Settings (Integration)

|  |  |
| --- | --- |
| Enable Backup from Storage Snapshots | Yes |
| Limit processed VM count per Storage Snapshot | No |
| VM count per Storage Snapshot | 10 |
| Failover to Standard Backup | No |
| Failover to Primary Storage Snapshot | No |

Table 238 - Advanced Settings (Integration) - VM - Test - AWS

Secondary Target

| Job Name | Type | State | Description |
| --- | --- | --- | --- |
| PHARMAX-HQ-SVR-TAPE Standard | Backup to Tape | Warning | Created by PHARMAX\administrator at 2/25/2022 7:14 PM. |

Table 239 - Secondary Destination Jobs - VM - Test - AWS

#### 1.7.2.6 VM Copy Job 1

Common Information

|  |  |
| --- | --- |
| Name | VM Copy Job 1 |
| Type | VM Copy |
| Total Backup Size | 2 GB |
| Target Address | F:\VM |
| Target File |  |
| Description | Created by PHARMAX\jocolon at 2/6/2022 3:28 PM. |
| Modified By | PHARMAX\administrator |

Table 240 - Common Information - VM Copy Job 1

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Machines

| Name | Resource Type | Role | Approx Size | Disk Filter Mode |
| --- | --- | --- | --- | --- |
| csr-mapserver | Virtual Machine | Include | 1.5 GB | AllDisks |

Table 241 - Virtual Machines - VM Copy Job 1

Storage

|  |  |
| --- | --- |
| Backup Proxy | Automatic |
| Backup Repository | F:\VM |
| Retention Type | Days |
| Retain Days To Keep | 7 |
| Keep First Full Backup | No |
| Enable Full Backup | No |
| Integrity Checks | Yes |
| Storage Encryption | No |
| Backup Mode | Incremental |
| Active Full Backup Schedule Kind | Daily |
| Active Full Backup Days | Saturday |
| Transform Full To Synthetic | Yes |
| Transform Increments To Synthetic | No |
| Transform To Synthetic Days | Saturday |

Table 242 - Storage Options - VM Copy Job 1

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | No |
| SLCG Schedule Type | Monthly |
| SLCG Schedule Day | Friday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | No |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Remove deleted item data after | 14 |

Table 243 - Advanced Settings (Maintenance) - VM Copy Job 1

***Health Check:***

***Best Practice: It is recommended to use storage-level corruption guard for any backup job with no active full backups scheduled. Synthetic full backups are still 'incremental forever' and may suffer from corruption over time. Storage-level corruption guard was introduced to provide a greater level of confidence in integrity of the backups.***

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Exclude Swap Files Block | Yes |
| Exclude Deleted Files Block | Yes |
| Compression Level | OPTIMAL (Default) |
| Storage optimization | Local target |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 244 - Advanced Settings (Storage) - VM Copy Job 1

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (vSphere)

|  |  |
| --- | --- |
| Enable VMware Tools Quiescence | No |
| Use Change Block Tracking | Yes |
| Enable CBT for all protected VMs | Yes |
| Reset CBT On each Active Full Backup | Yes |

Table 245 - Advanced Settings (vSphere) - VM Copy Job 1

Advanced Settings (Integration)

|  |  |
| --- | --- |
| Enable Backup from Storage Snapshots | Yes |
| Limit processed VM count per Storage Snapshot | No |
| VM count per Storage Snapshot | 10 |
| Failover to Standard Backup | No |
| Failover to Primary Storage Snapshot | No |

Table 246 - Advanced Settings (Integration) - VM Copy Job 1

Guest Processing

|  |  |
| --- | --- |
| Name | csr-mapserver |
| Enabled | Yes |
| Resource Type | Virtual Machine |
| Ignore Errors | Yes |
| Guest Proxy Auto Detect | Yes |
| Default Credential | administrator@pharmax.local |
| Object Credential | Default Credential |
| Application Processing | Yes |
| Transaction Logs | Process Transaction Logs |
| Use Persistent Guest Agent | Yes |
| SQL Transaction Logs Processing | Truncate logs |
| SQL Backup Log Every | 15 min |
| SQL Retain Log Backups | Until the corresponding image-level backup is deleted |
| Oracle Account Type | Oracle |
| Oracle Sysdba Creds | Guest OS Credential |
| Oracle Archive Logs | Delete Log Over 10 GB |
| Oracle Retain Log Backups | Until the corresponding image-level backup is deleted |
| Scripts | Yes |
| Scripts Mode | Require successfull script execution |
| Windows Pre-freeze script | preprueba.exe |
| Windows Post-thaw script | postprueba.exe |

Table 247 - Guest Processing Options - csr-mapserver

Schedule

|  |  |
| --- | --- |
| Retry Failed item | 3 |
| Wait before each retry | 10/min |
| Backup Window | Yes |
| Shedule type | Minutes |
| Shedule Options | Full Period: 1, Hourly Offset: 0, Unit: Minutes |
| Start Time | 10:00 PM |
| Latest Run | 06/03/2023 23:11:00 |

Table 248 - Schedule Options - VM Copy Job 1

Backup Window Time Period

**Permited \ Denied**

| H | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tue | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Thu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fri | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 249 - Backup Window - VM Copy Job 1

### 1.7.3 Hyper-V Backup Jobs Configuration

The following section details the configuration of the Hyper-V type backup jobs.

| Name | Creation Time | VM Count |
| --- | --- | --- |
| HyperV-Backup-Job | 03/06/2023 12:07:58 | 1 |
| HyperV-Backup-Job | 06/30/2021 22:06:10 | 2 |
| HYPERV-VEEAM-Win2016 | 12/15/2019 22:03:08 | 0 |
| WIN HyperV VM Backup | 12/26/2021 20:38:56 | 1 |

Table 250 - Hyper-V Backup Summary - VEEAM-VBR

#### 1.7.3.1 HyperV-Backup-Job

Common Information

|  |  |
| --- | --- |
| Name | HyperV-Backup-Job |
| Type | Hyper-V Backup |
| Total Backup Size | 4 MB |
| Target Address | /backup\_data/backups |
| Target File | HyperV-Backup-Job |
| Description | Created by PHARMAX\administrator at 6/30/2021 10:02 PM. |
| Modified By | PHARMAX\administrator |

Table 251 - Common Information - HyperV-Backup-Job

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Machines

| Name | Resource Type | Role | Approx Size | Disk Filter Mode |
| --- | --- | --- | --- | --- |
| LNX-WEB-01 | VM | Include | 4 MB | AllDisks |

Table 252 - Virtual Machines - HyperV-Backup-Job

Storage

|  |  |
| --- | --- |
| Backup Proxy | VEEAM-HVPRX-01V.pharmax.local |
| Backup Repository | Linux - Hardened Repository |
| Retention Type | Days |
| Retain Days To Keep | 7 |
| Keep First Full Backup | No |
| Enable Full Backup | No |
| Integrity Checks | Yes |
| Storage Encryption | Yes |
| Backup Mode | Incremental |
| Active Full Backup Schedule Kind | Daily |
| Active Full Backup Days | Saturday |
| Transform Full To Syntethic | Yes |
| Transform Increments To Syntethic | No |
| Transform To Syntethic Days | Saturday |
| Keep certain full backup longer for archival purposes (GFS) | Yes |
| Keep Weekly full backup for | 1 weeks, If multiple backup exist use the one from: Sunday |
| Keep Monthly full backup | Disabled |
| Keep Yearly full backup | Disabled |

Table 253 - Storage Options - HyperV-Backup-Job

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | Yes |
| SLCG Schedule Type | Monthly |
| SLCG Schedule Day | Friday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | No |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Remove deleted item data after | 14 |

Table 254 - Advanced Settings (Maintenance) - HyperV-Backup-Job

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Inline Data Deduplication | No |
| Exclude Swap Files Block | Yes |
| Exclude Deleted Files Block | Yes |
| Compression Level | OPTIMAL (Default) |
| Storage optimization | Local target (large blocks) |
| Enabled Backup File Encryption | Yes |
| Encryption Key | Password Global |

Table 255 - Advanced Settings (Storage) - HyperV-Backup-Job

Advanced Settings (Notification)

|  |  |
| --- | --- |
| Send Snmp Notification | Yes |
| Send Email Notification | No |
| Email Notification Additional Addresses |  |
| Email Notify Time | 10:00 PM |
| Use Custom Email Notification Options | No |
| Use Custom Notification Setting | [%JobResult%] %JobName% (%ObjectCount% machines) %Issues% |
| Notify On Success | Yes |
| Notify On Warning | Yes |
| Notify On Error | Yes |
| Suppress Notification until Last Retry | Yes |
| Set Results To Vm Notes | - |
| VM Attribute Note Value |  |
| Append to Existing Attribute | - |

Table 256 - Advanced Settings (Notification) - HyperV-Backup-Job

Advanced Settings (Hyper-V)

|  |  |
| --- | --- |
| Enable Hyper-V Guest Quiescence | Yes |
| Crash Consistent Backup | Yes |
| Use Change Block Tracking | Yes |
| Volume Snapshot | Yes |

Table 257 - Advanced Settings (Hyper-V) - HyperV-Backup-Job

Advanced Settings (Integration)

|  |  |
| --- | --- |
| Enable Backup from Storage Snapshots | Yes |
| Limit processed VM count per Storage Snapshot | No |
| VM count per Storage Snapshot | 10 |
| Failover to Standard Backup | No |
| Failover to Primary Storage Snapshot | No |

Table 258 - Advanced Settings (Integration) - HyperV-Backup-Job

Advanced Settings (Script)

|  |  |
| --- | --- |
| Run the Following Script Before | Yes |
| Run Script Before the Job | pretest.bat |
| Run the Following Script After | Yes |
| Run Script After the Job | posttest.bat |
| Run Script Frequency | Cycles |
| Run Script Every Backup Session | 1 |

Table 259 - Advanced Settings (Script) - HyperV-Backup-Job

Secondary Target

| Job Name | Type | State | Description |
| --- | --- | --- | --- |
| Hyper-V-Backup-Copy | Backup Copy | None | Created by PHARMAX\administrator at 2/20/2022 10:38 AM. |

Table 260 - Secondary Destination Jobs - HyperV-Backup-Job

Guest Processing

|  |  |
| --- | --- |
| Name | LNX-WEB-01 |
| Enabled | Yes |
| Resource Type |  |
| Ignore Errors | No |
| Guest Proxy Auto Detect | Yes |
| Default Credential | administrator@pharmax.local |
| Object Credential | Default Credential |
| Application Processing | Yes |
| Transaction Logs | Process Transaction Logs |
| Use Persistent Guest Agent | No |
| SQL Transaction Logs Processing | Truncate logs |
| SQL Backup Log Every | 15 min |
| SQL Retain Log Backups | Until the corresponding image-level backup is deleted |

Table 261 - Guest Processing Options - LNX-WEB-01

#### 1.7.3.2 WIN HyperV VM Backup

Common Information

|  |  |
| --- | --- |
| Name | WIN HyperV VM Backup |
| Type | Hyper-V Backup |
| Total Backup Size | 4 MB |
| Target Address |  |
| Target File | WIN HyperV VM Backup |
| Description | Created by PHARMAX\jocolon at 12/26/2021 8:36 PM. |
| Modified By | PHARMAX\administrator |

Table 262 - Common Information - WIN HyperV VM Backup

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Machines

| Name | Resource Type | Role | Approx Size | Disk Filter Mode |
| --- | --- | --- | --- | --- |
| pharmax-cluster.pharmax.local | Directory | Include | 4 MB | AllDisks |
| Server-EX-01v | VM | Exclude | 0 B | SelectedDisks |

Table 263 - Virtual Machines - WIN HyperV VM Backup

Storage

|  |  |
| --- | --- |
| Backup Proxy | VEEAM-HVPRX-01V.pharmax.local |
| Backup Repository | SOBR - Minio |
| Retention Type | Days |
| Retain Days To Keep | 7 |
| Keep First Full Backup | No |
| Enable Full Backup | Yes |
| Integrity Checks | Yes |
| Storage Encryption | Yes |
| Backup Mode | Incremental |
| Active Full Backup Schedule Kind | Daily |
| Active Full Backup Days | Saturday |
| Transform Full To Syntethic | Yes |
| Transform Increments To Syntethic | No |
| Transform To Syntethic Days | Saturday |
| Keep certain full backup longer for archival purposes (GFS) | Yes |
| Keep Weekly full backup for | 1 weeks, If multiple backup exist use the one from: Sunday |
| Keep Monthly full backup | Disabled |
| Keep Yearly full backup | Disabled |

Table 264 - Storage Options - WIN HyperV VM Backup

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | Yes |
| SLCG Schedule Type | Monthly |
| SLCG Schedule Day | Friday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | No |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Remove deleted item data after | 14 |

