

EnsureDR

User Guide

Version 4.0.7



December 2021

Introduction

EnsureDR is a leader in the area of Business continuity and specifically, Data Disaster Recovery (DR). With EnsureDR's state-of-the-art DR Platform, your entire DR site will be invoked automatically, and EnsureDR will run a testing plan on the machines there in a secured and Encapsulated way – from within the network bubble. EnsureDR supports a variety of replication/backup vendors, tools, and solutions either in the Cloud or on-prem. It can be adapted to a wide range of different scenarios – from a workflow perspective or to a testing perspective (testing specific aspects of a machine).

EnsureDR will verify the DR site is able to recover and will also provide data and tips – like how to fix issues that were found during the recovery process; so the customer could increase overall recoverability using the tool. Once EnsureDR is installed, it can be scheduled to run automatically in the needed time window. The resulting report will provide the customer with the assurance that their recoverability is maintained. EnsureDR is proud to introduce EDRM – the latest product from the EnsureDR software labs.

EDRM is the evolution of the EnsureDR stand-alone application to a scalable, clustered environment, that is centrally controlled via an advanced user interface, and capable of showing,/ managing, and running the entire suite of EnsureDR's jobs and devices. In this guide, we will take a step-by-step approach to guide you on how to install, use, and more importantly – how to leverage and enjoy EDRM's advanced capabilities!

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Feedback

The EnsureDR team values feedback from our customers because it is important not only for customers but to us as well. It is our mission to listen and incorporate customer input into the build of our products and design them on their needs and suggestions.

Support

In case you have any technical issues or questions, please access the EnsureDR support portal to open a case or send mail to support@ensuredr.com.

Online Documents

For online support, please visit our web pages where you can find more information regarding our platform.

Web site: <https://www.ensuredr.com/>

Documents: <https://www.ensuredr.com/documents/>

Support portal and knowledgebase: <https://support.ensuredr.com/>

About User Guide

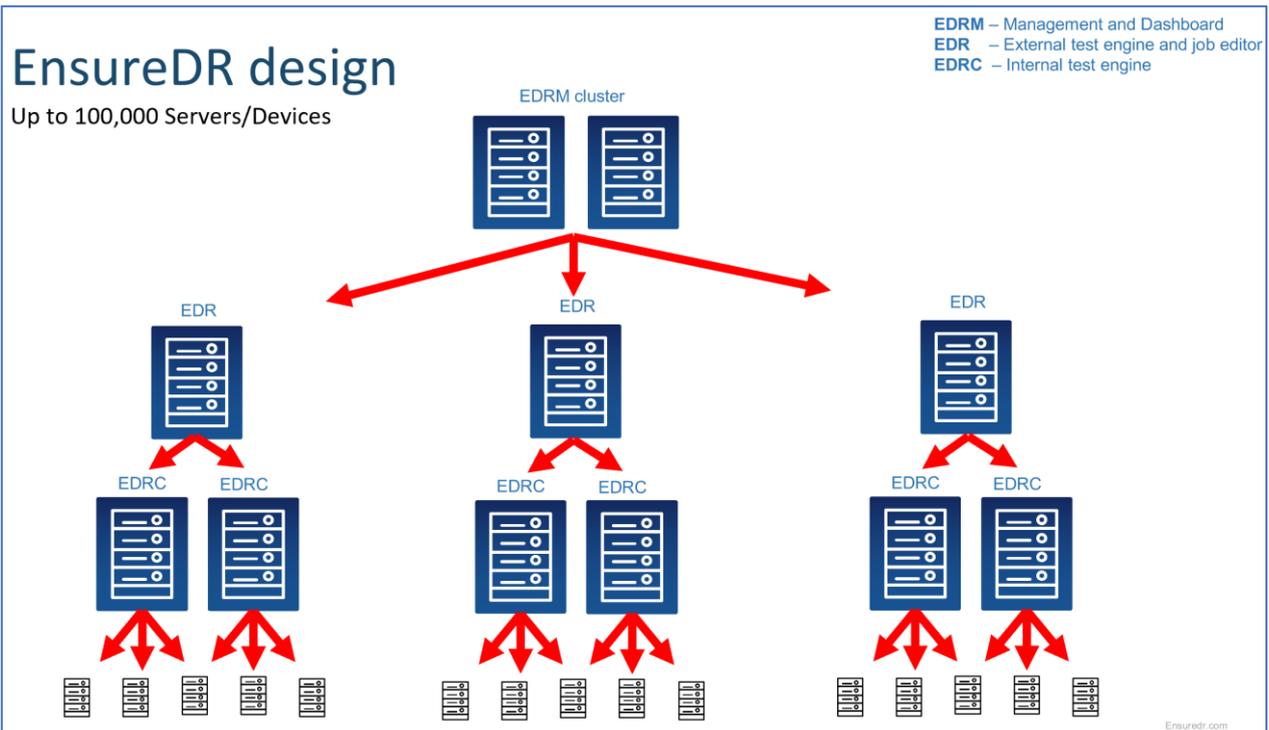
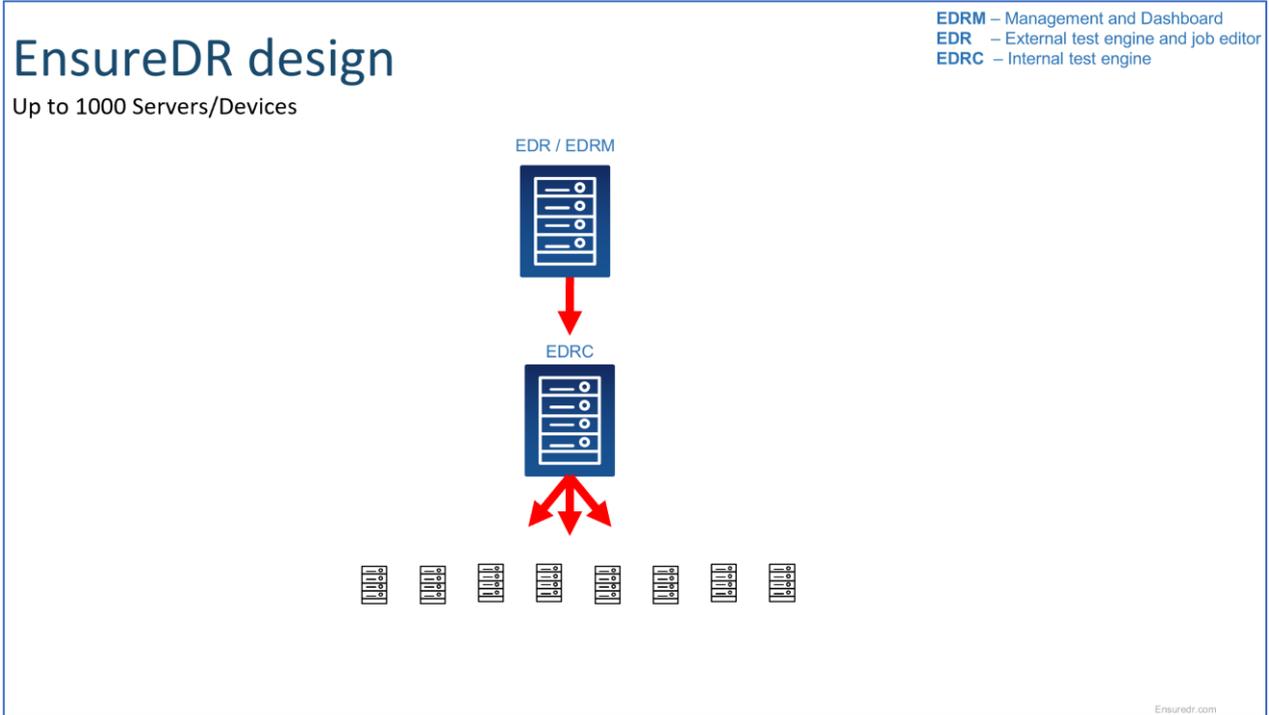
This document provides information about the main features, installation, and use of EnsureDR. This document applies to version 4 and all subsequent versions.

The System Architecture

EDRM was built with scale in mind. As a solution for DR sites of any size, the EDRM system could be installed as a cluster of App servers that can serve dozens of EnsureDR nodes (called EnsureDR Runners). Each of these Runners can then connect to a controller, with access to the network bubble created within the DR, to test the DR devices.

Depending on the complexity and size of the DR site, the appropriate amount of App servers/EDR-Runners will be installed, will need to be determined so that they will be able to perform the task of invoking and testing the entire Disaster Recovery process with fault tolerance and high availability.

Here are two design solutions for EnsureDR depending on the number of servers you plan to test.



EnsureDR Prerequisites

To make EnsureDR works correctly, there are some prerequisites to set up in advance.

Servers	<p>The EDRM/EDR management server with 16 GB RAM, 4 CPUs, disk size 250 GB, and a single NIC.</p> <p>The EDRC controller server with 8 GB RAM, 4 CPUs, disk size 50 GB disk, and a single NIC.</p> <p>Both servers (EDRM/EDR and EDRC) should be located on the DR location of a testing environment.</p> <p>The latest VMware VM tools must be installed on both servers and assigned a static IP.</p> <p>Servers must have a single NIC only.</p> <p>The correct time zone should be set for both servers.</p> <p>Both servers should be joined to a domain.</p>
Credentials	Domain account which is the local administrator on both EDRM/EDR and EDRC servers.
VMware Credentials	Our best practice is to use a single AD account that has administrator rights inside the VMware environment. In case your company policy doesn't allow you to use the same AD account inside the VMware environment with administrator privileges, you can create a dedicated VMware account from VMware vCenter Web UI.
Networking	Bubble network configured on target ESXi host isolated from the production environment. If the target is a cluster and has multiple hosts, a physical or VLAN that can close the connection between them in the bubble such as VMware DVSWITCH or close the VLAN on a physical switch with no Gateway so VMs can communicate with each other between hosts in a close the DR environment.
Firewall	<p>For each EDR-Runner to be able to communicate with the EDRM, the outbound side of port 5876 needs to be opened (so EDRM can communicate with it). Each EDR-Runner has the standalone EDR client installed, so it should also be able to communicate (outgoing from the EDR-Runner machine to the relevant machine) with the Replication vendors, the VMware Virtual Center, and the machines to be tested in the EDR needed ports (80, 135, 443, 445, 1433, LDAP port, and ICMP port).</p> <p>For each EDR-Runner, you need to also be able to communicate outbound with the EDRM DB on port 5432.</p> <p>The EDRM machine itself should have inbound rules for 5432, 5876, and 443 for accessing the web application.</p> <p>It is recommended to also open the outbound portion of 9200 from EDRM to support Cloud Logs gathering – for remote support purposes (this is not mandatory).</p> <p>SMTP port should be open for the reporting from the EDRM server to the local mail server. Usually, the SMTP port number is 25, but it can be different. Please ask your mail administrator for the correct port number.</p>
Anti-Virus	<p>If you have Anti-Virus software running inside the EnsureDR management server, add an exclusion for:</p> <ul style="list-style-type: none"> • API.exe • edr_service.exe • EDRC_E2.exe • EDRMS.exe • EDRunner.exe • EnsureDR.exe
Reporting Mail	SMTP mail service available for the EnsureDR server to send the report via mail such as local exchange or Office365/Gmail.
Supported Data Movers	<ul style="list-style-type: none"> • Zerto (version 5 - 8) • Zerto Azure to Azure and on-prem to Azure (version 8) • VMware SRM. Storage Replication or vSphere Replication (version 5 - 8.13) • Carbonite Replication, Double-Take (version 7 – 8.4) • Netapp with NFS/ISCSI/Fiber Channel (ontap version 9 and above) • EMC RecoverPoint for VM (version 5 and above) • Veeam Replication/Backup (version 11.0) • Veeam SQL only (version 10.0)

	<ul style="list-style-type: none"> • Cohesity (version 6.5) • Azure ASR - on-prem to Azure (Rollup 50) • Rubrik (version 5.2 and above)
Supported Browser	Google Chrome
UAC	Users Access Control should be disabled on both servers. If you have GPO which sets it back, please remove this EDRM/EDR and EDRC servers from that domain group policy.

Replication/backup solution Prerequisites

To avoid any duplicate IPs in your environment, please validate that your data mover jobs are properly configured with test networking settings to be able to run inside an isolated/bubble network on the DR site before starting the job from the EDRM.

VMware Site Recovery Manager

- Port 443 needs to be open from the main EnsureDR management server (EDRM) to the source and target VMware vCenter servers.
- Port 443 needs to be open from the main EnsureDR management server (EDRM) to the source and target VMware SRM servers.
- Port 443 needs to be open from the client workstation to the EDRM server.
- SMTP port should be open for the reporting, from the EDRM server to the local mail server.

Usually, the SMTP port number is 25 but can be different. Please ask your mail administrators for the correct port number.

Zerto for VMware vSphere

The Zerto PowerShell module must be installed on the EDRM server.

- Port 9669 needs to be open from the main EnsureDR management server (EDRM) to the source and target Zerto data movers.
- Port 443 needs to be open from the main EnsureDR management server (EDRM) to the source and target VMware vCenter servers.
- Port 443 needs to be open from the client workstation to the EDRM server.
- SMTP port should be open for the reporting, from the EDRM server to the local mail server.

Usually, the SMTP port number is 25 but can be different. Please ask your mail administrators for the correct port number.

Veeam Backup and Replication

Veeam Backup and Replication console must be installed on the EDRM server.

- Ports 9392 and 9398 needs to be open from the main EnsureDR management server (EDRM) to the source and target Veeam data mover servers.
- Port 443 needs to be open from the main EnsureDR management server (EDRM) to the source and target VMware vCenter servers.
- Port 443 needs to be open from the client workstation to the EDRM server.
- SMTP port should be open for the reporting, from the EDRM server to the local mail server.

Usually, the SMTP port number is 25 but can be different. Please ask your mail administrators for the correct port number.

