Vembu VMBackup

VMware Backup and Replication using Vembu VMBackup

VEMBU TECHNOLOGIES PARTNERS

vmware PARTNER TECHNOLOGY ALLIANCE

Microsoft GOLD CERTIFIED Partner

redhat TECHNOLOGY PARTNER

www.vembu.com

About Vembu Technologies

Vembu

Founded in 2002

HQ in Chennai, India

4000+ Channel Partners

Reached more than 60,000 businesses

70 % of our customers are from North America, 20% from Europe and the rest 10% from APAC

Vembu BDR Suite

Vembu

Vembu BDR suite is an one stop solution to all your backup and DR needs catering to every requirement of small and midsize businesses.

VMBackup	Backup & Replication for VMware and Hyper-V
Image Backup	Backup and Bare-metal recovery for Physical Windows Servers & Desktops
NetworkBackup	Backup solution for file/folders, applications like MS Exchange, SQL, SharePoint, AD, Outlook and MySQL etc.,
OnlineBackup	Backup solution for file/folders, applications like MS Exchange, SQL, SharePoint, AD, Outlook and etc. directly to Vembu Cloud
SaaSBackup	Backup Solution for SaaS Applications like Office 365 and Google Apps

Add-on Products

Vembu

- **Vembu OffsiteDR** is an add-on service to Vembu BDR Backup Server. OffsiteDR enables you to keep additional copy of backup data on-site or off-site

- **Vembu CloudDR** provides ability to set up hybrid cloud environment where you can replicate additional backup copy to Vembu Cloud. So, you can keep one copy of your backup data in the Vembu BDR backup server in your data center and another copy in the Vembu Cloud

- **Vembu BDR360** helps you with 24/7 availability by providing the flexibility to monitor and manage all your Vembu BDR backup environments from a centralized portal

- **Vembu Universal Explorer** is an agent-less software which helps you to restore individual items from Microsoft Exchange, SQL Server, SharePoint and Active Directory instantly. This tool can be used for Instant Granular Recovery from Vembu BDR managed backups

Why Vembu VMBackup?

Vembu

Challenges

- Backing up a virtual environments typically are more expensive and difficult to manage
- As we all know that it requires a fundamentally different approach

Solution

- Vembu VMBackup is exclusively designed for Virtual Environments like VMware vSphere and Microsoft Hyper-V by the experts in the industry
- Vembu fills a purpose here to be the best of breed technology in providing manageable solution in affordable cost for both VMware vSphere and Microsoft Hyper-V virtual machines along with the applications that resides in the system and also it offers optional Cloud Disaster Recovery.

Understanding RPO & RTO

Vembu

RTO (Recovery Time Objective)

Time duration to recover a backed up machine after disaster

Until which point in time you can recover the machine data after disaster

RPO (Recovery Point Objective)

Recovery Time Objectives (RTO)

Vembu

Vembu offers Industry best RTO which is less than 15 minutes.

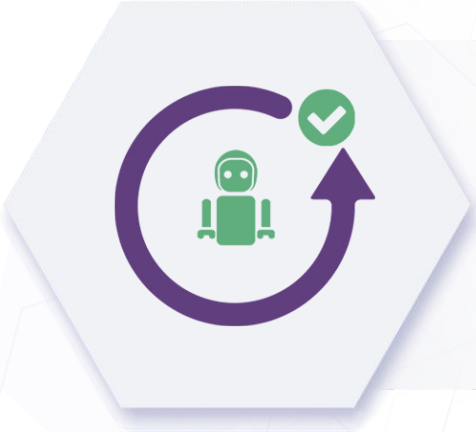
- Instant Virtual Machine Recovery
- Instant File-Level Recovery
- Failover and Failback
- Explorer for Microsoft Exchange, SharePoint, SQL and Active Directory

Recovery Point Objective (RPO)

Vembu

Vembu offers near continuous data protection without affecting the production data center.

- Automated Backup & Replication scheduling
- Backup frequencies starts from 15 mins
- So you can assure RPO less than 15 mins



Backup Verification

Backup data should be recoverable. If not, it is worthless. Vembu provides the ability to run automatic backup verification for all backed up VMs

- Backup verification can be automated to run post completion of every backup schedule or once in a day.
- In the process, booting of backed up Virtual Machine will be carried out and screenshot of boot screen will be captured. This screenshot details will be sent to administrators via email.

Efficient Storage Management

Vembu

Vembu BDR Backup Server utilizes VembuHIVE™ file system to effectively manage storage repositories. VembuHIVE™ is an efficient cloud file system designed for large-scale backup and disaster recovery application with support for advanced use-cases. VembuHIVE™ can be defined as a File System for File Systems.

- Supports SAN, NAS and DAS
- Automatically scale up/out the storage devices
- In-built version control and error correction
- In-built Deduplication & Encryption

Migration Plan (P2V and V2V)

Vembu

Having plan to migrate physical machines to virtual environments (VMware/Hyper-V)? Looking for a cost-effective solution with less downtime offering and less workload?

- Vembu has in built solution to all your migration plans
- Vembu supports instant creation of VMDK, VHD and RAW files for backed up virtual/physical machines; So that users can instantly start migrations P2V(Physical to virtual) and V2V(between virtual environments)

Architecture

Architecture - VMware Backup

- Vembu VMBackup agent will communicate with VMware ESXi production storage and backup the VM data
- Vembu VMBackup works as a proxy between ESXi host and Vembu BDR Backup Server
- VM data will be compressed and encrypted on-fly
- VM data will be compressed and encrypted at rest on Storage Repositories

Architecture - VMware Replication

- Vembu VMBackup agent will communicate with VMware ESXi production storage and replicate the VM data to another ESXi host
- Vembu VMBackup works as a proxy between both the ESXi hosts
- Replicated VM will be in power-off mode
- Supports VM Failover and Failback

Advantages of VMware Backup and Replication

Vembu

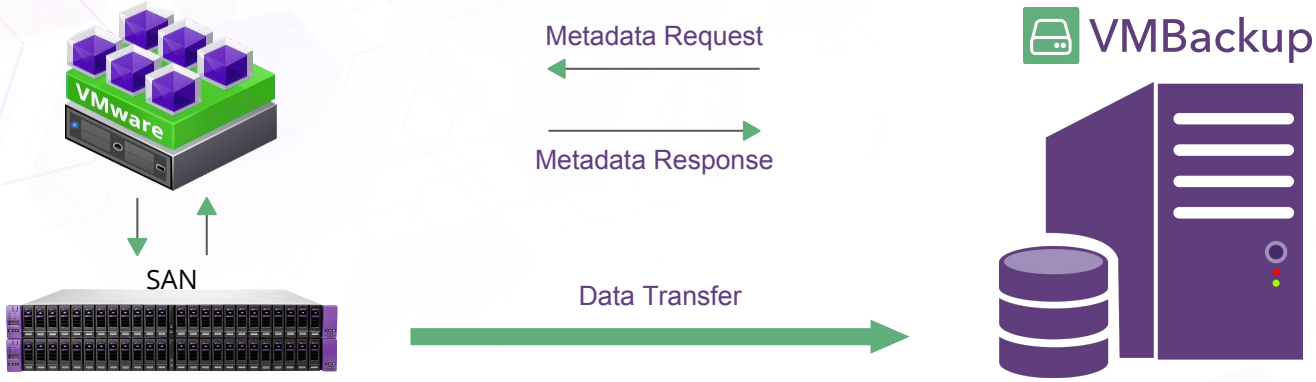
- Agentless VM Backup & Replication
- Host level VMware Backup & Replication designed to protect vSphere and vCenter environments using the VMware vStorage APIs (VADP)
- CBT enabled incremental data transfer using VMware VADP
- Application-aware image processing for Microsoft application VMs
- VMware Hot-Add and SAN transport mode for LAN free data transfer

