Quick Start Guide for AWS (Linux)

Arcserve® Live Migration



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Contents

Chapter 1: Introduction	5
Overview	6
Terminologies	7
Requirements	9
Software Compatibility	10
Chapter 2: Perform Live Migration	11
Install Components on Master	12
Installing Control Service	13
Installing Engine	20
Configure Amazon EC2	24
Provision VA on Amazon EC2	25
How to Convert Your Private Key using PuTTYgen	34
How to Connect to the Linux Instance using PuTTY	38
Install Engine on Replica	43
Create Full System Scenario for Amazon EC2	44
Creating Full System Scenario for Amazon EC2	47
Perform Assured Recovery Testing	59
Perform Cut off/Switchover	62

Chapter 1: Introduction

Arcserve Live Migration simplifies the process of migrating data, applications, and workloads. It allows you to move virtually any type of data or workload to cloud, on-premises, or remote locations, such as the edge, with support for virtual, cloud and physical systems. An assured validation of the migrated workload completes the process of enabling customers to continue operations without risks of losing data.

You can easily migrate:

From	То
On-premises	Cloud
Cloud	Cloud
Cloud	On-premises
Physical	Physical
Physical	Virtual
Virtual	Virtual

Live Migration provides the following:

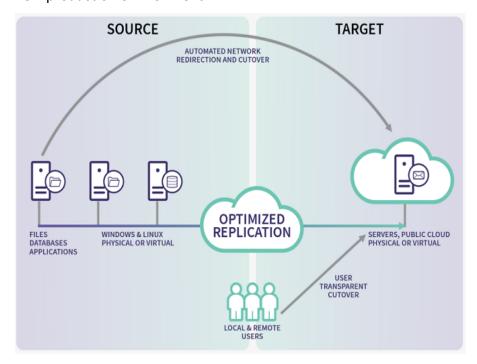
- Unlimited use of the Arcserve Live Migration technology enhanced by Arcserve Continuity Suite.
- Every source that you plan to migrate requires 1 license.
- Seamless access to the entitled software for a period of 90-days.
- On expiry of the license, new scenarios cannot be started, but the existing ones will continue.
- For each license, Live Migration provides free of cost technical assistance for two incidents.

Note: Arcserve currently does not provide professional services to help you with implementation, deployment, and any other migration services.

Overview

Arcserve Live Migration automatically synchronizes files, databases, and applications on Windows and Linux systems with a second physical or virtual environment located on-premises, at a remote location, or in the cloud. After synchronization, changes are replicated in real time to ensure the source and target are in sync prior to the migration.

Encryption enables secure data transfers between local systems and remote locations without the need for a VPN, and automated network redirection makes the switchover process seamless with push-button cutover to ensure availability to the new production environment.



Your typical migration process includes the following steps:

- Install Components on Master
- Configure Amazon EC2
- Provision VA on Amazon EC2
- Install Engine on Replica
- Create Full System Scenario for Amazon EC2
- Perform Assured Recovery Testing
- Perform Cut off/Switchover

Terminologies

This document uses the following terminologies:

- Virtual Appliance: This is a virtual machine that acts as the Replication/Migration proxy server (install the Arcserve Continuity Suite Engine here and deploy on the hypervisor/cloud destination). If you are using a Hyper-V virtual platform, the Virtual Platform Hostname/IP field is disabled (appears dim).
- Control Service: Control Service is a management component of Arcserve Continuity Suite. It is a Windows based service that must be deployed first. It hosts web-based information portal and rich Management UI, which is used for creating and monitoring migration scenarios.
- Engine: Replication Engine is a background service that moves data from source to destination during migration. Install the Engine on any source that you plan to migrate. You may use the Remote Installer feature to mass deploy Engines.
- **FSHA:** Full System High Availability (FSHA) is a scenario type that allows replication and fail-over of full server. This scenario type is used for migrating full systems.
- Management UI: A UI that you use for creating and managing replication/migration scenarios. The Control Server hosts the Management UI. To start the Management UI, log into the Management Portal.
- Master (Source): A host/computer that you want to migrate. You can migrate the whole system using the full system migration scenario or the host containing the applications.
- **PowerShell:** Arcserve offers PowerShell Command Line Interface as an alternative if you do not want to manage the replication process using the Manager graphic user interface.
- Replica (Target): In case of full system migration, VA (replication proxy) serves as a Replica. Upon completion, VA spins off new VM containing replicated disks or data. For application-based scenarios, the VA hosts and runs replicated application and data.
- Scenario: A configuration unit describing migration job/task. You can create and manage scenarios using rich management GUI or PowerShell CLI. Scenarios contain key information about replication/migration jobs to be performed.