Cohesity

- Port 443 needs to be open from the main EnsureDR management server (EDRM) to the source and target Cohesity servers.
- Port 443 needs to be open from the main EnsureDR management server (EDRM) to the source and target VMware vCenter servers.
- Port 443 needs to be open from the client workstation to the EDRM server.
- SMTP port should be open for the reporting, from the EDRM server to the local mail server.

Usually, the SMTP port number is 25 but can be different. Please ask your mail administrators for the correct port number.

The Network Prerequisites

For successful testing, we need to meet some network prerequisites to avoid duplicate IPs in your environment. As explained in the previous chapter, all data movers must be configured to recover servers inside the isolated network. To be able to do that, you need to create an isolated network inside the VMware vSphere environment. This isolated network will allow you to test all your servers inside that isolated network without interfacing with your production network.

Depending on your data mover settings we can recognize two cases:

- servers are recovered on a single ESXi host
- servers are recovered on multiple ESXi hosts (cluster solution)

In case you are recovering all servers into a single isolated network on a single host, no other action needs to be performed. If you are recovering servers on multiple ESXi hosts, you need to establish connectivity between those ESXi hosts in the isolated network by configuring your external switch.

Depending on how many subnets you have inside your VMware vSphere environment, we can recognize two cases:

- servers are recovered into an isolated network without the need for routing capability
- servers are recovered into an isolated network with a need for routing capability

In the case where all of your servers are inside the same subnet, no additional steps need to be performed. If your servers are configured in multiple subnets, you will need to enable routing capabilities between those subnets. Routing could be done with a physical router configured in your environment or by using some predefined VM appliance/server available on market. Ask your network support team to help you establish routing capabilities between different subnets regardless of which servers have recovered on a single ESXi host or on multiple (cluster) ESXi hosts.

Active directory Prerequisites

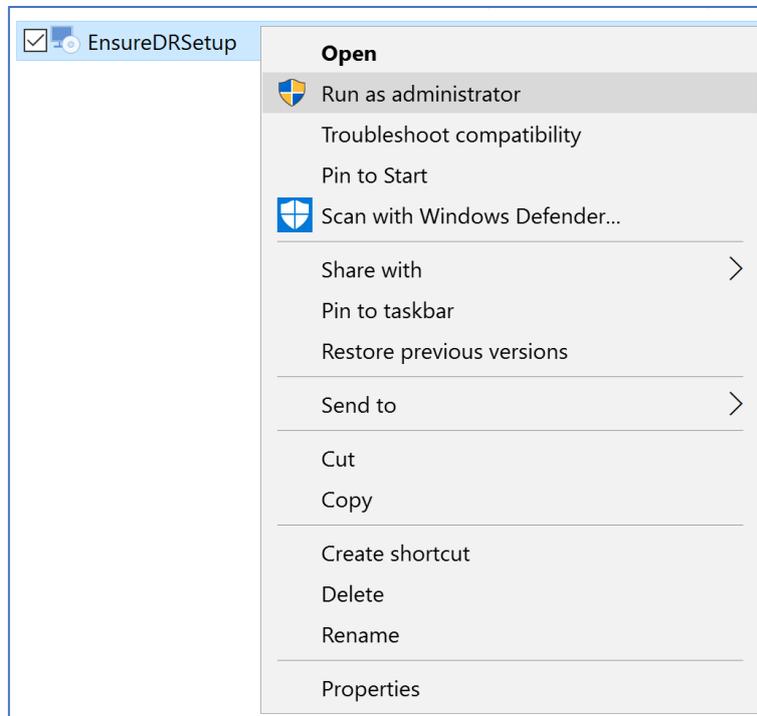
The EDRM solutions have capabilities to do advanced tests inside your isolated network after you have recovered servers to the DR site for testing and validation purposes. For successful testing, you will need a Domain Controller available inside an isolated network environment. This Domain Controller will be used by the EDRC server to resolve DNS names and validate credentials.

You can use your data mover to migrate and run the Domain Controller inside the isolated network. Another solution is to use the EnsureDR job to clone the preferred Domain Controller inside the bubble network. If you choose to clone the Domain Controller, it must be located at the DR site, and during the cloning process, the Domain Controller will be shut down to avoid any issues within your production network. Because of that, we suggest having a dedicated Domain Controller on the DR site that EnsureDR will be used inside the EnsureDR job. If this is the case and you choose to use a cloned Domain Controller, the server should be set as the primary DNS on the EDRC server.

The Installation

EDRM installation

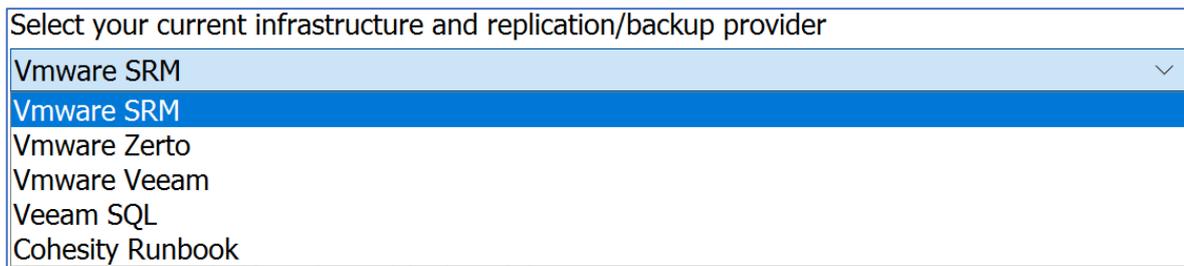
Log on to the EDRM server with the dedicated account you created as described in the prerequisites. Download EnsureDRSetup.exe and run it as an administrator inside the EDRM server.



A welcome screen will appear, click the **Next** button



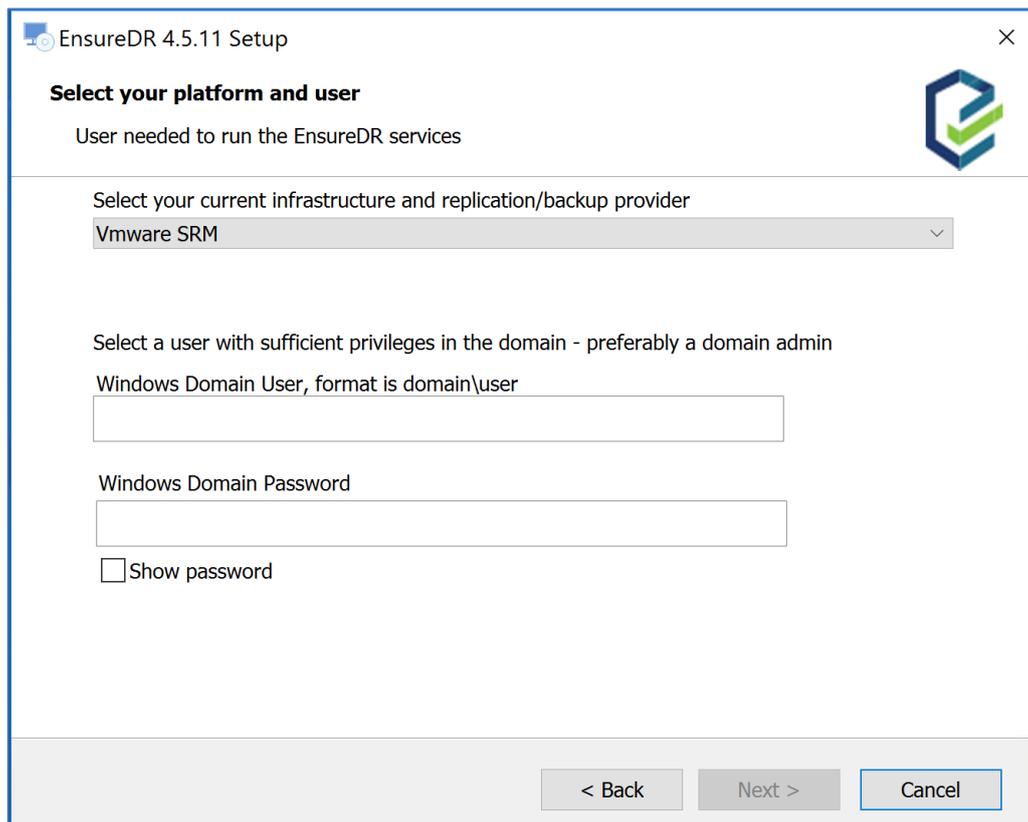
On the main screen, select your replication provider from the drop-down list.



Select your current infrastructure and replication/backup provider

- Vmware SRM
- Vmware SRM
- Vmware Zerto
- Vmware Veeam
- Veeam SQL
- Cohesity Runbook

Enter the domain account username and password.



EnsureDR 4.5.11 Setup

Select your platform and user

User needed to run the EnsureDR services

Select your current infrastructure and replication/backup provider

Vmware SRM

Select a user with sufficient privileges in the domain - preferably a domain admin

Windows Domain User, format is domain\user

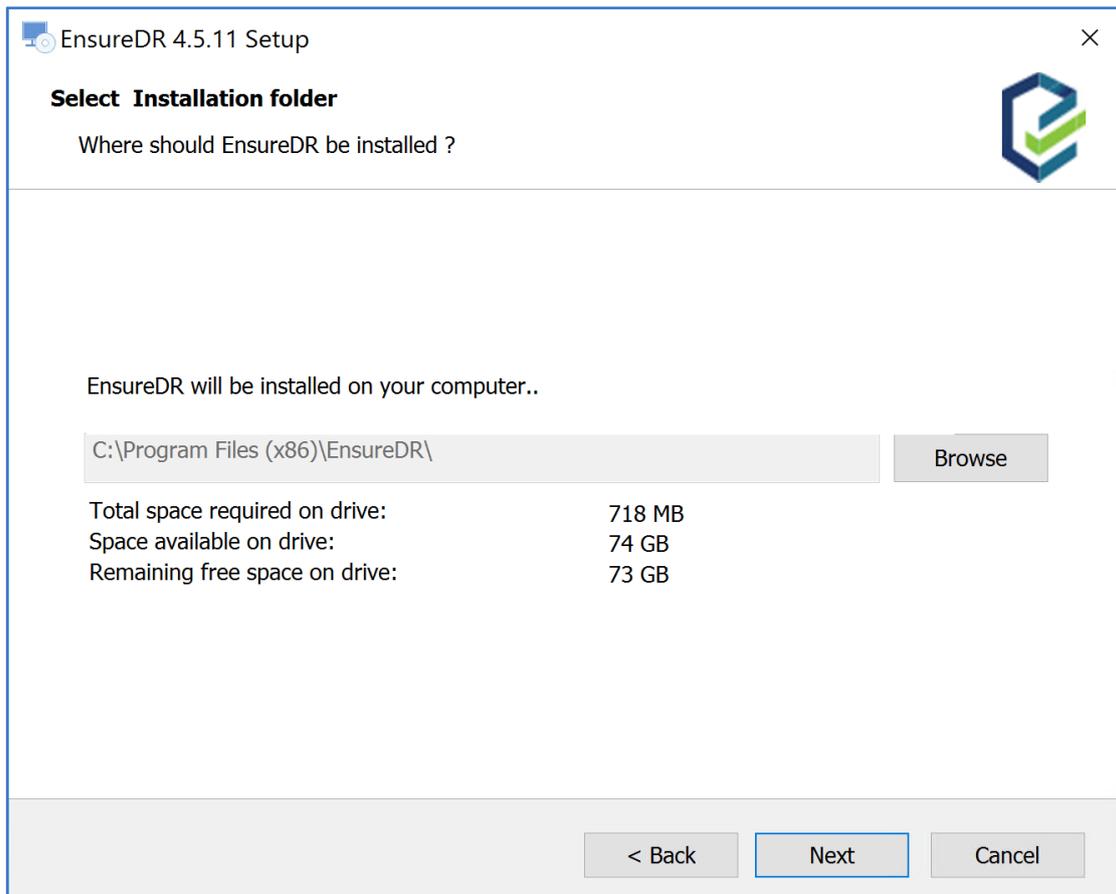
Windows Domain Password

Show password

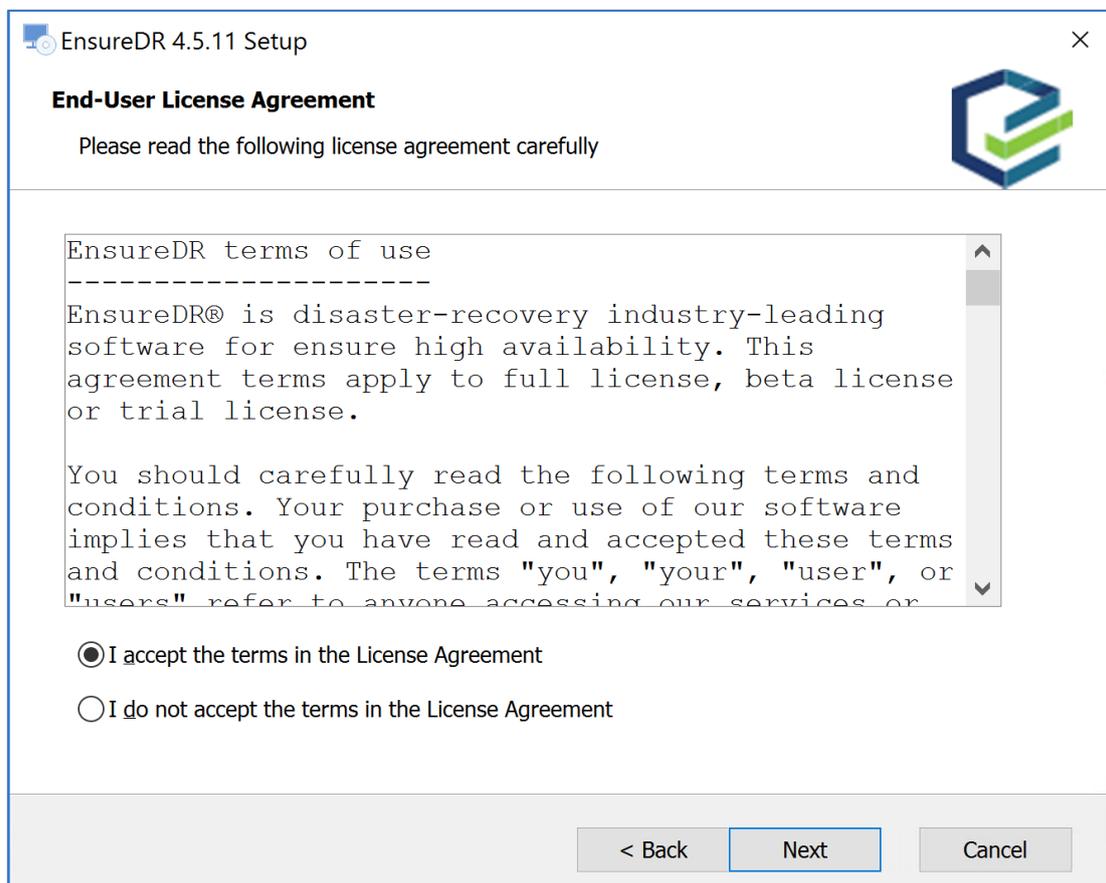
< Back Next > Cancel

NOTE: This domain account must have local administrator rights on the EDRM server and will be used to run the services inside the server.