Backup Transport Modes

Backup Transport Modes

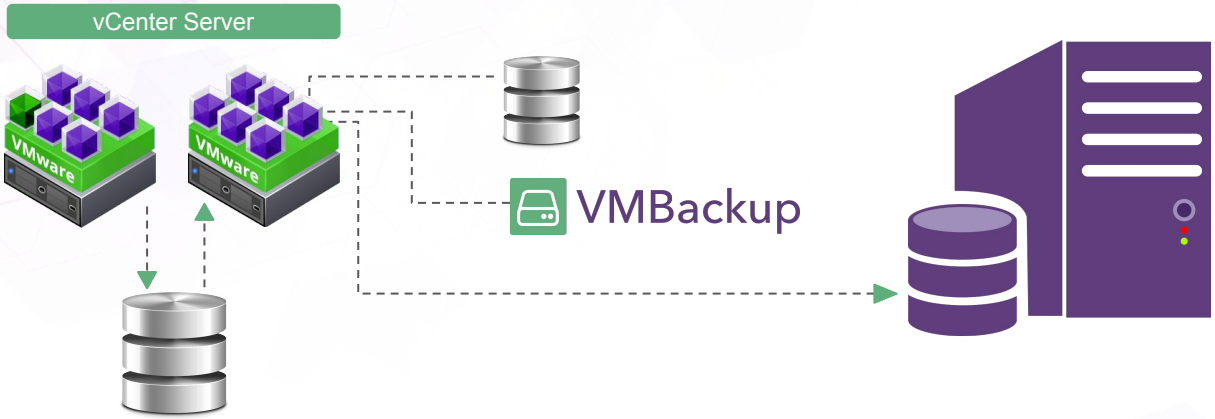
- Vembu VMBackup Client agent transfers the VM data through different modes. Based on the agent installation and VMware environment, Vembu VMBackup Client automatically chooses any one of following transport mode.
    - Direct SAN Mode
    - Hot-Add Mode
    - Network Mode
- You can configure the Vembu VMBackup Client to use any one of above mode permanently

Direct SAN Transport Mode



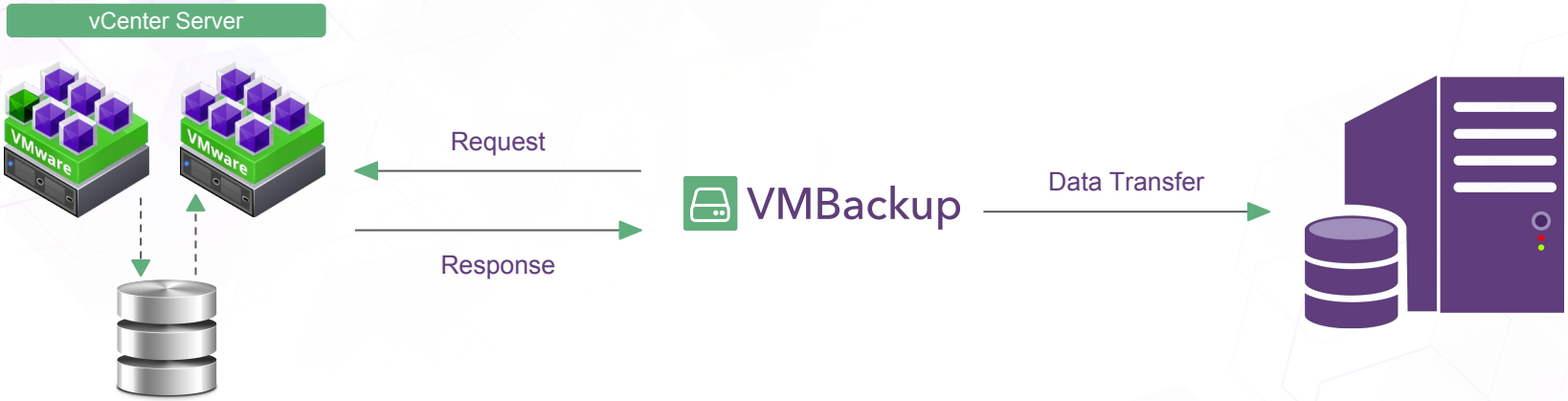
- Vembu VMBackup Client should have access to the SAN. It works on both physical server/FC or VM/iSCSI
- Vembu VMBackup Client directly reads the data which needs to be backed up from the SAN and send them to Vembu BDR Backup Server's storage repositories

Hot-Add Transport Mode



- Vembu VMBackup Client needs to be installed on anyone of the Windows VM or you may dedicate a VM to enable Hot-Add transport mode
- The virtual disk of the VM which needs to be backed up can be directly attached to the Vembu VMBackup Client VM
- Vembu VMBackup Client will read the attached disks and send the backup data to Vembu BDR Backup Server's storage repositories

Network Transport Mode



- Vembu VMBackup Client agent can be either installed on physical or virtual machine
- ESXi hosts reads and sends VM data to Vembu VMBackup Client and then it sends to Vembu BDR Backup Server's storage repositories
- It transmits data over the TCP/IP connection between the ESXi hosts and Vembu VMBackup Client
- The data transfer speed will be lower than the other two modes

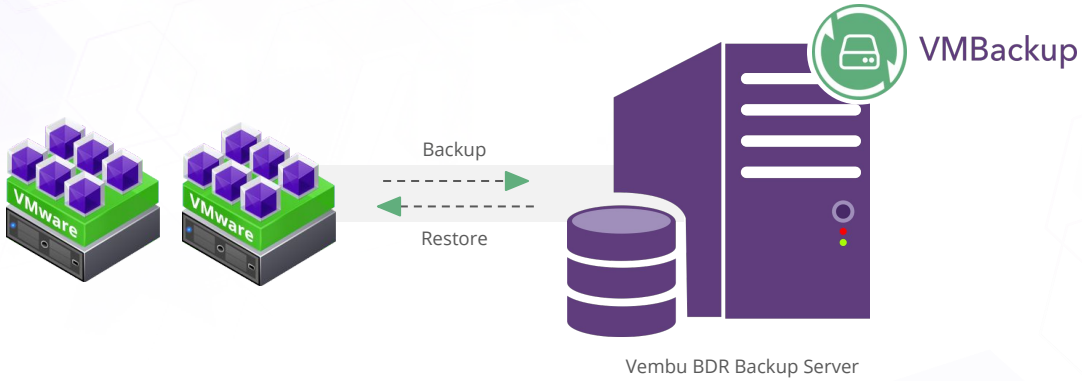
Deployment

Physical or Virtual ?

