# Table of contents

Introduction .......................................................................................................................... 4
System Requirements ............................................................................................................. 4
  OffsiteDR .......................................................................................................................... 4
  Supported Platform .......................................................................................................... 5
    VMware ......................................................................................................................... 5
    Hyper-V ....................................................................................................................... 6
  Port Configuration ............................................................................................................ 7
  Naming Conventions ........................................................................................................ 7
  Target/Source Host Permissions for VMware ................................................................. 8
Backup Components ............................................................................................................ 8
  OffsiteDR Server ............................................................................................................. 8
  BDR Backup Server ........................................................................................................ 8
  Storage Repository .......................................................................................................... 9
  Vembu Universal Explorer .............................................................................................. 9
Installation ............................................................................................................................ 9
  Vembu OffsiteDR Server ................................................................................................. 9
    Windows ....................................................................................................................... 10
    Ubuntu ......................................................................................................................... 17
  Vembu Universal Explorer ............................................................................................. 23
  Uninstalling Vembu OffsiteDR Server ........................................................................... 27
Login to Web GUI ................................................................................................................ 31
Storage Management .......................................................................................................... 32
  Add Storage Pools .......................................................................................................... 34
  Adding network Drives .................................................................................................... 36
  Storage Calculator .......................................................................................................... 37
  Delete All Data ................................................................................................................ 37
Getting Started with OffsiteDR .......................................................................................... 38
  Enabling Offsite Copy Management .............................................................................. 39
    OffsiteDR ..................................................................................................................... 40
    Manage Offsite Seed ................................................................................................. 42
    Manage Offsite Seed Migration ................................................................................. 42
Disaster Recovery ................................................................................................................ 43
  Restoring VMware vSphere Backups ............................................................................ 43
    Quick VM Recovery .................................................................................................... 46
      VMware .................................................................................................................... 46
      Hyper-V ................................................................................................................... 48
      KVM ......................................................................................................................... 50
    Full VM Recovery to ESXi Server .............................................................................. 52
    File Level Recovery .................................................................................................. 54
    Disk Management Mount ......................................................................................... 56
    Disk Level Recovery ................................................................................................. 57
    Download VM Files (VMDK, VHD, VHDX and RAW) ............................................... 59
    Bare-metal Recovery ................................................................................................. 61
**Vembu OffsiteDR User Guide**

**Introduction**

Vembu OffsiteDR (Part of Vembu BDR Suite) is a comprehensive data protection solution that is designed to help users restore their backups that are replicated from Vembu BDR Server to their very own data center in a secure fashion and simple way possible. Users can now restore their backups effectively from Vembu OffsiteDR server which is similar as restoring the backups from Vembu BDR backup server with minimal downtime.

**System Requirements**

- **OffsiteDR**
- **Supported Platform**
- **Port Configuration**
- **Naming Conventions**
- **Target/Source Host Permissions for VMware**

**Vembu OffsiteDR User Guide**

**Minimum Configuration**

<table>
<thead>
<tr>
<th><strong>OffsiteDR Server</strong></th>
<th><strong>Minimum Configuration</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OS</strong></td>
<td>- Microsoft Windows Server 2012 R2</td>
</tr>
<tr>
<td></td>
<td>- Microsoft Windows Server 2008 R2</td>
</tr>
<tr>
<td></td>
<td>- Microsoft Windows Server 2012</td>
</tr>
<tr>
<td></td>
<td>- Microsoft Windows Server 2016</td>
</tr>
<tr>
<td></td>
<td>- Microsoft Windows 10 64 bit</td>
</tr>
<tr>
<td></td>
<td>- Linux Ubuntu LTS 12.04</td>
</tr>
<tr>
<td></td>
<td>- Linux Ubuntu LTS 14.04</td>
</tr>
<tr>
<td></td>
<td>- Linux Ubuntu LTS 16.04</td>
</tr>
<tr>
<td><strong>Instant Boot Infrastructure</strong></td>
<td>- VMware vSphere</td>
</tr>
<tr>
<td></td>
<td>- Microsoft Hyper-V</td>
</tr>
<tr>
<td></td>
<td>- KVM Hypervisor</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>8 GB</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>Quad Core Xenon Processor</td>
</tr>
<tr>
<td><strong>Meta Data Storage</strong></td>
<td>10% of the planned total backup data size</td>
</tr>
<tr>
<td><strong>Network Card</strong></td>
<td>1 Gbps &amp; above</td>
</tr>
<tr>
<td><strong>Browser</strong></td>
<td>- IE v11</td>
</tr>
<tr>
<td></td>
<td>- Firefox v28 &amp; above</td>
</tr>
<tr>
<td></td>
<td>- Chrome v34 &amp; above</td>
</tr>
</tbody>
</table>
Recommended Configuration

<table>
<thead>
<tr>
<th>OffsiteDR Server</th>
<th></th>
</tr>
</thead>
</table>
| **OS**                    | • Microsoft Windows Server 2012 R2  
|                           | • Microsoft Windows Server 2008 R2  
|                           | • Microsoft Windows Server 2012  
|                           | • Microsoft Windows Server 2016  
|                           | • Microsoft Windows 10 64 bit  
|                           | • Linux Ubuntu LTS 12.04  
|                           | • Linux Ubuntu LTS 14.04  
|                           | • Linux Ubuntu LTS 16.04  |

<table>
<thead>
<tr>
<th>Instant Boot Infrastructure</th>
<th></th>
</tr>
</thead>
</table>
|                            | • VMware vSphere  
|                            | • Microsoft Hyper-V  
|                            | • KVM Hypervisor  |

<table>
<thead>
<tr>
<th>Memory</th>
<th>16 GB</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Octa Core Dual Processor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meta Data Storage</th>
<th>10% of the planned total backup data size</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Network Card</th>
<th>1 Gbps &amp; above</th>
</tr>
</thead>
</table>
| Browser                   | • IE v11  
|                            | • Firefox v28 & above  
|                            | • Chrome v34 & above  |

Vembu OffsiteDR User Guide

Supported Platform

- VMware
- Hyper-V

Vembu OffsiteDR User Guide

Supported Platform for VMware

- Following are the Virtual infrastructure platforms supported by Vembu VMBackup, with their respective supported versions listed:

<table>
<thead>
<tr>
<th>Virtual Infrastructure</th>
<th>Version</th>
</tr>
</thead>
</table>
| Platform                | • VMware vSphere 6.x  
|                         | • VMware vSphere 5.x  
|                         | • VMware vSphere 4.x  |
| Hypervisor              | • ESX(i) 6.x  
|                         | • ESX(i) 5.x  
|                         | • ESX(i) 4.x  |
Following are the specification virtual machine specification and requirement supported by Vembu VMBackup:

<table>
<thead>
<tr>
<th>VM Specification</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| Virtual Hardware       | • Virtual hardware of all types and versions are supported, which includes support to virtual disks larger than 2 TB. (i.e) Support extends upto recent addition- 62TB VMDK.  
                          • VMware does not support snapshotting VMs with disks engaged in SCSI bus sharing; Such VMs are not supported by Vembu VMBackup.  
                          • RDM virtual disks in physical mode, Independent disks, and disks connected via in-guest iSCSI initiator are not supported, and are skipped from processing automatically. Network shares and mount points targeted to 3rd party storage devices are also skipped as these volumes/disks are not visible in the VM configuration file. |
| OS                     | • All VMware supported operating systems.  
                          • Application-aware processing support from Microsoft Windows 2003 SP1 and later. |
| Software               | • VMware Tools (optional). VMware Tools are required for following operations: application-aware processing and file-level restore from Microsoft Windows guest OS.  
                          • All latest OS service packs and patches (required for application-aware processing) |

**Supported Platform for Hyper-V**

Following are the Virtual infrastructure platforms supported by Vembu VMBackup, with their respective supported versions listed:

<table>
<thead>
<tr>
<th>Virtual Infrastructure</th>
<th>Version</th>
</tr>
</thead>
</table>
| Platform               | • Microsoft Windows Server 2008 R2  
                          • Microsoft Windows Server 2012  
                          • Microsoft Windows Server 2012 R2  
                          • Microsoft Windows Server 2012 R2 Core  
                          • Microsoft Windows Server 2008 R2 Core |
Following are the specification virtual machine specification and requirement supported by Vembu VMBackup:

<table>
<thead>
<tr>
<th>VM Specification</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| Virtual Hardware  | • Virtual hardware of all types and versions are supported, which includes support to Generation 2 VM hardware.  
                | • Pass through virtual disks and shared VHDX that are connected to VMs are automatically skipped while taking snapshots for backups. |
| OS                | • All Hyper-V supported operating systems. 
                | • Application-aware processing support from Microsoft Windows 2003 SP1 and later. |
| Software          | • Microsoft Hyper-V Integration services should be enabled. |

**Vembu OffsiteDR User Guide**

**Port Configuration**

<table>
<thead>
<tr>
<th>Port</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCP Port 32004</td>
<td>For processing Backup/Restore/Delete/Replication requests</td>
</tr>
<tr>
<td>HTTP Port 6060, 6061</td>
<td>For processing WebService requests</td>
</tr>
<tr>
<td>TCP Port 32005</td>
<td>For UI Communication</td>
</tr>
<tr>
<td>HTTPS TCP 443</td>
<td>For Esx(i) Communication</td>
</tr>
<tr>
<td>TCP Port 902</td>
<td>Data Transfer to ESX(i) host</td>
</tr>
</tbody>
</table>

**Vembu OffsiteDR User Guide**

**Naming Conventions**

Any backup and replication job that is created in Vembu BDR should be named with below mentioned rule:

- Only [a-z][A-Z][0-9][ - _ ] characters are allowed in Backup/Replication Name.
Also do not use the following reserved names for naming any backup/replication job:
CON, PRN, AUX, NUL, COM1, COM2, COM3, COM4, COM5, COM6, COM7, COM8, COM9, LPT1, LPT2, LPT3, LPT4, LPT5, LPT6, LPT7, LPT8, and LPT9.
To learn more about file/folder naming restrictions in Microsoft Windows, do read the naming conventions column from below link:

Naming Conventions - Microsoft

Vembu OffsiteDR User Guide

Target/Source Host Permissions for VMware

- Root permissions on the source ESX(i) host.
- Root or equivalent permissions on the Linux backup repository.
- Write permission on the target folder and share.
- If VMware vCenter Server is added to the backup infrastructure, an account that has administrator permissions is required. Instead of granting administrator permissions to the account, you can configure more granular permissions.

Vembu OffsiteDR User Guide

Backup Components

- OffsiteDR Server
- BDR Backup Server
- Storage Repository
- Vembu Universal Explorer

Vembu OffsiteDR User Guide

OffsiteDR Server

Vembu OffsiteDR server is a Windows/Linux based server that maintains an offsite copy of server data which can be installed either as a service or as an application based on user requirement and works flawlessly on both (physical and virtual) environments. It also serves users with features that are available in backup server:

- Quick VM Recovery
- Restore processes
- VembuHIVE File System
- Backup storage management, compression/encryption and 4-tier verification

Vembu OffsiteDR User Guide

Vembu BDR Backup Server

Vembu BDR backup server is a Windows/Linux based server machine that can be installed as a service and works flawlessly on both (physical and virtual) environments. It serves the major
contribution to users with handful of features such as:

- Quick VM Recovery
- Restore processes
- VembuHIVE File System
- Backup storage management, compression/encryption and 4-tier verification.

**Vembu OffsiteDR User Guide**

**Storage Repository**

Vembu OffsiteDR repository management has a hybrid volume manager that supports scalable and extendable backup storage of different storage media such as Local drives, NAS(NFS and CiFS) and SAN(iSCSI and FC).

**VembuHIVE™**

Vembu’s patented document-oriented backup data repository. Having replaced all structural file system metadata with content metadata and intelligently indexed each document, Vembu is able to virtualize VembuHIVE™ as a file system, with respect to backup documents.

**Vembu OffsiteDR User Guide**

**Vembu Universal Explorer**

Vembu Universal Explorer is a single recovery tool that lets users to granularly recover data from the various Microsoft application backups such as: Exchange, SQL, SharePoint and Active Directory.

- User can perform granular restore of Emails/Mailboxes/Exchange stores from Microsoft Exchange.
- User can perform granular restore of Microsoft SQL databases and tables
- Supports document level restore for Microsoft SharePoint
- Users can perform granular level recovery of Microsoft Active Directory objects instantly.

**Vembu OffsiteDR User Guide**

**Installation**

- Vembu OffsiteDR Server
- Vembu Universal Explorer
- Uninstalling Vembu OffsiteDR Server

**Vembu OffsiteDR User Guide**

**OffsiteDR Server**

- Windows
Vembu OffsiteDR User Guide

Vembu OffsiteDR Server - Windows

Vembu OffsiteDR Server is currently supported for below versions of windows machines (Please make sure that you are using any one of the below versions).