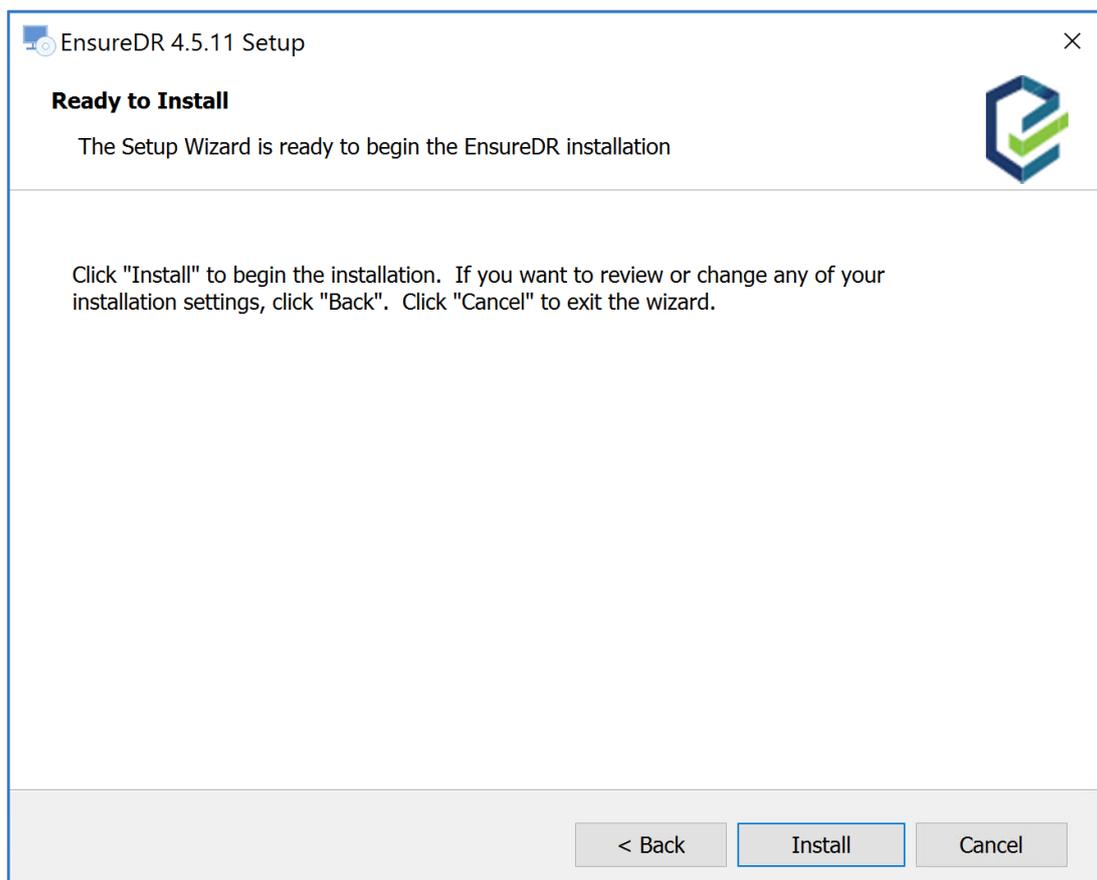
Leave the suggested installation path or click the **Browser** button to select a different path, then click the **Next** button.



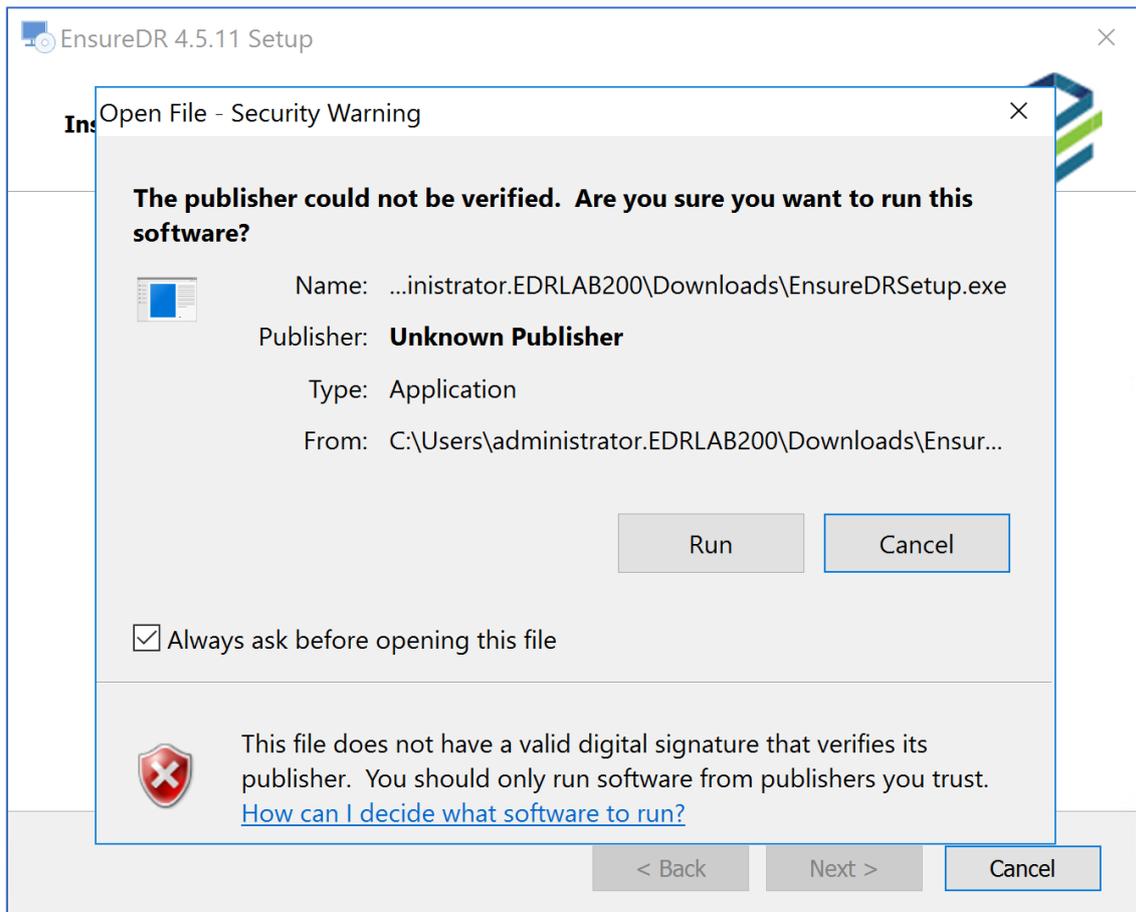
Please review the License Agreement, then click the **Next** button.



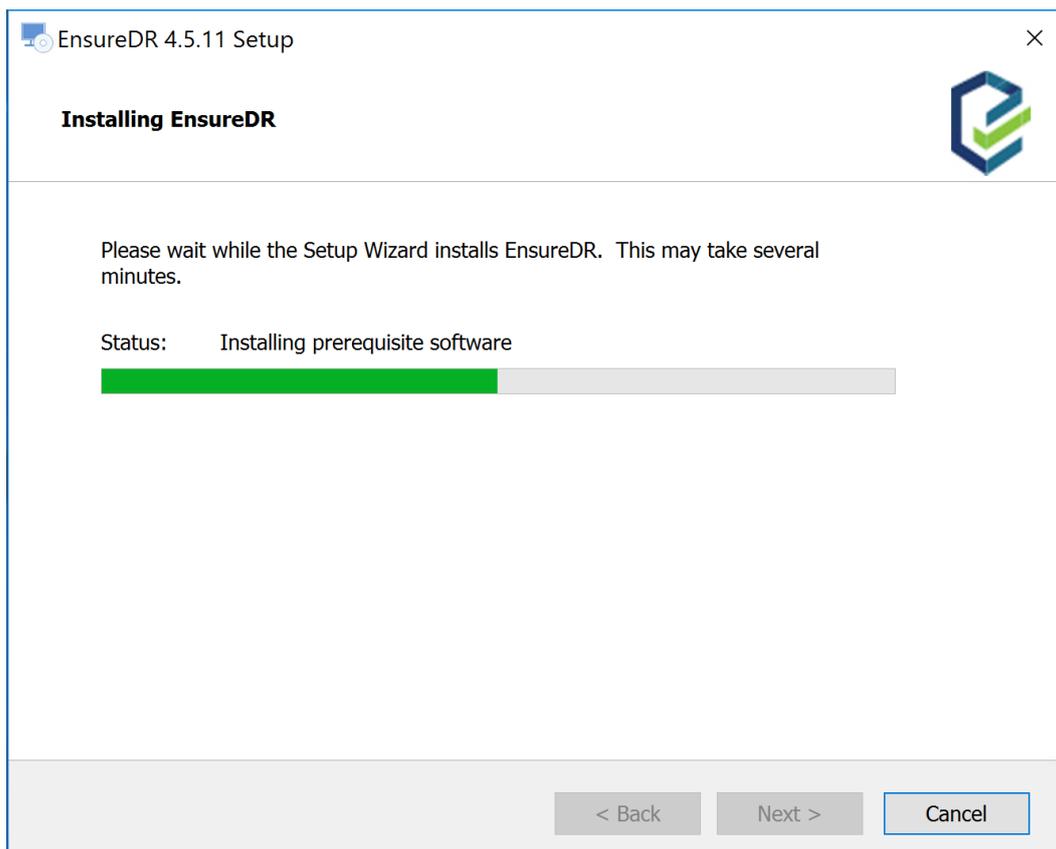
Now click the **Install** button and wait until the installation is finished.



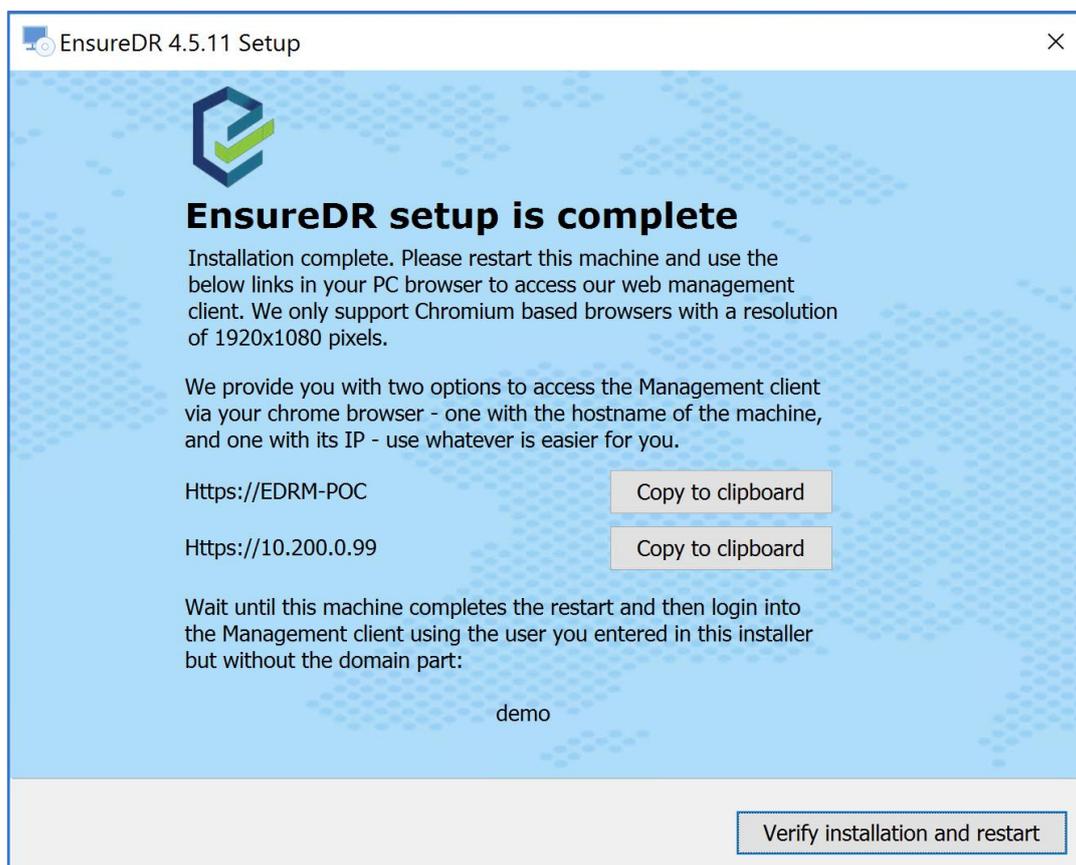
You may get the Windows 'Unknown Publisher' warning pop up, in this case, please click the **Run** button anyway.