Table 265 - Advanced Settings (Maintenance) - WIN HyperV VM Backup

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Exclude Swap Files Block | Yes |
| Exclude Deleted Files Block | Yes |
| Compression Level | OPTIMAL (Default) |
| Storage optimization | Local target |
| Enabled Backup File Encryption | Yes |
| Encryption Key | Password Global |

Table 266 - Advanced Settings (Storage) - WIN HyperV VM Backup

Advanced Settings (Notification)

|  |  |
| --- | --- |
| Send Snmp Notification | Yes |
| Send Email Notification | Yes |
| Email Notification Additional Addresses | rebelinux@gmail.com |
| Email Notify Time | 10:00 PM |
| Use Custom Email Notification Options | No |
| Use Custom Notification Setting | [%JobResult%] %JobName% (%ObjectCount% machines) %Issues% |
| Notify On Success | Yes |
| Notify On Warning | Yes |
| Notify On Error | Yes |
| Suppress Notification until Last Retry | Yes |
| Set Results To Vm Notes | - |
| VM Attribute Note Value |  |
| Append to Existing Attribute | - |

Table 267 - Advanced Settings (Notification) - WIN HyperV VM Backup

Advanced Settings (Hyper-V)

|  |  |
| --- | --- |
| Enable Hyper-V Guest Quiescence | Yes |
| Crash Consistent Backup | Yes |
| Use Change Block Tracking | Yes |
| Volume Snapshot | Yes |

Table 268 - Advanced Settings (Hyper-V) - WIN HyperV VM Backup

Advanced Settings (Integration)

|  |  |
| --- | --- |
| Enable Backup from Storage Snapshots | Yes |
| Limit processed VM count per Storage Snapshot | No |
| VM count per Storage Snapshot | 10 |
| Failover to Standard Backup | No |
| Failover to Primary Storage Snapshot | No |

Table 269 - Advanced Settings (Integration) - WIN HyperV VM Backup

Advanced Settings (Script)

|  |  |
| --- | --- |
| Run the Following Script Before | Yes |
| Run Script Before the Job | pre-exchange.bat |
| Run the Following Script After | Yes |
| Run Script After the Job | post-exchange.bat |
| Run Script Frequency | Days |
| Run Script on the Selected Days | Saturday |

Table 270 - Advanced Settings (Script) - WIN HyperV VM Backup

Secondary Target

| Job Name | Type | State | Description |
| --- | --- | --- | --- |
| PHARMAX-HQ-SVR-TAPE | Backup to Tape | Failed | Created by PHARMAX\administrator at 6/29/2021 7:24 PM. |

Table 271 - Secondary Destination Jobs - WIN HyperV VM Backup

Guest Processing

|  |  |
| --- | --- |
| Name | pharmax-cluster.pharmax.local |
| Enabled | Yes |
| Resource Type |  |
| Ignore Errors | No |
| Guest Proxy Auto Detect | Yes |
| Default Credential | admin |
| Object Credential | Default Credential |
| Application Processing | Yes |
| Transaction Logs | Process Transaction Logs |
| Use Persistent Guest Agent | No |
| SQL Transaction Logs Processing | Truncate logs |
| SQL Backup Log Every | 15 min |
| SQL Retain Log Backups | Until the corresponding image-level backup is deleted |

Table 272 - Guest Processing Options - pharmax-cluster.pharmax.local

|  |  |
| --- | --- |
| Name | Server-EX-01v |
| Enabled | Yes |
| Resource Type |  |
| Ignore Errors | Yes |
| Guest Proxy Auto Detect | Yes |
| Default Credential | admin |
| Object Credential | Default Credential |
| Application Processing | Yes |
| Transaction Logs | Process Transaction Logs |
| Use Persistent Guest Agent | Yes |
| SQL Transaction Logs Processing | Truncate logs |
| SQL Backup Log Every | 15 min |
| SQL Retain Log Backups | Until the corresponding image-level backup is deleted |
| Oracle Account Type | Oracle |
| Oracle Sysdba Creds | Guest OS Credential |
| Oracle Backup Logs Every | 15 min |
| Oracle Archive Logs | Disabled |
| Oracle Retain Log Backups | Until the corresponding image-level backup is deleted |

Table 273 - Guest Processing Options - Server-EX-01v

### 1.7.4 Replication Jobs

The following section provide a summary about replication jobs

| Name | Type | Status | Latest Result | Last Run |
| --- | --- | --- | --- | --- |
| Cisco-CSR-Replication | VMware Replication | Enabled | Success |  |
| Cloud-Replication-Virtualdcs | VMware Replication | Enabled | Warning | 12/22/2043 19:11:12 |
| HQ-to-EDGE | VMware Replication | Enabled | Failed |  |
| HVCluster-To-HVStandalone | Hyper-V Replication | Enabled | Warning |  |

Table 274 - Replication Jobs - VEEAM-VBR

### 1.7.5 VMware Replication Jobs Configuration

The following section details the configuration abut VMware type backup jobs.

| Name | Creation Time | VM Count |
| --- | --- | --- |
| Cisco-CSR-Replication | Sunday, May 8, 2022 | 1 |
| Cloud-Replication-Virtualdcs | Monday, June 27, 2022 |  |
| HQ-to-EDGE | Thursday, May 5, 2022 | 2 |

Table 275 - VMware Replication Summary - VEEAM-VBR

#### 1.7.5.1 Cisco-CSR-Replication

Common Information

|  |  |
| --- | --- |
| Name | Cisco-CSR-Replication |
| Type | VMware Replication |
| Total Backup Size | 2 GB |
| Target Address |  |
| Target File | replica |
| Description | Created by PHARMAX\administrator at 5/8/2022 6:19 PM. |
| Modified By | PHARMAX\administrator |

Table 276 - Common Information - Cisco-CSR-Replication

Destination

|  |  |
| --- | --- |
| Host or Cluster | Unknown |
| Resources Pool | PHARMAX-EDGE-SRV |
| VM Folder | PHARMAX-EDGE |
| Datastore | VMWARE\_EDGE\_DATASTORE |

Table 277 - Destination - Cisco-CSR-Replication

Network

| Source Network | Target Network |
| --- | --- |
| DVS-Esxi-VM-Network (PHARMAX-DVS) | DVS-VM-NETWORK-EDGE (VMWARE-LAB-DVS) |

Table 278 - Network Mappings - Cisco-CSR-Replication

Re-IP Rules

| Source IP Address | Source Subnet Mask | Target P Address | Target Subnet Mask | Target Default Gateway | Target DNS Addresses |
| --- | --- | --- | --- | --- | --- |
| 192.168.7.\* | 255.255.255.0 | 192.168.8.\* | 255.255.255.0 | 192.168.8.254 |  |

Table 279 - Re-IP Rules - Cisco-CSR-Replication

Virtual Machines

| Name | Resource Type | Role | Approx Size | Disk Filter Mode |
| --- | --- | --- | --- | --- |
| csr-mapserver | Virtual Machine | Include | 1.5 GB | AllDisks |

Table 280 - Virtual Machines - Cisco-CSR-Replication

Job Settings

|  |  |
| --- | --- |
| Repository for replica metadata | Linux - Hardened Repository |
| Replica Name Suffix | \_replica |
| Restore Point To Keep | 7 |

Table 281 - Options - Cisco-CSR-Replication

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | No |
| SLCG Schedule Type | Monthly |
| SLCG Schedule Day | Friday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | No |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Remove deleted item data after | 14 |

Table 282 - Advanced Settings (Maintenance) - Cisco-CSR-Replication

***Health Check:***

***Best Practice: It is recommended to use storage-level corruption guard for any backup job with no active full backups scheduled. Synthetic full backups are still 'incremental forever' and may suffer from corruption over time. Storage-level corruption guard was introduced to provide a greater level of confidence in integrity of the backups.***

Advanced Settings (Traffic)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Exclude Swap Files Block | Yes |
| Exclude Deleted Files Block | Yes |
| Compression Level | OPTIMAL (Default) |
| Storage optimization | LAN target |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 283 - Advanced Settings (Traffic) - Cisco-CSR-Replication

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (vSphere)

|  |  |
| --- | --- |
| Enable VMware Tools Quiescence | No |
| Use Change Block Tracking | Yes |
| Enable CBT for all protected VMs | Yes |
| Reset CBT On each Active Full Backup | Yes |

Table 284 - Advanced Settings (vSphere) - Cisco-CSR-Replication

Advanced Settings (Integration)

|  |  |
| --- | --- |
| Enable Backup from Storage Snapshots | Yes |
| Limit processed VM count per Storage Snapshot | No |
| VM count per Storage Snapshot | 10 |
| Failover to Standard Backup | No |
| Failover to Primary Storage Snapshot | No |

Table 285 - Advanced Settings (Integration) - Cisco-CSR-Replication

Data Transfer

|  |  |
| --- | --- |
| Source Proxy | Automatic |
| Target Proxy | Automatic |
| Use Wan accelerator | No |

Table 286 - Data Transfer - Cisco-CSR-Replication

#### 1.7.5.2 Cloud-Replication-Virtualdcs

Common Information

|  |  |
| --- | --- |
| Name | Cloud-Replication-Virtualdcs |
| Type | VMware Replication |
| Total Backup Size | 2 GB |
| Target Address |  |
| Target File | replica |
| Description | Created by PHARMAX\administrator at 5/8/2022 6:19 PM. |
| Modified By | PHARMAX\administrator |

Table 287 - Common Information - Cloud-Replication-Virtualdcs

Destination

|  |  |
| --- | --- |
| Host or Cluster | vcenter-03v.pharmax.local vcenter-01v.pharmax.local vcenter-03v.pharmax.local vcenter-01v.pharmax.local |
| Resources Pool |  |
| VM Folder |  |
| Datastore | VCC-ZenPRSolutions-Replication Storage |

Table 288 - Destination - Cloud-Replication-Virtualdcs

Network

| Source Network | Target Network |
| --- | --- |
| DVS-ESXi-MANAGEMENT (PHARMAX-DVS) | VCCR-ZenPRSolutions-Hardware Plan network 1 (internet) |

Table 289 - Network Mappings - Cloud-Replication-Virtualdcs

Virtual Machines

| Name | Resource Type | Role | Approx Size | Disk Filter Mode |
| --- | --- | --- | --- | --- |
| csr-pharmax-hq | Virtual Machine | Include | 1.5 GB | AllDisks |

Table 290 - Virtual Machines - Cloud-Replication-Virtualdcs

Job Settings

|  |  |
| --- | --- |
| Repository for replica metadata | Linux - Hardened Repository |
| Replica Name Suffix | \_replica |
| Restore Point To Keep | 7 |

Table 291 - Options - Cloud-Replication-Virtualdcs

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | No |
| SLCG Schedule Type | Monthly |
| SLCG Schedule Day | Friday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | No |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Remove deleted item data after | 14 |

Table 292 - Advanced Settings (Maintenance) - Cloud-Replication-Virtualdcs

***Health Check:***

***Best Practice: It is recommended to use storage-level corruption guard for any backup job with no active full backups scheduled. Synthetic full backups are still 'incremental forever' and may suffer from corruption over time. Storage-level corruption guard was introduced to provide a greater level of confidence in integrity of the backups.***

Advanced Settings (Traffic)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Exclude Swap Files Block | Yes |
| Exclude Deleted Files Block | Yes |
| Compression Level | OPTIMAL (Default) |
| Storage optimization | LAN target |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 293 - Advanced Settings (Traffic) - Cloud-Replication-Virtualdcs

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (vSphere)

|  |  |
| --- | --- |
| Enable VMware Tools Quiescence | No |
| Use Change Block Tracking | Yes |
| Enable CBT for all protected VMs | Yes |
| Reset CBT On each Active Full Backup | Yes |

Table 294 - Advanced Settings (vSphere) - Cloud-Replication-Virtualdcs

Advanced Settings (Integration)

|  |  |
| --- | --- |
| Enable Backup from Storage Snapshots | Yes |
| Limit processed VM count per Storage Snapshot | No |
| VM count per Storage Snapshot | 10 |
| Failover to Standard Backup | No |
| Failover to Primary Storage Snapshot | No |

Table 295 - Advanced Settings (Integration) - Cloud-Replication-Virtualdcs

Data Transfer

|  |  |
| --- | --- |
| Source Proxy | Automatic |
| Target Proxy | Automatic |
| Use Wan accelerator | Yes |
| Source Wan accelerator | VEEAM-VBR-02V.pharmax.local |
| Target Wan accelerator |  |

Table 296 - Data Transfer - Cloud-Replication-Virtualdcs

Seeding

|  |  |
| --- | --- |
| Seed from Backup Repository | Disabled |
| Map Replica to Existing VM | No |

Table 297 - Seeding - Cloud-Replication-Virtualdcs

#### 1.7.5.3 HQ-to-EDGE

Common Information

|  |  |
| --- | --- |
| Name | HQ-to-EDGE |
| Type | VMware Replication |
| Total Backup Size | 2 GB |
| Target Address |  |
| Target File | replica |
| Description | Created by PHARMAX\administrator at 5/8/2022 6:19 PM. |
| Modified By | PHARMAX\administrator |