- Windows Server 2012 R2 (64 Bit)
- Windows Server 2008 R2 (64 Bit)
- Windows Server 2012
- Windows Server 2016
- Windows 10 (64 Bit)

Download build:
- Download the Windows Installer for Vembu OffsiteDR server.

Steps to Installation:
- Run the downloaded installer with administrator privilege and installation process begins with the below wizard. Click Next to proceed with installing the setup.

- 'Vembu OffsiteDR License agreement' is the next step in setup installation, read the Software License Agreement carefully and choose 'I accept the agreement' option. **Note:** You cannot proceed further installing the setup if you opt 'I do not accept the agreement' option.

- Click Next.
• Next step in wizard will have default settings chosen, you can either: Click Install to proceed installation with default chosen settings.

Or can check 'Let me customize the configurations' option and opt to Customize settings.
Choosing Customize option will let you customize PostgreSQL Server Configurations in next step: ‘Port Number’, ‘Installation location’ and ‘Database Storage Location’.

By default, the port number is ‘32010’. You can enter the port value from 1024 to 65535. If you enter port number below 1024, you will be alerted with a popup message to change the given Port number.
If the entered port number is already occupied by any other process, an alert message will popup which informs you to enter a different port value that is available.

Once done, choose installation and database storage location(or proceed with default choices) and click Next.

Next step in wizard will allow you to customize installation location of Vembu OffsiteDR.
Once done choosing location, click Next.

Next step in wizard is 'Storage Repository Configuration', you can either choose:
- A local drive as your storage repository
- Or choose a network drive as your storage repository.
Once done with Vembu OffsiteDR server installation, you can add shared folders as network drives by configuring them via Vembu OffsiteDR server web console.

- Click Next.
- Next step in wizard will allow you to configure:
  - User credentials for WebConsole (Default user name: admin and password: admin)
  - WebServer port (Default port chosen will be 6060 and it is recommended not to change it unless you are advanced user)
  - Once done, Click Next.
Next step of Wizard will allow you to review the chosen configuration, review the settings and proceed to click Install.

Final step of wizard after installation will ask you whether to:
- Start Vembu OffsiteDR server and
- Open Vembu OffsiteDR Web Console.
You can either leave the options selected and click Finish. Or choose to UnCheck them and start later.

**Note:** Vembu OffsiteDR is installed as a service and can be found on `Services.msc`, if user chose to start later.
Vembu OffsiteDR server - Linux

Vembu OffsiteDR server is currently supported for below versions of Linux OSes (Please make sure that you are using any one of the below Linux architecture).

- Ubuntu 16.04 LTS (64 Bit)
- Ubuntu 14.04 LTS (64 Bit)
- Ubuntu 12.04 LTS (64 Bit)

To install Vembu OffsiteDR Backup Server on Linux environment follow the steps given below:

Copy the download link from the following link: Click here and download the installer file using wget command and make sure you are a root user (use "sudo su" command to be as an root user). Or you can download the installer to any Windows machine and move the installer to Linux machine by using FTP/WinSCP.

- Once you execute wget command you will have “VembuOffsiteDRSetup.sh” in the download location.

```
root@vembu-virtual-machine:/home/vembu# sh VembuOffsiteDRSetup.sh
```

- Run installer by using “sh” command. For ex: #sh VembuOffsiteDRSetup.sh. Installation process begins with the wizard below, click yes to proceed with the installation.

```
Welcome to Vembu BDR Suite installation setup wizard.
We will now take you through the Vembu OffsiteDR installation process.
Vembu OffsiteDR is proprietary software of Vembu Technologies and is licensed under its own terms which you are required to accept for this installation.
If you would like to install Vembu OffsiteDR,Please enter yes to proceed.
Do you want to proceed [yes/no]:
```

- The installer shows the License Agreement, kindly go through the License Terms carefully. If you agree enter “y” to proceed with your installation.
After initiating the installer, it will check for dependent packages and request for a confirmation from your side. You can enter "y" to proceed further.

Please find the packages to be downloaded by Vembu OffsiteDR application here,

- PostGreSQL RDMS (9.6)
- PostGreSQL Connector (9.5.02)
- ODBC Driver (2.3.4)
- VembuOffsiteDR Server (x.x.x)

This installer will download and install,

1. PostGreSQL RDMS (9.6)
2. PostGreSQL Connector (9.5.02)
3. ODBC driver (2.3.4)
4. VembuOffsiteDR Server (3.8.0)

Do you want to proceed [y/n]: 

Here you need to specify the location where you want to store PostGreSQL files (you can also proceed with the default choice). Vembu OffsiteDR will basically require 10% of the backup data storage for the internal meta data store. Hence please assess and configure a storage medium appropriate to the storage requirements. Besides please ensure your drives have higher I/O performance. Kindly specify the path and click Enter. We recommend you to use dedicated drive for this location instead of root volume. (Important STEP)

The Next step will specify the default port value for PostgresQL which is 32010 and you can also change the default port value by proceeding with a 'y' as follows:

Note: You can enter the port value from 1024 to 65535. You cannot enter a port number that is below or beyond the allowed limit. Also you cannot proceed with a port value which is already been used by another process.
Default port for PostgreSQL : '3306'

Do you want to change the default port for the PostgreSQL [y/n] : y

Please specify the port :
9960

Given PostgreSQL server port is currently occupied by another process. Enter another valid port number:
24
Please specify the valid port number between 1024 and 65535 to proceed

- Enter a valid port value and proceed.
- Then installer will proceed to install Unix ODBC and PostGreSQL driver.
- Click "yes" to proceed installing dependency packages of PostGreSQL.

Once done installing PostGreSQL, databases will be created and PostGreSQL will be restarted automatically.

User will then be asked to proceed with Vembu OffsiteDR backup server installation, the installer will begin downloading the 'VembuOffsiteDR_3.8.0_DBN.zip' file to proceed with further installation.
Once download is completed. The Vembu OffsiteDR Backup server build installation starts automatically and asks to choose type of installation. “Option 1" is to Install Vembu OffsiteDR by creating a new Vembu OffsiteDR user account with root privileges or “Option 2" to install Vembu OffsiteDR in the current user and proceed with the installation. By default we recommend to choose Option1.

If you have selected "Option 1" installer will create new Vembu OffsiteDR user and If you have selected "Option 2" installer will install OffsiteDR Server in the current user.

Once user is created.Then it will ask to create directory for the installation path. Enter "y" to proceed.

Installer asks your permission to create repository. Enter "y" to create repository now or Enter "n" to create it later, after installing the backup server. If you want to create now press "y" and click Enter.
Once you press enter, installer will show the list of volumes present in your machine. Kindly choose one volume by entering corresponding number. Click number and press Enter to continue (Example : Enter 1)

Once you click Enter, the repository created successfully and the installer asks for Vembu OffsiteDR Web Console Authentication as shown below. Kindly give username and password through which you can access your Server Web Console. By default we recommend username and password as “admin”. Now press Enter to continue. Once you click Enter, Vembu OffsiteDR Web console user will be created successfully.
• Now installer asks you to change ports from default value. If you want to change click “y” else “n”. By default we recommend to click “n” and continue. Kindly go through the usage of individual ports mentioned below.
  - Backup Server Port is the port through which the installed Vembu VMBackup client will backup the data to the backup server. The default value is 32004.
  - UI Communication Port is the port through which Vembu OffsiteDR Apache/PHP modules communicate with Vembu OffsiteDR to serve UI requests from the Vembu OffsiteDR Web Console. The default value is 32005.
  - HTTPS Port is the port used to access the Vembu OffsiteDR Web console in a secured manner through HTTPS protocol. Default value is 6061.
  - Enable HTTPS: HTTPS Port is the secure web console port through which you can access the Vembu OffsiteDR web console in secure manner. You should enable “Enable HTTPS” option to edit this value. If you have enabled HTTPS option, then you can access the Vembu OffsiteDR web console through https://localhost:6061

• Once the installation is complete you will be asked to start the Vembu server as Daemon process. If you have not started Vembu OffsiteDR as daemon process you can start Vembu OffsiteDR using “sh startVembuOffsiteDR.sh” command and “sh stopVembuOffsiteDR” to stop Vembu OffsiteDR from the Vembu OffsiteDR installation location. Or else if you want to start the Vembu OffsiteDR immediately, enter “y” to proceed as shown below.
Download build:

[Download](#) the installer file for Vembu Universal explorer.

**Steps to Installation:**

- Run the downloaded installer with administrator privilege and installation process begins with the wizard below. Click next to proceed with the installation process.

  ![Welcome to the Vembu Universal Explorer Setup Wizard](#)

  This will install Vembu Universal Explorer on your computer. It is recommended that you close all other applications before continuing.

  Click Next to continue, or Cancel to exit Setup.

- The next window will check for the pre-requisites installation in your machine and lists them along with download link for applications that are uninstalled.
- You can either download them right away, or check the 'I will install prerequisites later'
checkbox for installing them later. Click Next to continue.

- Read and agree to Vembu Software license agreement. Click Next to continue further.

- Following wizard will ask for folder name under which setup will add program icons to the folder. In the next page, choose whether you need shortcut and quick launch icons for the program and proceed.
Next wizard will give a brief summary of provided details, review it and proceed with installing Vembu Universal Explorer.

Once done installing, click Finish to complete the Vembu Universal Explorer Setup Wizard. If you want to start Vembu Universal Explorer Application after this setup exits, click on Start Vembu Universal Explorer Application check box.
Uninstalling Vembu OffsiteDR - Windows

For clean uninstallation of Vembu OffsiteDR server in Windows machines, follow the below steps:

- Run the downloaded installer file for Vembu OffsiteDR and click Next in the below wizard to proceed with clean uninstallation process.

**Note:** uninstallation process will happen only if Vembu OffsiteDR is already installed. If not the installer file will proceed with installing Vembu OffsiteDR and its prerequisites.
'Vembu OffsiteDR License agreement' is the next step, read the agreement carefully and choose 'I accept the agreement' option.

**Note:** Opting to 'I do not accept the agreement' will block you from proceeding with uninstallation.

- Click Next

The next step in wizard will ask you to choose between 'Upgrade Now' and 'Uninstall'.
Vembu OffsiteDR, PostGreSQL.

- To proceed with uninstallation choose the latter option: 'Uninstall Vembu OffsiteDR, PostGreSQL' and click Next.

- A pop-up with a alert message will show up, click 'Yes' to proceed.

- Uninstalling Vembu OffsiteDR and its requisite softwares(PostGreSQL) will begin.
Once Vembu OffsiteDR and its prerequisites are removed, you will be requested to restart the machine to complete the uninstallation process. Choose 'Yes' to restart immediately or 'No' to manually restart later.

**Uninstalling Vembu OffsiteDR - Linux**

For clean uninstallation of Vembu OffsiteDR server in Linux machines, follow the below steps:
- Login to Linux machine with root privilege.
- Change the directory path to Vembu OffsiteDR installation location.
- Run following command to proceed uninstallation: sh uninstall.sh

```
root@vembutest:/home/vembuoffsitedr/Vembu/VembuOffsiteDR#/ sh uninstall.sh
```
• Running the above command will provide two options to choose between:
  o Uninstall OffsiteDR server or
  o Perform clean uninstallation(Vembu OffsiteDR and PostGreSQL)

1. Uninstall and Remove VembuOffsiteDR
2. Uninstall and Remove all the existing VembuOffsiteDR, PostgreSQL services [Clean Uninstallation]

• Proceeding with option 1 will delete and uninstall existing Vembu OffsiteDR instances. If you wish to continue, click yes.

Enter your choice [ 1 / 2 ] : 1
This will uninstall and delete existing VembuOffsiteDR instances. Would you like to continue anyway? Click Yes to continue. Or Click No to use the existing setup.[y/n]:

• Proceeding with option 2 will uninstall and delete all existing Vembu OffsiteDR, PostgreSQL services and its data. If you wish to continue, click yes.

Enter your choice [ 1 / 2 ] : 2
This will uninstall and delete all the existing VembuOffsiteDR, PostgreSQL services and its data. Click Yes to continue. Or Click No to use the existing setup.[y/n]:

• Vembu OffsiteDR will be uninstalled successfully.

Vembu OffsiteDR User Guide

Login to Web GUI - Vembu OffsiteDR

• User can login to Vembu OffsiteDR web UI via following options:
  o By typing the following URL: https://localhost:6061 (or) https://<Ip_Address_of_Machine>:6061 in browser.
  o Via shortcut created on desktop.
  o Via Vembu OffsiteDR server web console option in tray icon.