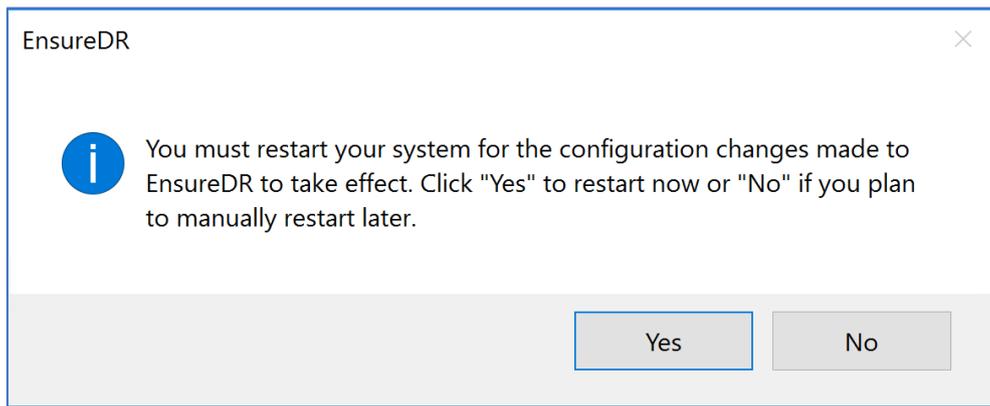
The installation will begin and depending on the environment and specific components, it may take up to a few minutes to finish the installation.



As the installation ends, you will see the following screen. Please select the **Copy to clipboard** link to the EnsureDR WebUI from your EDRM server to your windows client workstation from where you can remotely access the EDRM. Now press the **Verify installation and restart** button to finish the setup process.

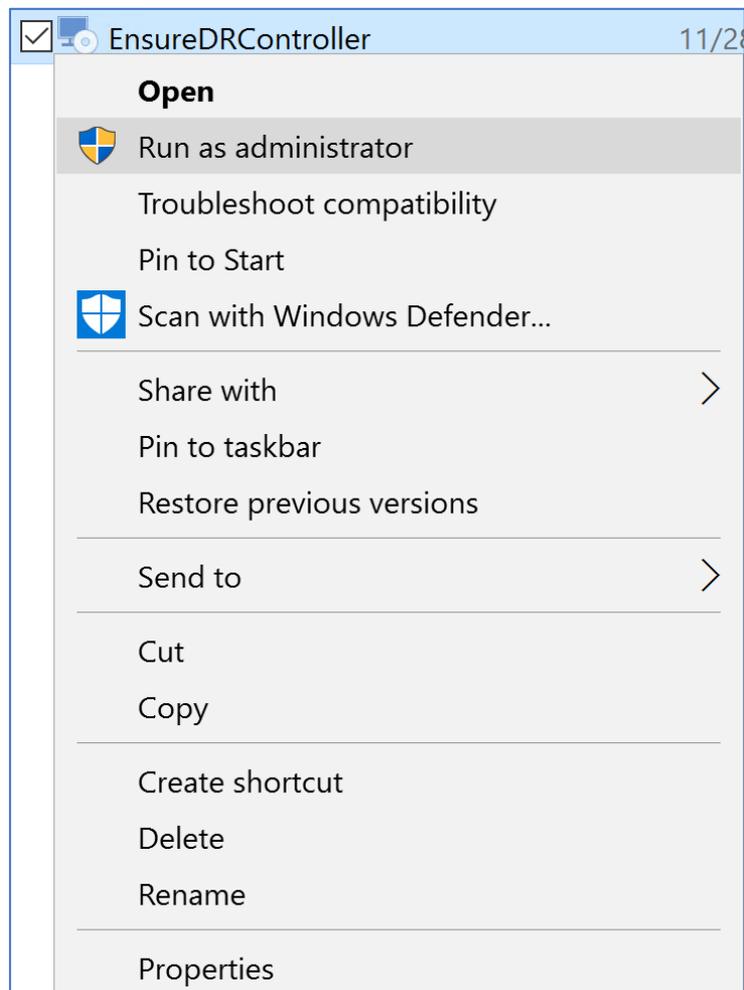


When the following message pops up, please click the **Yes** button to restart the server.

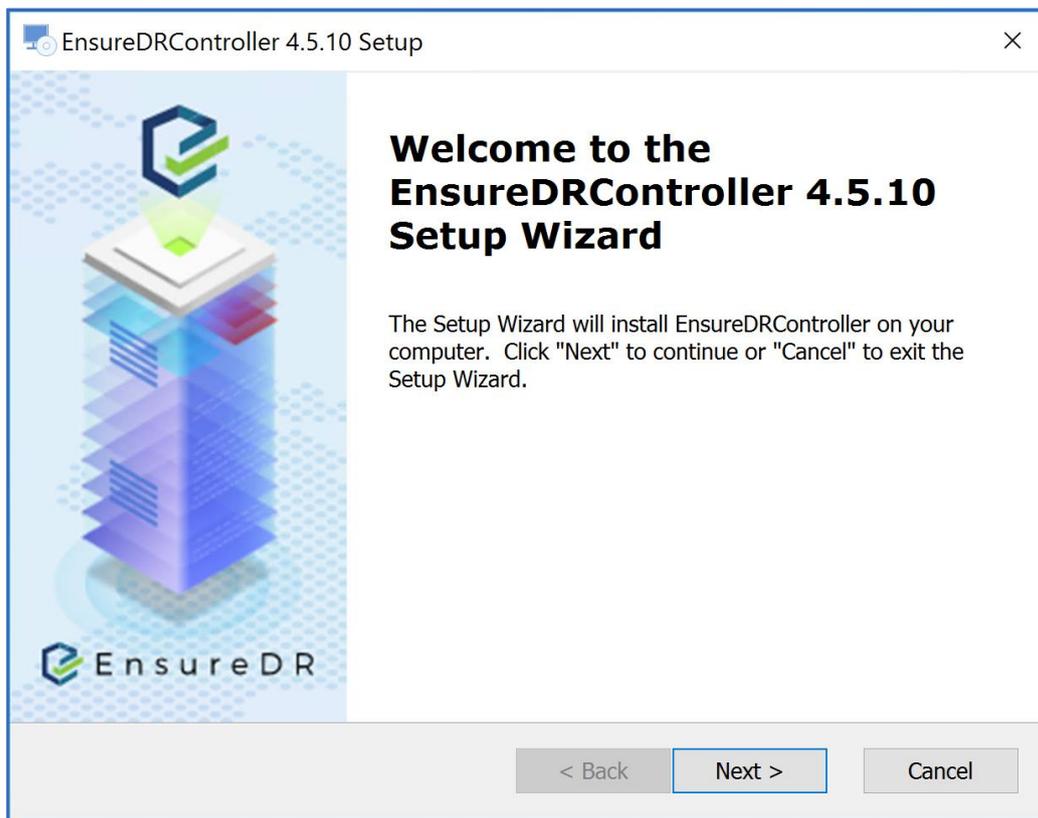


EDRC installation

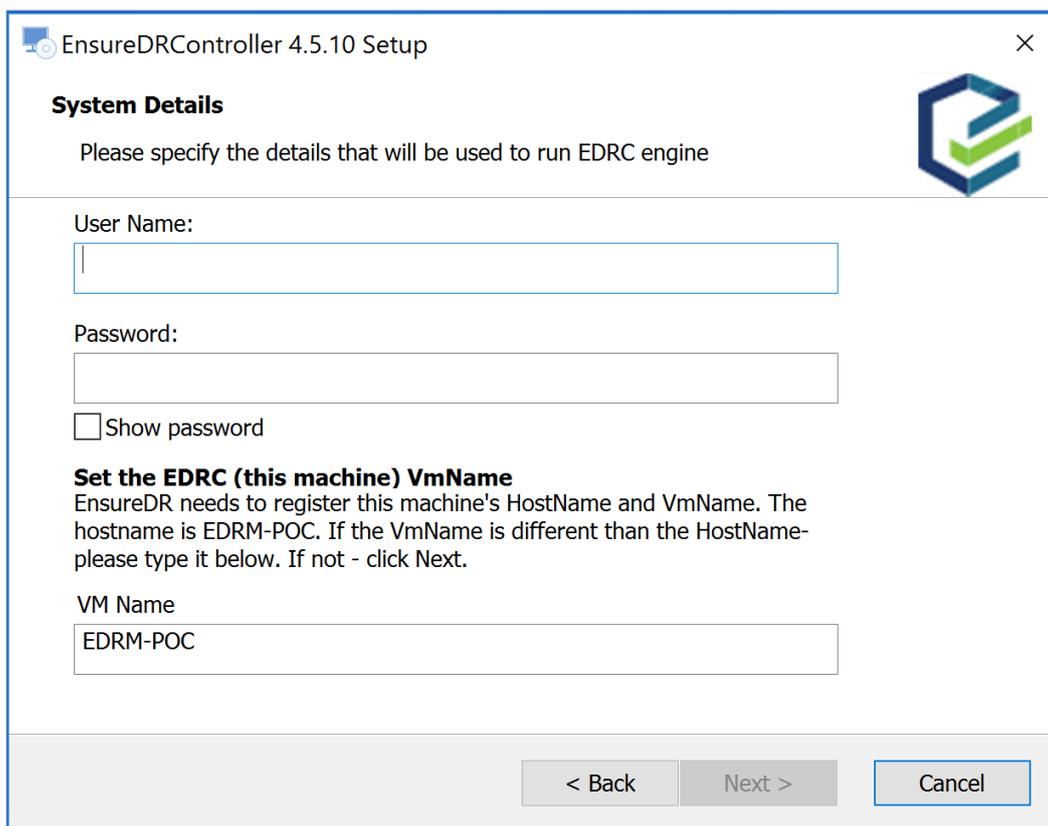
Before continuing the installation, verify that the EDRM server we configured in the previous step is up and running. Log onto the EDRC server with the dedicated account you created as described in the prerequisites. Now, download EnsureDRController.exe and run it as an administrator inside the EDRC server.



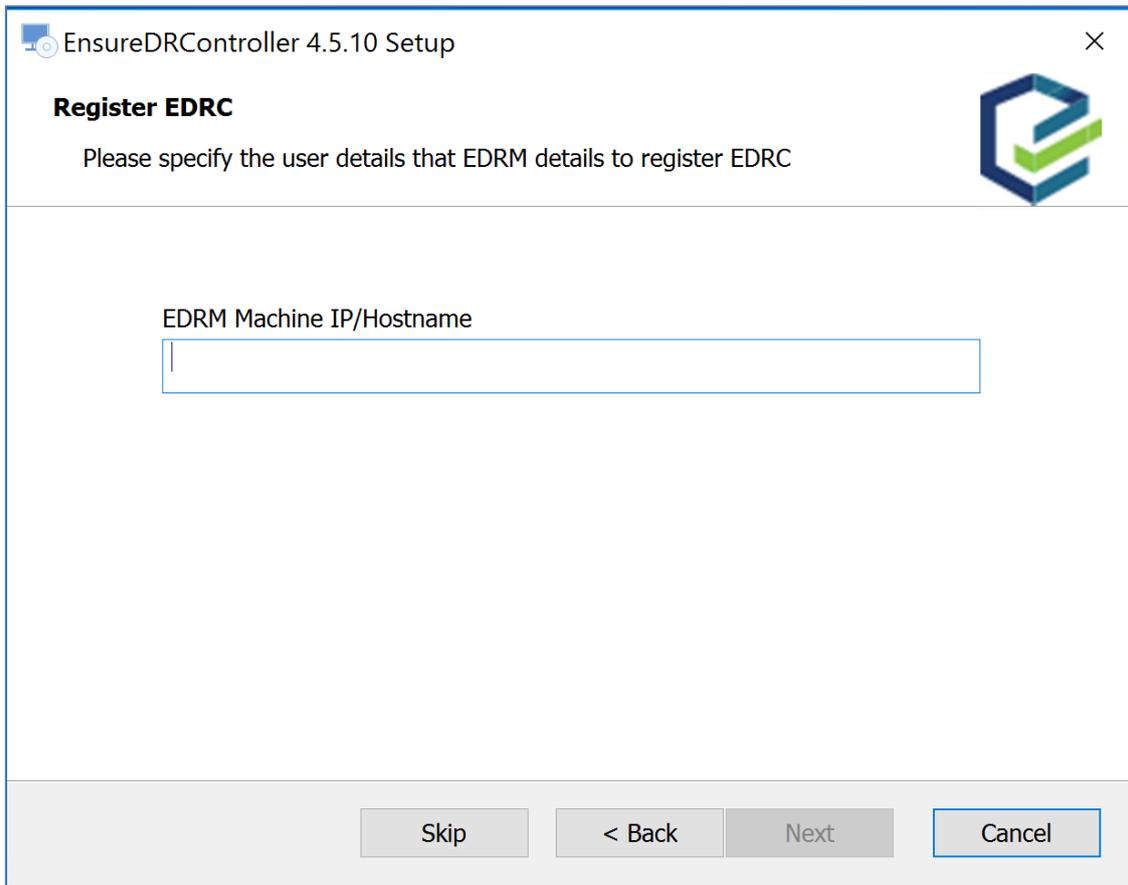
A welcome screen will appear, click the **Next** button.



On the next screen, enter credentials that have administrator rights on the EDRC server. In case your EDRC server name is different from VMware vCenter, please update the VM name as registered inside the VMware vSphere. Now click the **Next** button.