Vembu

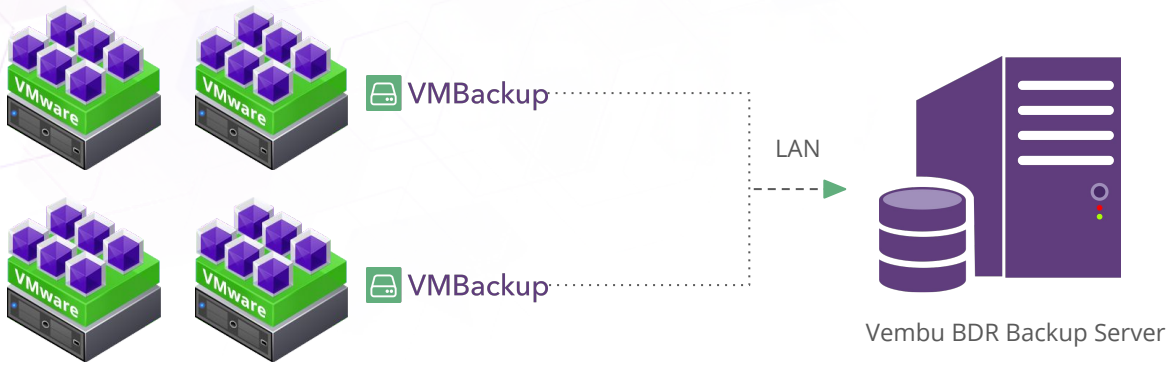
- Vembu BDR Backup Server, OffsiteDR Server and VMBackup Client can be installed on physical or virtual machines
- It depends on the size of the environment
- Small business may use virtual machine for Vembu BDR backup server and OffsiteDR server
- Recommending physical machine for Vembu BDR backup server and OffsiteDR server to get instant boot feature availability

On-premises Deployment - Simple



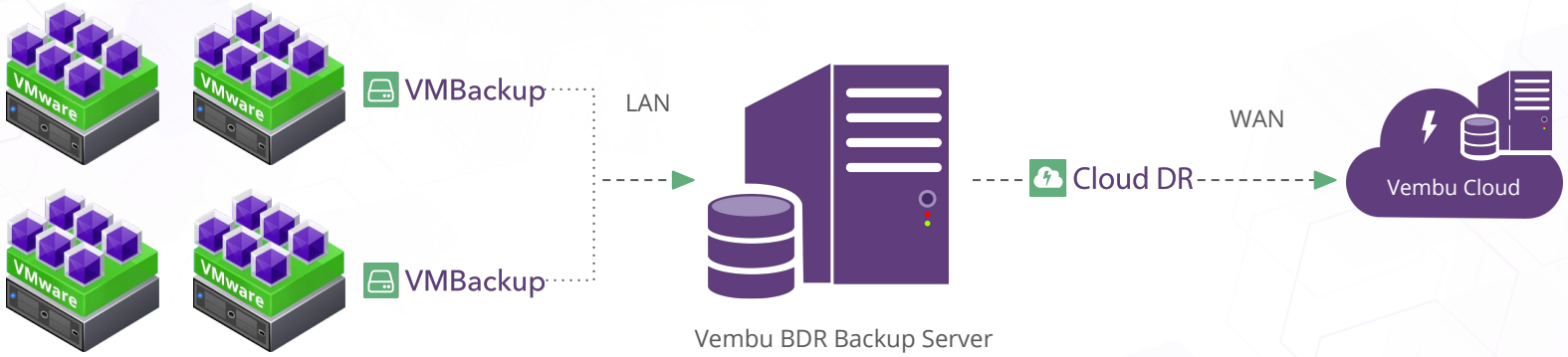
- Setup DR site in your local environment and backup via LAN connections
- Configure and manage backup jobs from BDR Backup Server GUI
- Backup VMs to the local storage repositories

On-premises Deployment - Distributed



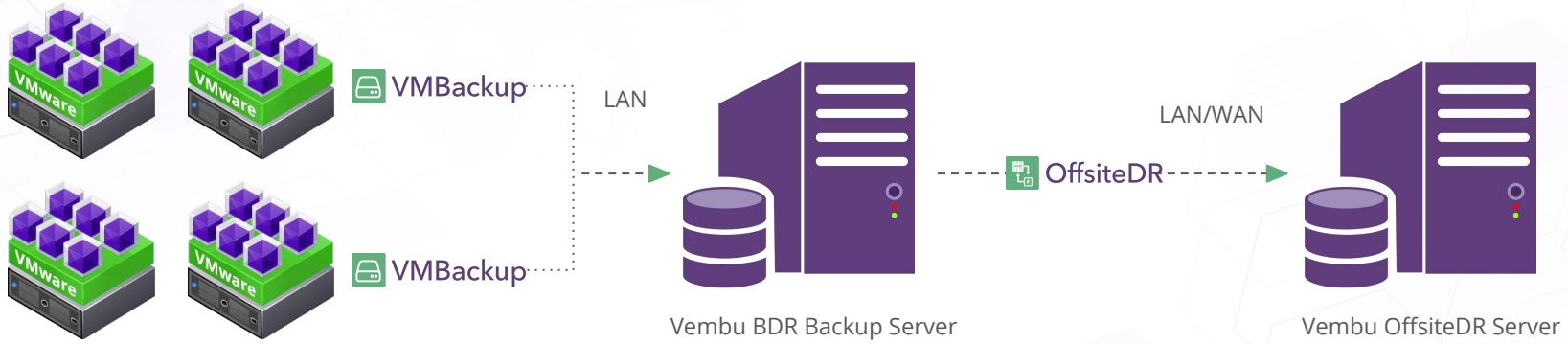
- This deployment is recommended for larger environments
- Setup DR site in your local environment and backup via LAN connections
- VMBackup agent can be used to configure and manage backup jobs
- Backup VMs to the local storage repositories

Hybrid Deployment - Scenario 1 (CloudDR)