• Users who login after a fresh installation will be required to choose the time zone in which they want their backup/replication reports to be generated.
Once done choosing time zone, you will be required to provide Vembu OffsiteDR ID which should be globally unique.

**Note:** We recommend users to give machineName.domainName as Vembu OffsiteDR ID since it is globally unique.

Once done assigning ID for Vembu OffsiteDR, you will be directed to job listing page.

**Troubleshooting**

- If there seems to be any issue existing in accessing web GUI, check whether Vembu OffsiteDR service is running in Services.
- Also check whether Vembu OffsiteDR WebServer service is running.

**Vembu OffsiteDR User Guide**

**Storage Management**

Storage management page lets user manage and configure drives into separate storage pools for storing backup data. Vembu OffsiteDR have a new file system that halts backup for nothing and once a storage pool gets filled, user can extend storage by edit option where he can add new volumes to an already created storage pool.
Note: Vembu OffsiteDR repository management has a hybrid volume manager that supports scalable and extendable backup storage of different storage media such as Local drives, NAS (NFS and CIFS) and SAN (iSCSI and FC).

- Go to ‘Management → Storage Management’

- To create a new storage pool, click the ‘Add’ option. Give a Storage Pool name and select any set of volumes from the list of available Storage Volumes. Click Save. The space available in that particular pool will also be displayed. Click Next.

- Users can also add network volumes using ‘Add network drive’ option in settings.
  - Click here to go to Add Network Drive page.
Storage Pools

Storage Pools are used to aggregate the space available from different volumes and utilise them as a single storage for specific backups.

Steps to create Storage Pool:

- The backup storage configured during installation will act as a default pool. In case if the backup storage is not configured during installation, the user has to create default pool from the storage management page of BDR/OffsiteDR server.
- User can add new volumes to create a pool for storing their backups. You can create 'n' number of storage pools, wherein 'n' number of volumes can also be added to form a pool.
- Physical and network shared volumes can also be combined together to form a pool. A single volume can be added to multiple pools.
- Backups configured from a standalone client will only be stored in default storage repository of backup server.
- User can choose the storage pool for backups during backup configuration itself when the backup is configured from a client on the server.
Click on add button to create a storage pool.

Enter the storage pool name.

The list of storage volumes with its used size and backup location are displayed. User can select the required drives for the pool.

Once all the details are provided, click save.

The new pool that is created will be displayed in the list of storage pools.
User can expand the storage pool size by adding Volumes by using the ‘Edit’ option respective to the pool.

Note: If backup data are available in a pool, it cannot be deleted. If the pool does not contain any backup data, then it could be deleted.

**Vembu OffsiteDR User Guide**

**Add/Manage Network Drives**

This option lets users add, delete network drives which will then be listed in list of storage volumes with a separate drive letter and can be configured for storing backups.

**Note:** Mapped network drives are not supported when Vembu OffsiteDR server runs in local logon account. Change logon user with administrator privileged user in service management console and then proceed configuring Network drive.

To add a network drive, one must provide following attribute details:

- **Drive Name** - Provide a drive letter/name for network drive to be added.
  
  **Note:** Drive name must be single alpha character: A-Z or a-z
  
  - **Drive Path** - Network path of drive to be added.
  
  - **Ex:** `\<MACHINE_NAME OR IP_ADDRESS>\<SHARE_NAME>`
  
  - **Username & Password** - If network drive requires login authentication provide the username and password to authenticate drive addition.
  
  - A user can add ‘n’ number of network drives and can manage it via ‘Manage network drives’ page.
  
  - Once done providing details, click save to add network drive.
The added drives will be listed as shown in pic above, which can also be deleted using 'delete' option if no longer required.

**Vembu OffsiteDR User Guide**

**Storage Calculator**

Users with large data centers and high data traffic can now calculate their storage space requirements with Vembu Storage calculator. The calculation will be made based on the type of job a user opts for along with recovery points and the average data traffic ratio. We implement a custom compression method that reduces storage space to a vast ratio difference compared to source data size.

Click below to calculate your storage space requirements:

[Vembu Storage Calculator](#)

**Vembu OffsiteDR User Guide**

**Delete All Data**

This option lets user to completely wipeout their server data and reset Vembu OffsiteDR to fresh installation state.

- Go to 'Management → Storage Management → Delete All'
The ‘Delete All Data’ window will open as shown below.

![Delete All Data Window](image)

This process will wipe out all your backed up data references from this Server and this will not have any impact on trial period. To continue deletion, type the following text exactly in the below textbox.

```
I wish to delete storage repositories folder manually
```

- Select the check box to acknowledge the deletion and Click Submit.

- In order to proceed with the deletion process the user must type the phrase “I wish to delete storage repositories folder manually” as mentioned in the window. Please note that the command is case-sensitive and the phrase should be typed as given.

- On proceeding with the Submit will wipe all data and reset Vembu OffsiteDR to fresh installation state.

Note: Proceeding with the delete option will not auto-delete the backed up data, but will rename the sgstorage folder with the timestamp of deletion period in configured storage location. Once the delete process is notified with a success note, you have to manually delete the folder.

Vembu OffsiteDR User Guide

Getting Started with OffsiteDR
Vembu OffsiteDR provides additional data protection, which helps users to replicate data from Vembu BDR backup server from business production site to the offsite data center location. With Vembu OffsiteDR user can restore data directly from the OffsiteDR server.

- **Enabling Offsite Copy Management**
- **Disaster Recovery**

**Vembu OffsiteDR User Guide**

**Offsite Copy Management**

Users can have an offsite copy of backup server data which can be used as a safe precaution in securing user data. These offsite copies will help in handy, in case of backup server disaster.

- Go to ‘Management → Offsite Copy Management’
- By default, Offsite copy settings is set disabled.

**Note:** Before enabling Offsite copy, user need to [Register Vembu BDR server to their Vembu Portal account](#).

Once registered, you will get the below window with Offsite copy status disabled:

- Offsite Copy management offers two option to choose from:
  - Vembu Cloud
  - My own data center
• Select “My own data center”

Vembu OffsiteDR User Guide

Vembu OffsiteDR

• Choosing this option, will let users to replicate backup data to their personal data center and user can enable schedule window here as well or replicate with no preference.
• Enabling schedule window let users to choose the start and end time, during which the replication process need not be performed.

• Additionally, user can also define the days to be backed up - All days or only on weekdays.

• Once done choosing Offsite copy type, save and proceed to configure retention.
**Note:** Offsite copy type once saved cannot be changed. So make sure, you choose the right option.

**Retention:**
- Users can configure retention for offsite copies of backup data.
- By default, retention will be enabled which can be disabled if not required.
- User can also define count for daily restore point and additional full backups to be retained.

Once done choosing retention, hit save.

**Bandwidth Throttling**
Bandwidth throttling option enables user to limit network bandwidth used by backup jobs. This helps in a balanced network usage in a work environment.

**Options to Bandwidth Throttle:**
- When a user enables bandwidth throttling on server end, he will have two options to choose from:
  - Throttle bandwidth always
  - Throttle bandwidth 'From' - 'To'

**Throttle bandwidth always** - This option will keep the applied bandwidth limit always active.

**Throttle bandwidth 'From' - 'To'** - This option allow user to specify a time frame during when the applied throttling will be active.

- Users will also be asked to specify the maximum throttle limit on client machines that ranges in: Kbps, Mbps, Gbps.
- In addition, a checkbox to disable throttling during weekends is provided; Which can be enabled when required.
Once done with selecting the required configuration, click save.

**Manage Offsite Seed**

- The backups from various clients will be listed in manage seeds page and dump process can be performed for the initial set of backups.
- Click Action icon to perform the dump process.
- Once you click action icon it will ask for the Dump location browse the dump location and Click OK to continue.
- After the process is over, the backup is locally dumped for the migration.
- Now we can transfer it over a secondary storage medium to (HDD/USB) the offsite server.

To complete Offsite Seed after transferring seed data to OffsiteDR location, login to OffsiteDR UI and follow these steps: [Click Here](#)

**Manage OffsiteDR Seed Migration**

- Go to ‘Management → Server Management → Offsite Seed Migration’.
- To proceed with migration in Offsite seed migration page, browse the location of seed data...
on your secondary storage medium (HDD/USB) and Click Submit to start migration.

- Once migration of seed backup data completes, the backups will be listed under Offsite Seed Migration progress window where user can check the status of migration tasks.
- Offsite seed migration progress window also includes: Backup Name, Client Name, Start Time, End Time, Status, Remarks.

Vembu OffsiteDR User Guide

Disaster Recovery

- Restoring VMware vSphere Backups
- Restoring Microsoft Hyper-V Backups
- Restoring Physical Image Backups
- Restoring Application Backups

Vembu OffsiteDR User Guide

Restoring VMware vSphere Backups

- Go to Recovery tab.
- Backups configured from various client machines to the server, will be listed for recovery, along with below listed options:
  - Restore
- Virtual mount
- Proceed to Persistent Instant Boot version delete
- Delete
- Replication actions
- Status
- Reports

**Virtual mount**

- This option lets you instant mount backup data virtually where users can access backup in different file formats such as: IMG, VHD, VHDX, VMDK.

**Mount Backup - vm1**

Are you sure you want to Mount the backup data in the Virtual drive?

- Users can either take a copy of this mounted data or boot respective files if needed on KVM(IMG file in Linux), VMware vSphere(VMDK) or Hyper-V(VHD, VHDX).
- Once done with requirement, unmount backup data. This will resume backup job, so that incrementals will run as per schedule.

**Unmount Backup - vm1**

Backup image might be in use by recovery options such as Quick VM recovery or Disk Management Mount. Do you still want to unmount the backup from VirtualDrive?

---

Virtual mount
- This option lets you instant mount backup data virtually where users can access backup in different file formats such as: IMG, VHD, VHDX, VMDK.

**Mount Backup - vm1**

Are you sure you want to Mount the backup data in the Virtual drive?

- Users can either take a copy of this mounted data or boot respective files if needed on KVM(IMG file in Linux), VMware vSphere(VMDK) or Hyper-V(VHD, VHDX).
- Once done with requirement, unmount backup data. This will resume backup job, so that incrementals will run as per schedule.

**Unmount Backup - vm1**

Backup image might be in use by recovery options such as Quick VM recovery or Disk Management Mount. Do you still want to unmount the backup from VirtualDrive?
Proceed to Persistent Instant Boot version delete

- During each instant boot and instant file recovery session, a change in backup data will take place which then is saved as persistent Instant boot data.
- Persistent data can be restored using restore options, if needed.
- Persistent data will be listed with a (+p) sign alongside timestamps of backup versions.
- Such persistent data can also be deleted if not required, using the 'Proceed to Persistent Instant Boot version delete' option.
- The option let user choose the timestamp of persistent data to be deleted.
- User will also be required to confirm deletion by selecting the checkbox 'Are you sure you want to delete the selected version related persistent boot data from the repository location permanently?' to proceed with deletion process.

Restore:

- Proceeding with restore option will list below restore options to choose from:
  - Quick VM Recovery
  - Live Recovery to ESX(i) server
  - File Level Recovery
  - Disk Management Mount
  - Disk Level Recovery
  - Download
In addition, users can also opt for following recovery options:
  - Bare-metal Recovery
  - Vembu Virtual Drive (NFS Share)

Vembu OffsiteDR User Guide

Quick VM Recovery

Quick VM recovery option allow user to quick access backup images as ready state VMs. (i.e) Minimal downtime and business continuity secured by making VMs instantly available. Quick VM recovery gives 3 choices of instant boot software to users:

- **VMware** (Available in both Windows and Linux servers as an alternate software for instant boot)
- **Hyper-V** (Default chosen software for Windows and available only on Windows servers)
- **KVM** (Default chosen software for Linux and available only on Linux servers)

Vembu OffsiteDR User Guide

Quick VM recovery - VMware

Login to OffsiteDR server installed in a Windows/Linux environment and go with 'Quick VM Recovery' among recovery options.

- Proceeding with Quick VM recovery option will let you select version for Instant Boot.

Once done choosing required timestamp, proceed to select the virtual machine to boot.
From the list of VM(s) select the VM to instant boot and proceed to configure in which VMware server to boot.
User can choose VMware as software for instant boot (In both Windows and Linux servers) and need to enter the necessary details to instant boot in VMware environment.

In order to proceed with instant boot via ESXi/vCenter server, user have to choose: target VMware server and target datastore. User will also be requested to provide a VM name(which by default takes name of VM to be restored).

User can also specify whether the VM should be powered ON automatically.

Once done configuring VMware server details, proceed to review configuration.

Once done reviewing, click Next to proceed with Instant Booting the VM.
• VM will get automatically created in VMware server VMs list.

**Note:** Once done with requirement, shutdown and turn off VM before unmounting backup data. This will resume backup job, so that incrementals will run as per schedule.