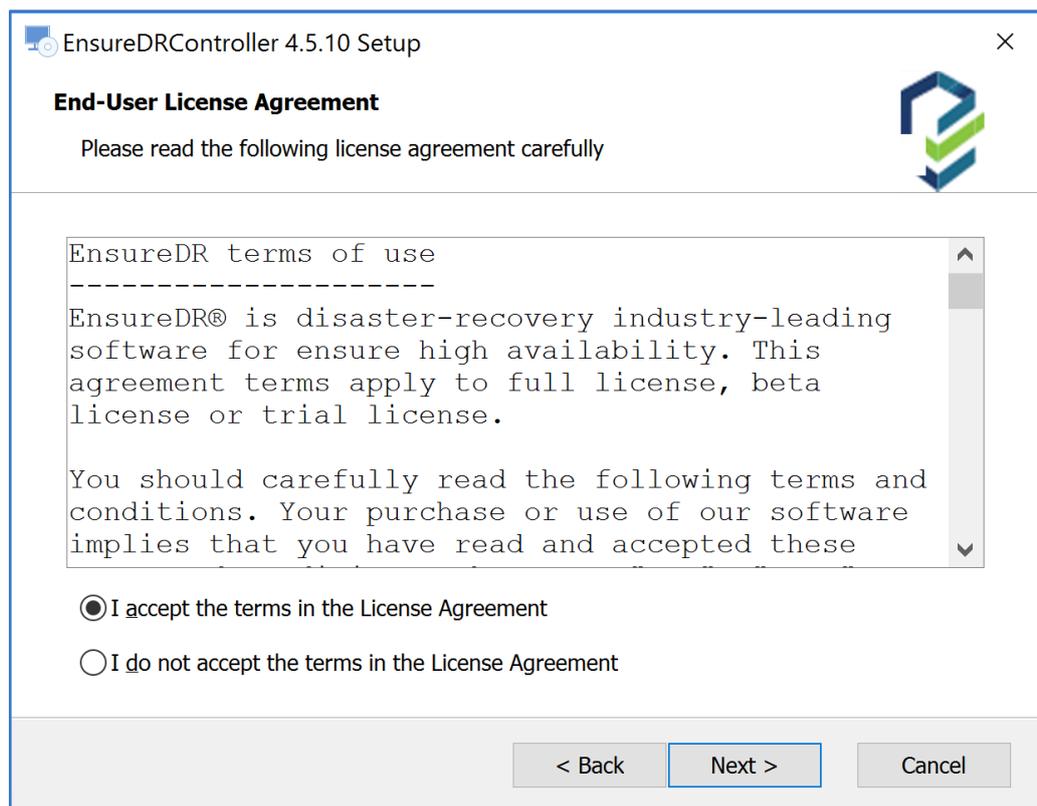


Now enter the EDRM server name or IP address you set up in the previous task, then click the **Next** button.



The screenshot shows a window titled "EnsureDRController 4.5.10 Setup" with a close button in the top right corner. The main heading is "Register EDRC" and the instruction below it says "Please specify the user details that EDRM details to register EDRC". A text input field is labeled "EDRM Machine IP/Hostname". At the bottom of the window, there are four buttons: "Skip", "< Back", "Next", and "Cancel".

Please review the License Agreement, then click the **Next** button

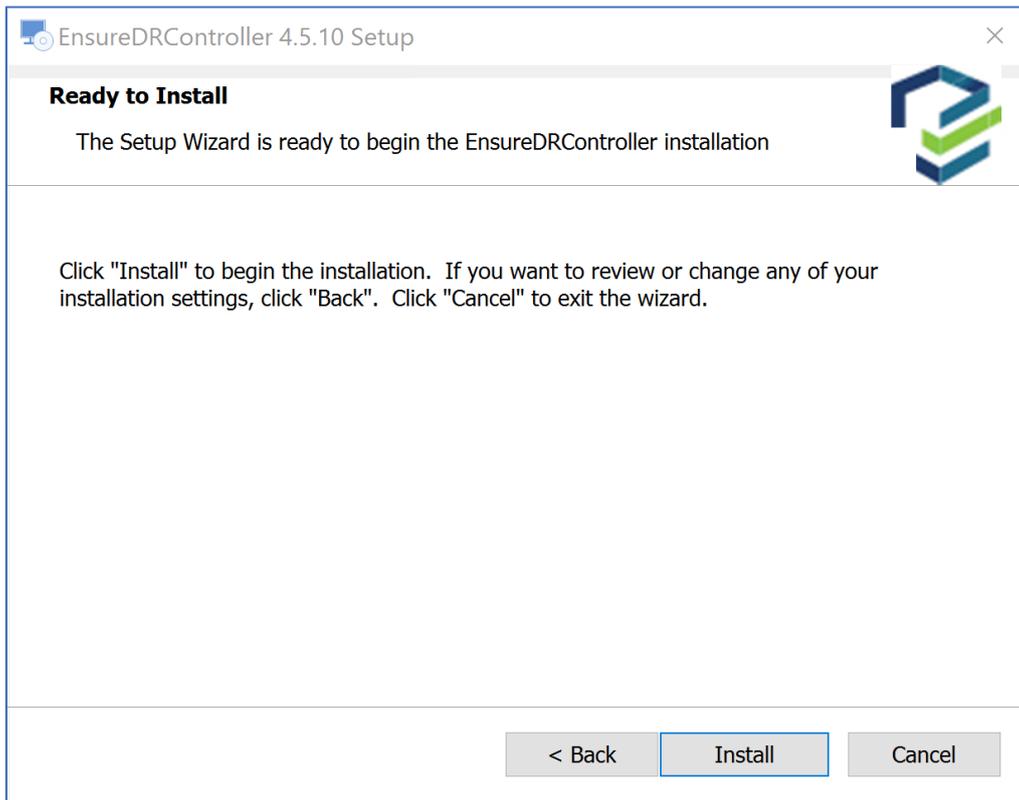


The screenshot shows a window titled "EnsureDRController 4.5.10 Setup" with a close button in the top right corner. The main heading is "End-User License Agreement" and the instruction below it says "Please read the following license agreement carefully". A scrollable text area contains the following text:
EnsureDR terms of use

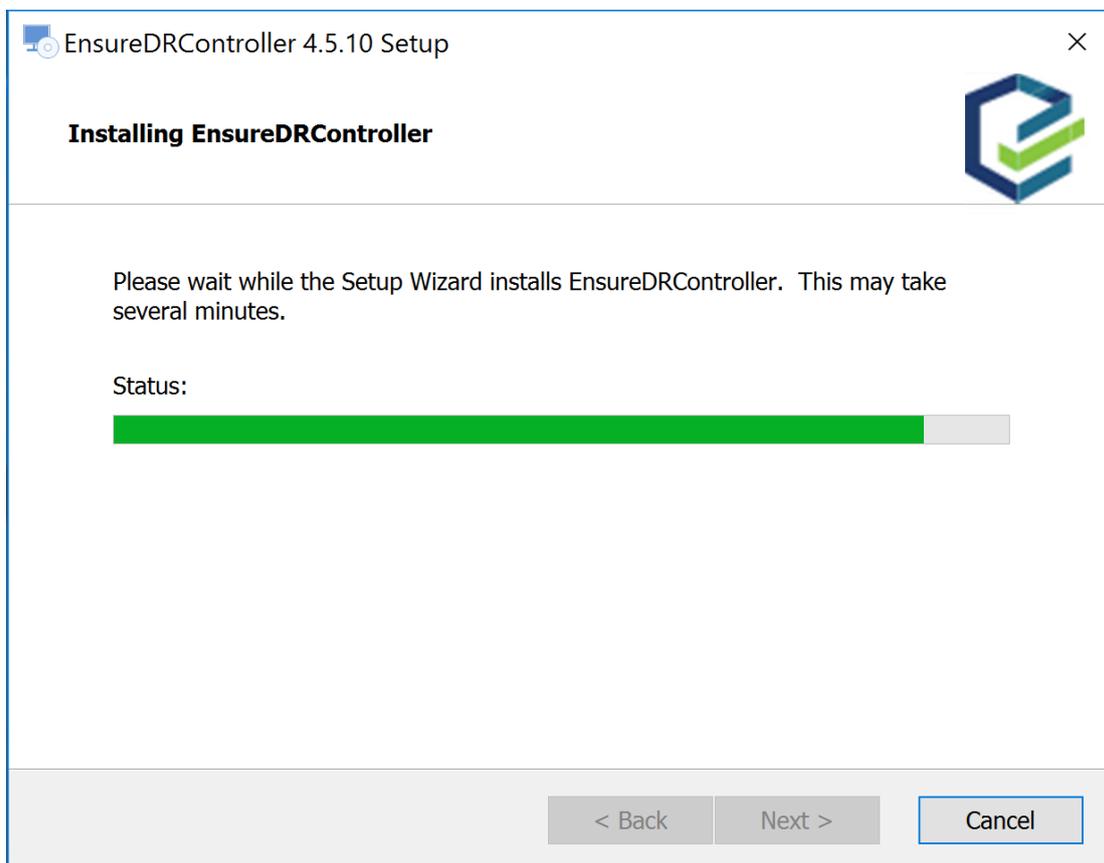
EnsureDR® is disaster-recovery industry-leading software for ensure high availability. This agreement terms apply to full license, beta license or trial license.

You should carefully read the following terms and conditions. Your purchase or use of our software implies that you have read and accepted these
At the bottom of the text area, there are two radio button options:
 I accept the terms in the License Agreement
 I do not accept the terms in the License Agreement
At the bottom of the window, there are three buttons: "< Back", "Next >", and "Cancel".

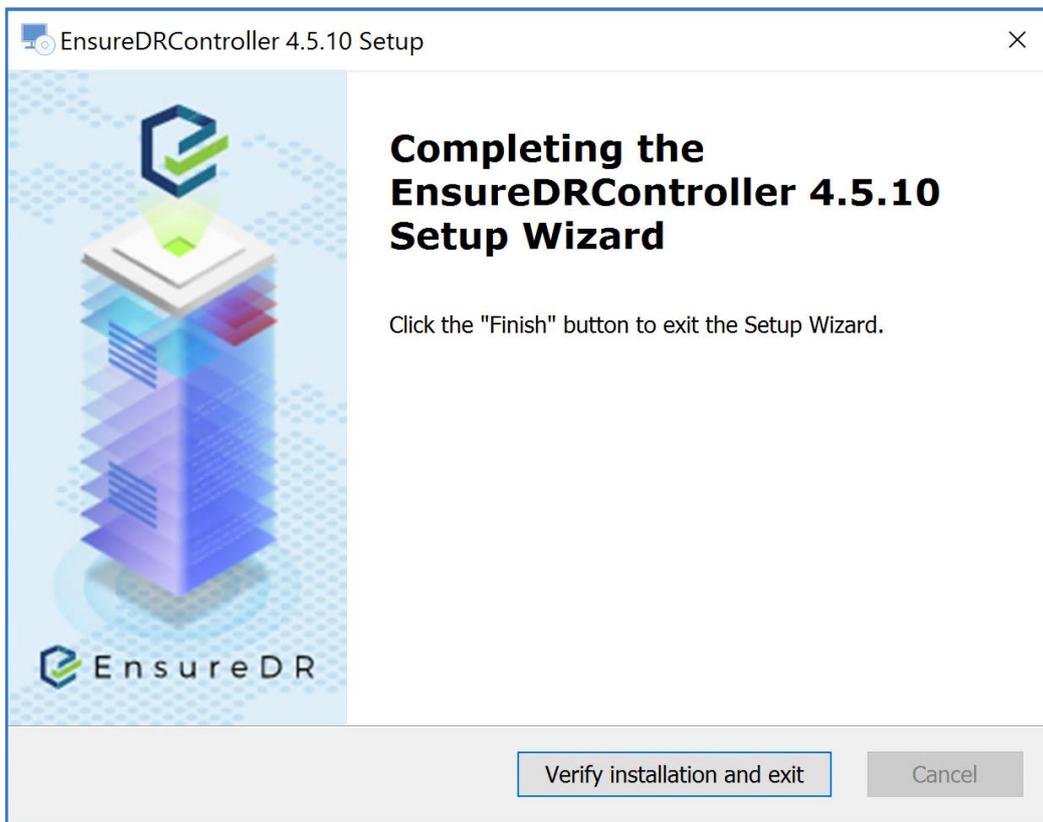
Now click the **Install** button and wait until the installation is finished.



The installation will begin and depending on the environment and specific components, it may take up to a few minutes to finish the installation.



Now press the ***Verify installation and exit*** button to finish the setup process. There is no need to restart the server after the installation is finished.



EnsureDR Manager

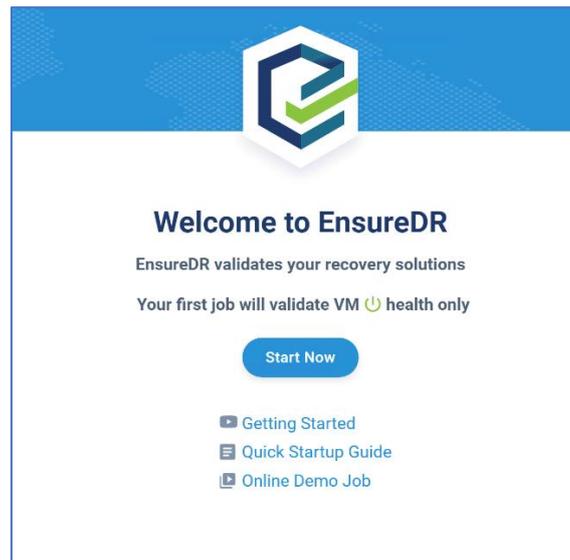
Access the EDRM Web UI

The EDRM solution includes the trial license out of the box. This trial license will be used to create the simple EDRM job with a health test only. This step is mandatory and will be used as proof that all of the data you configured inside the job is validated during the job execution and no other issues are detected in your environment. Only after the job validation process is finished do we recommend moving to the next step with more advanced testing capabilities.