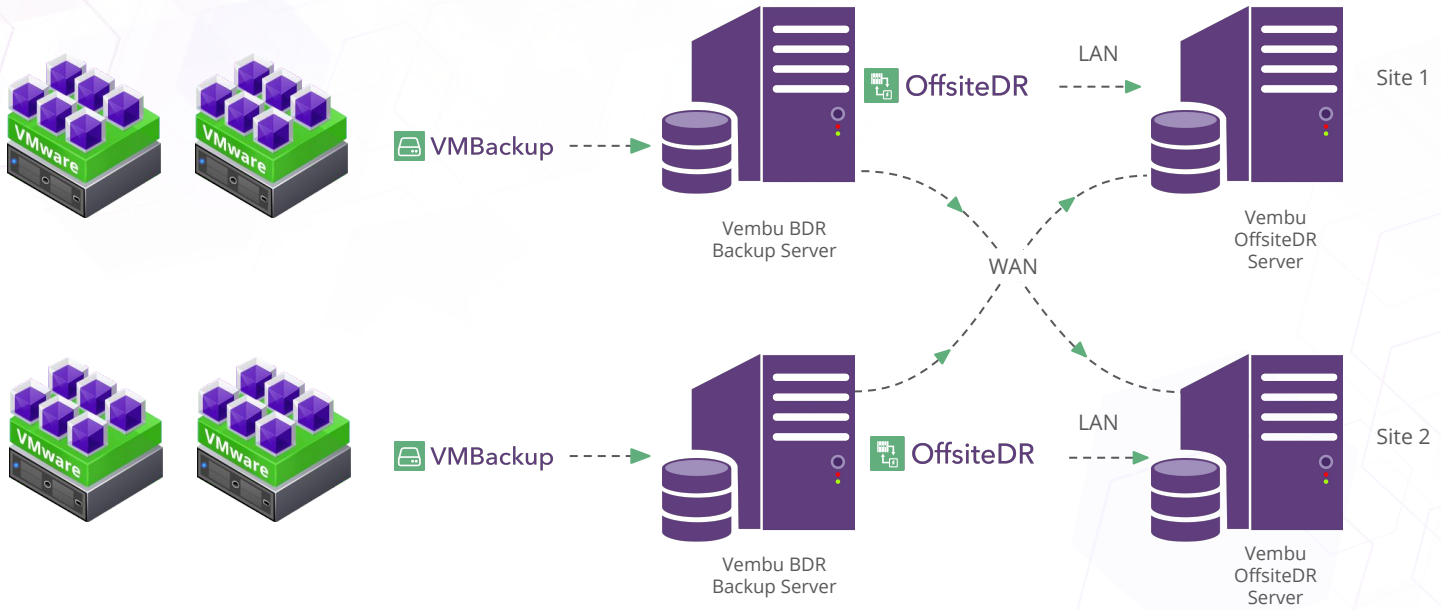
Setup DR site in your local environment and backup via LAN connections and send another copy of backup data to Vembu Cloud via WAN connection by signing up to Vembu CloudDR service

Hybrid Deployment - Scenario 2 (OffsiteDR)



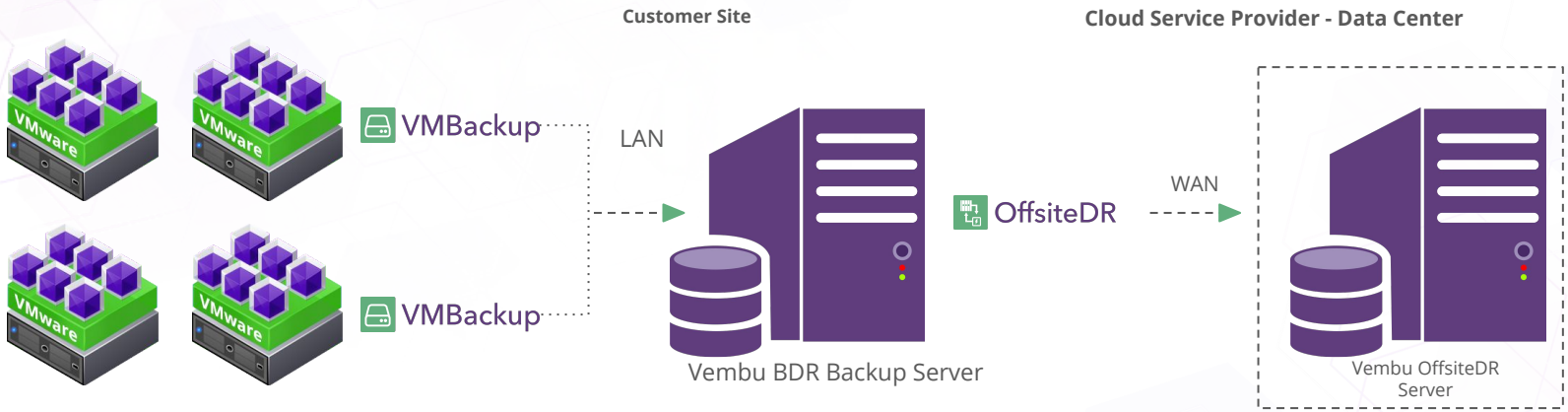
Setup DR site in your local environment and backup via LAN connections and send another copy of backup data to your Own Cloud via LAN/WAN connection by deploying Vembu OffsiteDR Server

Remote office/Branch office



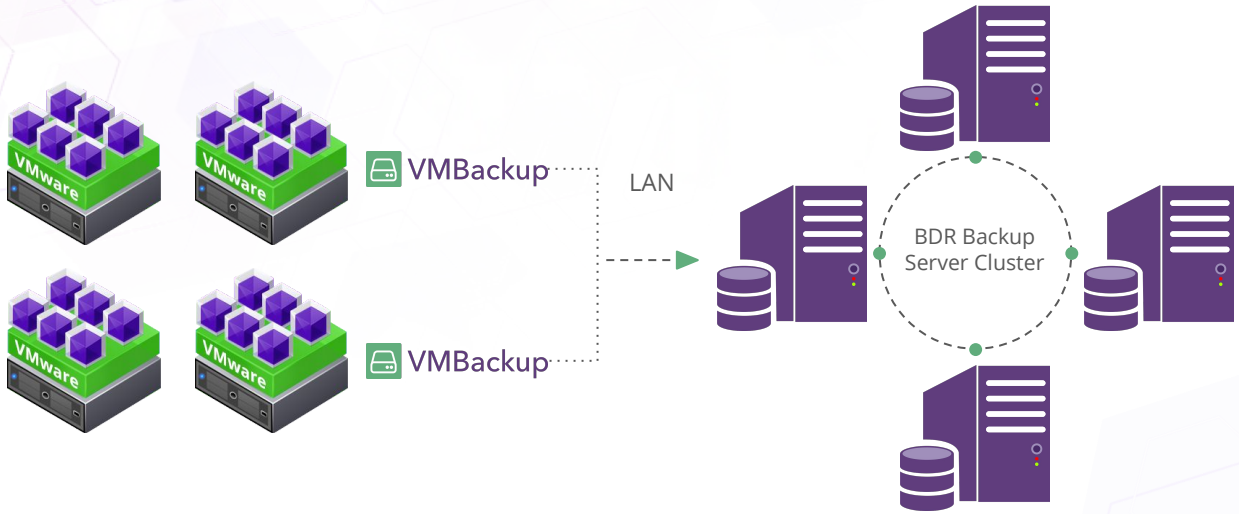
Setup Vembu BDR Backup Server and Vembu OffsiteDR Server in both Remote office and Branch office and sync backup data between both the locations

Offsite (or) Remote Deployment (CSP)



Cloud Service Providers can host Vembu OffsiteDR Server on their data center and backup another copy of data from Vembu BDR Backup Servers to their data center over WAN

Backup Server Clustering



- You can easily scale up the backup server when backup load increases
- Backup requests will be equally shared between each backup servers

Other Advantages

VMware Backup & Replication

Vembu

- Backup multiple VMs in single backup job or option to create multiple backup jobs with group of VMs
- Supports VMware ESXi hosts and vCenter Servers
- Supports ESXi v4.0 and above
- Supports vCenter Server v4.1 and above
- IP and Network remapping support for replicated VMs