**Vembu OffsiteDR User Guide**

**Quick VM - Hyper-V**

Login to OffsiteDR server installed in a Windows environment and go with 'Quick VM Recovery' among recovery options.

• Proceeding with Quick VM recovery option will let you select version for Instant Boot.

• Once done choosing required timestamp, proceed to select the virtual machine to boot.

• From the list of VM(s) select the VM to instant boot and proceed to allocate RAM for Instant boot.
The software used to instant boot is Hyper-V (For Windows servers) and the default RAM size chosen is 2GB which can be modified based on user requirement.

Once done configuring restore options, proceed to review configuration.

Once done reviewing, click Next to proceed with Instant Booting the VM.
• VM will get automatically created in Hyper-V VMs list. 
  Note: Once done with requirement, shutdown and turn off VM before unmounting backup data. This will resume backup job, so that incrementals will run as per schedule.

Vembu OffsiteDR User Guide

Quick VM - KVM

Login to OffsiteDR server installed in a Linux environment and go with 'Quick VM Recovery' among recovery options

• Proceeding with Quick VM recovery option will let you select version for Instant Boot.

• Once done choosing required timestamp, proceed to select the virtual machine to boot.
• From the list of VM(s) select the VM to instant boot and proceed to allocate RAM for Instant boot.
The software used to instant boot is KVM (For Linux servers) and the default RAM size chosen is 2 GB which can be modified based on user requirement.

Once done allocating RAM size, proceed to review configuration.

Once done reviewing, click Next to proceed with Instant Booting the VM.
VM will get automatically created in KVM VMs list.

Note: Once done with requirement, shutdown and turn off VM before unmounting backup data. This will resume backup job, so that incrementals will run as per schedule.

Full VM Recovery to ESXi Host or vCenter Server

- Proceeding with 'Live Recovery to ESX(i) Server' option will let you select Version for Live ESXi Server restore, where you have VMware backup with several timestamps.
- Choose your required timestamp version and proceed to select VM.

- If you have backed up more than one VM in a backup and need to restore a particular VM/set of VMs, among all other VMs - Select your desired VM(s) and hit proceed to provide target ESXi details.
Choose the target server (ESXi/vCenter) for VM restore from the dropbox (if already registered in manage VMware vSphere server page). If not registered, add the server details using 'Add VMware Server' option.

Choose target host (if restoring to vCenter) and target datastore details.

Provide a name for the target VM to be created.

Once done configuring restore options, proceed to review configuration.

Once done reviewing, click Next to proceed with Live Recovery to ESX(i) Server.
File Level Recovery

This option lets you restore individual files and folders present in the VMs that are backed up using Vembu BDR Server.

- Select the timestamp from which you want to restore data and proceed to select files/folders.

- A tree listing backed up VMs along with its disks which on further expansion will list respective files and folders in it. Select specific files and folders you want to restore.

- Once done selecting files/folders, proceed to choose restore location.

Note: File level recovery is supported only for windows virtual machines with NTFS File systems.
• Provide restore location to which the files will be restored. Restoring location can either be a local drive or a network shared drive.
• You can download the restore copy as zip file by selecting “enable restored files for Zip process” option.
  o In addition, you can also enable encryption for the zip file by selecting “Encrypt zip file” option and by providing password for the zip file.

• Once done configuring restore options, proceed to review configuration.

• Once done reviewing, Click Restore Now to proceed with File Level Recovery.
Disk Management Mount

This option lets you instantly attach backup data to disk management as a VHD/VHDX file and proceed with restore process.

- The VHD/VHDX file is created by virtual mounting backup data.
- Users can access backup data via disks attached on disk management.
- Once done with requirement, unmount backup data. This will resume backup job, so that incrementals will run as per schedule.

- Select the timestamp version for mount and proceed.

- Select the disk file to be mounted in disk management for restore.
Note: You cannot mount more than one disk simultaneously. Choosing multiple disks for mount process will pop-out an Error message "User allowed to restore only one disk at a time. If you choose multiple disks, previous selection should be ignored."

- Once done configuring restore options, proceed to review configuration.

- Once done reviewing, click 'Restore Now' to proceed with recovery.
- This option lets users restore specific disk from existing VM backup to a target virtual machine, so that the disk can be attached and accessed by that target VM.
- Proceeding with the option VM disk restore, requests user to select time-stamp version for VM disk restore. Once done selecting, click proceed to select virtual machine(s).

- Select the required disks of VM(s) you want to restore and click proceed to provide target ESXi details.

- Choose the target server(ESXi/vCenter) for VM restore from the dropbox(if already registered in manage VMware vSphere server page). If not registered, add the server details using 'Add VMware Server' option.
- Choose target host(if restoring to vCenter) and target datastore details.
- Choose the target VM to which you wish to restore disk.
Once done configuring restore options, proceed to review configuration.

Once done reviewing, click Next to proceed with Disk Level Recovery.

Note: While performing Disk Level restore, target VM will be turned off.

Download VM Files
• Download option allows users to download backup data as an offsite copy of their preferred file format.
• Proceeding with restore, lets users go with the regular routine of selecting time-stamp version they want to restore and click proceed.

Now select VM(s) to restore and proceed to select restore location.
• You can also perform disk level restore, by selecting specific set of disks from different VMs to download.

• Restoring location can either be a local drive on backup server or if users have managed to add a network shared drive, the restore can be directed to the network shared location.
• Users can download backup data in multiple file formats such as: VHD, VMDK, VHDX, VMDK-Flat and RAW.
Once done configuring restore options, proceed to review configuration.

Once done reviewing, click Next to proceed with Download.

Taking offsite copies in various format allow users to boot backup data across various virtual and physical environments such as Oracle Box, KVM, Hyper-V, VMware vSphere, VMware player etc.,

Also reconstruction of physical servers is also possible with this offline backup copies.
Follow below steps to perform Physical Recovery for Image backups using Recovery CD:

- To do bare-metal recovery using Vembu Recovery CD first we need to download and install WAIK. Click on below link, to download WAIK:
  

- Once WAIK is installed, download Vembu Recovery CD: Click Here to Download

- You will have Vembu Recovery CD in both 32-bit and 64-bit zip formats, download accordingly based on requirement. Now unzip the downloaded file and run RecoverCDBuilder with administrator privileges. You will get a window opened as shown below.

![VembuBDR Recovery CD Builder](image)

- Read the service provider license agreement carefully and click agree. You will be proceeded to VembuBDR Recovery CD builder window as shown below.

  ![SERVICE PROVIDER LICENSE AGREEMENT](image)

  **Note:** When you have RAID and additional drivers to be setup in the machine to be recovered, such drivers can be bundled with Vembu Recovery CD using 'Additional Driver' option.
In this window, WAIK location will be auto-filled, target location is the location where you want to store ISO. Now click Build to start creating ISO file. You can also monitor the progress of ISO creation.

Once done, the ISO file will be available in the Target location you have entered.
Insert a blank CD in CD/DVD drive and burn the created ISO file in CD by right-clicking over ISO file and choosing the option 'Burn Disk Image'. Windows Disk Image Burner will open, choose the CD/DVD drive and click burn to start burning process.
You can also monitor the progress of burning process.

Once the burn process completes, CD will be auto ejected. Reinsert CD and reboot machine to BIOS settings. Change the boot priority and set CD/DVD as primary boot device and click Save and Exit. VembuBDR recovery console will be opened as shown below. Click Next to continue.
• Read the Software License Agreement carefully, click Accept and proceed with Next.

![Software License Agreement]

Please read the following License Agreement. You must accept the terms of this agreement before continuing.

1. Scope of Agreement
   The VembuBDR Recovery CD Creation Software consists of software that can be...

2. Grant of License
   If you are installing and/or using the VembuBDR Recovery CD Creation Software...

3. Restrictions on Use
   You shall not or permit any other to transmit all or any portion of the VembuBDR... The rights under this Agreement are personal to you and the functionality of the Vembu...

Accept  Decline

• You will have option to select a task from the below list:
  o Recover entire disk or partition
  o Set BCD boot configuration
  o VMware driver installation
Since we have to do physical recovery, we'll proceed with 'Recover entire disk or partition' option and click Next.
You will be directed to recovery page, where you will be required to provide details for following options:
  - Browse and select the file which you need to recover.
  - Browse and select the backup configuration file.
  - Select the disk/drive you wish to restore from the following list.

Once done choosing respective requirements, click Next to proceed.
In next window, you will be required to select target disk/drive to which recovery will be performed. Once done selecting the target, click Next.

**Note:** The selected disk/drive will be formatted and only recovered data will be available. So make sure you don't have any important data on target disk/drive.
Proceeding will initiate the recovery process and once it's done. You can find your recovered data in target disk/drive selected.

Vembu Virtual Drive:

Vembu Virtual Drive is an exclusive feature of OffsiteDR server, that allows user to instant access backup data. With the help of VembuHIVE file system, Vembu Virtual Drive virtual mount backup data and allow instant access for users.

Vembu Virtual Drive will make following file format types available for any image based backups mounted in it:

- VHD
- VMDK
- VHDX
- Flat.VMDK
- RAW image files

These files can be used based on user requirements. For example, a VHD file can be mounted in Hyper-V or a VMDK file can be mounted in a ESXi server or a RAW image file can be mounted in KVM to create a virtual machine. VHD file can also be mounted in disk management to access file level backup data.
Go to Management → Server Management → Manage Virtual Drive

This page lists all image backups stored in DR server and user can virtual mount any backup data he wish to instant access.

Vembu Virtual Drive - NFS Share Settings

Enable NFS service on Vembu Virtual Drive

List of backups available for virtual drive mount/unmount

<table>
<thead>
<tr>
<th>Backup Name</th>
<th>Client Name</th>
<th>Plugin Type</th>
<th>Virtual Mount Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>vm2</td>
<td>migration416123</td>
<td>vm</td>
<td>Mount</td>
</tr>
<tr>
<td>vm_client37</td>
<td>dfgjkl</td>
<td>vm</td>
<td>Mount</td>
</tr>
<tr>
<td>vm_client123</td>
<td>dfgjkl</td>
<td>vm</td>
<td>Mount</td>
</tr>
<tr>
<td>vm_client</td>
<td>dfgjkl</td>
<td>vm</td>
<td>Mount</td>
</tr>
</tbody>
</table>

To virtual mount a backup data, user have to click ‘Mount’ option alongside specific backup job to be accessed.

User can now have access to backup data by viewing VembuVirtualDrive displayed in My Computer.

Once done with requirement, user can unmount data by clicking on Unmount option.

Enable NFS Service on Vembu Virtual Drive

Vembu Virtual Drive can be shared within a network area by enabling NFS service on Vembu Virtual Drive.

NFS service for Vembu Virtual Drive is available on both Linux and Windows servers.

Note: For enabling NFS feature in Linux servers, it is necessary to have NFS kernel server installed in the DR machine. You can install NFS Service by using "apt-get install nfs-kernel-server" command. You need to run Vembu OffsiteDR with root/administrator privileges in order to save NFS settings.

Enable NFS Service on Linux Screenshot
Enable NFS Service on Windows Screenshot

NFS share service allows user to add VembuVirtualDrive as a NFS datastore in ESXi servers.

**Note:** Before enabling NFS service on Vembu Virtual Drive, please make sure Microsoft or any other third party NFS services is disabled to ensure uninterrupted service.

Vembu OffsiteDR User Guide

Restoring Microsoft Hyper-V Backups

- Go to Recovery tab.
- Backups configured from various client machines to the server, will be listed for recovery, along with below listed options:
  - Restore
  - Virtual mount
  - Proceed to Persistent Instant Boot version delete
  - Delete
  - Replication actions
  - Status
  - Reports

Virtual mount:
- This option lets you instant mount backup data virtually where users can access backup in different file formats such as: IMG, VHD, VHDX, VMDK.

**Mount Backup - HyperV_GFS**

Are you sure you want to Mount the backup data in the Virtual drive?

- Users can either take a copy of this mounted data or boot respective files if needed on KVM(IMG file in Linux), VMware vSphere(VMDK) or Hyper-V(VHD, VHDX).
- Once done with requirement, unmount backup data. This will resume backup job, so that incrementals will run as per schedule.

**Unmount Backup - HyperV_GFS**

Backup image might be in use by recovery options such as Quick VM recovery or Disk Management Mount. Do you still want to unmount the backup from VirtualDrive?

**Proceed to Persistent Instant Boot version delete**

- During each instant boot and instant file recovery session, a change in backup data will take place which then is saved as persistent Instant boot data.
- Persistent data can be restored using restore options, if needed.
- Persistent data will be listed with a (+p) sign alongside timestamps of backup versions.
- Such persistent data can also be deleted if not required, using the 'Proceed to Persistent Instant Boot version delete' option.
- The option let user choose the timestamp of persistent data to be deleted.
- User will also be required to confirm deletion by selecting the checkbox 'Are you sure you want to delete the selected version related persistent boot data from the repository location permanently?' to proceed with deletion process.