Creating the basic job

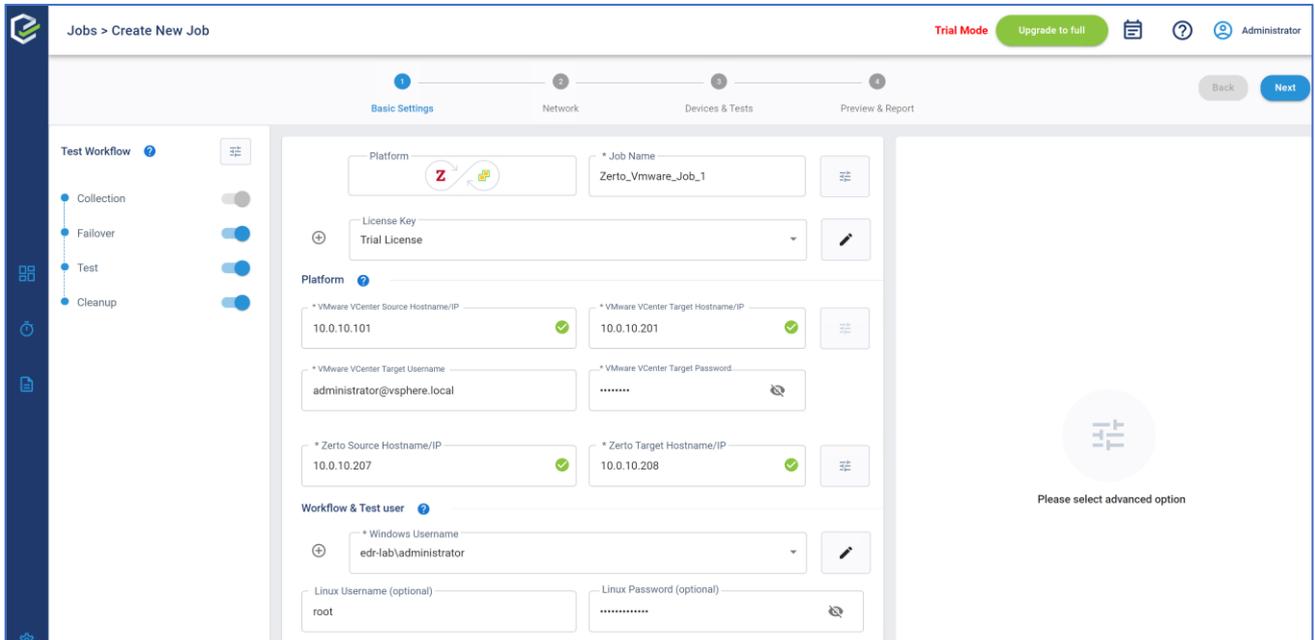
Now that the EDRM and EDRC servers are installed and configured, we can open the browser and navigate to the [https://your EDRM server name](https://your_EDRM_server_name).

The welcome screen will pop up, then click on the button **Start Now** to continue

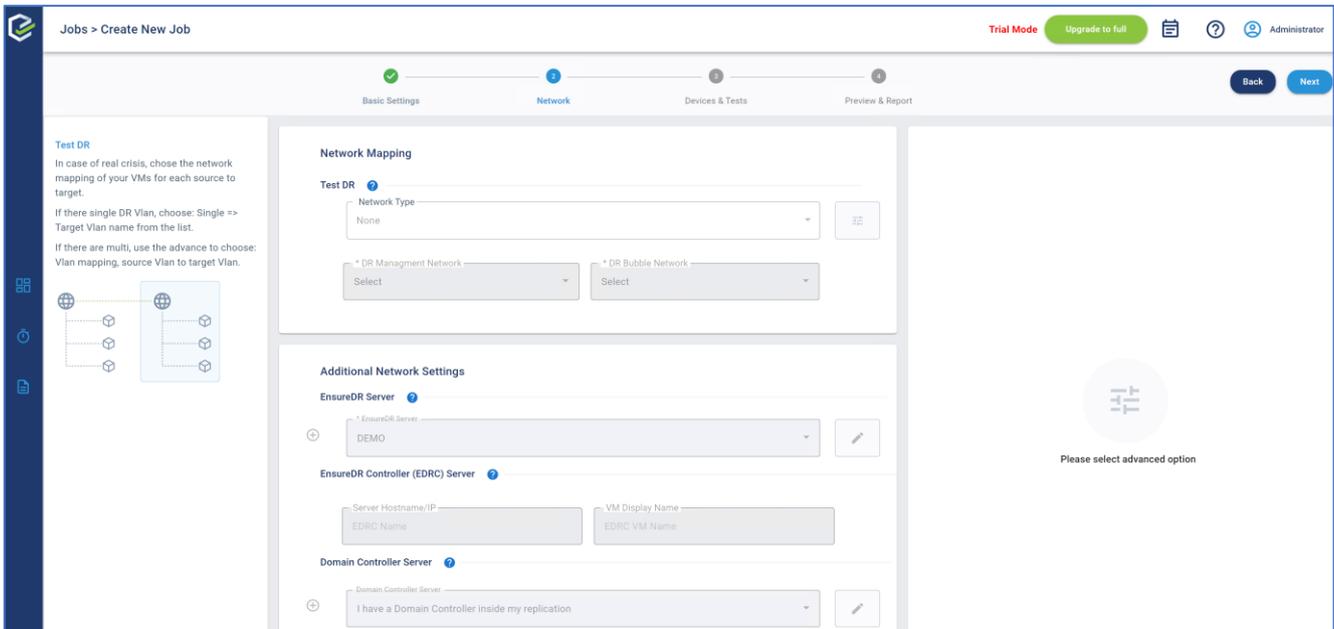


Note: EnsureDR comes with a built-in out of the box trial license for customers to try EnsureDR in their environment or for environmental compatibility tests for new customers with a full license.

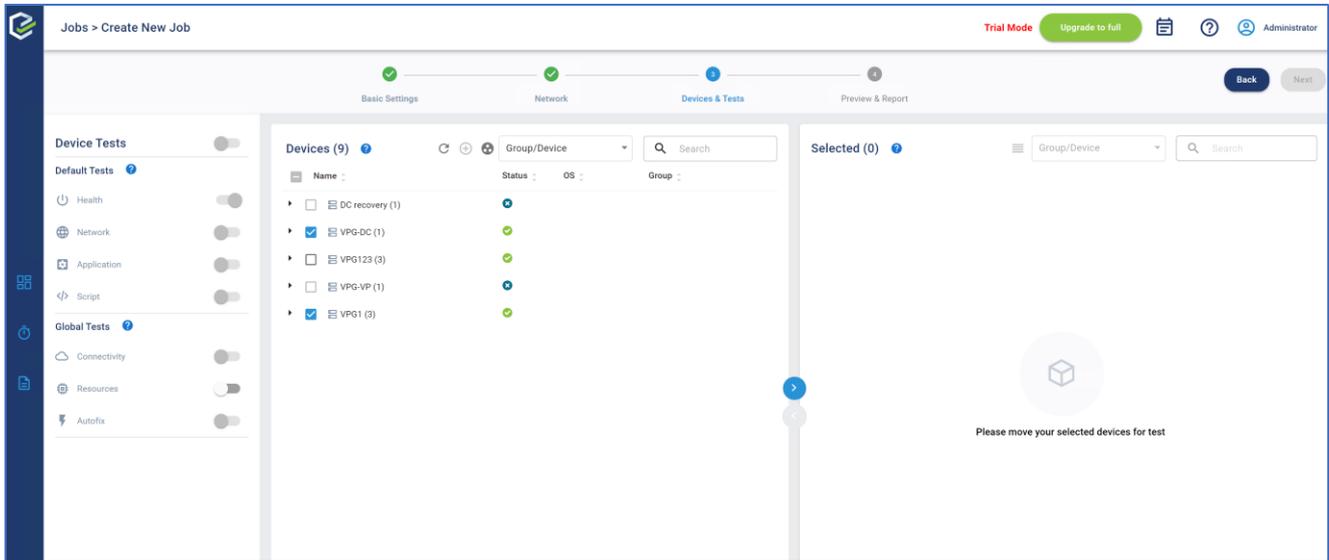
The job page is displayed and the trial license is selected. This is the first job available to start and the license cannot be updated with the full one inside this job. The number of servers inside the job is limited to ten devices and only a health test can be performed. Fill in all fields with data from your environment and the EDRM will validate them. If the environmental data can be validated, you will be able to click on the **Next** button, otherwise, fix an errors that the EDRM has detected and marked with red color.



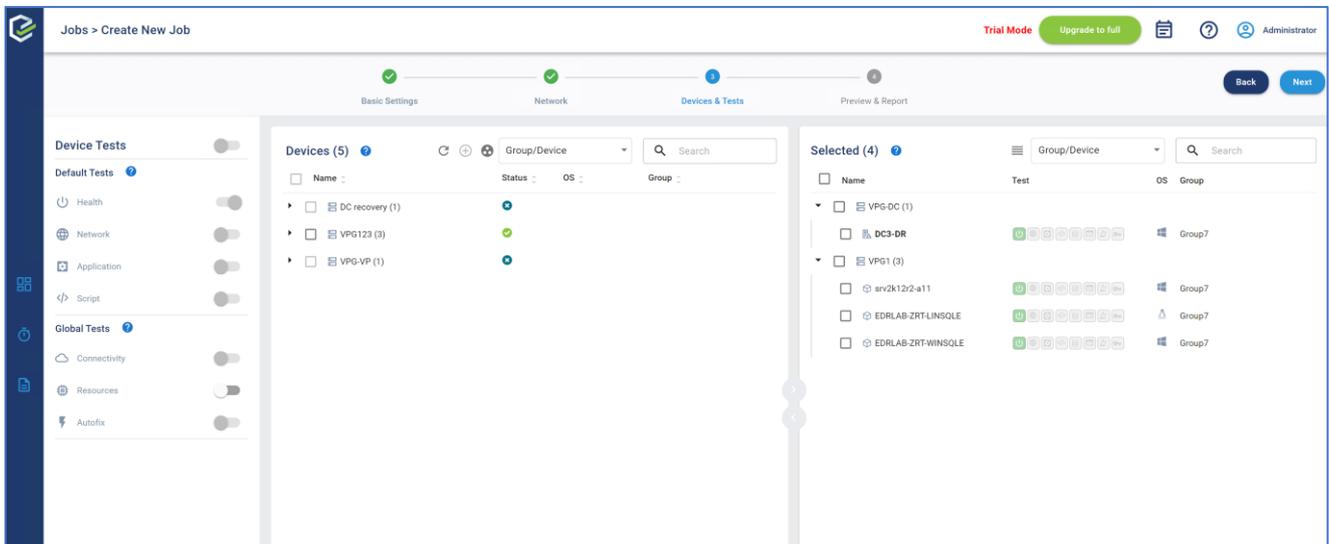
On the next page, you can see any of the disabled settings that are available only with the full license, click on the **Next** button to continue



Please wait until the EDRM connects to the data mover and collects all of the groups you have created within it.



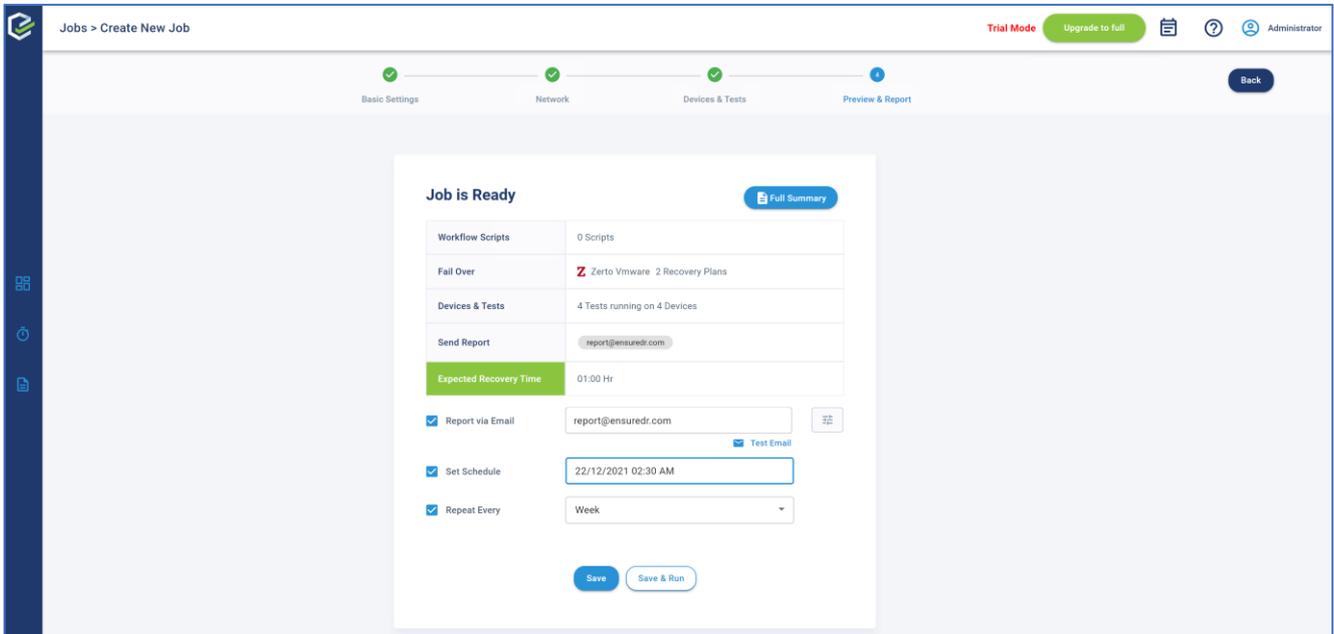
Select the desired group and click on the blue button to move the selected groups from the device list to the job selection list.