Table 298 - Common Information - HQ-to-EDGE

Destination

|  |  |
| --- | --- |
| Host or Cluster | Unknown |
| Resources Pool | PHARMAX-EDGE-SRV |
| VM Folder | PHARMAX-EDGE |
| Datastore | VMDatastore |

Table 299 - Destination - HQ-to-EDGE

Network

| Source Network | Target Network |
| --- | --- |
| DVS-CLIENT-LISP-40 (VMWARE-LAB-DVS) | DVS-VM-NETWORK-EDGE (VMWARE-LAB-DVS) |
| DVS-VM-NETWORK (VMWARE-LAB-DVS) | DVS-VM-NETWORK-EDGE (VMWARE-LAB-DVS) |

Table 300 - Network Mappings - HQ-to-EDGE

Re-IP Rules

| Source IP Address | Source Subnet Mask | Target P Address | Target Subnet Mask | Target Default Gateway | Target DNS Addresses |
| --- | --- | --- | --- | --- | --- |
| 192.168.7.\* | 255.255.255.0 | 192.168.8.\* | 255.255.255.0 | 192.168.8.254 |  |
| 192.168.7.9 | 255.255.255.0 | 192.168.8.8 | 255.255.255.0 | 192.168.8.25 | 192.168.5.1 |

Table 301 - Re-IP Rules - HQ-to-EDGE

Virtual Machines

| Name | Resource Type | Role | Approx Size | Disk Filter Mode |
| --- | --- | --- | --- | --- |
| PHARMAX-HQ-SVR | Resource Pool | Include | 0 B | AllDisks |

Table 302 - Virtual Machines - HQ-to-EDGE

Job Settings

|  |  |
| --- | --- |
| Repository for replica metadata | Linux - Hardened Repository |
| Replica Name Suffix | \_replica |
| Restore Point To Keep | 7 |

Table 303 - Options - HQ-to-EDGE

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | No |
| SLCG Schedule Type | Monthly |
| SLCG Schedule Day | Friday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | No |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Remove deleted item data after | 14 |

Table 304 - Advanced Settings (Maintenance) - HQ-to-EDGE

***Health Check:***

***Best Practice: It is recommended to use storage-level corruption guard for any backup job with no active full backups scheduled. Synthetic full backups are still 'incremental forever' and may suffer from corruption over time. Storage-level corruption guard was introduced to provide a greater level of confidence in integrity of the backups.***

Advanced Settings (Traffic)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Exclude Swap Files Block | Yes |
| Exclude Deleted Files Block | Yes |
| Compression Level | OPTIMAL (Default) |
| Storage optimization | LAN target |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 305 - Advanced Settings (Traffic) - HQ-to-EDGE

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (Notification)

|  |  |
| --- | --- |
| Send Snmp Notification | Yes |
| Send Email Notification | Yes |
| Email Notification Additional Addresses | rebelinux@gmail.com |
| Email Notify Time | 10:00 PM |
| Use Custom Email Notification Options | No |
| Use Custom Notification Setting | [%JobResult%] %JobName% (%ObjectCount% machines) %Issues% |
| Notify On Success | Yes |
| Notify On Warning | Yes |
| Notify On Error | Yes |
| Suppress Notification until Last Retry | Yes |
| Set Results To Vm Notes | No |
| VM Attribute Note Value | Notes |
| Append to Existing Attribute | Yes |

Table 306 - Advanced Settings (Notification) - HQ-to-EDGE

Advanced Settings (vSphere)

|  |  |
| --- | --- |
| Enable VMware Tools Quiescence | Yes |
| Use Change Block Tracking | Yes |
| Enable CBT for all protected VMs | Yes |
| Reset CBT On each Active Full Backup | Yes |

Table 307 - Advanced Settings (vSphere) - HQ-to-EDGE

Advanced Settings (Integration)

|  |  |
| --- | --- |
| Enable Backup from Storage Snapshots | Yes |
| Limit processed VM count per Storage Snapshot | No |
| VM count per Storage Snapshot | 10 |
| Failover to Standard Backup | No |
| Failover to Primary Storage Snapshot | No |

Table 308 - Advanced Settings (Integration) - HQ-to-EDGE

Advanced Settings (Script)

|  |  |
| --- | --- |
| Run the Following Script Before | Yes |
| Run Script Before the Job | presqldb.cmd |
| Run the Following Script After | Yes |
| Run Script After the Job | postsqldb.cmd |
| Run Script Frequency | Cycles |
| Run Script Every Backup Session | 1 |

Table 309 - Advanced Settings (Script) - HQ-to-EDGE

Data Transfer

|  |  |
| --- | --- |
| Source Proxy | VMware Backup Proxy |
| Target Proxy | Automatic |
| Use Wan accelerator | Yes |
| Source Wan accelerator | VEEAM-VBR-02V.pharmax.local |
| Target Wan accelerator | VEEAM-WAN-01V.pharmax.local |

Table 310 - Data Transfer - HQ-to-EDGE

Seeding

|  |  |
| --- | --- |
| Seed from Backup Repository | Linux - Hardened Repository |
| Map Replica to Existing VM | Yes |

Table 311 - Seeding - HQ-to-EDGE

Guest Processing

|  |  |
| --- | --- |
| Name | PHARMAX-HQ-SVR |
| Enabled | Yes |
| Resource Type | Resource Pool |
| Ignore Errors | No |
| Guest Proxy Auto Detect | Yes |
| Default Credential | administrator@pharmax.local |
| Object Credential | Default Credential |
| Application Processing | Yes |
| Transaction Logs | Perform Copy Only |
| Use Persistent Guest Agent | No |

Table 312 - Guest Processing Options - PHARMAX-HQ-SVR

Schedule

|  |  |
| --- | --- |
| Retry Failed item | 3 |
| Wait before each retry | 10/min |
| Backup Window | Yes |
| Shedule type | Monthly |
| Shedule Options | Day Of Month: 1, Day Number In Month: Fourth, Day Of Week: Saturday |
| Start Time | 10:00 PM |
| Latest Run | 10/22/2022 22:00:14 |

Table 313 - Schedule Options - HQ-to-EDGE

Backup Window Time Period

**Permited \ Denied**

| H | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tue | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Thu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fri | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 314 - Backup Window - HQ-to-EDGE

### 1.7.6 Hyper-V Replication Jobs Configuration

The following section details the configuration about Hyper-V replication jobs.

| Name | Creation Time | VM Count |
| --- | --- | --- |
| HVCluster-To-HVStandalone |  | 1 |

Table 315 - Hyper-V Replication Summary - VEEAM-VBR

#### 1.7.6.1 HVCluster-To-HVStandalone

Common Information

|  |  |
| --- | --- |
| Name | HVCluster-To-HVStandalone |
| Type | Hyper-V Replication |
| Total Backup Size | 4 MB |
| Target Address | C:\Hyper-V VM |
| Target File | replica |
| Description | Created by PHARMAX\administrator at 5/7/2022 1:30 PM. |
| Modified By | PHARMAX\administrator |

Table 316 - Common Information - HVCluster-To-HVStandalone

Destination

|  |  |
| --- | --- |
| Host or Cluster | Hosts and VMs |
| Path | c:\replicas |

Table 317 - Destination - HVCluster-To-HVStandalone

Network

| Source Network | Target Network |
| --- | --- |
| vmxnet3 Ethernet Adapter - Virtual Switch | vmxnet3 Ethernet Adapter - Virtual Switch |

Table 318 - Network Mappings - HVCluster-To-HVStandalone

Re-IP Rules

| Source IP Address | Source Subnet Mask | Target P Address | Target Subnet Mask | Target Default Gateway | Target DNS Addresses |
| --- | --- | --- | --- | --- | --- |
| 192.168.7.\* | 255.255.255.0 | 192.168.8.\* | 255.255.255.0 | 192.168.8.254 | 192.168.5.1 |

Table 319 - Re-IP Rules - HVCluster-To-HVStandalone

Virtual Machines

| Name | Resource Type | Role | Location | Disk Filter Mode |
| --- | --- | --- | --- | --- |
| Tiny-VM | Vm | Include | pharmax-cluster.pharmax.local\Tiny-VM | AllDisks |

Table 320 - Virtual Machines - HVCluster-To-HVStandalone

Job Settings

|  |  |
| --- | --- |
| Repository for replica metadata | Linux - Hardened Repository |
| Replica Name Suffix | \_replica |
| Restore Point To Keep | 7 |

Table 321 - Options - HVCluster-To-HVStandalone

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | No |
| SLCG Schedule Type | Monthly |
| SLCG Schedule Day | Friday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | No |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |
| Remove deleted item data after | 14 |

Table 322 - Advanced Settings (Maintenance) - HVCluster-To-HVStandalone

***Health Check:***

***Best Practice: It is recommended to use storage-level corruption guard for any backup job with no active full backups scheduled. Synthetic full backups are still 'incremental forever' and may suffer from corruption over time. Storage-level corruption guard was introduced to provide a greater level of confidence in integrity of the backups.***

Advanced Settings (Traffic)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Exclude Swap Files Block | Yes |
| Exclude Deleted Files Block | Yes |
| Compression Level | OPTIMAL (Default) |
| Storage optimization | LAN target |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 323 - Advanced Settings (Traffic) - HVCluster-To-HVStandalone

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (Hyper-V)

|  |  |
| --- | --- |
| Enable Hyper-V Guest Quiescence | Yes |
| Crash Consistent Backup | Yes |
| Use Change Block Tracking | Yes |
| Volume Snapshot | Yes |

Table 324 - Advanced Settings (Hyper-V) - HVCluster-To-HVStandalone

Advanced Settings (Integration)

|  |  |
| --- | --- |
| Enable Backup from Storage Snapshots | Yes |
| Limit processed VM count per Storage Snapshot | No |
| VM count per Storage Snapshot | 10 |
| Failover to Standard Backup | No |
| Failover to Primary Storage Snapshot | No |

Table 325 - Advanced Settings (Integration) - HVCluster-To-HVStandalone

Advanced Settings (Script)

|  |  |
| --- | --- |
| Run the Following Script Before | Yes |
| Run Script Before the Job | presql.cmd |
| Run the Following Script After | Yes |
| Run Script After the Job | postsql.cmd |
| Run Script Frequency | Cycles |
| Run Script Every Backup Session | 1 |

Table 326 - Advanced Settings (Script) - HVCluster-To-HVStandalone

Data Transfer

|  |  |
| --- | --- |
| Source Proxy | VEEAM-HVPRX-01V.pharmax.local |
| Target Proxy | VEEAM-HVPRX-01V.pharmax.local |
| Use Wan accelerator | Yes |
| Source Wan accelerator | VEEAM-VBR |
| Target Wan accelerator | VEEAM-WAN-01V.pharmax.local |

Table 327 - Data Transfer - HVCluster-To-HVStandalone

Seeding

|  |  |
| --- | --- |
| Seed from Backup Repository | Linux - Hardened Repository |
| Map Replica to Existing VM | Yes |

Table 328 - Seeding - HVCluster-To-HVStandalone

Guest Processing

|  |  |
| --- | --- |
| Name | Tiny-VM |
| Enabled | Yes |
| Resource Type |  |
| Ignore Errors | No |
| Guest Proxy Auto Detect | Yes |
| Default Credential | administrator@pharmax.local |
| Object Credential | administrator@vsphere.local |
| Application Processing | Yes |
| Transaction Logs | Perform Copy Only |
| Use Persistent Guest Agent | No |
| File Exclusions | Yes |
| Exclude the following file and folders | \*.mp3 |
| Scripts | Yes |
| Scripts Mode | Require successfull script execution |
| Windows Pre-freeze script | presql.cmd |
| Windows Post-thaw script | postsql.cmd |

Table 329 - Guest Processing Options - Tiny-VM

### 1.7.7 Tape Backup Jobs

The following section list tape backup jobs created in Veeam Backup & Replication.

| Name | Type | Latest Status | Target Repository |
| --- | --- | --- | --- |
| File to Tape Job - Data Share | File To Tape | Warning | Standard Media Pool [Oracle - Media Pool] |
| File to Tape Job - Server Share | File To Tape | Failed | Standard Media Pool [WORM Media Pool 1] |
| PHARMAX-HQ-SVR-TAPE | Backup To Tape | Success | WORM GFS Media Pool 1 |
| PHARMAX-HQ-SVR-TAPE Standard | Backup To Tape | Success | Standard Media Pool [WORM Media Pool 1] |

Table 330 - Backup Jobs - VEEAM-VBR

### 1.7.8 Backup To Tape Job Configuration

The following section details the configuration about the backup to tape jobs .