**Delete Persistent backup data of VM for this backup - HyperV_Basic01**

Select Persistent boot version to delete: Select timestamp

- Are you sure you want to delete the selected version related persistent boot data from the repository location permanently?

**Restore:**
• Proceeding with restore option will list below restore options to choose from:
  - Quick VM Recovery
  - Live Recovery to Hyper-V server
  - File Level Recovery
  - Disk Management Mount
  - Download

• In addition, users can also opt for following recovery options:
  - Bare-metal Recovery
  - Vembu Virtual Drive (NFS Share)

Vembu OffsiteDR User Guide

Quick VM Recovery

Quick VM recovery option allow user to quick access backup images as ready state VMs. (i.e) Minimal downtime and business continuity secured by making VMs instantly available. Quick VM recovery gives 2 choices of instant boot software to users:

- VMware (Available in both Windows and Linux servers as an alternate software for instant boot)
- Hyper-V (Default chosen software for Windows and available only on Windows servers)
- KVM (Default chosen software for Linux and available only on Linux servers)

Vembu OffsiteDR User Guide

Quick VM recovery - VMware

Login to OffsiteDR server installed in a Windows/Linux environment and go with 'Quick VM Recovery' among recovery options.

• Proceeding with Quick VM recovery option will let you select version for Instant Boot.
- Once done choosing required timestamp, proceed to select the virtual machine to boot.
- From the list of VM(s) select the VM to instant boot and proceed to configure in which VMware server to boot.

- User can choose VMware as software for instant boot (In both Windows and Linux servers) and need to enter the necessary details to instant boot in VMware environment.
- In order to proceed with instant boot via ESXi/vCenter server, user have to choose: target VMware server and target datastore. User will also be requested to provide a VM name(which by default takes name of VM to be restored).
- User can also specify whether the VM should be powered ON automatically.
- Once done configuring VMware server details, proceed to review configuration.

Review Restore Configurations

- Selected restore type: Quick VM Recovery
- Selected restore version: Fri 21 Jul 2017 21:00:06
- Selected VM Machine(s): F-2
- Booting Software: VMware
- Target VMware Server: 192.168.102.51
- Target datastore: dataset1 (3)
- Target VM Name: F-2

- Once done reviewing, click Next to proceed with Instant Booting the VM.

- VM will get automatically created in VMware server VMs list.

Note: Once done with requirement, shutdown and turn off VM before unmounting backup data. This will resume backup job, so that increnental runs as per schedule.

Vembu OffsiteDR User Guide

Hyper-V

Login to Vembu OffsiteDR server installed in a Windows environment and go with 'Quick VM Recovery' among recovery options.

- Proceeding with Quick VM recovery option will let you select version for Instant Boot.
Once done choosing required timestamp, proceed to select the virtual machine to boot. From the list of VM(s) select the VM to instant boot and proceed to allocate RAM for Instant boot.

The software used to instant boot is Hyper-V (For Windows servers) and the default RAM size chosen is 2 GB which can be modified based on user requirement.

You can also configure network details by enabling 'Configure Network Details' option. You will required to provide the IP address, Subnet mask, default gateway and DNS server details for the VM to be booted.
- Select virtual switch from the list of available virtual switches.

- Once done configuring restore options, proceed to review configuration.

- Once done reviewing, click Next to proceed with Instant Booting the VM.
VM will get automatically created in Hyper-V VMs list.

**Note:** Once done with requirement, shutdown and turn off VM before unmounting backup data. This will resume backup job, so that incrementals will run as per schedule.

**Vembu OffsiteDR User Guide**

**KVM**

Login to Vembu OffsiteDR server installed in a Linux environment and go with 'Quick VM Recovery' among recovery options.

- Proceeding with Quick VM recovery option will let you select version for Instant Boot.

- Once done choosing required timestamp, proceed to select the virtual machine to boot.
- From the list of VM(s) select the VM to instant boot and proceed to allocate RAM for Instant boot.
The software used to instant boot is KVM (For Linux servers) and the default RAM size chosen is 2 GB which can be modified based on user requirement.

Once done reviewing, click Next to proceed with Instant Booting the VM.
• VM will get automatically created in KVM VMs list.

Note: Once done with requirement, shutdown and turn off VM before unmounting backup data. This will resume backup job, so that incrementals will run as per schedule.

Vembu OffsiteDR User Guide

Full VM Recovery to Hyper-V Server

• Proceeding with 'Live recovery to Hyper-V server' option will let you 'Select restore version', where you have Hyper-V backup with several timestamps.
• Choose your required timestamp version and proceed to select VM.

If you have backed up more than one VM in a backup and need to restore a particular VM/set of VMs, among all other VMs - Select your desired VM(s) and hit proceed to provide target Host details.
- Provide the target host details for VM recovery - Target Host's UNC path and Host user credentials.
- User will also be required to choose RAM size for the VM to created (By default, set to 2 GB).
- User will also be allowed to choose the image format to be downloaded as - VHD or VHDX.

- Once done configuring restore options, proceed to review configuration.

- Once done reviewing, click Next to proceed with Live Recovery to Hyper-V Server.
Vembu OffsiteDR User Guide

File Level Recovery

This option lets you restore individual files and folders present in the VMs that are backed up using Vembu BDR Server.

- Select the timestamp from which you want to restore data and proceed to select files/folders.

- A tree listing backed up VMs along with its disks which on further expansion will list respective files and folders in it. Select specific files and folders you want to restore.

- Once done selecting files/folders, proceed to choose restore location.

**Note:** File level recovery is supported only for windows virtual machines with NTFS File systems
- Provide restore location to which the files will be restored. Restoring location can either be a local drive or a network shared drive.
- You can download the restore copy as zip file by selecting “enable restored files for Zip process” option.
  - In addition, you can also enable encryption for the zip file by selecting “Encrypt zip file” option and by providing password for the zip file.

- Once done configuring restore options, proceed to review configuration.
Once done reviewing, Click Restore Now to proceed with File Level Recovery.

**Disk Management Mount**

This option lets you instantly attach backup data to disk management as a VHD/VHDX file and proceed with restore process.

- The VHD/VHDX file is created by virtual mounting backup data.
- Users can access backup data via disks attached on disk management.
- Once done with requirement, unmount backup data. This will resume backup job, so that increnentals will run as per schedule.

- Select the timestamp version for mount and proceed.

- Select the disk file to be mounted in disk management for restore.
Note: You cannot mount more than one disk simultaneously. Choosing multiple disks for mount process will pop-out an Error message "User allowed to restore only one disk at a time. If you choose multiple disks, previous selection should be ignored."

- Once done configuring restore options, proceed to review configuration.

- Once done reviewing, click 'Restore Now' to proceed with recovery.
## Download VM Files

- Download option allows users to download backup data as an offsite copy of their preferred file format.
- Proceeding with restore, lets users go with the regular routine of selecting time-stamp version they want to restore and click proceed.

<table>
<thead>
<tr>
<th>Choose the restore version</th>
<th>Choose the restore data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed 19 Jul 2017 16:45:28</td>
<td>Search</td>
</tr>
<tr>
<td>Wed 19 Jul 2017 15:40:16+1</td>
<td>NODE1</td>
</tr>
<tr>
<td>Wed 19 Jul 2017 15:23:23+1</td>
<td>test10</td>
</tr>
</tbody>
</table>

- Now select VM(s) to restore and proceed to select restore location.

<table>
<thead>
<tr>
<th>Choose the restore version</th>
<th>Choose the restore data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed 19 Jul 2017 16:45:28</td>
<td>Search</td>
</tr>
<tr>
<td>Wed 19 Jul 2017 15:40:16+1</td>
<td>NODE1</td>
</tr>
<tr>
<td>Wed 19 Jul 2017 15:23:23+1</td>
<td>test10</td>
</tr>
</tbody>
</table>

- Restoring location can either be a local drive on backup server or if users have managed to add a network shared drive, the restore can be directed to the network shared location.
- Users can download backup data in multiple file formats such as: VHD, VMDK, VHDX, Flat.VMDK and RAW.
Once done configuring restore options, proceed to review configuration.

Once done reviewing, click Next to proceed with Download.

Taking offsite copies in various format allow users to boot backup data across various
virtual and physical environments such as Oracle Box, KVM, Hyper-V, VMware vSphere, VMware player etc.,

- Also reconstruction of physical servers is also possible with this offline backup copies.

Vembu OffsiteDR User Guide

**Bare-metal Recovery**

Follow below steps to perform Physical Recovery for Image backups using Recovery CD:

- To do bare-metal recovery using Vembu Recovery CD first we need to download and install WAIK. Click on below link, to download WAIK:


- Once WAIK is installed, download Vembu Recovery CD: [Click Here to Download]
- You will have Vembu Recovery CD in both 32-bit and 64-bit zip formats, download accordingly based on requirement. Now unzip the downloaded file and run RecoverCDBuilder with administrator privileges. You will get a window opened as shown below.

![VembuBDR Recovery CD Builder](image)

**SERVICE PROVIDER LICENSE AGREEMENT**

Read and accept the License Agreement:

Before you use this software, please read the terms of this agreement ("Agreement") carefully. Indicate your acceptance of these terms by selecting the "Agree" button at the end of this Agreement and if you do not agree to all of the terms of this Agreement, select the "Decline" button at the end of this Agreement and do not proceed to use the Software.

*NOTWITHSTANDING ANYTHING CONTAINED IN THIS AGREEMENT, UNDER NO CIRCUMSTANCES SHALL THE SOFTWARE PROVIDER - M/s. Vembu Technologies Private Limited, a company incorporated in India and having its registered office at Office A, II floor, 203, Velachery Main Road, Velachery, Chennai - 600042, INDIA BE LIABLE TO YOU OR ANY OF YOUR CUSTOMERS FOR ANY SPECIAL, INDIRECT, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING BUT NOT LIMITED TO DAMAGES FOR LOSS OF PROFITS OR SAVINGS, BUSINESS INTERRUPTION, LOSS OF INFORMATION OR DATA, INCLUDING CUSTOMER DATA WHETHER IN CONTRACT, NEGLIGENCE, TORT OR OTHERWISE ARISING OUT OF YOUR USE OR INABILITY TO USE THE SOFTWARE OR THE BREACH OF THIS AGREEMENT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.*

- Read the service provider license agreement carefully and click agree. You will be proceeded to VembuBDR Recovery CD builder window as shown below.

**Note:** When you have RAID and additional drivers to be setup in the machine to be recovered, such drivers can be bundled with Vembu Recovery CD using ‘Additional Driver’ option.
- In this window, WAiK location will be auto-filled, target location is the location where you want to store ISO. Now click Build to start creating ISO file. You can also monitor the progress of ISO creation.

- Once done, the ISO file will be available in the Target location you have entered.
- Insert a blank CD in CD/DVD drive and burn the created ISO file in CD by right-clicking over ISO file and choosing the option 'Burn Disk Image'. Windows Disk Image Burner will open, choose the CD/DVD drive and click burn to start burning process.
• You can also monitor the progress of burning process.

• Once the burn process completes, CD will be auto ejected. Reinsert CD and reboot machine to BIOS settings. Change the boot priority and set CD/DVD as primary boot device and click Save and Exit. VembuBDR recovery console will be opened as shown below. Click Next to continue.
Read the Software License Agreement carefully, click Accept and proceed with Next.
You will have option to select a task from the below list:

- Recover entire disk or partition
- Set BCD boot configuration
- VMware driver installation

Since we have to do physical recovery, we'll proceed with 'Recover entire disk or partition' option and click Next.
You will be directed to recovery page, where you will be required to provide details for following options:
- Browse and select the file which you need to recover.
- Browse and select the backup configuration file.
- Select the disk/drive you wish to restore from the following list.
Once done choosing respective requirements, click Next to proceed.
In next window, you will be required to select target disk/drive to which recovery will be performed. Once done selecting the target, click Next.

**Note:** The selected disk/drive will be formatted and only recovered data will be available. So make sure you don’t have any important data on target disk/drive.
Proceeding will initiate the recovery process and once it's done. You can find your recovered data in target disk/drive selected.

Vembu Virtual Drive

Vembu Virtual Drive is an exclusive feature of VembuOffsiteDR server, that allows user to instant access backup data. With the help of VembuHIVE file system, Vembu Virtual Drive virtual mount backup data and allow instant access for users.