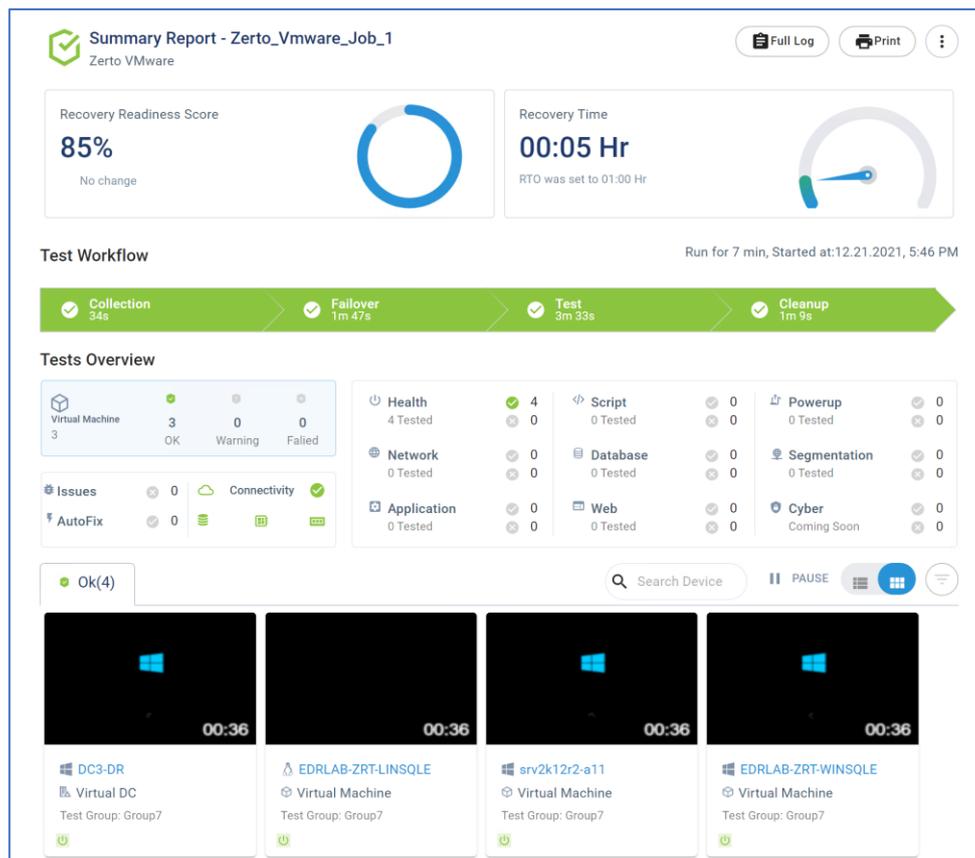
On the last page, you can enter an email address that the EDRM will use to send an offline HTML report after the job is finished. You can also set a schedule to run the recurrent job on a weekly basis. Click the **Save & Run** button to execute the job you created

Before running the job, please verify that you properly configured your data mover inside the bubble isolated network to avoid duplicate IP. The EDRM will not change or modify any data you configured inside your data mover. The EDRM will only run the job in test mode with settings you configured inside the data mover.

Click on the **Save & Run** button to save this basic job and start it.

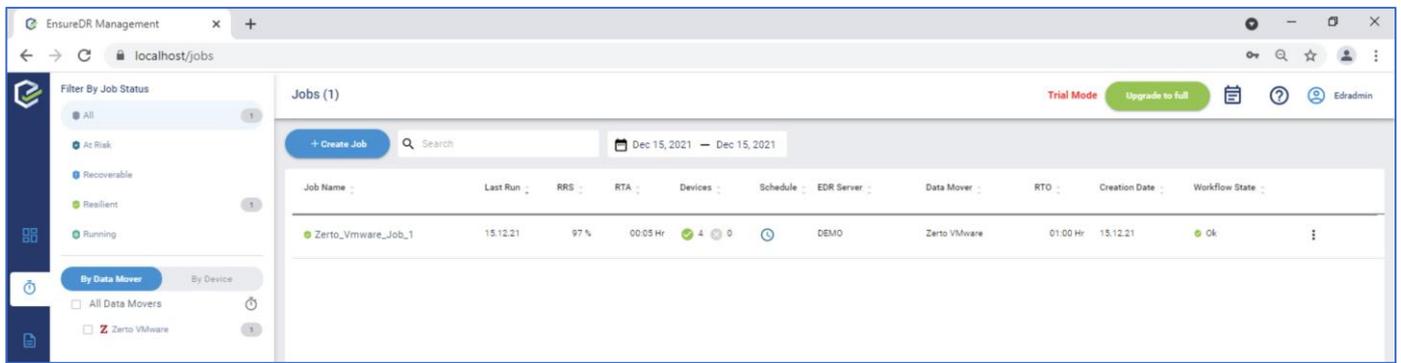


The job was started, now please wait until it finished. The time need for a job to be executed through all of the steps can vary depending on equipment. This is the first job you created with the trial license and it only includes a health test which means only the Power On command will be executed against VM's on the DR site by your data mover. Please wait until the job is finished, then click on the **Full Report** button. In our example, you can see that the health test was successful and inside the report, you can see animated pictures of every server included in the test as proof that the boot process started on all servers.

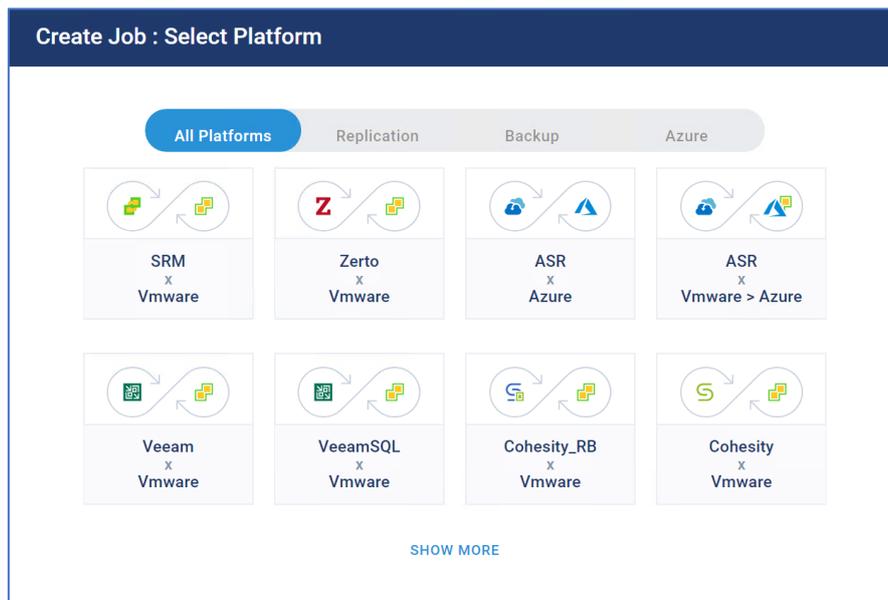


Creating the advanced job

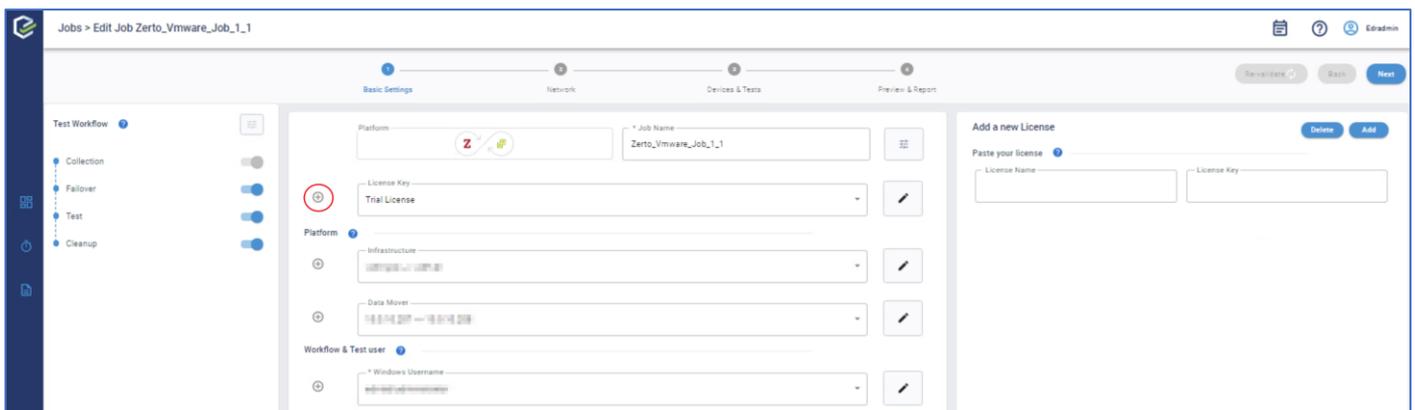
You have now created the first job with the trial license, now you can create a new job with a more advanced test. To do that, click on the job icon as shown on the following picture:



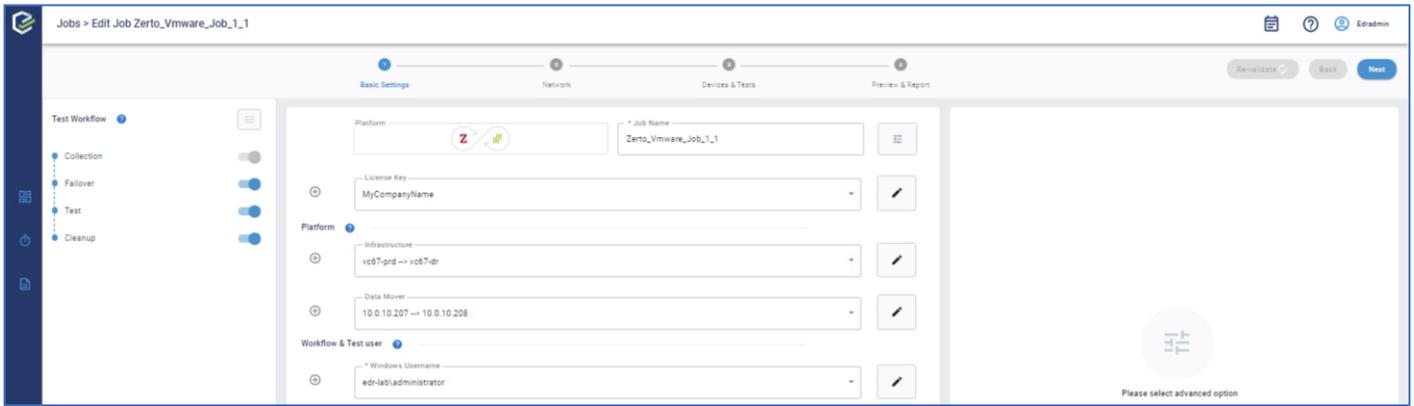
Now click on the **Create Job** button and select your data mover



On the first page of edit mode, we need to provide a new license by clicking on the plus sign in front of the License Key. In the right panel, enter the custom license name and paste the license key you received by mail. Click the **Add** button to validate the license key.



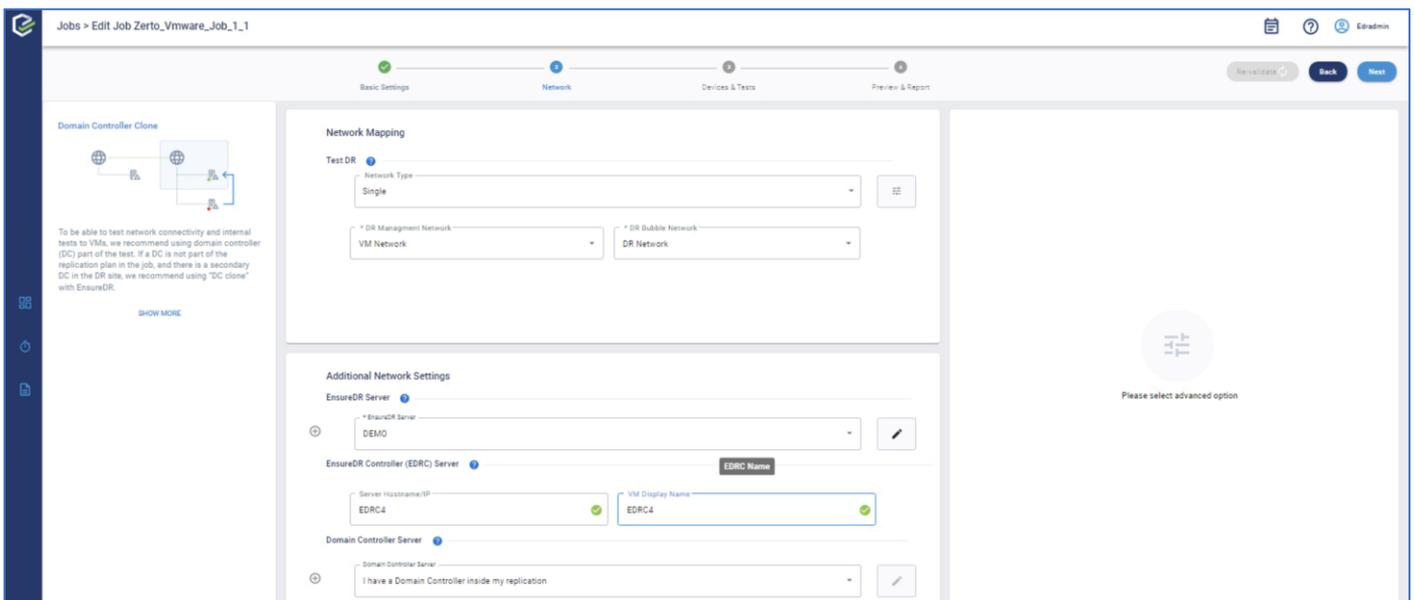
All other data needed for the job will be taken from your first job you created with the trial license. If the license key is valid, you can click the **Next** button to continue



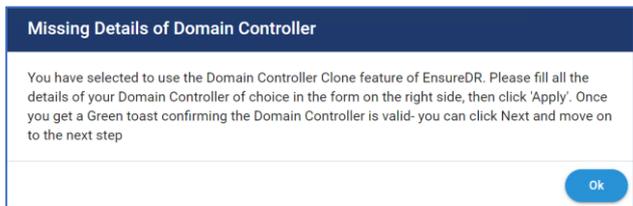
In the next step, we need to configure the management and isolated network on the DR site where you installed the EDRC server. Add the EnsureDR Controller (EDRC) VM and hostname, if the validation is successful, you can move on to configuring the Domain Controller. You can choose between two possible options:

- Put the Domain Controller inside your data mover group
- Clone the Domain Controller

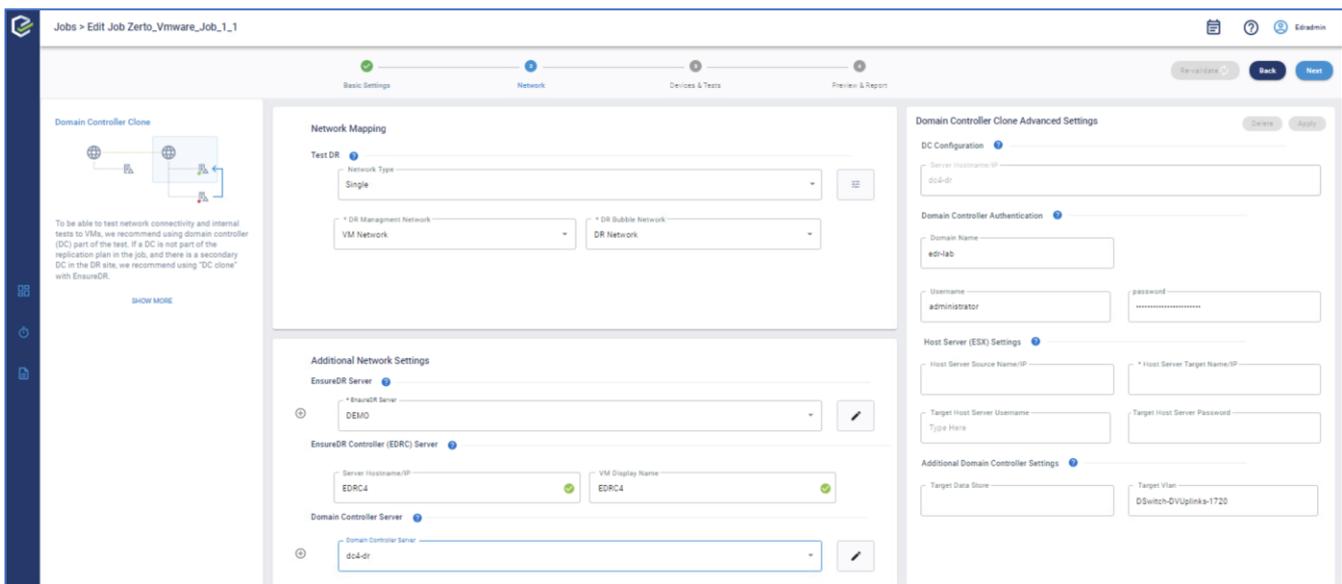
In case you configured your data mover to replicate the Domain Controller to the DR site, leave the default option and click the **Next** button.