#### 1.7.8.1 PHARMAX-HQ-SVR-TAPE

Backups Information

|  |  |
| --- | --- |
| Name | PHARMAX-HQ-SVR-TAPE |
| Type | BackupToTape |
| Total Backup Size | 186 GB |
| Next Run | Disabled |
| Description | Created by PHARMAX\administrator at 6/29/2021 7:24 PM. |

Table 331 - Common Information - PHARMAX-HQ-SVR-TAPE

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Backups Objects

| Name | Type | Size | Repository |
| --- | --- | --- | --- |
| Gurabo PC - Backup Job | Backup Job | 0 KB | SOBR - Minio |
| Linux Agent Backup Job | Backup Job | 0 KB | Linux - Hardened Repository |
| PHARMAX-HQ-SVR | Backup Job | 31 GB | SOBR - Minio |
| Server With Netapp LUNS - Backup | Backup Job | 0 KB | SOBR - Minio |
| SOBR - Minio | Repository | 156 GB | SOBR - Minio |
| WIN HyperV VM Backup | Backup Job | 4 MB | SOBR - Minio |

Table 332 - Backups Objects - PHARMAX-HQ-SVR-TAPE

Media Pool

|  |  |
| --- | --- |
| Name | WORM GFS Media Pool 1 |
| Pool Type | Gfs |
| Tape Count | 5 |
| Free Space | 59 TB |
| Encryption Enabled | Yes |
| Encryption Key | Password Global |
| Parallel Processing | 2 drives; Multiple Backup Chains: Yes |
| Is WORM | Yes |
| Daily | 14 days; Use any available media; append; do not export |
| Weekly | 4 days; Use any available media; do not append; do not export |
| Monthly | 12 days; Use any available media; do not append; do not export |
| Quarterly | 4 days; Use any available media; do not append; do not export |
| Yearly | 1 days; Use any available media; do not append; do not export |

Table 333 - Media Pool - PHARMAX-HQ-SVR-TAPE

Options

|  |  |
| --- | --- |
| Eject Tape Media Upon Job Completion | Yes |
| Export the following MediaSet Upon Job Completion | Yes |
| Limit the number of drives this job can use | Enabled: Yes; Tape Drives Limit: 3 |

Table 334 - Options - PHARMAX-HQ-SVR-TAPE

Advanced Settings (Notifications)

|  |  |
| --- | --- |
| Send Email Notification | Yes |
| Email Notification Additional Recipients | veeam\_admin@pharmax.local |
| Use Custom Notification Settings | Yes |
| Subject | [%JobResult%] %JobName% (%TapeCount% Tapes) %Issues% |
| Notify On Success | Yes |
| Notify On Warning | Yes |
| Notify On Error | Yes |
| Notify On Last Retry Only | Yes |
| Notify When Waiting For Tape | Yes |

Table 335 - Advanced Settings (Notifications) - PHARMAX-HQ-SVR-TAPE

Advanced Settings (Advanced)

|  |  |
| --- | --- |
| Process the most recent Restore Point instead of waiting | Yes |
| Use Hardware Compression when available | Yes |
| Run the following script before job | c:\pretapebackup.bat |
| Run the following script after job | c:\posttapebackup.bat |
| Run Script Every Backup Session | Every 1 backup session |

Table 336 - Advanced Settings (Advanced) - PHARMAX-HQ-SVR-TAPE

Schedule

|  |  |
| --- | --- |
| Prevent this job from being interrupted by source backup job | No |
| Perform GFS scan daily at | 0:00:00 |
| Daily backup | Everyday |
| Weekly backup | Wednesday 00:00:00 |
| Monthly backup | Fourth Wednesday of the month |
| Quarterly backup | 1 day of the Last month of the quarter |
| Yearly backup | 1 day of May |

Table 337 - Schedule - PHARMAX-HQ-SVR-TAPE

#### 1.7.8.2 PHARMAX-HQ-SVR-TAPE Standard

Backups Information

|  |  |
| --- | --- |
| Name | PHARMAX-HQ-SVR-TAPE Standard |
| Type | BackupToTape |
| Total Backup Size | 13 GB |
| Next Run |  |
| Description | Created by PHARMAX\administrator at 2/25/2022 7:14 PM. |

Table 338 - Common Information - PHARMAX-HQ-SVR-TAPE Standard

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Backups Objects

| Name | Type | Size | Repository |
| --- | --- | --- | --- |
| Agent Backup Job 3 | Backup Job | 0 KB | SOBR - Minio |
| Agent Backup Policy 2 | Backup Job | 0 KB | SOBR - Minio |
| Linux - Hardened Repository | Repository | 13 GB | Linux - Hardened Repository |
| Server With Netapp LUNS - Backup | Backup Job | 0 KB | SOBR - Minio |
| VM - Test - AWS | Backup Job | 26 MB | SOBR - AWS S3 |

Table 339 - Backups Objects - PHARMAX-HQ-SVR-TAPE Standard

Media Pool

|  |  |
| --- | --- |
| Name | Standard Media Pool |
| Pool Type | Custom |
| Tape Count | 3 |
| Free Space | 35 TB |
| Encryption Enabled | No |
| Encryption Key | Disabled |
| Parallel Processing | 2 drives; Multiple Backup Chains: Yes |
| Is WORM | No |
| Retention | Protect data for 1 Months |
| Export to Vault | Yes |
| Vault | DR - Tape Vault |
| Media Set Name | Standard Media set # %id% %date% |
| Automatically create new media set | Create new media set for every backup session |
| Full Backup Schedule | Weekly on selected days: Monday, Tuesday, Wednesday, Thursday, Friday |

Table 340 - Media Pool - PHARMAX-HQ-SVR-TAPE Standard

Incremental Backup

|  |  |
| --- | --- |
| Media Pool | WORM Media Pool 1 |
| Pool Type | Custom |
| Tape Count | 5 |
| Free Space | 59 TB |
| Encryption Enabled | Yes |
| Encryption Key | Password Global |
| Parallel Processing | 2 drives; Multiple Backup Chains: Yes |
| Is WORM | Yes |
| Retention | Never Overwrite Data |
| Export to Vault | Yes |
| Vault | DR - Tape Vault |
| Media Set Name | WORM media set # %id% %date% |
| Automatically create new media set | Do not create, always continue using current media set |

Table 341 - Incremental Backup - PHARMAX-HQ-SVR-TAPE Standard

Options

|  |  |
| --- | --- |
| Eject Tape Media Upon Job Completion | Yes |
| Export the following MediaSet Upon Job Completion | Yes |
| Limit the number of drives this job can use | Enabled: Yes; Tape Drives Limit: 2 |

Table 342 - Options - PHARMAX-HQ-SVR-TAPE Standard

Advanced Settings (Notifications)

|  |  |
| --- | --- |
| Send Email Notification | Yes |
| Email Notification Additional Recipients | veeam\_admin@pharmax.local |
| Use Global Notification Settings | No |

Table 343 - Advanced Settings (Notifications) - PHARMAX-HQ-SVR-TAPE Standard

Advanced Settings (Advanced)

|  |  |
| --- | --- |
| Process the most recent Restore Point instead of waiting | Yes |
| Use Hardware Compression when available | Yes |
| Pre Job Script Enabled | No |
| Post Job Script Enabled | No |

Table 344 - Advanced Settings (Advanced) - PHARMAX-HQ-SVR-TAPE Standard

Schedule

|  |  |
| --- | --- |
| Prevent this job from being interrupted by source backup job | Yes |
| Run Automatically | After Job: PHARMAX-HQ-SVR |
| Wait for Backup Job | 03:00:00 hours |

Table 345 - Schedule - PHARMAX-HQ-SVR-TAPE Standard

### 1.7.9 File To Tape Job Configuration

The following section details the configuration about file to tape jobs.

#### 1.7.9.1 File to Tape Job - Data Share

Backups Information

|  |  |
| --- | --- |
| Name | File to Tape Job - Data Share |
| Type | FileToTape |
| Next Run | 06/05/2023 18:00:00 |
| Description | Created by PHARMAX\jocolon at 1/8/2022 1:02 PM. |

Table 346 - Common Information - File to Tape Job - Data Share

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Files and Folders

| Name | Type | Selection Type | Path | Include Filter | Exclude Filter |
| --- | --- | --- | --- | --- | --- |
| 192.168.5.18:/oracle | NfsShare | Directory | nfs3://192.168.5.18:/oracle | \*.\* | \*.odt |
| ONTAP-HQ-SAN-IC.pharmax.local | NDMP | Directory | /NAS-VEEAM/DATA | - | - |

Table 347 - Files and Folders - File to Tape Job - Data Share

Full Backup

|  |  |
| --- | --- |
| Name | Standard Media Pool |
| Pool Type | Custom |
| Tape Count | 3 |
| Capacity | 35 TB |
| Remaining | 35 TB |
| Is WORM | No |
| Schedule Enabled | Yes |
| Daily at this Time | 18:00:00 - Monday, Tuesday, Wednesday, Thursday, Friday |

Table 348 - Full Backup - File to Tape Job - Data Share

Incremental Backup

|  |  |
| --- | --- |
| Name | Oracle - Media Pool |
| Pool Type | Custom |
| Tape Count | 4 |
| Capacity | 24 TB |
| Remaining | 24 TB |
| Is WORM | No |
| Schedule Enabled | Yes |
| Monthly at this Time | At 00:00:00, Monthly on the: Fourth Saturday of Every Month |

Table 349 - Incremental Backup - File to Tape Job - Data Share

Options

|  |  |
| --- | --- |
| Use Microsoft volume shadow copy (VSS) | Yes |
| Eject Tape Media Upon Job Completion | Yes |
| Export the following MediaSet Upon Job Completion | Yes |

Table 350 - Options - File to Tape Job - Data Share

Advanced Settings (Notifications)

|  |  |
| --- | --- |
| Send Email Notification | Yes |
| Email Notification Additional Recipients | admin@superdc.com,admin@netapp.com |
| Use Custom Notification Settings | Yes |
| Subject | [%JobResult%] %JobName% (%TapeCount% Tapes) %Issues% |
| Notify On Success | Yes |
| Notify On Warning | Yes |
| Notify On Error | Yes |
| Notify On Last Retry Only | Yes |
| Notify When Waiting For Tape | Yes |

Table 351 - Advanced Settings (Notifications) - File to Tape Job - Data Share

Advanced Settings (Advanced)

|  |  |
| --- | --- |
| Use Hardware Compression when available | Yes |
| Run the following script before job | c:\pretest.exe |
| Run the following script after job | c:\posttest.exe |
| Run Script Every Backup Session | Every 4 backup session |

Table 352 - Advanced Settings (Advanced) - File to Tape Job - Data Share

#### 1.7.9.2 File to Tape Job - Server Share

Backups Information

|  |  |
| --- | --- |
| Name | File to Tape Job - Server Share |
| Type | FileToTape |
| Next Run | 06/07/2023 22:00:00 |
| Description | Created by PHARMAX\administrator at 2/26/2022 6:01 PM. |

Table 353 - Common Information - File to Tape Job - Server Share

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Files and Folders

| Name | Type | Selection Type | Path | Include Filter | Exclude Filter |
| --- | --- | --- | --- | --- | --- |
| \\server-dc-01v\UEMConfig | CifsShare | Directory | \\server-dc-01v\UEMConfig | \*.\* | - |
| server-dc-01v | Windows | Host | server-dc-01v | \*.\* | - |
| veeam-lnx-px.pharmax.local | Linux | Directory | /home | \*.\* | - |

Table 354 - Files and Folders - File to Tape Job - Server Share

Full Backup

|  |  |
| --- | --- |
| Name | Standard Media Pool |
| Pool Type | Custom |
| Tape Count | 3 |
| Capacity | 35 TB |
| Remaining | 35 TB |
| Is WORM | No |
| Schedule Enabled | Yes |
| Daily at this Time | 18:00:00 - Saturday |

Table 355 - Full Backup - File to Tape Job - Server Share

Incremental Backup

|  |  |
| --- | --- |
| Name | WORM Media Pool 1 |
| Pool Type | Custom |
| Tape Count | 5 |
| Capacity | 59 TB |
| Remaining | 59 TB |
| Is WORM | Yes |
| Schedule Enabled | Yes |
| Monthly at this Time | At 00:00:00, Monthly on the: First Wednesday of January, February, March, April, May, June, July, August, September, October |

Table 356 - Incremental Backup - File to Tape Job - Server Share

Options

|  |  |
| --- | --- |
| Use Microsoft volume shadow copy (VSS) | Yes |
| Eject Tape Media Upon Job Completion | Yes |
| Export the following MediaSet Upon Job Completion | Yes |

Table 357 - Options - File to Tape Job - Server Share

Advanced Settings (Notifications)

|  |  |
| --- | --- |
| Send Email Notification | Yes |
| Email Notification Additional Recipients | admin@veeam.com |
| Use Custom Notification Settings | Yes |
| Subject | [%JobResult%] %JobName% (%TapeCount% Tapes) %Issues% |
| Notify On Success | Yes |
| Notify On Warning | Yes |
| Notify On Error | Yes |
| Notify On Last Retry Only | Yes |
| Notify When Waiting For Tape | Yes |

Table 358 - Advanced Settings (Notifications) - File to Tape Job - Server Share

Advanced Settings (Advanced)

|  |  |
| --- | --- |
| Use Hardware Compression when available | Yes |
| Pre Job Script Enabled | No |
| Post Job Script Enabled | No |

Table 359 - Advanced Settings (Advanced) - File to Tape Job - Server Share

### 1.7.10 SureBackup Jobs

The following section list surebackup jobs created in Veeam Backup & Replication.

| Name | Status | Schedule Enabled | Latest Result | Virtual Lab |
| --- | --- | --- | --- | --- |
| SureBackup Job 3 | Enabled | Not Scheduled | None | PHARMAX-VLAB |
| Pharmax-Lab Test Oracle Upgrade | Enabled | Scheduled | None | PHARMAX-VLAB |
| Hyper-V-Backup-LNX | Enabled | Scheduled | Failed | PHARMAX-VLAB-HYPER-V |

Table 360 - SureBackup Jobs - VEEAM-VBR

### 1.7.11 SureBackup Job Configuration

The following section provide detailed jobs configuration about Surebackup.