- **Switchover:** The cutover to the newly migrated workload from where the operations can begin.
- Synchronization: The process of making the set of files identical on the Master and Replica servers. It is usually necessary to synchronize the Master and Replica as the initial step of a replication/migration scenario.
- Virtual Platform Host: The machine that hosts the Appliance VM, which acts as a Replica server. Based on the scenario type, it acts as a local hypervisor or cloud platform (AWS or Azure).

Requirements

Before you migrate, make sure to meet the following requirements:

Arcserve Live Migration supports both Windows and Linux operating systems for Full System migration scenarios. If the source host is Windows, then the Virtual Appliance (VA) must be Windows; if the source host is Linux, then the VA must be Linux as well.

Note: Before deploying Arcserve Live Migration scenarios, see <u>Limitations</u> in Release Notes.

When migrating workloads to AWS, corresponding AWS cloud credentials must be registered in Arcserve Continuity Suite Management UI.

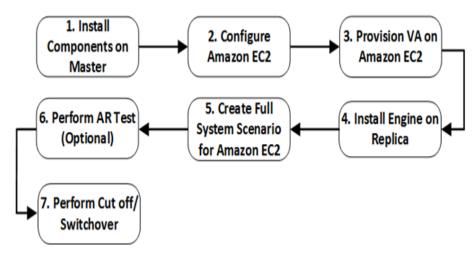
Software Compatibility

For more information about compatibility, see **Compatibility Matrix**.

Note: Make sure that your source OS and application versions are explicitly listed on the support matrix.

Chapter 2: Perform Live Migration

The following flowchart provides the Live Migration process given in this document:



Install Components on Master

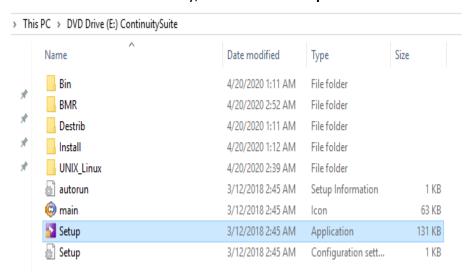
This section describes how to install the Arcserve Continuity Suite Control Service and Engine on Master.

Installing Control Service

The Control Service component functions as the single-point-of-control that contains the entire dataset of the existing scenarios. Control Service communicates with the Engines and the Managers. It is responsible for the management of all scenario-related-tasks, such as creation, configuration, monitoring, and running of the scenarios.

To install Control Service, follow these steps:

- 1. Download RHA iso for Continuity Suite, and then open the folder.
- 2. From the mounted directory, double-click **Setup**.



3. On the Arcserve Continuity Suite installation wizard, click **Install Components**.

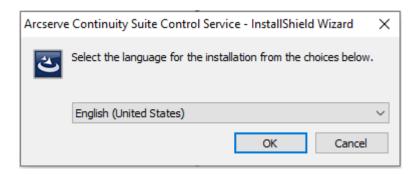


The wizard displays the components.

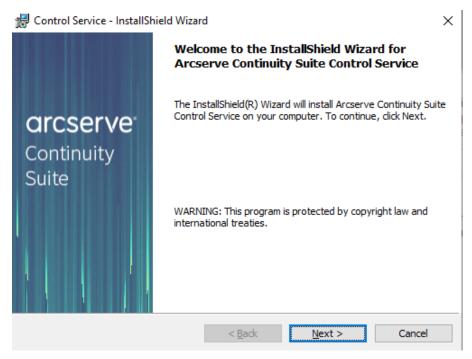
4. Click Install Control Service.