Basic Retention (Forever Incremental)

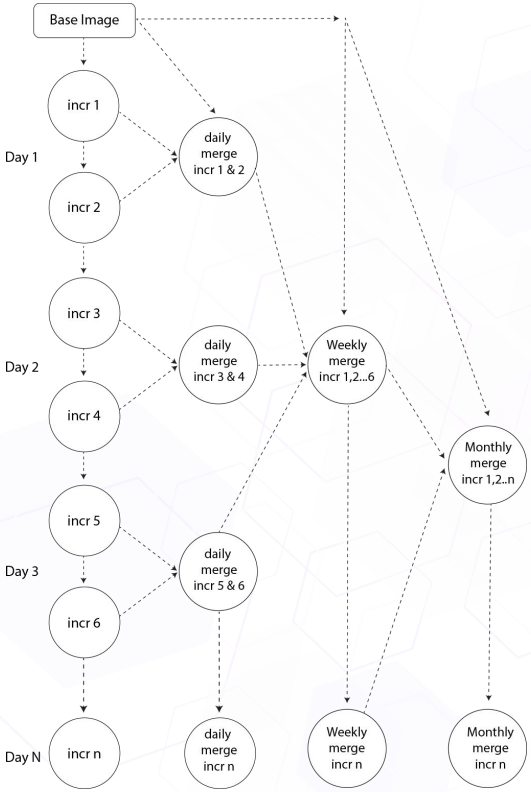
Vembu

- Vembu VMBackup will merge the incrementals based on the number of daily restore points we choose to keep. So you can run forever incremental with only one full backup.

- Normally hourly incrementals will be merged daily and based on the restore points, it will only retain last ‘n’ number of restore points. Rest of the daily merged incrementals will be merged with the earlier incremental backup.

Advance Retention - GFS Merge

- Provides the ability to specify retention policy for merging multiple recovery points via GFS (grandfather- father- son) settings.
- Enabling above options will reduce the time taken to restore backed up machines and most importantly reduce the size of merged image files in the storage location.
- Generally, daily merge is known as ‘son’, weekly merge is known as ‘father’ and monthly merge is known as ‘grandfather’.



Application Aware Process

- Application-aware process is to create consistent database snapshots by quiescing the applications using Microsoft VSS
- This option allows you to stop the backup if any one of application writers (Eg: MS Exchange Writer) were in an unstable state or if VSS writers were not processed successfully after the snapshot.
- Along with application consistency, it will truncate the logs based on the configuration.

Managing Backup & Replication Jobs

Vembu

- Automates the backup process by scheduling from the window provided, later the incrementals will run forever without any manual scheduling

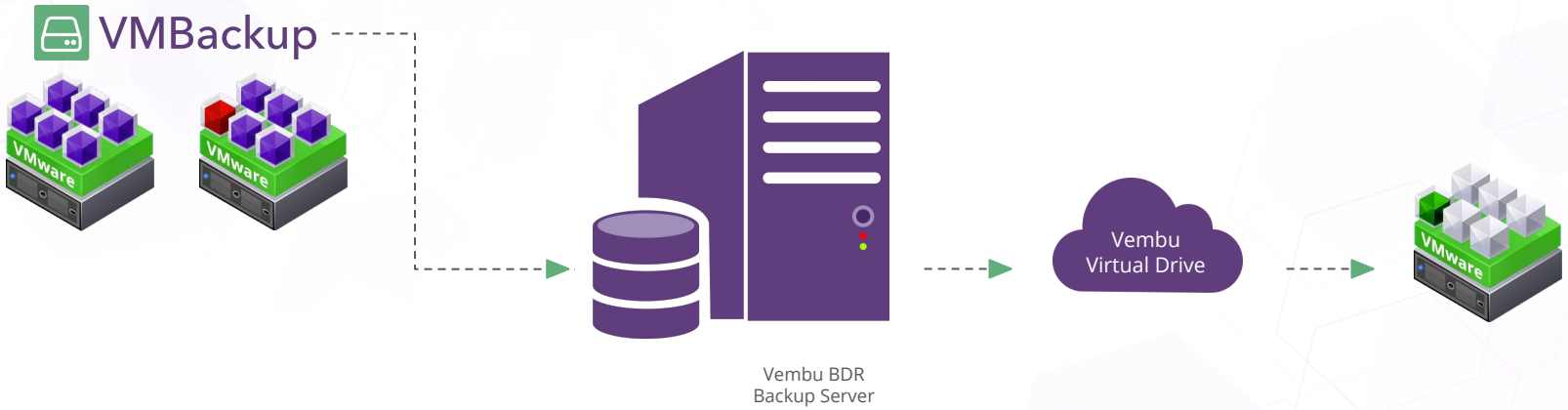
- Configure backup window settings, if you don't want to run incrementals during non working hours and weekends

- Bandwidth Throttling feature enables the user to limit the bandwidth used by the backup process from the client machine. If you don't want to spend your entire bandwidth on backups, use this feature to control or limit the bandwidth

- Additionally you can specify the maximum number of full backups that need to be stored in the server