#### 1.7.11.1 Hyper-V-Backup-LNX

Common Information

|  |  |
| --- | --- |
| Name | Hyper-V-Backup-LNX |
| Last Run | 03/06/2023 12:22:31 |
| Next Run | 06/04/2023 22:00:00 |
| Description | Created by PHARMAX\administrator at 3/6/2023 10:10 AM. |

Table 361 - Common Information - Hyper-V-Backup-LNX

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Lab

|  |  |
| --- | --- |
| Name | PHARMAX-VLAB-HYPER-V |
| Description | Created by PHARMAX\administrator at 3/6/2023 10:07 AM. |
| Physical Host | VEEAM-HV-03.pharmax.local |
| Physical Host Version | Microsoft Windows Server 2022 Datacenter Evaluation 64-bit (10.0.20348 build:20348) |
| Destination | C:\VeeamVirtualLabs\PHARMAX-VLAB-HYPER-V |

Table 362 - Virtual Lab - Hyper-V-Backup-LNX

Application Group

|  |  |
| --- | --- |
| Name | HV - APPGroup |
| Virtual Machines | LNX-WEB-01 |
| Keep Application Group Running | No |
| Description | Created by PHARMAX\jocolon at 12/25/2021 9:53 PM. |

Table 363 - Application Group - Hyper-V-Backup-LNX

Settings

|  |  |
| --- | --- |
| Backup file integrity scan | No |
| Skip validation for application group VM | Yes |
| Malware Scan | No |
| Scan the entire image | No |
| Skip application group machine from malware scan | Yes |
| Send SNMP trap | Yes |
| Send Email notification | Yes |
| Email recipients | rebelinux@gmail.com |

Table 364 - Settings - Hyper-V-Backup-LNX

Schedule

|  |  |
| --- | --- |
| Wait for backup jobs | 180 minutes |
| Run Automatically | Daily at this time: 22:00:00, Days: Everyday, Day Of Week: Sunday Monday Tuesday Wednesday Thursday Friday Saturday |

Table 365 - Schedule - Hyper-V-Backup-LNX

#### 1.7.11.2 Pharmax-Lab Test Oracle Upgrade

Common Information

|  |  |
| --- | --- |
| Name | Pharmax-Lab Test Oracle Upgrade |
| Last Run | 02/16/2023 22:00:07 |
| Next Run | 06/04/2023 22:00:00 |
| Description | Created by PHARMAX\jocolon at 12/25/2021 6:07 PM. |

Table 366 - Common Information - Pharmax-Lab Test Oracle Upgrade

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Lab

|  |  |
| --- | --- |
| Name | PHARMAX-VLAB |
| Description | Created by PHARMAX\jocolon at 12/25/2021 6:02 PM. |
| Physical Host | esxsvr-00f.pharmax.local |
| Physical Host Version | VMware ESXi 8.0.1 build-21495797 |
| Datastore | SSD-VM-HIGH-CAPACITY-PERF-KN |

Table 367 - Virtual Lab - Pharmax-Lab Test Oracle Upgrade

Application Group

|  |  |
| --- | --- |
| Name | PHARMAX-AG |
| Virtual Machines | smallserver-01v, LINUX-VM |
| Keep Application Group Running | Yes |
| Description | Created by PHARMAX\administrator at 6/30/2021 6:35 PM. |

Table 368 - Application Group - Pharmax-Lab Test Oracle Upgrade

Linked Jobs

| Name | Roles | Description |
| --- | --- | --- |
| PHARMAX-HQ-SVR | WebServer | Created by PHARMAX\administrator at 6/29/2021 12:12 PM. |
| COMP-CLUSTER-NFS | DNSServer | Created by PHARMAX\administrator at 6/2/2021 8:15 PM. |

Table 369 - Linked Jobs - Pharmax-Lab Test Oracle Upgrade

Verification Options

|  |  |
| --- | --- |
| Job Name | PHARMAX-HQ-SVR |
| Amount of memory to Allocate to VM | 100 percent |
| Maximum allowed boot time | 600 sec |
| Application Initialization Timeout | 120 sec |
| VM heartbeat is present | Yes |
| VM respond to ping on any interface | Yes |
| VM Test Script | SQLServer |
| Credentials | Isilon Account |

Table 370 - Verification Options - Pharmax-Lab Test Oracle Upgrade

|  |  |
| --- | --- |
| Job Name | COMP-CLUSTER-NFS |
| Amount of memory to Allocate to VM | 100 percent |
| Maximum allowed boot time | 600 sec |
| Application Initialization Timeout | 120 sec |
| VM heartbeat is present | Yes |
| VM respond to ping on any interface | Yes |
| VM Test Script | DNSServer,MailServer |
| Credentials | administrator@pharmax.local |

Table 371 - Verification Options - Pharmax-Lab Test Oracle Upgrade

Settings

|  |  |
| --- | --- |
| Backup file integrity scan | Yes |
| Skip validation for application group VM | Yes |
| Malware Scan | Yes |
| Scan the entire image | Yes |
| Skip application group machine from malware scan | Yes |
| Send SNMP trap | No |
| Send Email notification | Yes |
| Email recipients | admin@veem.com, admin@netapp.com |

Table 372 - Settings - Pharmax-Lab Test Oracle Upgrade

Schedule

|  |  |
| --- | --- |
| Wait for backup jobs | 180 minutes |
| Run Automatically | Monthly at this time: 22:00:00, This Day: 4, Months: January February March April May June July August September October |

Table 373 - Schedule - Pharmax-Lab Test Oracle Upgrade

#### 1.7.11.3 SureBackup Job 3

Common Information

|  |  |
| --- | --- |
| Name | SureBackup Job 3 |
| Last Run | 03/06/2023 20:07:17 |
| Next Run | 01/01/0001 00:00:00 |
| Description | Created by PHARMAX\jocolon at 2/6/2022 3:30 PM. |

Table 374 - Common Information - SureBackup Job 3

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Virtual Lab

|  |  |
| --- | --- |
| Name | PHARMAX-VLAB |
| Description | Created by PHARMAX\jocolon at 12/25/2021 6:02 PM. |
| Physical Host | esxsvr-00f.pharmax.local |
| Physical Host Version | VMware ESXi 8.0.1 build-21495797 |
| Datastore | SSD-VM-HIGH-CAPACITY-PERF-KN |

Table 375 - Virtual Lab - SureBackup Job 3

Application Group

|  |  |
| --- | --- |
| Name | PHARMAX-AG |
| Virtual Machines | smallserver-01v, LINUX-VM |
| Keep Application Group Running | No |
| Description | Created by PHARMAX\administrator at 6/30/2021 6:35 PM. |

Table 376 - Application Group - SureBackup Job 3

Linked Jobs

| Name | Roles | Description |
| --- | --- | --- |
| COMP-CLUSTER-NFS | SQLServer | Created by PHARMAX\administrator at 6/2/2021 8:15 PM. |

Table 377 - Linked Jobs - SureBackup Job 3

Verification Options

|  |  |
| --- | --- |
| Job Name | COMP-CLUSTER-NFS |
| Amount of memory to Allocate to VM | 100 percent |
| Maximum allowed boot time | 1800 sec |
| Application Initialization Timeout | 120 sec |
| VM heartbeat is present | Yes |
| VM respond to ping on any interface | Yes |
| VM Test Script | SQLServer |
| Credentials | None |

Table 378 - Verification Options - SureBackup Job 3

Settings

|  |  |
| --- | --- |
| Backup file integrity scan | No |
| Skip validation for application group VM | Yes |
| Malware Scan | No |
| Scan the entire image | No |
| Skip application group machine from malware scan | Yes |
| Send SNMP trap | No |
| Send Email notification | Yes |
| Email recipients |  |

Table 379 - Settings - SureBackup Job 3

### 1.7.12 Agent Backup Jobs

The following section list agent backup jobs created in Veeam Backup & Replication.

| Name | Type | OS Platform | Backup Object |
| --- | --- | --- | --- |
| Agent Backup Job 3 | FailoverCluster | Windows | Server with Netapp LUNS |
| Agent Backup Policy 2 | Server | Linux | Linux Protection Group |
| Gurabo PC - Backup Job | Workstation | Windows | Gurabo PC - Backup HQ - Manual Packet |
| Linux Agent Backup Job | Server | Linux | Linux Protection Group |
| Server With Netapp LUNS - Backup | Server | Windows | Server with Netapp LUNS server-dc-01v.pharmax.local |

Table 380 - Agent Backup Jobs - VEEAM-VBR

### 1.7.13 Agent Backup Jobs Configuration

The following section details agent backup jobs configuration created in Veeam Backup & Replication.

#### 1.7.13.1 Agent Backup Job 3

Job Mode

|  |  |
| --- | --- |
| Name | Agent Backup Job 3 |
| Id | 68ab65f1-235a-42b4-a1ae-7582951e0a99 |
| Type | FailoverCluster |
| Mode | Managed by Backup Server |
| Description | Created by PHARMAX\administrator at 5/2/2022 10:18 PM. |
| Priority | Normal Priority |

Table 381 - Job Mode - Agent Backup Job 3

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Protected Computers

| Name | Type | Enabled | Container |
| --- | --- | --- | --- |
| Server with Netapp LUNS | Custom | Yes | Active Directory |

Table 382 - Protected Computers - Agent Backup Job 3

Backup Mode

|  |  |
| --- | --- |
| Backup Mode | Entire Computer |
| Include external USB drives | No |

Table 383 - Backup Mode - Agent Backup Job 3

Storage

|  |  |
| --- | --- |
| Backup Repository | SOBR - Minio |
| Repository Type | ExtendableRepository |
| Retention Policy | Restore Days |
| Retain Days To Keep | 7 |
| Configure Secondary Destination for this Job | Yes |
| Keep certain full backup longer for archival purposes (GFS) | Yes |
| Keep Weekly full backup for | 1 weeks, If multiple backup exist use the one from: Sunday |
| Keep Monthly full backup for | 1 months, Use weekly full backup from the following week of the month: First |
| Keep Yearly full backup for | 1 years, Use monthly full backup from the following month: January |

Table 384 - Destination - Agent Backup Job 3

Secondary Target

| Job Name | Type | State | Description |
| --- | --- | --- | --- |
| PHARMAX-HQ-SVR-TAPE Standard | Backup to Tape | Warning | Created by PHARMAX\administrator at 2/25/2022 7:14 PM. |

Table 385 - Secondary Destination Job - Agent Backup Job 3

Advanced Settings (Backup)

|  |  |
| --- | --- |
| Syntethic Full Backup | Yes |
| Create Syntethic on Days | Saturday |
| Active Full Backup | No |

Table 386 - Advanced Settings (Backup) - Agent Backup Job 3

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | No |
| Defragment and Compact Full Backup (DCFB) | No |

Table 387 - Advanced Settings (Maintenance) - Agent Backup Job 3

***Health Check:***

***Best Practice: It is recommended to use storage-level corruption guard for any backup job with no active full backups scheduled. Synthetic full backups are still 'incremental forever' and may suffer from corruption over time. Storage-level corruption guard was introduced to provide a greater level of confidence in integrity of the backups.***

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Compression Level | Optimal |
| Storage optimization | LocalTarget |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 388 - Advanced Settings (Storage) - Agent Backup Job 3

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (Notification)

|  |  |
| --- | --- |
| Send Snmp Notification | Yes |
| Send Email Notification | No |