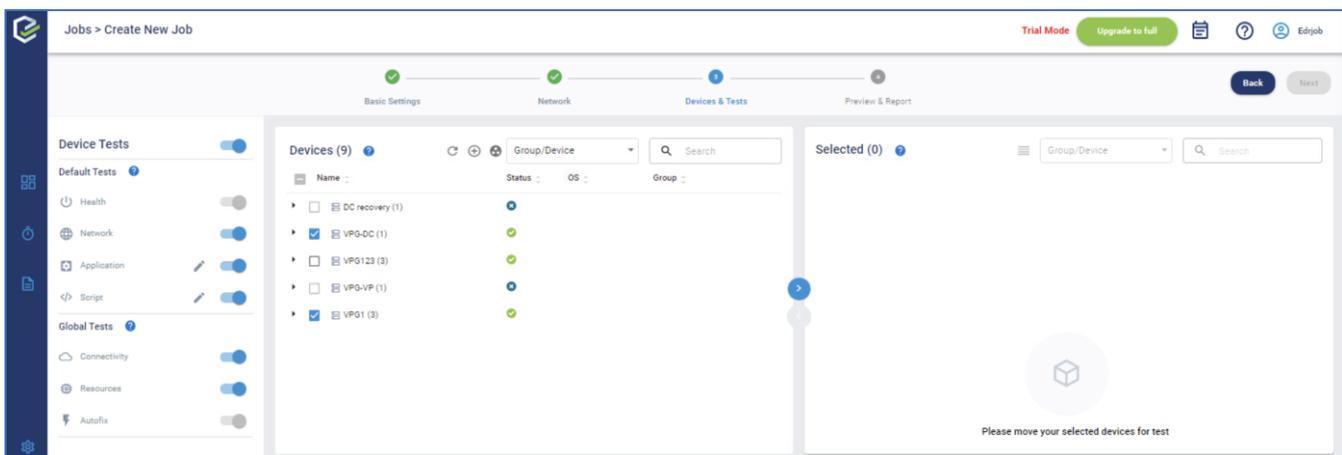
In case you are not replicating the Domain Controller inside your data mover, choose the Domain Controller which exists on the DR site by clicking on the server name from the drop-down list. The warning message will pop up:



In the right panel, fill in the requested data and then click the **Apply** button. If you choose to clone the server on the DR site during the job execution process, the EDRM will shut down the domain controller before taking the snapshot to avoid any issues inside your active directory during the test process. The domain controller will be in a shutdown state until the job is finished and the cloned domain controller is deleted. Only after that, the EDRM will Power On the domain controller. Because of this, our best practice is to have more than one domain controller inside the DR site to be more resilient during the cloning and testing process.



Click on the **Next** button to continue to the next step. Wait until the EDRM fetches data from your data mover, then select the desired group that you want to test, and click on the blue icon in a middle to move selected devices to the selection panel.

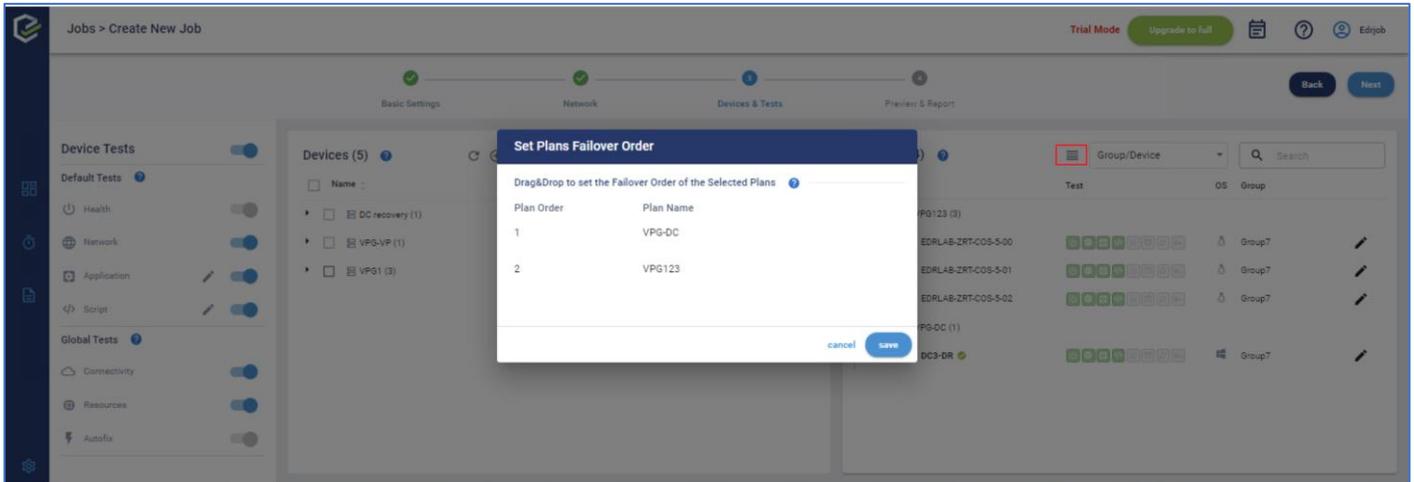


In the Device Test panel, you will see the list of the preselected tests that will be applied to all selected devices. Each server, by default, will be tested on four grounds:

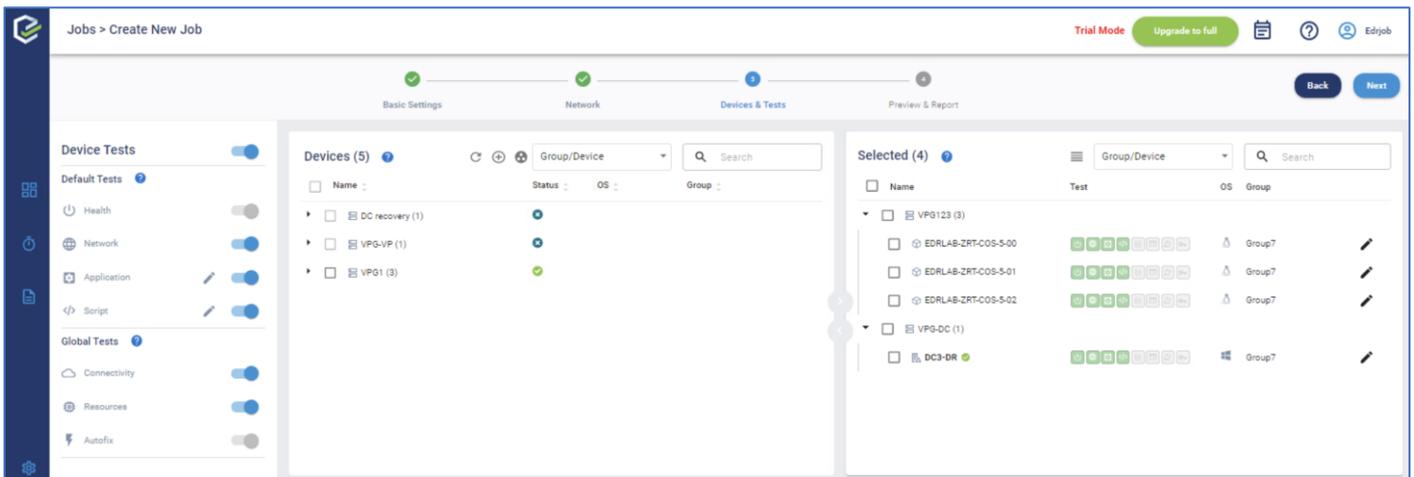
- health test
- network test
- application test

- script test

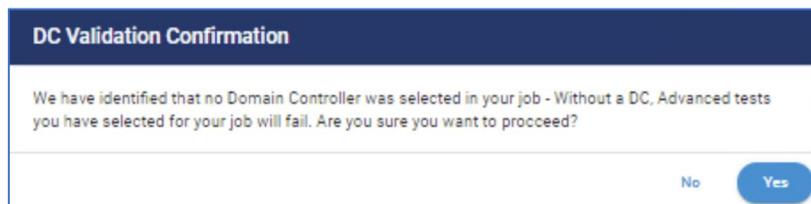
Before continuing to the last step, please check that your Domain Controller is in the first group that will failover inside the test isolated bubble network. This is a mandatory step that will enable you to successfully test all other servers that rely on a domain controller. Click on the red marked option to open **Set Plans Failover Order** window. If the group that contains Domain Controller is not first on the list, please click and hold the mouse button on the desired group, then drag it on the top of the panel. Now Domain Controller is now planned to be in the first group that is tested. Click the **Save** button.



Now that all of the settings are configured, click on the **Next** button.

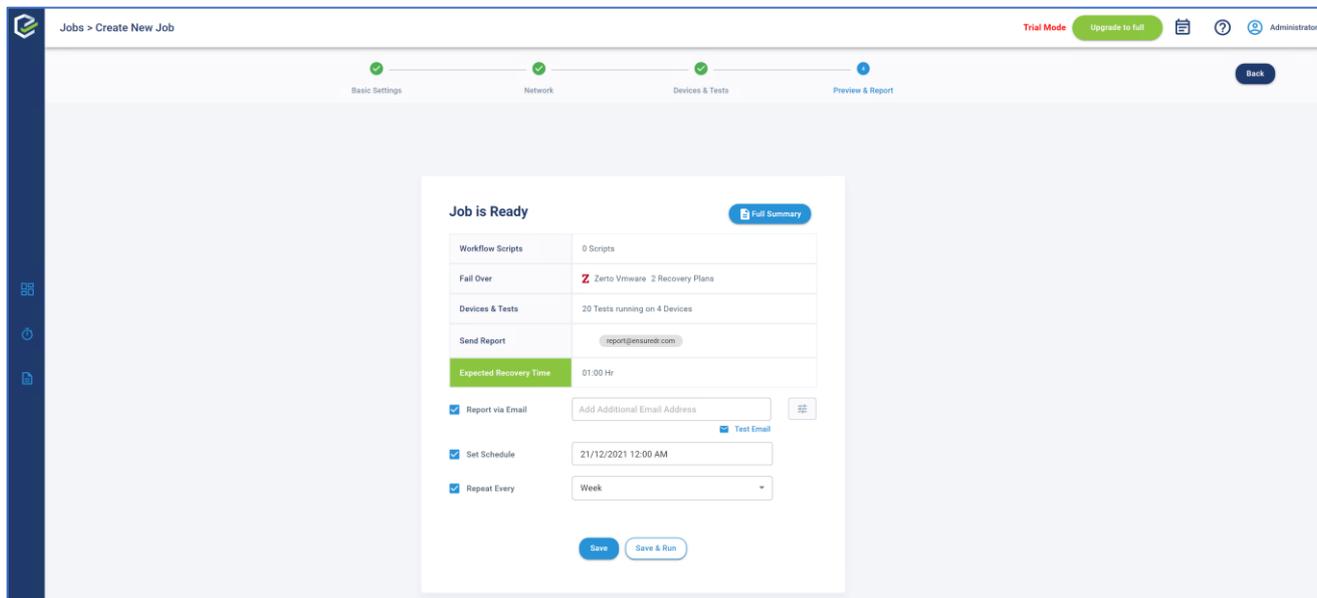


In case a warning message pops up, it will probably be caused because you selected the group that doesn't include the Domain Controller. Because the Domain Controller is mandatory for the test to succeed, review your groups and make sure that you include at least one Domain Controller. In cases where you are testing a Linux server that does not rely on Domain Controller, click the **Yes** button to continue.



On the last page, you can enter an email address that the EDRM will use to send an offline HTML report after the job is finished. EnsureDR will use our external SMTP server. If this server is not connected to the internet or port 25 is blocked, you can set your internal STMP with the **setting** button to the right. You can set the scheduler to run the recurrent job on a weekly basis. Click the **Save & Run** button to execute the job you created.

Note: Only one EnsureDR job can run on the same EDR server. You can either use multiple EDR servers or set different schedules for each job.



Wait until the job is finished and a report is created. Click on the **Full Report** button to get details regarding tests that are performed within the job, review the test results. In case of issues found within the report, take steps to fix the issues that the EDRM reported as unsuccessful during the testing process. In the report, you can investigate if a test failed and get more info within the logs by pressing the **Full Log** button.