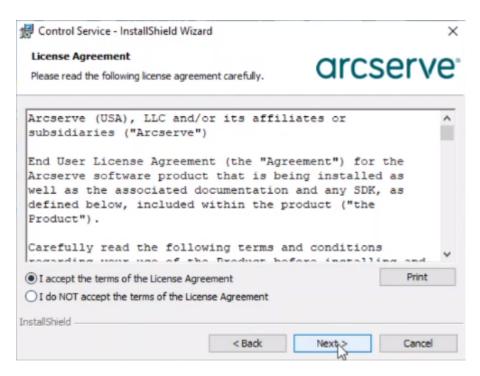
5. On the Arcserve Continuity Suite Control Service - InstallShield Wizard, from the drop-down list, select your preferred language, and then click **OK**.



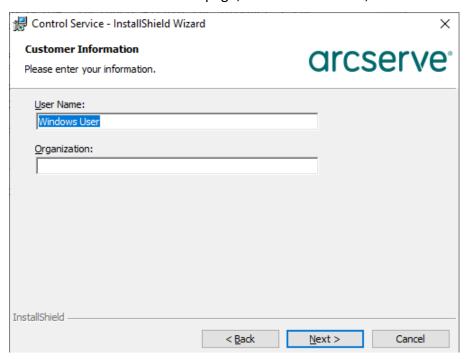
After the initial process is complete, the Welcome page appears.



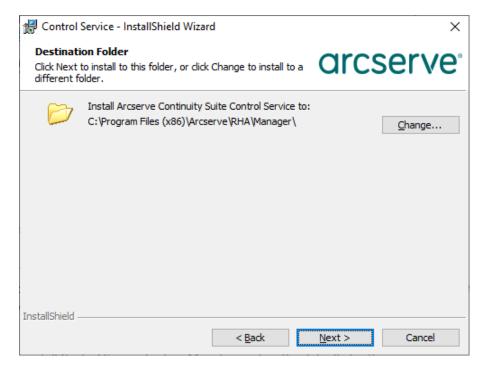
- 6. Click Next.
- On the License Agreement page, read the terms of the License Agreement, select the I accept the terms of the License Agreement option, and then click Next.



8. On the Customer Information page, enter a user name, and then click **Next**.



9. On the Destination Folder page, retain the defaults, and then click **Next**. To change the destination folder, click **Change**.

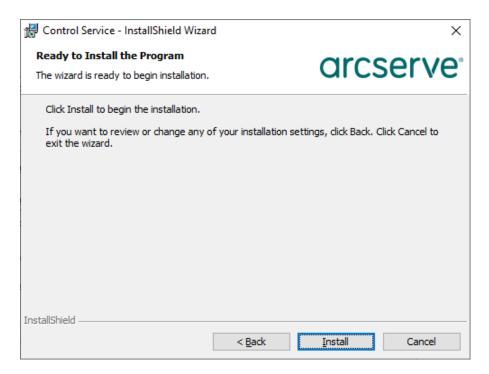


Note: The default installation directory is: *C:\Program Files (x86)\Arc-serve\RHA\Manager*. All executables, DLLs and configuration files are located within the INSTALLDIR.

10. For the upcoming screens, retain the defaults, and then click **Next** to continue.

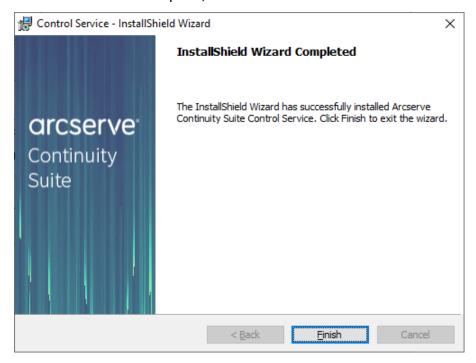
Note: For more information about how to configure SSL Configuration, Service Logon Information, and Control Service Role, see <u>Install a Control Service</u> for a Standard Operation.

11. On the Ready to Install the Program page, click **Install**.



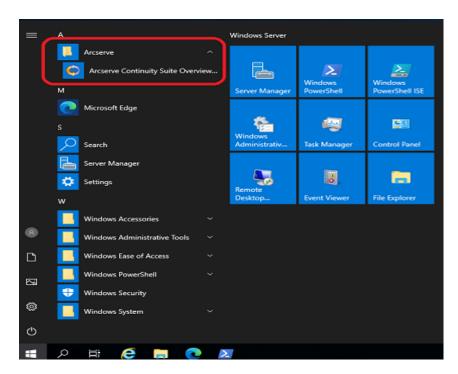
Note: Click the **Back** button to return to the previous pages and change any configuration as needed.