Table 389 - Advanced Settings (Notification) - Agent Backup Job 3

Advanced Settings (Integration)

|  |  |
| --- | --- |
| Enable Backup from Storage Snapshots | Yes |
| Failover to On-Host Backup agent | Yes |
| Off-host Backup Proxy Automatic Selection | Yes |

Table 390 - Advanced Settings (Integration) - Agent Backup Job 3

Advanced Settings (Script)

|  |  |
| --- | --- |
| Run the Following Script Before | No |
| Run the Following Script After | No |

Table 391 - Advanced Settings (Script) - Agent Backup Job 3

Guest Processing

|  |  |
| --- | --- |
| Enabled Application Process Processing | Yes |
| Enabled Guest File System Indexing | No |

Table 392 - Guest Processing Options - Agent Backup Job 3

Schedule

|  |  |
| --- | --- |
| Retry Failed item | 3 |
| Wait before each retry | 10/min |
| Backup Window | Yes |
| Schedule type | After Job |
| Schedule Options | COMP-CLUSTER-NFS |

Table 393 - Schedule Options - Agent Backup Job 3

#### 1.7.13.2 Agent Backup Policy 2

Job Mode

|  |  |
| --- | --- |
| Name | Agent Backup Policy 2 |
| Id | 48c82831-c4c7-460c-ba64-8871e9b563f6 |
| Type | Server |
| Mode | Managed by Agent |
| Description | Created by PHARMAX\administrator at 5/2/2022 10:04 PM. |
| Priority | Normal Priority |

Table 394 - Job Mode - Agent Backup Policy 2

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Protected Computers

| Name | Type | Enabled | Container |
| --- | --- | --- | --- |
| Linux Protection Group | Custom | Yes | Individual Computers |

Table 395 - Protected Computers - Agent Backup Policy 2

Backup Mode

|  |  |
| --- | --- |
| Backup Mode | Entire Computer |
| Include external USB drives | No |

Table 396 - Backup Mode - Agent Backup Policy 2

Destination

|  |  |
| --- | --- |
| Destination Type | Veeam Backup Repository |
| Retention Policy | Restore Points |
| Retain Points | 7 |
| Configure Secondary Destination for this Job | Yes |
| Backup Server | VEEAM-VBR.pharmax.local |
| Backup Repository | SOBR - Minio |

Table 397 - Destination - Agent Backup Policy 2

Secondary Target

| Job Name | Type | State | Description |
| --- | --- | --- | --- |
| PHARMAX-HQ-SVR-TAPE Standard | Backup to Tape | Warning | Created by PHARMAX\administrator at 2/25/2022 7:14 PM. |

Table 398 - Secondary Destination Job - Agent Backup Policy 2

Advanced Settings (Backup)

|  |  |
| --- | --- |
| Syntethic Full Backup | - |
| Active Full Backup | No |

Table 399 - Advanced Settings (Backup) - Agent Backup Policy 2

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | No |
| Defragment and Compact Full Backup (DCFB) | - |

Table 400 - Advanced Settings (Maintenance) - Agent Backup Policy 2

***Health Check:***

***Best Practice: It is recommended to use storage-level corruption guard for any backup job with no active full backups scheduled. Synthetic full backups are still 'incremental forever' and may suffer from corruption over time. Storage-level corruption guard was introduced to provide a greater level of confidence in integrity of the backups.***

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Compression Level | Optimal |
| Storage optimization | LocalTarget |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 401 - Advanced Settings (Storage) - Agent Backup Policy 2

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (Notification)

|  |  |
| --- | --- |
| Send Snmp Notification | - |
| Send Email Notification | - |

Table 402 - Advanced Settings (Notification) - Agent Backup Policy 2

Guest Processing

|  |  |
| --- | --- |
| Enabled Application Process Processing | Yes |
| Enabled Guest File System Indexing | Yes |

Table 403 - Guest Processing Options - Agent Backup Policy 2

Schedule

|  |  |
| --- | --- |
| Schedule type |  |
| Schedule Options |  |
| If Computer is Power Off Action |  |
| Once Backup is Taken |  |
| Backup At LogOff | - |
| Backup At Lock | - |
| Backup At Target Connection | - |
| Eject Storage After Backup | - |
| Backup Timeout |  |

Table 404 - Schedule Options - Agent Backup Policy 2

#### 1.7.13.3 Gurabo PC - Backup Job

Job Mode

|  |  |
| --- | --- |
| Name | Gurabo PC - Backup Job |
| Id | cc087b1f-629d-4890-ab02-30c6cba80e11 |
| Type | Workstation |
| Mode | Managed by Agent |
| Description | Created by PHARMAX\administrator at 4/28/2022 3:19 PM. |
| Priority | Normal Priority |

Table 405 - Job Mode - Gurabo PC - Backup Job

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Protected Computers

| Name | Type | Enabled | Container |
| --- | --- | --- | --- |
| Gurabo PC - Backup | Custom | Yes | Active Directory |
| HQ - Manual Packet | Custom | Yes | Manually Deployed |

Table 406 - Protected Computers - Gurabo PC - Backup Job

Backup Mode

|  |  |
| --- | --- |
| Backup Mode | Entire Computer |
| Include external USB drives | No |

Table 407 - Backup Mode - Gurabo PC - Backup Job

Destination

|  |  |
| --- | --- |
| Destination Type | Veeam Backup Repository |
| Retention Policy | Restore Days |
| Retain Days To Keep | 7 |
| Configure Secondary Destination for this Job | Yes |
| Backup Server | VEEAM-VBR.pharmax.local |
| Backup Repository | SOBR - Minio |

Table 408 - Destination - Gurabo PC - Backup Job

Secondary Target

| Job Name | Type | State | Description |
| --- | --- | --- | --- |
| PHARMAX-HQ-SVR-TAPE | Backup to Tape | Failed | Created by PHARMAX\administrator at 6/29/2021 7:24 PM. |

Table 409 - Secondary Destination Job - Gurabo PC - Backup Job

Advanced Settings (Backup)

|  |  |
| --- | --- |
| Syntethic Full Backup | No |
| Active Full Backup | No |

Table 410 - Advanced Settings (Backup) - Gurabo PC - Backup Job

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | Yes |
| SLCG Schedule Type | Monthly |
| SLCG Schedule Day | Friday Saturday Sunday |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Third Day of Month: 1 Months: January February March April May June July August September October November December |
| Defragment and Compact Full Backup (DCFB) | Yes |
| DCFB Schedule Type | Monthly |
| DCFB Schedule Day | Thursday Friday Saturday |
| DCFB Backup Monthly Schedule | Day Of Week: Saturday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |

Table 411 - Advanced Settings (Maintenance) - Gurabo PC - Backup Job

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Compression Level | Optimal |
| Storage optimization | LocalTarget |
| Enabled Backup File Encryption | Yes |
| Encryption Key | Password Global |

Table 412 - Advanced Settings (Storage) - Gurabo PC - Backup Job

Advanced Settings (Notification)

|  |  |
| --- | --- |
| Send Snmp Notification | - |
| Send Email Notification | - |

Table 413 - Advanced Settings (Notification) - Gurabo PC - Backup Job

Backup Cache

| Maximun Size | Type | Path |
| --- | --- | --- |
| 10 GB | Automatic | Auto Selected |

Table 414 - Backup Cache - Gurabo PC - Backup Job

Schedule

|  |  |
| --- | --- |
| Schedule type | Daily |
| Schedule Options | Recurrence: WeekDays, Days: Monday Tuesday Wednesday Thursday Fridayr At: 22:00:00 |
| If Computer is Power Off Action | Backup At Power On |
| Once Backup is Taken | Keep Running |
| Backup At LogOff | Yes |
| Backup At Lock | No |
| Backup At Target Connection | Yes |
| Eject Storage After Backup | Yes |
| Backup Timeout | 2 Hour |

Table 415 - Schedule Options - Gurabo PC - Backup Job

#### 1.7.13.4 Linux Agent Backup Job

Job Mode

|  |  |
| --- | --- |
| Name | Linux Agent Backup Job |
| Id | 190c96cd-7b9a-48f4-82af-3dbc4f00dbe3 |
| Type | Server |
| Mode | Managed by Backup Server |
| Description | Created by PHARMAX\administrator at 4/29/2022 8:11 PM. |
| Priority | Normal Priority |

Table 416 - Job Mode - Linux Agent Backup Job

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Protected Computers

| Name | Type | Enabled | Container |
| --- | --- | --- | --- |
| Linux Protection Group | Custom | Yes | Individual Computers |

Table 417 - Protected Computers - Linux Agent Backup Job

Backup Mode

|  |  |
| --- | --- |
| Backup Mode | Entire Computer |
| Include external USB drives | No |

Table 418 - Backup Mode - Linux Agent Backup Job

Storage

|  |  |
| --- | --- |
| Backup Repository | Linux - Hardened Repository |
| Repository Type | LinuxLocal |
| Retention Policy | Restore Days |
| Retain Days To Keep | 7 |
| Configure Secondary Destination for this Job | Yes |
| Keep certain full backup longer for archival purposes (GFS) | Yes |
| Keep Weekly full backup for | 1 weeks, If multiple backup exist use the one from: Sunday |
| Keep Monthly full backup for | 1 months, Use weekly full backup from the following week of the month: First |
| Keep Yearly full backup for | 1 years, Use monthly full backup from the following month: January |

Table 419 - Destination - Linux Agent Backup Job

Secondary Target

| Job Name | Type | State | Description |
| --- | --- | --- | --- |
| PHARMAX-HQ-SVR-TAPE | Backup to Tape | Failed | Created by PHARMAX\administrator at 6/29/2021 7:24 PM. |

Table 420 - Secondary Destination Job - Linux Agent Backup Job

Advanced Settings (Backup)

|  |  |
| --- | --- |
| Syntethic Full Backup | Yes |
| Create Syntethic on Days | Saturday |
| Active Full Backup | No |

Table 421 - Advanced Settings (Backup) - Linux Agent Backup Job

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | No |
| Defragment and Compact Full Backup (DCFB) | No |

Table 422 - Advanced Settings (Maintenance) - Linux Agent Backup Job

***Health Check:***

***Best Practice: It is recommended to use storage-level corruption guard for any backup job with no active full backups scheduled. Synthetic full backups are still 'incremental forever' and may suffer from corruption over time. Storage-level corruption guard was introduced to provide a greater level of confidence in integrity of the backups.***

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Compression Level | Optimal |
| Storage optimization | LocalTarget |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 423 - Advanced Settings (Storage) - Linux Agent Backup Job

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (Notification)

|  |  |
| --- | --- |
| Send Snmp Notification | No |
| Send Email Notification | No |

Table 424 - Advanced Settings (Notification) - Linux Agent Backup Job

Advanced Settings (Script)

|  |  |
| --- | --- |
| Run the Following Script Before | Yes |
| Run the Following Script After | Yes |
| Run Script Before the Job | pre\_mysql.sh |
| Run Script After the Job | post\_mysql.sh |
| Run Script Frequency | Days |
| Run Script on the Selected Days | Saturday,Sunday |

Table 425 - Advanced Settings (Script) - Linux Agent Backup Job

Schedule

|  |  |
| --- | --- |
| Retry Failed item | 3 |
| Wait before each retry | 10/min |
| Backup Window | Yes |
| Schedule type | Daily |
| Schedule Options | Recurrence: WeekDays, Days: Monday Tuesday Wednesday Thursday Friday At: 22:00:00 |

Table 426 - Schedule Options - Linux Agent Backup Job

#### 1.7.13.5 Server With Netapp LUNS - Backup

Job Mode

|  |  |
| --- | --- |
| Name | Server With Netapp LUNS - Backup |
| Id | b4f0ac88-76ab-4c61-b142-0cff89ec91f2 |
| Type | Server |
| Mode | Managed by Backup Server |
| Description | Created by PHARMAX\administrator at 3/1/2021 5:12 PM. |
| Priority | Normal Priority |

Table 427 - Job Mode - Server With Netapp LUNS - Backup

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Protected Computers

| Name | Type | Enabled | Container |
| --- | --- | --- | --- |
| Server with Netapp LUNS | Custom | Yes | Active Directory |
| server-dc-01v.pharmax.local | Computer | - | Individual Computer |

Table 428 - Protected Computers - Server With Netapp LUNS - Backup

Backup Mode

|  |  |
| --- | --- |
| Backup Mode | Entire Computer |
| Include external USB drives | No |

Table 429 - Backup Mode - Server With Netapp LUNS - Backup

Storage

|  |  |
| --- | --- |
| Backup Repository | SOBR - Minio |
| Repository Type | ExtendableRepository |
| Retention Policy | Restore Points |
| Restore Points | 8 |
| Configure Secondary Destination for this Job | Yes |
| Keep certain full backup longer for archival purposes (GFS) | Yes |
| Keep Weekly full backup for | 1 weeks, If multiple backup exist use the one from: Sunday |
| Keep Monthly full backup for | 1 months, Use weekly full backup from the following week of the month: First |
| Keep Yearly full backup for | 1 years, Use monthly full backup from the following month: January |