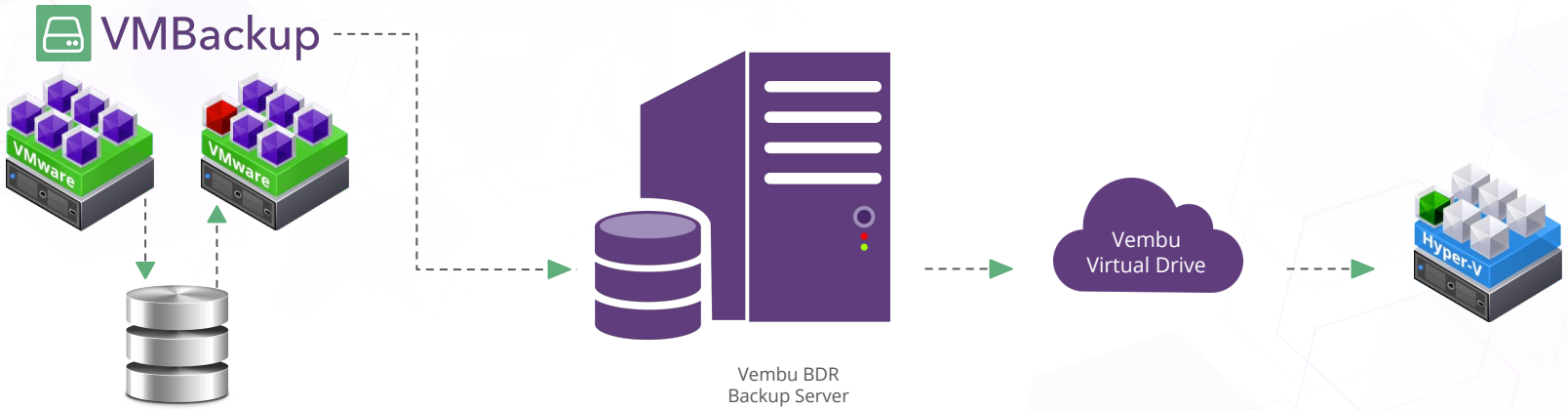
Disaster Recovery Scenarios

Instant Virtual Machine Recovery on VMware



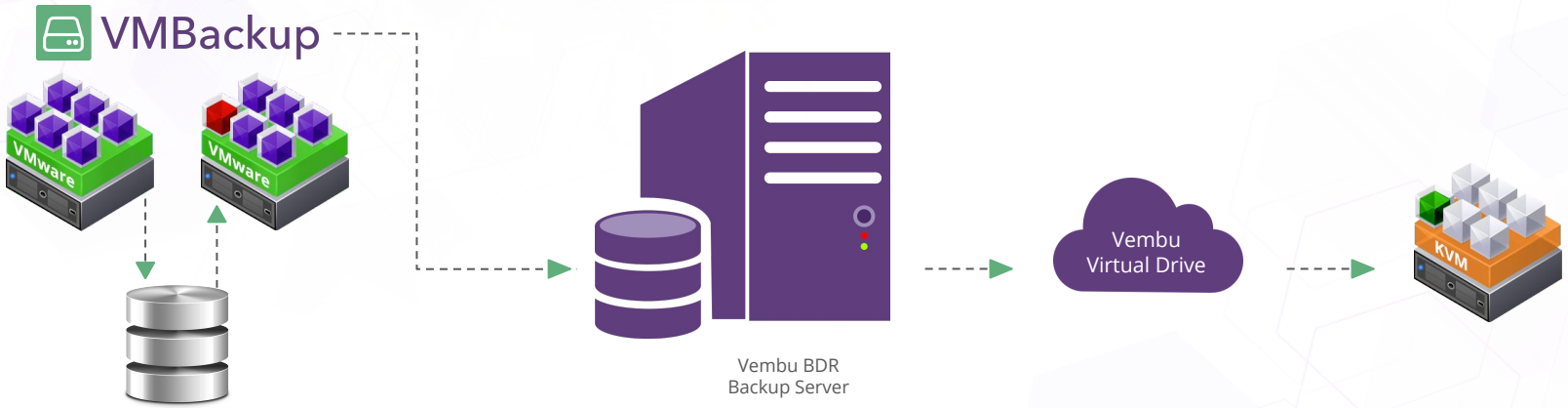
- Instantly boot the backed up VM on any ESXi host
- Share the Vembu Virtual Drive by using NFS Share and mount it on Datastore
- Then create a VM on ESXi host and select the VMDK

Instant Virtual Machine Recovery on Microsoft Hyper-V



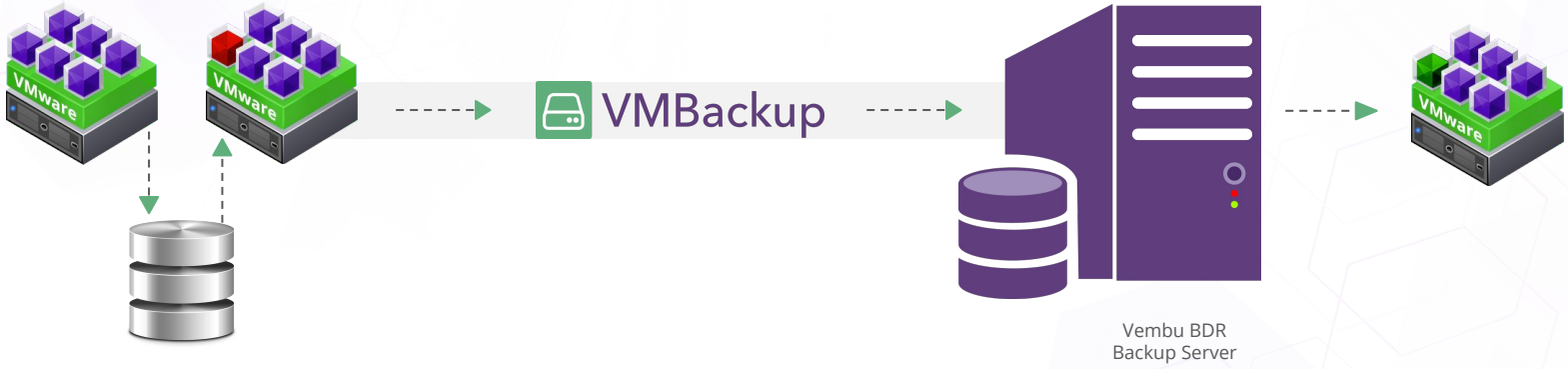
- Instantly boot the backed up VM on native or remote Microsoft Hyper-V

Instant Virtual Machine Recovery on KVM



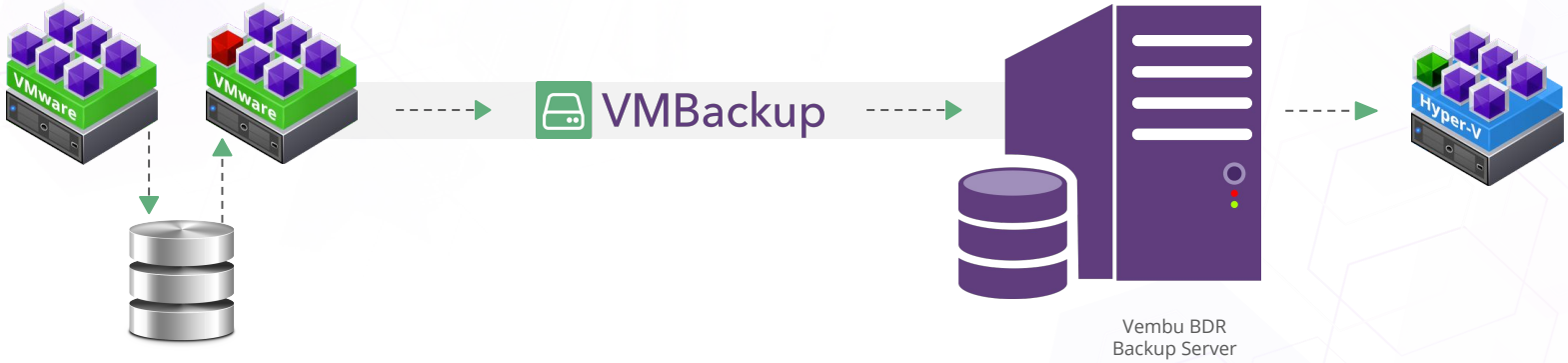
- Instantly boot the backed up VM on native or remote KVM