12. After installation is complete, click **Finish** to close the wizard.

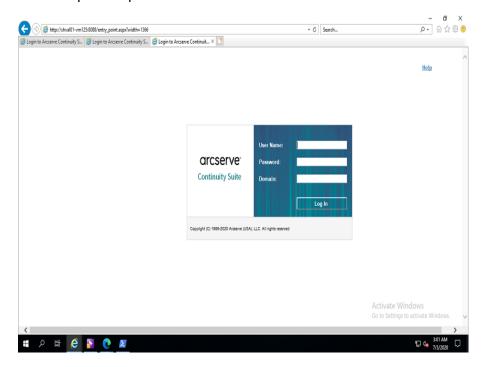


The Arcserve Continuity Suite Control Service is installed.

13. To open Control Service in a web portal, go to **Start > Arcserve > Arcserve Continuity Suite Overview**.



The web portal opens in a browser.



Installing Engine

Make sure that the Engine component, which is a service, is running before you start any scenario. Install Engine on every server participating in any given scenario such as the Master (source) and Replica (target) hosts. Each Engine supports both Master and Replica functionality in addition to both Replication and High Availability scenarios. It may participate in multiple scenarios and serve in a different role for each scenario. You can install Engines one by one locally on each host, or concurrently through a remote installer on numerous hosts. You can also install it during scenario creation if needed.

To Install Engine, follow these steps:

1. To extract installation package and start the engine installation, copy *arc-serverha.tar* to your host, and then run the command as a root user.

Note: The script in the following example uses the command for installation of RHEL 8 package.

tar xvf arcserverha.tar && tar zxf arcserverha-18.3-0.7024.rhel8.tgz && cd arcserverha && ./install.sh

The installation script for the Continuity Suite Engine is install.sh. When you run this script without any option, it initiates the interactive installation process. For silent or non-interactive installation, use install.sh -q or install.sh -y. The following illustration lists additional customization options that you can use with install.sh.

```
Usage:
   install.sh [options]
Where options is
   -L, --license=<Agree/n> Agree to license*
   -c|g, --caarha-group=<Y/n> Create caarha group if it does not exist.
   -o, --enable-oracle=<y/N> Enable oracle support (default is no)
         --oracle-user=<user> Specfiy oracle user (req'd for oracle support)
        --ora-home=<path> Force ORACLE_HOME if not in user's environment
        --ora-base=<path> Force ORACLE_BASE if not in user's environment
         --install
                              Install Arcserve Continuity Suite (Answer 'yes' to install)
   -q|y, --quiet
                              Perform a default installation.
                                - ack and don't display license
                               - ensure caarha group exists or is created
                               - oracle support is not installed

    language is auto detected.

   -l, --language=<lang>
                               Specify language, default is C.UTF-8
   -f, --firewall
                               Open firewall port 25000
    -v, --virtual
                               Install Virtual Appliance packages."
       --force
                               Install even if scenario is running."
 OTE: You must be an admin (root) to install.
```

2. To provide your consent during interactive installation, do the following:

a. To continue with the installation and accept End User License Agreement, type YES and press Enter.

```
Do you accept Arcserve End User License Agreement?[YES]yes
```

b. If you already have the Continuity Suite Engine previously installed, a prompt appears that needs your confirmation for product upgrade. To upgrade, type YES and press Enter.

```
Continuity Suite 18.0-0.5503 is already installed.
Do you want to upgrade Continuity Suite to 18.3-0.7024?[YES]
```

c. If you plan to use the given host as proxy and install Virtual Appliance packages in Full System HA scenarios, type YES and press Enter.

```
Install packages needed to act as Virtual Appliance for Full System HA?[NO]yes
```

d. To confirm user group creation for Continuity Suite Engine, type YES and press Enter.