Table 430 - Destination - Server With Netapp LUNS - Backup

Secondary Target

| Job Name | Type | State | Description |
| --- | --- | --- | --- |
| PHARMAX-HQ-SVR-TAPE Standard | Backup to Tape | Warning | Created by PHARMAX\administrator at 2/25/2022 7:14 PM. |
| PHARMAX-HQ-SVR-TAPE | Backup to Tape | Failed | Created by PHARMAX\administrator at 6/29/2021 7:24 PM. |

Table 431 - Secondary Destination Job - Server With Netapp LUNS - Backup

Advanced Settings (Backup)

|  |  |
| --- | --- |
| Syntethic Full Backup | Yes |
| Create Syntethic on Days | Saturday |
| Active Full Backup | No |

Table 432 - Advanced Settings (Backup) - Server With Netapp LUNS - Backup

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | No |
| Defragment and Compact Full Backup (DCFB) | No |

Table 433 - Advanced Settings (Maintenance) - Server With Netapp LUNS - Backup

***Health Check:***

***Best Practice: It is recommended to use storage-level corruption guard for any backup job with no active full backups scheduled. Synthetic full backups are still 'incremental forever' and may suffer from corruption over time. Storage-level corruption guard was introduced to provide a greater level of confidence in integrity of the backups.***

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Compression Level | Optimal |
| Storage optimization | LocalTarget |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 434 - Advanced Settings (Storage) - Server With Netapp LUNS - Backup

***Health Check:***

***Best Practice: Backup and replica data is a high potential source of vulnerability. To secure data stored in backups and replicas, use Veeam Backup & Replication inbuilt encryption to protect data in backups***

Advanced Settings (Notification)

|  |  |
| --- | --- |
| Send Snmp Notification | Yes |
| Send Email Notification | Yes |
| Email Notification Additional Addresses | rebelinux@gmail.com |
| Use Custom Email Notification Options | Yes |
| Use Custom Notification Setting | [%JobResult%] %JobName% (%ObjectCount% machines) %Issues% |
| Notify On Success | Yes |
| Notify On Warning | Yes |
| Notify On Error | No |
| Suppress Notification until Last Retry | No |

Table 435 - Advanced Settings (Notification) - Server With Netapp LUNS - Backup

Advanced Settings (Integration)

|  |  |
| --- | --- |
| Enable Backup from Storage Snapshots | Yes |
| Failover to On-Host Backup agent | Yes |
| Off-host Backup Proxy Automatic Selection | No |
| Off-host Backup Proxy Server | VEEAM-VBR-02V.pharmax.local |

Table 436 - Advanced Settings (Integration) - Server With Netapp LUNS - Backup

Advanced Settings (Script)

|  |  |
| --- | --- |
| Run the Following Script Before | Yes |
| Run the Following Script After | Yes |
| Run Script Before the Job | sql\_pre.cmd |
| Run Script After the Job | sql\_post.cmd |
| Run Script Frequency | Cycles |
| Run Script Every Backup Session | 1 |

Table 437 - Advanced Settings (Script) - Server With Netapp LUNS - Backup

Guest Processing

|  |  |
| --- | --- |
| Enabled Application Process Processing | Yes |
| Enabled Guest File System Indexing | No |

Table 438 - Guest Processing Options - Server With Netapp LUNS - Backup

Schedule

|  |  |
| --- | --- |
| Retry Failed item | 3 |
| Wait before each retry | 1/min |
| Backup Window | No |
| Schedule type | After Job |
| Schedule Options | COMP-CLUSTER-NFS |

Table 439 - Schedule Options - Server With Netapp LUNS - Backup

### 1.7.14 File Share Backup Jobs

The following section list file share backup jobs created in Veeam Backup & Replication.

| Name | Type | Status | Latest Result | Last Run |
| --- | --- | --- | --- | --- |
| File Backup Job 1 | File Backup | Enabled | Failed | 06/03/2023 22:47:06 |
| Server - Share Backup | File Backup | Enabled | Failed | Unknown |

Table 440 - File Share Backup Jobs - VEEAM-VBR

### 1.7.15 File Share Backup Jobs Configuration

The following section details the configuration of File Share type backup jobs.

#### 1.7.15.1 File Backup Job 1

Common Information

|  |  |
| --- | --- |
| Name | File Backup Job 1 |
| Type | File Backup |
| Total Backup Size | 0 KB |
| Target Address |  |
| Target File | File Backup Job 1 |
| Description | Created by PHARMAX\jocolon at 1/8/2022 8:31 PM. |
| Modified By | PHARMAX\administrator |

Table 441 - Common Information - File Backup Job 1

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Files and Folders

|  |  |
| --- | --- |
| Name | ONTAP-HQ-SAN |
| Resource Type | Host |
| Role | Include |
| Location | ONTAP-HQ-SAN |
| Approx Size | 0 B |
| File Filter Include Masks | \*.\* |
| File Filter Exclude Masks | \*.tmp; \*/.snapshot; \*/~snapshot; \*\.snapshot; \*\~snapshot; /.snapshot; /~snapshot; \.snapshot; \~snapshot; \admin$; \C$; \ipc$; |

Table 442 - Files and Folders - ONTAP-HQ-SAN

|  |  |
| --- | --- |
| Name | PHARMAX-ISILON |
| Resource Type | Host |
| Role | Include |
| Location | PHARMAX-ISILON |
| Approx Size | 0 B |
| File Filter Include Masks | \*.\* |
| File Filter Exclude Masks | \*/.snapshot; \*/~snapshot; \*\.snapshot; \*\~snapshot; /.snapshot; /~snapshot; \.snapshot; \~snapshot; \admin$; \C$; \ipc$; |

Table 443 - Files and Folders - PHARMAX-ISILON

Storage

|  |  |
| --- | --- |
| Backup Repository | SOBR - Minio |
| Keep all file versions for the last | 28 Day |
| Keep previous file versions for | 3 Year |
| Archive repository | Linux - Hardened Repository |
| File to Archive | All file exept the following extension: \*.tmp \*.ods |

Table 444 - Storage Options - File Backup Job 1

Advanced Settings (File Version)

|  |  |
| --- | --- |
| File version to keep | Limit the number of both recent and archived file versions |
| Active file version limit | 10 |
| Delete file version limit | 3 |

Table 445 - Advanced Settings (File Version) - File Backup Job 1

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Compression Level | OPTIMAL (Default) |
| Enabled Backup File Encryption | Yes |
| Encryption Key | Password Global |

Table 446 - Advanced Settings (Storage) - File Backup Job 1

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | Yes |
| SLCG Schedule Type | Daily |
| SLCG Schedule Day | Friday Saturday Sunday |

Table 447 - Advanced Settings (Maintenance) - File Backup Job 1

Advanced Settings (Notification)

|  |  |
| --- | --- |
| Send Snmp Notification | Yes |
| Send Email Notification | Yes |
| Email Notification Additional Addresses | rebelinux@gmail.com |
| Email Notify Time | 10:00 PM |
| Use Custom Email Notification Options | Yes |
| Use Custom Notification Setting | [%JobResult%] %JobName% (%ObjectCount% objects) %Issues% |
| Notify On Success | Yes |
| Notify On Warning | Yes |
| Notify On Error | Yes |
| Suppress Notification until Last Retry | Yes |
| Set Results To Vm Notes | No |
| VM Attribute Note Value | Notes |
| Append to Existing Attribute | Yes |

Table 448 - Advanced Settings (Notification) - File Backup Job 1

Advanced Settings (Script)

|  |  |
| --- | --- |
| Run the Following Script Before | Yes |
| Run Script Before the Job | caca.sh |
| Run the Following Script After | Yes |
| Run Script After the Job | cacaout.sh |
| Run Script Frequency | Cycles |
| Run Script Every Backup Session | 1 |

Table 449 - Advanced Settings (Script) - File Backup Job 1

Secondary Target

| Job Name | Type | State | Description |
| --- | --- | --- | --- |
| File Backup Job 1 (Copy) 1 | Backup Copy | None |  |

Table 450 - Secondary Destination Jobs - File Backup Job 1

Schedule

|  |  |
| --- | --- |
| Retry Failed item | 3 |
| Wait before each retry | 10/min |
| Backup Window | Yes |
| Shedule type | Daily |
| Shedule Options | Kind: Everyday, Days: Sunday Monday Tuesday Wednesday Thursday Friday Saturday |
| Start Time | 10:00 PM |
| Latest Run | 06/03/2023 22:00:13 |

Table 451 - Schedule Options - File Backup Job 1

Backup Window Time Period

**Permited \ Denied**

| H | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mon | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Tue | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Wed | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Thu | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Fri | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 452 - Backup Window - File Backup Job 1

#### 1.7.15.2 Server - Share Backup

Common Information

|  |  |
| --- | --- |
| Name | Server - Share Backup |
| Type | File Backup |
| Total Backup Size | 0 KB |
| Target Address |  |
| Target File | Server - Share Backup |
| Description | Created by PHARMAX\administrator at 9/16/2022 7:02 PM. |
| Modified By | PHARMAX\administrator |

Table 453 - Common Information - Server - Share Backup

***Health Check:***

***Best Practice: It is a general rule of good practice to establish well-defined descriptions. This helps to speed up the fault identification process, as well as enabling better documentation of the environment.***

Files and Folders

|  |  |
| --- | --- |
| Name | \\server-dc-01v\UEMConfig |
| Resource Type |  |
| Role | Include |
| Location | \\server-dc-01v\UEMConfig |
| Approx Size | 0 B |
| File Filter Include Masks |  |
| File Filter Exclude Masks | \.snapshot; \\server-dc-01v\UEMConfig\.snapshot; \\server-dc-01v\UEMConfig\~snapshot; \~snapshot; |

Table 454 - Files and Folders - \\server-dc-01v\UEMConfig

Storage

|  |  |
| --- | --- |
| Backup Repository | SOBR - Minio |
| Keep all file versions for the last | 28 Day |
| Keep previous file versions for | 3 Year |
| Archive repository | HQ - Backups |
| File to Archive | All Files: \*.\* |

Table 455 - Storage Options - Server - Share Backup

Advanced Settings (File Version)

|  |  |
| --- | --- |
| File version to keep | Keep all file versions |

Table 456 - Advanced Settings (File Version) - Server - Share Backup

Advanced Settings (Storage)

|  |  |
| --- | --- |
| Inline Data Deduplication | Yes |
| Compression Level | OPTIMAL (Default) |
| Enabled Backup File Encryption | No |
| Encryption Key | None |

Table 457 - Advanced Settings (Storage) - Server - Share Backup

Advanced Settings (Maintenance)

|  |  |
| --- | --- |
| Storage-Level Corruption Guard (SLCG) | Yes |
| SLCG Schedule Type | Monthly |
| SLCG Backup Monthly Schedule | Day Of Week: Friday Day Number In Month: Last Day of Month: 1 Months: January February March April May June July August September October November December |

Table 458 - Advanced Settings (Maintenance) - Server - Share Backup

Advanced Settings (Notification)

|  |  |
| --- | --- |
| Send Snmp Notification | Yes |
| Send Email Notification | Yes |
| Email Notification Additional Addresses | rebelinux@gmail.com |
| Email Notify Time | 10:00 PM |
| Use Custom Email Notification Options | No |
| Use Custom Notification Setting | [%JobResult%] %JobName% (%ObjectCount% objects) %Issues% |
| Notify On Success | Yes |
| Notify On Warning | Yes |
| Notify On Error | Yes |
| Suppress Notification until Last Retry | Yes |
| Set Results To Vm Notes | No |
| VM Attribute Note Value | Notes |
| Append to Existing Attribute | Yes |

Table 459 - Advanced Settings (Notification) - Server - Share Backup

Advanced Settings (Script)

|  |  |
| --- | --- |
| Run the Following Script Before | Yes |
| Run Script Before the Job | test.cmd |
| Run the Following Script After | No |
| Run Script After the Job |  |
| Run Script Frequency | Days |
| Run Script on the Selected Days | Saturday |

Table 460 - Advanced Settings (Script) - Server - Share Backup

Schedule

|  |  |
| --- | --- |
| Retry Failed item | 3 |
| Wait before each retry | 10/min |
| Backup Window | No |
| Shedule type | Monthly |
| Shedule Options | Day Of Month: 1, Day Number In Month: Fourth, Day Of Week: Saturday |
| Start Time | 10:00 PM |
| Latest Run | 10/22/2022 22:00:14 |

Table 461 - Schedule Options - Server - Share Backup

## 1.8 Infrastructure Security Hardening

Protecting your infrastructure successfully is all about understanding the current attack vectors; what and whom you are protecting, your Veeam infrastructure, against. If you know what and whom you are protecting against, makes it easier to take the correct countermeasures. One of those countermeasures is hardening.