Direct VM Recovery to VMware



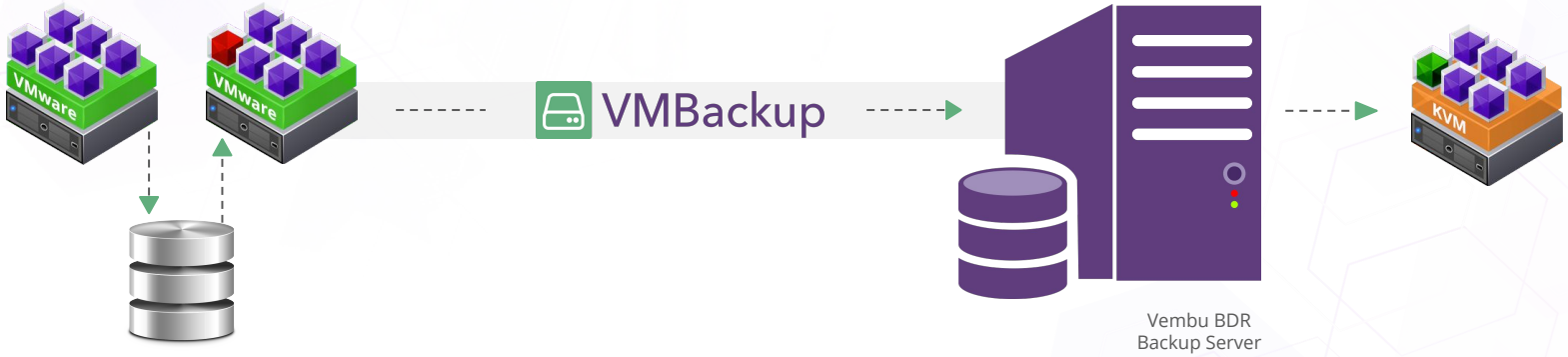
- Restore the backed up VM permanently to same or different ESXi host

Permanent VM Recovery to Hyper-V (V2V)



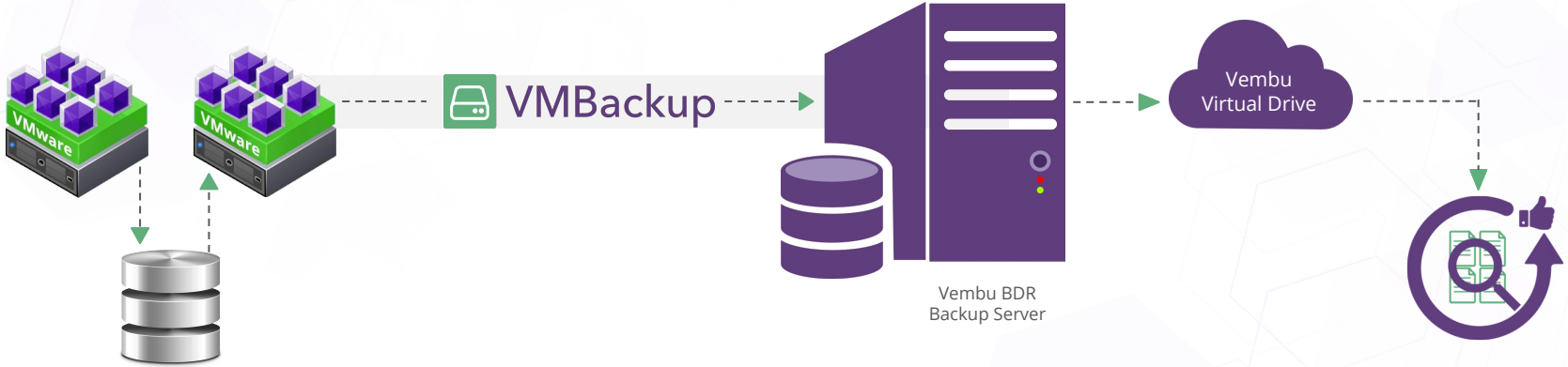
- Restore the backed up VM permanently to a Hyper-V host (V2V)

Permanent VM Recovery to KVM (V2V)



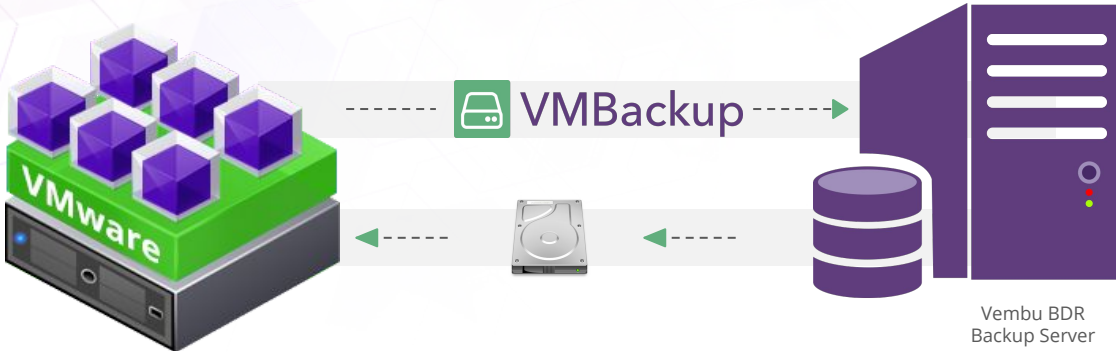
- Restore the backed up VM permanently to a KVM host (V2V)

Instant File Level Restore



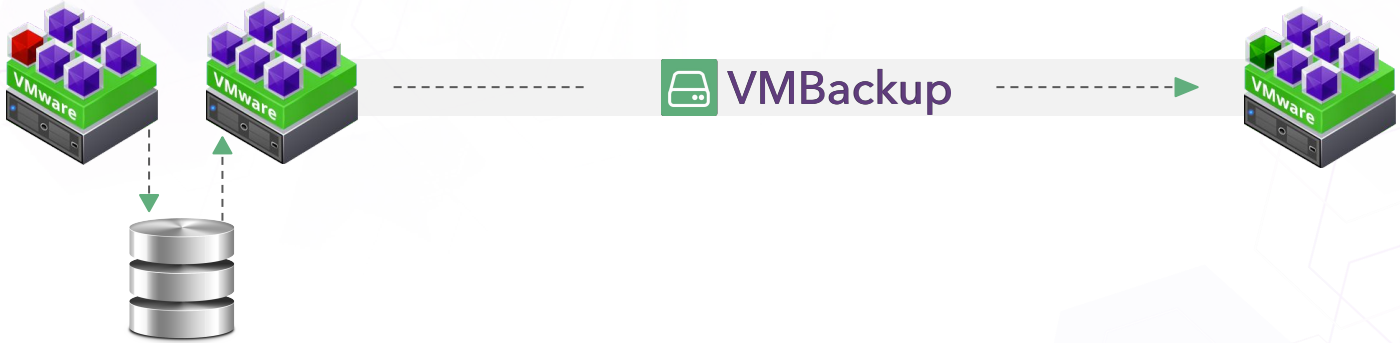
- Restore files/folders from the backed up VM instantly without restoring the backed up VM