Note: By default, only a root user can authenticate and manage Continuity Suite Engine. Non-root users must be listed in the group to be able to authenticate and manage Continuity Suite Engine.

```
Create "caarha" group?[YES]yes
```

e. To replicate Oracle and enable its support, type YES and press Enter. The default option is NO.

```
Enable Oracle support[NO]
```

f. To select the language, type the number corresponding to the specified language, and then press Enter.

```
Please select language to be used:

1 - Chinese (Simplified)

2 - Chinese (Traditional)

3 - English (United States)

4 - French (France)

5 - German (Germany)

6 - Italian (Italy)

7 - Japanese

8 - Portuguese (Brazil)

9 - Spanish (Traditional Sort)

Please select your language [3]
```

g. To allow firewall port to be opened for the engine, type YES and press Enter.

The default port value is 25000.

Note: If you plan to use a different port, type NO and later change the engine port manually in the /opt/Arcserve/RHA/bin/ws_rep.cfg file, and then open the corresponding firewall port.

Open firewall port 25000? [YES]

h. If you want to enable latest product updates, type YES and press Enter. The default option is NO.

Check for latest product updates (recommended)?[NO]

- 3. Do the following NAT settings:
 - a. On the Master server, run the following command in /op-t/Arcserve/RHA/bin:

./natutl

- b. To check if any machines are added, run the following command:

 nat.list
- c. To add the NAT settings, run the following command:

nat.addhost <VA IP address> 25000

- d. To apply the NAT settings, run the following command: nat.apply
- e. To check whether the Master can communicate, run the following command:

telnet <VA IP address> 25000

Notes:

- If you decide to enable Oracle support, you must provide information such as Oracle Owner, Oracle Home path, and Oracle Base path. The Oracle Owner is primarily required as it allows the product to retrieve the Home path and Base path information using the Oracle Owner user environment. If the Home path and Base path information cannot be found, then you must manually add them. On Solaris, if your Oracle server is installed without the 32-bit Oracle client library, then you must also provide the Oracle Instant Client path.
- Although the Arcserve Continuity Suite package is installed, you are prompted to reinstall it.
- ◆ To allow non-root users to manage scenarios, you must create the "caarha" group on your machine and make sure the group works with the supplementary group.



Configure Amazon EC2

The Arcserve Replication and High Availability VA virtual machine resides in VPC (default or customized), and the Master servers are replicated to that VPC.

Note: To set up VPC, subnets, IP gateway, and so on according to your DR network requirements, see the Amazon online help.

Consider the following before deploying EC2-based Full System scenarios:

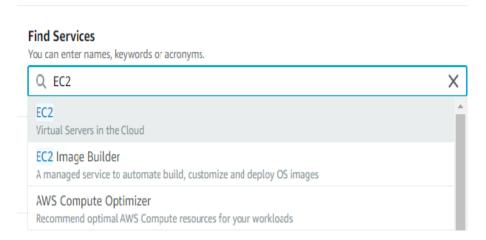
- Arcserve Replication and High Availability needs the Access Key ID and Secret Access Key of Amazon EC2 account to work with EC2. You can get the required information from your administrator.
- The Amazon EC2 user in Arcserve Replication and High Availability should have required permissions. For more information, see the Arcserve KB article.
- If you want Arcserve Replication and High Availability to start the DR VM with a specific public IP address, pre-allocate such Elastic IPs in the Amazon EC2 web portal. Later in the Network Mapping dialog of Continuity Suite Scenario, you can select a public IP from the existing Elastic IP addresses for the DR VM.

Provision VA on Amazon EC2

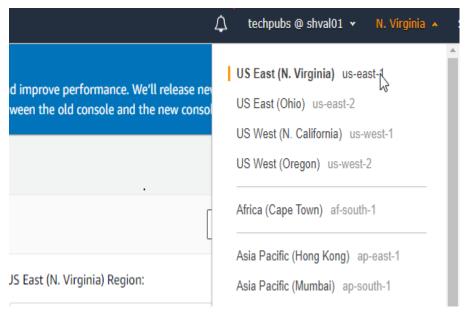
The Continuity Suite Virtual Appliance (VA) is a VM running on the virtualization platform or cloud where you want to replicate the Master servers. The VA acts as Replica in a Continuity Suite Full System scenario. The Master server is replicated to this virtualization platform or cloud. However, the Disaster Recovery VM of Master server starts and runs on this virtualization platform or cloud for multiple reasons, such as Assured Recovery testing, Switchover, and Start VM.