Looking at the different Veeam Backup & Replication components you have to protect the following components:

\* Veeam Backup server

\* User Accounts

\* Backup repositories

\* Backup data flows

### 1.8.1 Backup & Replication Server (VEEAM-VBR)

#### 1.8.1.1 Remove Unused Components

Remove all non-essential software programs and utilities from the deployed Veeam components. While these programs may offer useful features to the administrator, if they provide 'back-door' access to the system, they must be removed during the hardening process. Think about additional software like web browsers, java, adobe reader and such. All parts which do not belong to the operating system or to active Veeam components, remove it. It will make maintaining an up-to-date patch level much easier.

| Name | Publisher |
| --- | --- |
| 7-Zip 22.01 | Igor Pavlov |
| Graphviz | Graphviz |

Table 462 - Non-essential software programs - VEEAM-VBR

**Reference: https://bp.veeam.com/vbr/Security/infrastructure\_hardening.html#remove-unused-components**

#### 1.8.1.2 Remove Backup & Replication Console

Remove the Veeam Backup & Replication Console from the Veeam Backup & Replication server. The console is installed locally on the backup server by default.

| Name | Publisher |
| --- | --- |
| Veeam Backup & Replication Console | Veeam Software Group GmbH |
| Veeam Explorer for Microsoft Active Directory | Veeam Software Group GmbH |
| Veeam Explorer for Microsoft Exchange | Veeam Software Group GmbH |
| Veeam Explorer for Microsoft SharePoint | Veeam Software Group GmbH |
| Veeam Explorer for Microsoft SQL Server | Veeam Software Group GmbH |
| Veeam Explorer for Microsoft Teams | Veeam Software Group GmbH |
| Veeam Explorer for Oracle | Veeam Software Group GmbH |
| Veeam Explorer for PostgreSQL | Veeam Software Group GmbH |

Table 463 - Backup & Replication Console - VEEAM-VBR

**Reference: https://bp.veeam.com/vbr/Security/infrastructure\_hardening.html#how-to-remove-the-veeam-backup--replication-console**

#### 1.8.1.3 Switch off the vPower NFS Service

Stop the Veeam vPower NFS Service if you do not plan on using the following Veeam features: SureBackup, Instant Recovery, or Other-OS File Level Recovery (FLR) operations.

| Display Name | Short Name | Status |
| --- | --- | --- |
| Veeam vPower NFS Service | VeeamNFSSvc | Running |

Table 464 - vPower NFS Services Status - VEEAM-VBR

**Reference: https://bp.veeam.com/vbr/Security/infrastructure\_hardening.html#remove-unused-components**

### 1.8.2 Enterprise Manager

When Enterprise Manager is not in use de-install it and remove it from your environment.

#### 1.8.2.1 Enterprise Manager Server (VEEAM-EM)

|  |  |
| --- | --- |
| Server Name | VEEAM-EM.pharmax.local |
| Server URL | https://VEEAM-EM.pharmax.local:9443 |
| Skip License Push | No |
| Is Connected | Yes |

Table 465 - Enterprise Manager - VEEAM-VBR

### 1.8.3 Console Access

The Veeam Backup & Replication console is a client-side component that provides access to the backup server. The console lets several backup operators and admins log in to Veeam Backup & Replication simultaneous and perform all kind of data protection and disaster recovery operations as if you work on the backup server.

Install the Veeam Backup & Replication console on a central management server that is, positioned in a DMZ and protected with 2-factor authentication. Do NOT install the console on the local desktops of backup & recovery admins.

### 1.8.4 Roles and Users

Deploy an Access Control policy, managing access to management components is crucial for a good protection. Use the principle of least privilege. Provide the minimal privilege needed for some operation to occur. An attacker who gained high-privilege access to backup infrastructure servers can get credentials of user accounts and compromise other systems in your environment. Make sure that all accounts have a specific role and that they are added to that specific group.

Containment to keep the attackers from moving around too easily. Some standard measures and policies are:

\* Do not use user accounts for admin access, reducing incidents and accidents.

\* Give every Veeam admin his own admin account or add their admin account to the appropriate security group within Veeam, for traceability and easy adding and removal.

\* Only give out access to what is needed for the job.

\* Limit users who can log in using Remote Desktop and/or Veeam Backup Console.

\* Add 2-factor authentication to highly valuable assets.

\* Monitor your accounts for suspicious activity.

A role assigned to the user defines the user activity scope: what operations in Veeam Backup & Replication the user can perform.

| Name | Type | Role |
| --- | --- | --- |
| Administrators | Group | BackupAdmin |
| PHARMAX\veeam\_admin | User | BackupOperator |
| PHARMAX\vrauser | User | BackupOperator |

Table 466 - Roles and Users - VEEAM-VBR

**Reference: https://bp.veeam.com/vbr/Security/infrastructure\_hardening.html#roles-and-users**

#### 1.8.4.1 Password Management Policy

Use a clever Password management policy, which works for your organization. Enforcing the use of strong passwords across your infrastructure is a valuable control. It's more challenging for attackers to guess passwords/crack hashes to gain unauthorized access to critical systems.

Selecting passwords of 10 characters with a mixture of upper and lowercase letters, numbers and special characters is a good start for user accounts.

For Admin accounts adding 2-factor authentication is also a must to secure the infrastructure.

And for service accounts use 25+ characters combined with a password tool for easier management. An Admin can copy and paste the password when needed, increasing security of the service accounts.

|  |  |
| --- | --- |
| Password Must Meet Complexity Requirements | Yes |
| Max Password Age | 42 |
| Min Password Age | 1 |
| Min Password Length | 7 |
| Enforce Password History | 24 |
| Store Password using Reversible Encryption | No |

Table 467 - Password Management Policy - VEEAM-VBR

**Reference: https://bp.veeam.com/vbr/Security/infrastructure\_hardening.html#password-management-policy**

#### 1.8.4.2 Lockout Policy

Use a Lockout policy that complements a clever password management policy. Accounts will be locked after a small number of incorrect attempts. This can stop password guessing attacks dead in the water. But be careful that this can also lock everyone out of the backup & replication system for a period! For service accounts, sometimes it is better just to raise alarms fast. Instead of locking the accounts. This way you gain visibility into suspicious behavior towards your data/infrastructure.

|  |  |
| --- | --- |
| Account Lockout Thresholds | 5 |
| Account Lockout Duration Age | 30 |
| Reset account lockout counter after | 30 |

Table 468 - Lockout Policy - VEEAM-VBR

**Reference: https://bp.veeam.com/vbr/Security/infrastructure\_hardening.html#lockout-policy**

### 1.8.5 Required Permissions

Use the principle of least privilege. Provide the minimal required permissions needed for the accounts to run. The accounts used for installing and using Veeam Backup & Replication must have the following permissions:

\* https://helpcenter.veeam.com/docs/backup/vsphere/required\_permissions.html?ver=110

Backup proxies must be considered the target for compromise. During backup, proxies obtain from the backup server credentials required to access virtual infrastructure servers. A person having administrator privileges on a backup proxy can intercept the credentials and use them to access the virtual infrastructure.

#### 1.8.5.1 VMware vSphere Credentials

If VMware vCenter Server is added to the backup infrastructure, an account with reduced permissions can be used. Use the minimum permissions for your use-case. See Required Permissions document:

\* https://helpcenter.veeam.com/docs/backup/permissions/installation.html?ver=110

For example, Hot-Add backup requires the delete disk permission. You can also consider elevating permissions for restores.

##### 1.8.5.1.1 vCenter Server

| Name | Credential |
| --- | --- |
| 192.168.5.2 | administrator@vsphere.local |
| vcenter-01v.pharmax.local | administrator@vsphere.local |
| vcenter-03v.pharmax.local | administrator@vsphere.local |

Table 469 - vCenter Servers - VEEAM-VBR

##### 1.8.5.1.2 Standalone ESXi Server

| Name | Credential |
| --- | --- |
| disaster-01a.pharmax.local | root |

Table 470 - ESXi Servers - VEEAM-VBR

**Reference: https://helpcenter.veeam.com/docs/backup/permissions/installation.html?ver=110**

### 1.8.6 Encryption

Backup and replica data is a highly potential source of vulnerability. To secure data stored in backups and replicas, follow these guidelines:

\* Ensure physical security of target servers. Check that only authorized personnel have access to the room where your target servers (backup repositories and hosts) reside.

\* Restrict user access to backups and replicas. Check that only authorized users have permissions to access backups and replicas on target servers.

\* Encrypt data in backups. Use Veeam Backup & Replication inbuilt encryption to protect data in backups. To guarantee security of data in backups, follow Encryption Best Practices.

**Reference: https://bp.veeam.com/vbr/Security/infrastructure\_hardening.html#encryption**

#### 1.8.6.1 Backup Jobs Encryption Status

Data security is an important part of the backup strategy. You must protect your information from unauthorized access, especially if you back up sensitive VM data to off-site locations or archive it to tape. To keep your data safe, you can use data encryption.

##### 1.8.6.1.1 Backup Jobs

| Name | Storage Encryption | Encryption Key |
| --- | --- | --- |
| Backup - Replicated VM - Cloud Virtualdcs | No | None |
| Backup Copy Job 1 | Yes | Password Global |
| Cisco-CSR-Replication | No | None |
| Cloud-Replication-Virtualdcs | No | None |
| COMP-CLUSTER-NFS | No | None |
| File Backup Job 1 (Copy) 1 | Yes | Password Global |
| HPE-StoreOnce-Copy-Job | No | None |
| HQ-to-EDGE | No | None |
| HVCluster-To-HVStandalone | No | None |
| Hyper-V-Backup-Copy | Yes | Password Global |
| HyperV-Backup-Job | Yes | Password Global |
| PHARMAX-HQ-SVR | Yes | Password Global |
| SOBR - TEST | No | None |
| VM - Test - AWS | No | None |
| VM Copy Job 1 | No | None |
| WIN HyperV VM Backup | Yes | Password Global |

Table 471 - Backup Jobs - VEEAM-VBR

##### 1.8.6.1.2 Agent Backup Jobs

| Name | Enabled Backup File Encryption | Encryption Key |
| --- | --- | --- |
| Agent Backup Job 3 | No | None |
| Agent Backup Policy 2 | No | None |
| Gurabo PC - Backup Job | Yes | Password Global |
| Linux Agent Backup Job | No | None |
| Server With Netapp LUNS - Backup | No | None |

Table 472 - Agent Backup Jobs - VEEAM-VBR

#### 1.8.6.1.3 File Share Backup Jobs

| Name | Enabled Backup File Encryption | Encryption Key |
| --- | --- | --- |
| File Backup Job 1 | Yes | Password Global |
| Server - Share Backup | No | None |

Table 473 - File Share Backup Jobs - VEEAM-VBR

#### 1.8.6.2 Encrypt Network Traffic

By default, Veeam Backup & Replication encrypts network traffic traveling between public networks. To ensure secure communication of sensitive data within the boundaries of the same network, you can also encrypt backup traffic in private networks.

| Name | Source IP Start | Source IP End | Target IP Start | Target IP End | Encryption Enabled |
| --- | --- | --- | --- | --- | --- |
| Inter-Site-to-DR | 192.168.7.1 | 192.168.7.255 | 10.10.33.1 | 10.10.33.255 | No |
| Internet | Any | - | Internet | - | Yes |

Table 474 - Encrypt Network Traffic - VEEAM-VBR

### 1.8.7 Backup and Replication Database

The Backup & Replication configuration database stores credentials to connect to virtual servers and other systems in the backup & replication infrastructure. All passwords stored in the database are encrypted. However, a user with administrator privileges on the backup server can decrypt the passwords, which presents a potential threat.

**Reference: https://bp.veeam.com/vbr/Security/infrastructure\_hardening.html#backup-and-replication-database**

#### 1.8.7.1 Encrypt Data in Configuration Backups

Enable data encryption for configuration backup to secure sensitive data stored in the configuration database.

**Reference: https://helpcenter.veeam.com/docs/backup/vsphere/config\_backup\_encrypted.html?ver=110**

|  |  |
| --- | --- |
| Name | Backup Configuration Job |
| Run Job Automatically | Yes |
| Schedule Type | Daily |
| Schedule Options | Type: Everyday Period: 10:00:00 Day Of Week: Sunday Monday Tuesday Wednesday Thursday Friday Saturday |
| Restore Points To Keep | 10 |
| Encryption Enabled | Yes |
| Encryption Key | Password Global |
| Additional Address | veeam\_admin@pharmax.local |
| Email Subject | [%JobResult%] %JobName% (%Time%) |
| Notify On | Notify On Success: No Notify On Warning: Yes Notify On Error: Yes Notify On Last Retry Only: Yes |
| NextRun |  |
| Target | Linux - Hardened Repository |
| Enabled | No |
| LastResult | Failed |

Table 475 - Configuration Backup Settings - VEEAM-VBR