Vembu Virtual Drive will make following file format types available for any image based backups mounted in it:
- VHD
- VMDK
- VHDX
- VMDK-Flat
- RAW image files

These files can be used based on user requirements. For example, a VHD file can be mounted in Hyper-V or a VMDK file can be mounted in a ESXi server or a RAW image file can be mounted in KVM to create a virtual machine. VHD file can also be mounted in disk management to
manage vembu virtual drive (nfs share)

- go to management → server management → manage virtual drive

this page lists all image backups stored in backup server and user can virtual mount any backup data he wish to instant access.

- to virtual mount a backup data, user have to click 'mount' option alongside specific backup job to be accessed.
- user can now have access to backup data by viewing vembu virtual drive displayed in my computer.
- once done with requirement, user can unmount data by clicking on unmount option.

enable nfs service on vembu virtual drive

- vembu virtual drive can be shared within a network area by enabling nfs service on vembu virtual drive.
- nfs service for vembu virtual drive is available on both linux and windows servers.

note: for enabling nfs feature in linux servers, it is necessary to have nfs kernel server installed in backup server machine. you can install nfs service by using "apt-get install nfs-kernel-server" command. you need to run vembuoffsitedr with root/administrator privileges in order to save nfs settings.

enable nfs service on linux screenshot
Enable NFS Service on Windows Screenshot

NFS share service allows user to add VembuVirtualDrive as a NFS datastore in ESXi servers.

**Note:** Before enabling NFS service on Vembu Virtual Drive, please make sure Microsoft or any other third party NFS services is disabled to ensure uninterrupted service.

**Vembu OffsiteDR User Guide**

**Restoring Physical Image Backups**

- Go to Recovery tab.
- Backups configured from various client machines to the server, will be listed for recovery, along with below listed options:
  - Restore
  - Virtual mount
  - Proceed to Persistent Instant Boot version delete
  - Delete
  - Replication actions
  - Status
Virtual mount

- This option lets you instant mount backup data virtually where users can access backup in different file formats such as: IMG, VHD, VHDX, VMDK.

Mount Backup - MBR_Boot_Basic01

Are you sure you want to Mount the backup data in the Virtual drive?

Unmount Backup - MBR_Boot_Basic01

Backup image might be in use by recovery options such as Quick VM recovery or Disk Management Mount. Do you still want to unmount the backup from VirtualDrive?

Proceed to Persistent Instant Boot version delete

- During each instant boot and instant file recovery session, a change in backup data will take place which then is saved as persistent Instant boot data.
- Persistent data can be restored using restore options, if needed.
- Persistent data will be listed with a (+p) sign alongside timestamps of backup versions.
- Such persistent data can also be deleted if not required, using the 'Proceed to Persistent Instant Boot version delete' option.
- The option let user choose the timestamp of persistent data to be deleted.
- User will also be required to confirm deletion by selecting the checkbox 'Are you sure you
want to delete the selected version related persistent boot data from the repository location permanently? to proceed with deletion process.

Restore

Proceeding with restore option will list below restore options to choose from:

- Quick VM Recovery
- Disk/Partition Recovery
- File Level Recovery
- Disk Management Mount
- Download

In addition, users can also opt for following recovery options:

- Bare-metal Recovery
- Vembu Virtual Drive (NFS Share)

Quick VM Recovery

Quick VM recovery option allow user to quick access backup images as ready state VMs. (i.e) Minimal downtime and business continuity secured by making VMs instantly available. Quick
VM recovery gives 2 choices of instant boot software to users:

- **VMware** (Available in both Windows and Linux servers as an alternate software for instant boot)
- **Hyper-V** (Default chosen software for Windows and available only on Windows servers)
- **KVM** (Default chosen software for Linux and available only on Linux servers)

### Quick VM recovery - VMware

Login to OffsiteDR server installed in a Windows/Linux environment and go with 'Quick VM Recovery' among recovery options.

- Proceeding with Quick VM recovery option will let you select version for Instant Boot.

Once done choosing required timestamp, proceed to select the virtual machine to boot.

- From the list of VM(s) select the VM to instant boot and proceed to configure in which VMware server to boot.

User can choose VMware as software for instant boot (In both Windows and Linux servers) and need to enter the necessary details to instant boot in VMware environment.

In order to proceed with instant boot via ESXi/vCenter server, user have to choose: target VMware server and target datastore. User will also be requested to provide a VM
name (which by default takes name of VM to be restored).

- User can also specify whether the VM should be powered ON automatically.

- Once done configuring VMware server details, proceed to review configuration.

- Once done reviewing, click Next to proceed with Instant Booting the VM.

- VM will get automatically created in VMware server VMs list.
**Note:** Once done with requirement, shutdown and turn off VM before unmounting backup data. This will resume backup job, so that incrementals will run as per schedule.

**Vembu OffsiteDR User Guide**

**Hyper-V**

Login to Vembu OffsiteDR server installed in a Windows environment and go with 'Quick VM Recovery' among recovery options.

- Proceeding with Quick VM recovery option will let you select version for Instant boot.

- Once done choosing required timestamp, select the Disks of backed up machine to boot.
- From the list of disks backed up, select the required disks along with OS drive to instant boot and proceed to allocate RAM for Instant boot.

- The software used to instant boot is Hyper-V (For Windows servers) and the default RAM size chosen is 2 GB which can be modified based on user requirement.
Once done allocating RAM size, proceed to review configuration.

Once done reviewing, click Next to proceed with Instant Booting the VM.

VM will get automatically created in Hyper-V VMs list.
**Note:** Once done with requirement, shutdown and turn off VM before unmounting backup data. This will resume backup job, so that incrementals will run as per schedule.

**Vembu OffsiteDR User Guide**

**KVM**

Login to Vembu OffsiteDR server installed in a Linux environment and go with 'Quick VM Recovery' among recovery options.

- Proceeding with Quick VM recovery option will let you select version for Instant boot.

- Once done choosing required timestamp, proceed to select the Disks of backed up machine to boot.
- From the list of disks backed up, select the required disks along with OS drive to instant boot and proceed to allocate RAM for Instant boot.

- The software used to instant boot is KVM (For Linux servers) and the default RAM size chosen is 2 GB which can be modified based on user requirement.
Once done allocating RAM size, proceed to review configuration.

Once done reviewing, click Next to proceed with Instant Booting the VM.
• VM will get automatically created in KVM VMs list.

**Note:** Once done with requirement, shutdown and turn off VM before unmounting backup data. This will resume backup job, so that incrementals will run as per schedule.

**Vembu OffsiteDR User Guide**

**Disk/Partition Recovery**

- This option lets you restore backedup machines at disk/partition level in servers.
- Select the timestamp version for file level recovery and proceed.

- Select the backup data to be restored based on requirement: at disk level or at partition level.

- If backup data is selected at disk level, then restoring options will let you choose from list of disks available in server machine.
If backup data is selected at partition level, then restoring options will let you choose from list of partitions available in server machine.

Once done choosing, proceed to review your selections.

Once done reviewing, click Next to proceed with the restore.
File Level Recovery

This option lets you restore individual files and folders present in the VMs that are backed up using Vembu BDR Server.

- Select the timestamp from which you want to restore data and proceed to select files/folders.

- A tree listing backed up VMs along with its disks which on further expansion will list respective files and folders in it. Select specific files and folders you want to restore.

- Once done selecting files/folders, proceed to choose restore location.

Note: File level recovery is supported only for windows virtual machines with NTFS File systems.
• Provide restore location to which the files will be restored. Restoring location can either be a local drive or a network shared drive.
• You can download the restore copy as zip file by selecting “enable restored files for Zip process” option.
  o In addition, you can also enable encryption for the zip file by selecting “Encrypt zip file” option and by providing password for the zip file.

• Once done configuring restore options, proceed to review configuration.

• Once done reviewing, Click Restore Now to proceed with File Level Recovery.
Vembu OffsiteDR User Guide

Disk Management Mount

This option lets you instantly attach backup data to disk management as a VHD/VHDX file and proceed with restore process.

- The VHD/VHDX file is created by virtual mounting backup data.
- Users can access backup data via disks attached on disk management.
- Once done with requirement, unmount backup data. This will resume backup job, so that incrementals will run as per schedule.
- Select the timestamp version for mount and proceed.

- Select the disk file to be mounted in disk management for restore.
Note: You cannot mount more than one disk simultaneously. Choosing multiple disks for mount process will pop-out an Error message “User allowed to restore only one disk at a time. If you choose multiple disks, previous selection should be ignored.”

- Once done configuring restore options, proceed to review configuration.

- Once done reviewing, click 'Restore Now' to proceed with recovery.
Download VM Files

- Download option allows users to download backup data as an offsite copy of their preferred file format.
- Proceeding with restore, lets users go with the regular routine of selecting time-stamp version they want to restore and click proceed.

- Now select disk(s) to restore and proceed to select restore location.
Restoring location can either be a local drive on backup server or if users have managed to add a network shared drive, the restore can be directed to the network shared location.

Users can download backup data in multiple file formats such as: VHD, VMDK, VHDX, Flat.VMDK and RAW.

Once done choosing the Restore location and the required Virtual Disk Format, proceed to review the detail.

Once done reviewing, click Next to proceed with the restore.
Taking offsite copies in various format allow users to boot backup data across various virtual and physical environments such as Oracle Box, KVM, Hyper-V, VMware vSphere, VMware player etc.,

Reconstruction of physical servers is also possible with this offline backup copies.

**Vembu OffsiteDR User Guide**

**Bare-metal Recovery**

Follow below steps to perform Physical Recovery for Image backups using Recovery CD:

- To do bare-metal recovery using Vembu Recovery CD first we need to download and install WAIK. Click on below link, to download WAIK:


- Once WAIK is installed, download Vembu Recovery CD: Click Here to Download

- You will have Vembu Recovery CD in both 32-bit and 64-bit zip formats, download accordingly based on requirement. Now unzip the downloaded file and run RecoverCDBuilder with administrator privileges. You will get a window opened as shown below.
- Read the service provider license agreement carefully and click agree. You will be proceeded to VembuBDR Recovery CD builder window as shown below.

**Note:** When you have RAID and additional drivers to be setup in the machine to be recovered, such drivers can be bundled with Vembu Recovery CD using ‘Additional Driver’ option.

- In this window, WAIK location will be auto-filled, target location is the location where you want to store ISO. Now click Build to start creating ISO file. You can also monitor the
progress of ISO creation.

- Once done, the ISO file will be available in the Target location you have entered.

- Insert a blank CD in CD/DVD drive and burn the created ISO file in CD by right-clicking over ISO file and choosing the option 'Burn Disk Image'. Windows Disk Image Burner will open, choose the CD/DVD drive and click burn to start burning process.
You can also monitor the progress of burning process.

Once the burn process completes, CD will be auto ejected. Reinsert CD and reboot machine to BIOS settings. Change the boot priority and set CD/DVD as primary boot device and click Save and Exit. VembuBDR recovery console will be opened as shown below. Click Next to continue.
Read the Software License Agreement carefully, click Accept and proceed with Next.
You will have the option to select a task from the below list:
- Recover entire disk or partition
- Set BCD boot configuration
- VMware driver installation
Since we have to do physical recovery, we'll proceed with 'Recover entire disk or partition' option and click Next.
You will be directed to recovery page, where you will be required to provide details for following options:

- Browse and select the file which you need to recover.
- Browse and select the backup configuration file.
- Select the disk/drive you wish to restore from the following list.

Once done choosing respective requirements, click Next to proceed.
In next window, you will be required to select target disk/drive to which recovery will be performed. Once done selecting the target, click Next.

**Note:** The selected disk/drive will be formatted and only recovered data will be available. So make sure you don't have any important data on target disk/drive.
Proceeding will initiate the recovery process and once it's done. You can find your recovered data in target disk/drive selected.

**Vembu Virtual Drive**

Vembu Virtual Drive is an exclusive feature of Vembu OffsiteDR server, that allows user to instant access backup data. With the help of VembuHIVE file system, Vembu Virtual Drive virtual mount backup data and allow instant access for users.

Vembu Virtual Drive will make following file format types available for any image based backups mounted in it:

- VHD
- VMDK
- VHDX
- Flat.VMDK
- RAW image files

These files can be used based on user requirements. For example, a VHD file can be mounted in Hyper-V or a VMDK file can be mounted in a ESXi server or a RAW image file can be mounted in KVM to create a virtual machine. VHD file can also be mounted in disk
management to access file level backup data.

**Manage Vembu Virtual Drive (NFS Share)**

- Go to Management → Server Management → Manage Virtual Drive

This page lists all image backups stored in backup server and user can virtual mount any backup data he wish to instant access.