VM Disk Level Restore



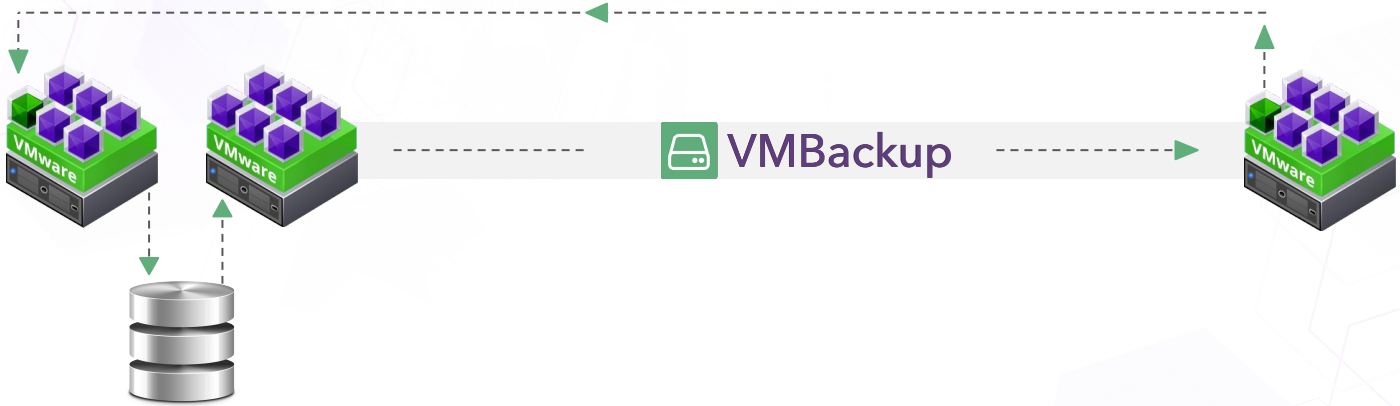
- Restore selected disk/disks to same VM or different VM

Failover



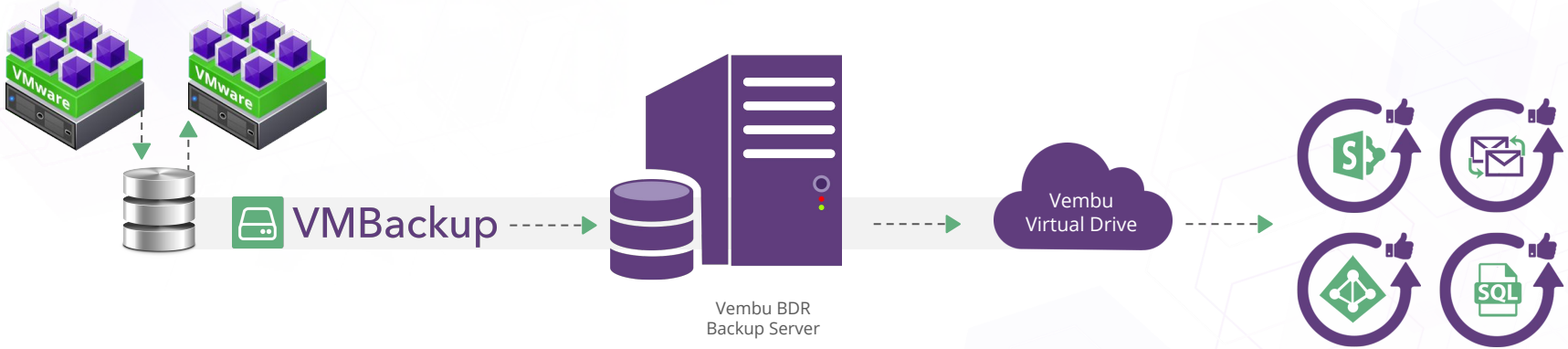
- Instantly boot the replicated VM from the target ESXi host when your source VM is down

Failback



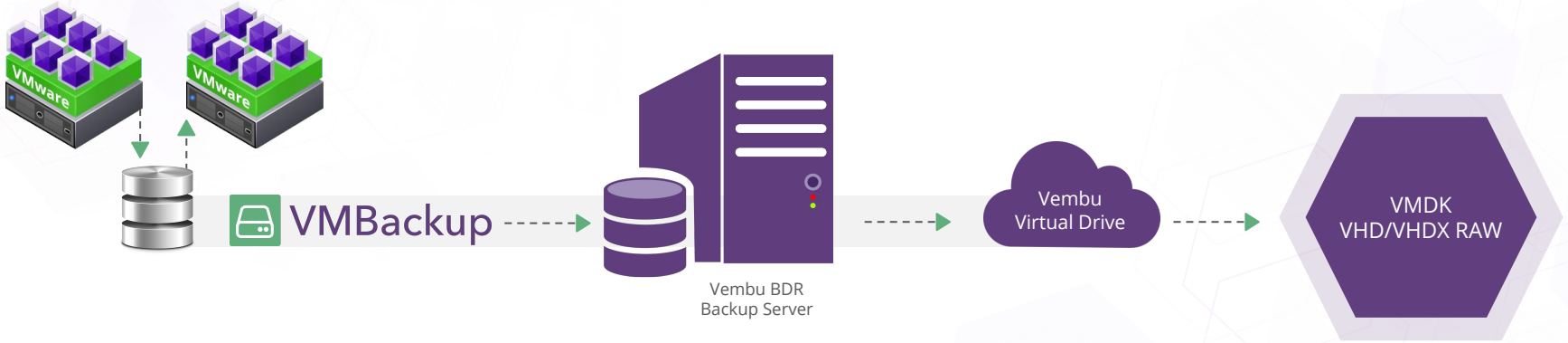
- Fail Over VM can later Fail Back to the source ESXi host or different host

Instant Item Level Recovery - Vembu Universal Explorer



- Vembu Universal Explorers helps you to restore Exchange mails, SQL database/tables, SharePoint documents and AD Users/Roles instantly

Vembu Virtual Drive



- Vembu Virtual Drive will be available in Vembu BDR Backup Server machine and for every VM, it will create a VHD, VHDX, VMDK, Flat-VMDK and RAW files instantly
- For every incremental schedule, full virtual hard disk files will be created without using any additional storage

License

License

Vembu

- Vembu charges for VMware and Hyper-V backups based on no. of CPU-Sockets
- If an ESXi host is deployed on a machine which has two CPU-Sockets, you need to buy two “VMware or Hyper-V Image Backup” licenses and backup unlimited VMs
- For Windows Physical Servers, you need to buy licenses per physical server machine
- Windows Desktops & Laptops licenses are FREE !
- For application backups, you need to buy license for each application
- The licenses need to be renewed every year
- License cost includes unlimited product upgrade, access to technical resources and 24/7 email & telephone support

Managing Licenses

Vembu

- To buy licenses, you need to create an account for your company in Vembu Portal (https://portal.vembu.com). Vembu Portal is a centralized server which manages all of your Vembu Licenses from one place

- Once you have successfully signed up, goto “Buy” page and choose the license quantity and pay for the licenses

- Purchased licenses will be allocated to your account immediately and you can view them under “License” page

- These licenses will be automatically mapped with your existing backup jobs

- All Vembu BDR Backup Servers will communicate with Vembu Portal Server for license availability.

Pricing

Pricing

Vembu

- Subscription based yearly(one, two and three year) licensing model for each applications. So you can just pay for what you use.
- License includes free updates and major product upgrades
- 24/7 Email & Telephone support
- Access to Vembu Community Forum, KnowledgeBase and other resources
- Access to centralized management portal to manage purchased licenses, download invoices and buy new licenses
- Check pricing here, https://www.vembu.com/vembu-bdr-suite-pricing/

Vembu

Thank You

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