![Vembu Virtual Drive - NFS Share Settings](image)

**List of backups available for virtual drive mount/unmount**

<table>
<thead>
<tr>
<th>Backup Name</th>
<th>Client Name</th>
<th>Plugin Type</th>
<th>Virtual Mount Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBR_AddFull01</td>
<td>Test-WIN2008R</td>
<td></td>
<td>Unmount</td>
</tr>
<tr>
<td>HyperV_Basic01</td>
<td>127.0.0.1</td>
<td></td>
<td>Mount</td>
</tr>
<tr>
<td>HyperV_SplChar_AddFull05</td>
<td>127.0.0.1</td>
<td></td>
<td>Mount</td>
</tr>
<tr>
<td>HyperV_Linux_AddFull01</td>
<td>127.0.0.1</td>
<td></td>
<td>Mount</td>
</tr>
<tr>
<td>HyperV_GFS</td>
<td>127.0.0.1</td>
<td></td>
<td>Mount</td>
</tr>
<tr>
<td>ImgClient_NoRet</td>
<td>ImgBkp_380_5GRelease_103_195</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- To virtual mount a backup data, user have to click 'Mount' option alongside specific backup job to be accessed.
- User can now have access to backup data by viewing VembuVirtualDrive displayed in My Computer.
- Once done with requirement, user can unmount data by clicking on Unmount option.

**Enable NFS Service on Vembu Virtual Drive**

- Vembu Virtual Drive can be shared within a network area by enabling NFS service on Vembu Virtual Drive.
- NFS service for Vembu Virtual Drive is available on both Linux and Windows servers.

**Note:** For enabling NFS feature in Linux servers, it is necessary to have NFS kernel server installed in Backup Server machine. You can install NFS Service by using "`apt-get install nfs-kernel-server`" command. You need to run VembuOffsiteDR with root/administrator privileges in order to save NFS settings.

**Enable NFS Service on Linux Screenshot**
Enable NFS Service on Windows Screenshot

Enable NFS service on Vembu Virtual Drive

List of backups available for virtual drive mount/unmount

<table>
<thead>
<tr>
<th>Backup Name</th>
<th>Client Name</th>
<th>Plugin Type</th>
<th>Virtual Mount Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>DiskImage_Test</td>
<td>localhost</td>
<td></td>
<td>Mount</td>
</tr>
</tbody>
</table>

You can now attach and access Vembu VirtualDrive in ESXi Server as a NFS datastore using the below steps.
1. Provide DNS Name/IP address of Backup Server in "Server" field
2. Provide "VembuNFS" as Share in "Folder" field
3. Then provide a name for that datastore
   e.g. 192.168.10.10/VembuNFS

Now ESXi hosts get direct access to the backed up image files (flat-VMDK) hence you can recover the backed up virtual machines.

- NFS share service allows user to add VembuVirtualDrive as a NFS datastore in ESXi servers.

**Note:** Before enabling NFS service on Vembu Virtual Drive, please make sure Microsoft or any other third party NFS services is disabled to ensure uninterrupted service.

Vembu OffsiteDR User Guide

Restoring Application Backups

- File Restore
- MS Exchange Server Restore
- MS Exchange Mailbox Restore
- MS SQL Server Restore
- MySQL Restore
- MS Outlook Restore
- MS SharePoint Restore

Vembu OffsiteDR User Guide

File Restore - OffsiteDR

Step 1- Get started
• Click restore option alongside the backup you want to restore.

Step 2 - Select Version

A tree listing various backup timestamps with the full backup as its parent node will be displayed. This list generated is based on incremental and retention configured. If additional full backup is configured, then there will be more than one parent node list based on the configuration.

• Select the timestamp from which you want to restore data and proceed to select files/folders.

Step 3 - Select Files/Folders:

A tree list with backed up files and folders based on chosen time-stamp will be displayed.

You can select files/folders in 3 ways. You can either:
• Select the root folder to proceed restoring entire backed up data for the chosen time-
Select specific files and folders alone based on requirement and proceed with restore.

Using filter option, you can filter files by file types with extensions (Ex: *.doc). Filtering more than one file type can be done by separating them with a comma (Ex: *.doc, *.pdf and so on).

Step 4- Select Restore Settings

- Restore deleted files - This gives 3 options to choose from:
  - Skip deleted files (Restore backup data skipping deleted files)
  - Deleted files only (Restore deleted files alone)
  - Include deleted files (Restore backup data along with deleted files)

Restore to (This gives two optional location to choose from):

- Original location - This option is available if backup is restored to same machine, where data is restored to its original folder location.
  
  **Note:** If source file is already present in restore location, then restored file will be saved with an extension ‘*.sg’. (This can be changed using “Advanced Options”)
- Alternate location - This option allow user to restore backup to a different location, where backup data is restored in its original folder structure.
Step 5- Run Restore:

- Once done configuring restore options, proceed to review configuration.

Once done reviewing, click Next to proceed with File Restore.

MS Exchange Server Restore:

Step 1- Get started

- Click restore option alongside the 'MS Exchange Server' backup that you want to restore.

Step 2- Select Version

A tree listing various backup timestamps with the full backup as its parent node will be displayed. This list generated is based on incremental and retention configured. If additional full backup is configured, then there will be more than one parent node list based on the configuration.
Select the time-stamp from which you want to restore data and proceed to select files/folders.

Step 3- Select Files/Folders

A tree list with backed up files and folders based on chosen time-stamp will be displayed. You can select files/folders in 3 ways. You can either:

- Select the root folder to proceed restoring entire backed up data for the chosen time-stamp.
- Select specific files and folders alone based on requirement and proceed with restore.
- Using filter option, you can filter files by file types with extensions (Ex: *.doc). Filtering more than one file type can be done by separating them with a comma (Ex: *.doc, *.pdf and so on).

Step 4- Select Restore Settings

- **Restore deleted files** - This gives 3 options to choose from:
  - Skip deleted files (Restore backup data skipping deleted files)
  - Deleted files only (Restore deleted files alone)
  - Include deleted files (Restore backup data along with deleted files)
Compressed Restore Files

The restored data can also be downloaded as a Zip File by enabling the ‘Enable Restored Files for download’. As an additional security measure to the restored data, the Zip File can also be encrypted through the ‘Encrypt Zip File’ option.

- Select the restore location where backup data has to be restored.

Step 5- Run Restore

- Once done configuring restore options, proceed to review configuration.

- Once done reviewing, click Next to proceed with File Restore.
Microsoft Exchange Mailbox Restore - OffsiteDR

Step 1- Get started
- Click restore option alongside the MS Exchange Mailbox backup you want to restore.

Step 2- Select Version

A tree listing various backup timestamps with the full backup as its parent node will be displayed. This list generated is based on incremental and retention configured. If additional full backup is configured, then there will be more than one parent node list based on the configuration.

- Select the time-stamp from which you want to restore data and proceed to select files/folders.

Step 3- Select Files/Folders

A tree list with backed up files and folders based on chosen time-stamp will be displayed. You can select files/folders in 3 ways. You can either:
• Select the root folder to proceed restoring entire backed up data for the chosen timestamp.
• Select specific files and folders alone based on requirement and proceed with restore.
• Using filter option, you can filter files by file types with extensions (Ex: *.doc). Filtering more than one file type can be done by separating them with a comma (Ex: *.doc, *.pdf and so on).

Step 4- Select Restore Settings
• **Restore deleted files** - This gives 3 options to choose from:
  • Skip deleted files (Restore backup data skipping deleted files)
  • Deleted files only (Restore deleted files alone)
  • Include deleted files (Restore backup data along with deleted files)

Compressed Restore Files
The restored data can also be downloaded as a Zip File by enabling the ‘Enable Restored Files for download’. As an additional security measure to the restored data, the Zip File can also be encrypted through the ‘Encrypt Zip File’ option.
• Select the restore location where backup data has to be restored.
Step 5- Run Restore

- Once done configuring restore options, proceed to review configuration.

Once done reviewing, click Next to proceed with Restore.

MS SQL Server Restore

Step 1- Get started

- Click restore option MS SQL backup you want to restore.
Step 2- Select Version
A tree listing various backup timestamps with the full backup as its parent node will be displayed. This list generated is based on incremental and retention configured. If additional full backup is configured, then there will be more than one parent node list based on the configuration.

- Select the time-stamp from which you want to restore data and proceed to select files/folders.

Step 3- Select Files/Folders
A tree list with backed up files and folders based on chosen time-stamp will be displayed. You can select files/folders in 3 ways. You can either:

- Select the root folder to proceed restoring entire backed up data for the chosen time-stamp.
- Select specific files and folders alone based on requirement and proceed with restore.
- Using filter option, you can filter files by file types with extensions (Ex: *.doc). Filtering more than one file type can be done by separating them with a comma (Ex: *.doc, *.pdf and so on).
Compressed Restore Files
The restored data can also be downloaded as a Zip File by enabling the 'Enable Restored Files for download'. As an additional security measure to the restored data, the Zip File can also be encrypted through the 'Encrypt Zip File' option.

- Select the restore location where backup data has to be restored.

Step 5 - Run Restore
- Once done configuring restore options, proceed to review configuration.

- Once done reviewing, click Next to proceed with Restore.
Step 1 - Get started

- Click restore option for MySQL backup you want to restore.

Step 2 - Select Version

A tree listing various backup timestamps with the full backup as its parent node will be displayed. This list generated is based on incremental and retention configured. If additional full backup is configured, then there will be more than one parent node list based on the configuration.

- Select the time-stamp from which you want to restore data and proceed to select files/folders.
Step 3- Select Files/Folders

A tree list with backed up files and folders based on chosen time-stamp will be displayed. You can select files/folders in 3 ways. You can either:

- Select the root folder to proceed restoring the entire backed up data for the chosen time-stamp.
- Select specific files and folders alone based on requirement and proceed with restore.
- Using filter option, you can filter files by file types with extensions (Ex: *.doc). Filtering more than one file type can be done by separating them with a comma (Ex: *.doc, *.pdf and so on).

Step 4- Select Restore Settings

- **Restore deleted files** - This gives 3 options to choose from:
  - Skip deleted files (Restore backup data skipping deleted files)
  - Deleted files only (Restore deleted files alone)
  - Include deleted files (Restore backup data along with deleted files)
The restored data can also be downloaded as a Zip File by enabling the ‘Enable Restored Files for download’. As an additional security measure to the restored data, the Zip File can also be encrypted through the ‘Encrypt Zip File’ option.

- Select the restore location where backup data has to be restored.

**Step 5 - Run Restore**

- Once done configuring restore options, proceed to review configuration.

- Once done reviewing, click Next to proceed with Restore.

---

**MS Outlook Restore- OffsiteDR**

**Step 1 - Get started**

- Click restore option for MS Outlook backup you want to restore.
Step 2- Select Version
A tree listing various backup timestamps with the full backup as its parent node will be displayed. This list generated is based on incremental and retention configured. If additional full backup is configured, then there will be more than one parent node list based on the configuration.

- Select the time-stamp from which you want to restore data and proceed to select files/folders.

Step 3- Select Files/Folders
A tree list with backed up files and folders based on chosen time-stamp will be displayed. You can select files/folders in 3 ways. You can either:

- Select the root folder to proceed restoring entire backed up data for the chosen time-stamp.
- Select specific files and folders alone based on requirement and proceed with restore.
- Using filter option, you can filter files by file types with extensions (Ex: *.doc). Filtering more than one file type can be done by separating them with a comma (Ex: *.doc, *.pdf and so on).

Step 4- Select Restore Settings

- **Restore deleted files**- This gives 3 options to choose from:
  - Skip deleted files (Restore backup data skipping deleted files)
  - Deleted files only (Restore deleted files alone)
  - Include deleted files (Restore backup data along with deleted files)
Compressed Restore Files
The restored data can also be downloaded as a Zip File by enabling the ‘Enable Restored Files for download’. As an additional security measure to the restored data, the Zip File can also be encrypted through the ‘Encrypt Zip File’ option.
- Select the restore location where backup data has to be restored.

Step 5 - Run Restore
- Once done configuring restore options, proceed to review configuration.

- Once done reviewing, click Next to proceed with Restore.
MS Sharepoint Restore - OffsiteDR

Step 1 - Get started

- Click restore option MS Sharepoint backup you need to restore.

Step 2 - Select Version

A tree listing various backup timestamps with the full backup as its parent node will be displayed. This list generated is based on incremental and retention configured. If additional full backup is configured, then there will be more than one parent node list based on the configuration.

- Select the time-stamp from which you want to restore data and proceed to select files/folders.

Step 3 - Select Files/Folders
A tree list with backed up files and folders based on chosen time-stamp will be displayed. You can select files/folders in 3 ways. You can either:

- Select the root folder to proceed restoring entire backed up data for the chosen time-stamp.
- Select specific files and folders alone based on requirement and proceed with restore.
- Using filter option, you can filter files by file types with extensions (Ex: *.doc). Filtering more than one file type can be done by separating them with a comma (Ex: *.doc, *.pdf and so on).

Step 4- Select Restore Settings

- **Restore deleted files**- This gives 3 options to choose from:
- **Skip deleted files** (Restore backup data skipping deleted files)
- **Deleted files only** (Restore deleted files alone)
- **Include deleted files** (Restore backup data along with deleted files)

Compressed Restore Files

The restored data can also be downloaded as a Zip File by enabling the 'Enable Restored Files for download'. As an additional security measure to the restored data, the Zip File can also be encrypted through the 'Encrypt Zip File' option.
• Select the restore location where backup data has to be restored.

**Step 5 - Run Restore**
• Once done configuring restore options, proceed to review configuration.

<table>
<thead>
<tr>
<th>Select Version and Files to Restore</th>
<th>Select Restore Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Review Configurations</strong></td>
<td></td>
</tr>
<tr>
<td>Restore Type: MS SharePoint - share</td>
<td></td>
</tr>
<tr>
<td>Data will be restored to Location [C:/] on Same Machine</td>
<td></td>
</tr>
<tr>
<td>Restore data excludes deleted files</td>
<td></td>
</tr>
</tbody>
</table>

• Once done reviewing, click Next to proceed with Restore from OffsiteDR Server

**Vembu OffsiteDR User Guide**

**Group Management**

This feature is designed specifically for service providers who can group their customers under individual groups for easy management. They can also provide web UI access for customers to manage their backup jobs.

• Group management option will be listed under 'Management' tab which by default will be
set disabled.

Note: By default, group management feature will be disabled in both Vembu BDR and Vembu OffsiteDR. To enable this feature service providers are requested to register Vembu BDR/OffsiteDR server to Vembu Portal account.

Steps to Enable Group Management:
- Service providers should register Vembu BDR/OffsiteDR server to Vembu Portal account.
- Once done registering, login to portal.vembu.com and click Server Info tab.
- You will see the list of servers managed under your portal account with the option to enable group management (SP feature) if disabled.

- Click the wrench icon to enable SP feature.
- Once enabled run license check from Vembu BDR/OffsiteDR server to fetch SP feature status.
- Now logout and login to server web console. You will see 'Group Management' option listed under 'Management' tab.
Create New Group

- To create a new group click 'Group Management' option under Management Tab.
- You will see a page as shown below, click on Add Group button to proceed with group creation.

Group Creation

- Enter a unique group name you can identify along with a associative Email ID and proceed with Next.

Create User Login

- Next page will let you create web access for the group created which can be shared with customers to be added under that particular group.
- The option let you choose a display name along with login password and allow you to set the level of access privilege to be provided. User name will be auto generated.
- Once done configuring, proceed with Next.
Group Mapping

- Group mapping option allow service providers to add their Vembu BDR backup servers to form a group. The user can club any number of servers to form the server level grouping.

Server Level Mapping

Note:
- Users can also proceed with empty group creation where entities can be added later using edit option.
- In OffsiteDR, server level grouping is available where multiple servers can be clubbed under a single group.

Settings:
- The next page allows you configure storage repository for the new group to be created.
- You can either proceed with the default pool chosen or choose from the list of already created pools.
You can also create a new storage pool using 'Add Storage Pool' option and assign it as storage repository.

- Refer Add Storage Pools page to learn more about storage Pools.
- Click Save and proceed with Next.

Review
- Review the group configurations provided and click save if no more modifications required.
Once added the group will be listed as shown below, along with the list of already created groups.

- Group Name: sdf
- Email: p@email.com
- Configured Storage Pool: Default_Rpo
- Mapped Entities: rb_bdr_30_159_1

**Group Pass Key:**
- A unique key is generated for every server level groups created in the Vembu OffsiteDR Server.
- This Group Pass key is mainly generated for authorization purpose and helps in mapping the backup servers to the specific group which is already created in the OffsiteDR server.
- Group pass key is an optional choice for the backup servers to be added in Vembu OffsiteDR Server.
Regenerate Group Passkey:
- The Pass key can be regenerated as per the requirement of the service providers.
- For the new backup servers that are to be added under the group, the regenerated Group Pass key must be provided.
- The old backup servers in the group will not get affected with the regenerated new pass key.

Vembu OffsiteDR User Guide

Server Settings
- Authorization
- Dashboard
- User Management
- Time Zone Settings
- Software Update Process

Vembu OffsiteDR User Guide

Authorization

Authorization feature generates an unique passkey for the offsite servers which allows only the authorized backup servers to get connected with Vembu OffsiteDR server using the registration key.

- Authorization option will be listed under 'Management → Settings → Authorization',

which by default will be set disabled.

- On enabling the feature, registration key will be generated which should be provided by the VembuBDR servers while adding OffsiteDR server (while setting up OffsiteDR as an option for offsite copy management), for authorization.

- Below is an example for adding OffsiteDR server to a VembuBDR server using registration key.
Add OffsiteDR Server

Type the IP address of your machine where Vembu Offsite DR Server is installed

192.168.102.137

Test Connection

Optional: Please enter the registration Key provided by your administrator to register this Backup Server under specific group.

Enter Registration Key

Close  Add Server

- Offsite server is added successfully with provided registration key to VembuBDR server.

Note: When 'Authorization' is disabled, backup servers do not require authorization key to add OffsiteDR server.

- You can also reset or regenerate Registration key using 'Reset Passkey' option. The new key will not affect the backup servers which are added with the old pass key and every new backup server to be added should provide the newly generated registration key to add OffsiteDR server.

Note: In case of having authorization enabled and group pass keys as well (Refer: Create New Group), user can use any one to add OffsiteDR server to setup offsite copy management where:
  - Group passkeys adds backup servers directly under a specific group created in OffsiteDR server.
  - Registration key adds backup server to a OffsiteDR server.

Vembu OffsiteDR User Guide

Dashboard

Dashboard helps users find detailed reports of backup jobs that are replicated from Vembu BDR backup server to Vembu OffsiteDR server. The Dashboard is split into three sections - Active Jobs, Recents Offsite copy and Storage Quota.
Active Jobs
Active jobs section will display the jobs that are currently active in Vembu OffsiteDR server. Recovery and Offsite Replication progress can be viewed. Active jobs session will provide the user with: Job name, Clientname, Status of the job session. Once the job is completed, the job will be removed from the active jobs list.

Recent OffsiteCopy
Recent OffsiteCopy maintains list of the recent jobs that are replicated to OffsiteDR. Once Offsite Replication Job is completed, it will be moved to recent offsitecopy section from the active jobs section.

Filter option is available to check the Jobs based on their status - All, Successful, Incomplete. Using the drop down list users can view the desired set of jobs.
**Storage Quota**

Storage quota allows users to view the list of storage volume that are added to OffsiteDR server and the used space in each volumes. This section makes it easy for the user to switch to new volumes and update/add any new storage volume to the OffsiteDR.

---

**Vembu OffsiteDR User Guide**

**User Management**

This feature allow users to create and manage multiple user profiles for different roles to access web-console.

- Go to ‘Management → Server Management → User Management’

**List of Users:**

- This page lists all users created with the following attributes detailed:
  - User name, Role, Accessed By, Access Privilege, Change Password and Delete User

---

**User Creation:**

- Click ‘Create User’.
A pop-up box will be displayed with following options:
- **User name** - Provide user name to be created.
- **Access privilege** - By default, this is selected as Admin.
- **Password** - Password for user login
- **Confirm Password** - Confirm password provided

Once done providing details, click Create User.

**Note:** Users can also delete a created user, but will be required to provide the appropriate user password assigned.

**Vembu OffsiteDR User Guide**

**Time Zone Settings**

This option lets user choose the time zone at which replicated backup jobs reports are to be maintained.

**Note:** By default, when a user logs in for the first time after a fresh client installation, the time zone settings will be asked which can then be changed via this option if required.

- Go to ‘Management → Settings → Time Zone Settings’

**Choose time Zone:**
- Choose your appropriate time zone, in the 'Select time zone' drop down box and change it.

**Vembu OffsiteDR User Guide**
Software Update Process

Software update in general are defined to Integrate newly added features and enhance existing features to an installed application. This process of upgrading Vembu OffsiteDR can be done manually.

Server Update:

- Upgradation of Vembu OffsiteDR is a manual process as of now, wherein users will be notified periodically via Emails to registered Email ID about the updates available. They can then be downloaded from Vembu downloads page.
- Downloaded server update can be installed on top of existing installation.
- Make sure there is no ongoing/active process (restore, delete or replication) before proceeding with the update process.
- Once upgrade process completes successfully, Vembu OffsiteDR service will be restarted and the backup schedules will resume as per schedule.
- Users can click on help icon and verify the build version to confirm successful updation of Vembu OffsiteDR server.

Vembu OffsiteDR User Guide

Reports

- Image Integrity Report
- VM Status Report
- Email Alert Configuration

Vembu OffsiteDR User Guide

Image Integrity Report

- Go to ‘Reports → Image Integrity Report’
- This page lists every image backups configured to Vembu OffsiteDR server along with the backup details such as: backup name, plugin, client name, host name, machine name, disk name and scheduled time(Most recent backup time).
- It also confirms if the backup data is mountable and provides boot image of most recent backup(This ensures that the backup is in readily-bootable state).

An example of boot image is given below:
Vembu OffsiteDR User Guide

VM Status Report

- Go to Recovery.
- This page lists all replicated jobs configured from backup server to the offsite server where you can see a report option alongside every replicated job. Click "Report" icon.
- In this report page you can view the entire set of reports generated for a particular replicated job.
  - Offsite report
  - Restore report
  - Merge report
  - Deleted backup report

- In the Backup report section click "more" option view the consolidated VM status report of the backup. Consolidated VM Status report includes: Hostname, VM Name, Incremental, Status, Size, Remarks.
Vembu OffsiteDR User Guide

Email Alert Configuration

This option let users set SMTP server and configure email address to which backup reports can be mailed periodically. Options to configure sending various reports to different email addresses is also available.

- Go to 'Management → Settings → Email Setting → Email Configuration'
- By default, Email Configuration will be disabled. Enable it.

Configure SMTP server:

- Provide SMTP server details and if required provide outgoing server port number.
- Also do provide authentication credentials, if SMTP server requires one.
- You also do have options to choose authentication type and SMTP secure protocol.
Once done providing SMTP server details, user can test its connectivity by sending a test mail and verify it’s working.

**Email reports:**
- Users can configure:
  - A single Email ID to receive all success/failure reports from server.
  - Or enable different Email IDs for each success/failure report generated (Server backup/restore/delete reports).

Click save to save email settings provided.

**Portal Registration**

User should create a Vembu portal account, in order to get backup server registered with Vembu portal, where a user can manage all his/her Vembu products and services.

**Creating a Vembu Portal Account**

Vembu portal is an all-in-one hub spot for managing your registered Vembu products and services where you can get started. To register in Vembu portal, follow the steps given below:
- Go to portal.vembu.com and click on Signup.
- You will be required to provide the following details in order to create your account:
  - Company Name
  - First Name and Last Name
  - Email ID
  - Contact Number
  - Country and State

- Once done providing the requested details click Sign up to register.
- A verification Email will be sent to the registered Email ID. Kindly check your Inbox (Spam folder, if not found in Inbox) for verification email and click on 'Verify my email address'. If the button doesn't work copy-paste the link given below the 'Verify' button in your browser.
You will be directed to a page with the registered email ID and you will be requested to create a password for your account. Once done providing password, click Activate.

Vembu portal account is now created successfully and you will be redirected to Vembu Portal login page. Login to Vembu portal account with the registered email id and password.
Server Registration
Once Vembu portal account is created:
- Login to Vembu OffsiteDR web console.
- Go to ‘Management → Server Management → Server Registration’

Steps to Register
- Click Register.
- Provide Vembu account credentials in the pop-up shown and register the trial.
- Once registered, a user can check server registration by running a license check to success.

Vembu OffsiteDR User Guide
Licensing
VMware Image Backup
- Vembu charges for VMware backup based on no. of CPU Sockets
- If a VMware Server is deployed on a machine which has two CPU-Sockets, you need to buy two “VMware Image Backup” licenses and backup unlimited VMs
- The licenses have to be renewed every year
- License cost includes unlimited product upgrade and 24/7 email & telephone support

Hyper-V Image Backup
- Vembu charges for Hyper-V backup based on no. of CPU Sockets
- If a Hyper-V Server is deployed on a machine which has two CPU-Sockets, you need to buy
two “Hyper-V Image Backup” licenses and backup unlimited VMs
- The licenses have to be renewed every year
- License cost includes unlimited product upgrade and 24/7 email & telephone support

**Physical Image Backups**
- Vembu charges per Windows physical servers
- Windows Desktops and Laptops licenses are FREE!
- The licenses need to be renewed every year
- License cost includes unlimited product upgrade and 24/7 email & telephone support