Follow these steps:

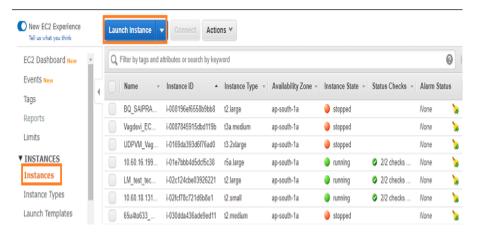
- 1. Log into Amazon Web Services as an IAM user.
- 2. Under Find Services, search for EC2, and then select EC2.



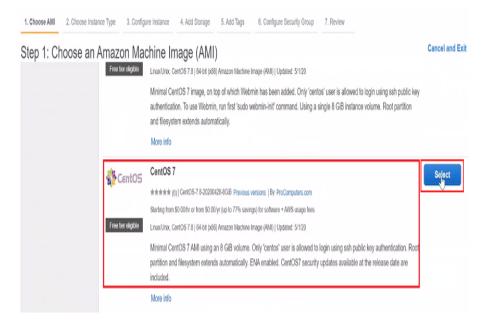
3. On the top right corner of the EC2 dashboard, select the AWS region in which you want to provision the EC2 server.



4. On the left panel, go to Instances, and then click Launch Instance.

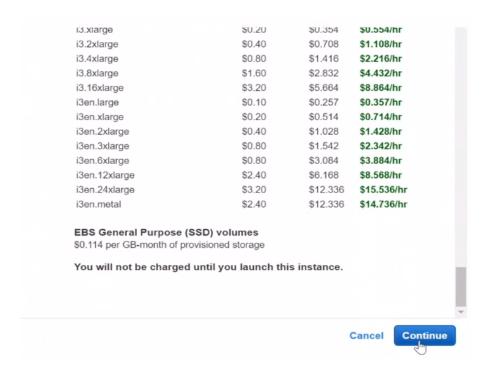


5. On the Step 1: Choose an Amazon Machine Image (AMI) page, from the list of AMI, for CentOS 7, click **Select**.

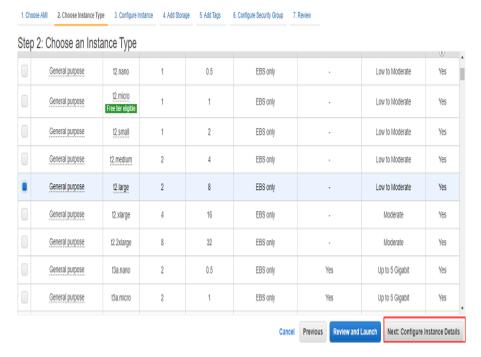


The CentOS details page appears.

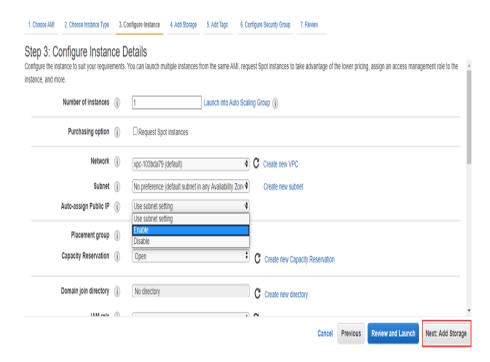
6. Scroll down to the bottom of the page,, and then click **Continue**.



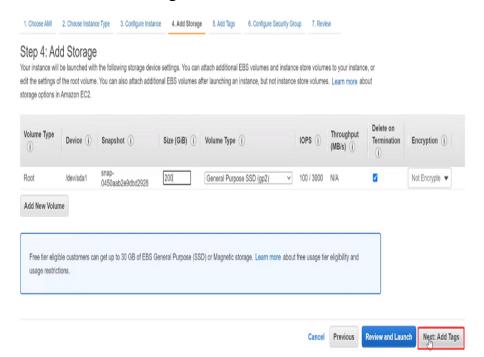
7. On the Step 2: Choose an Instance Type page, select an instance type, and then click **Next: Configure Instance Details**.



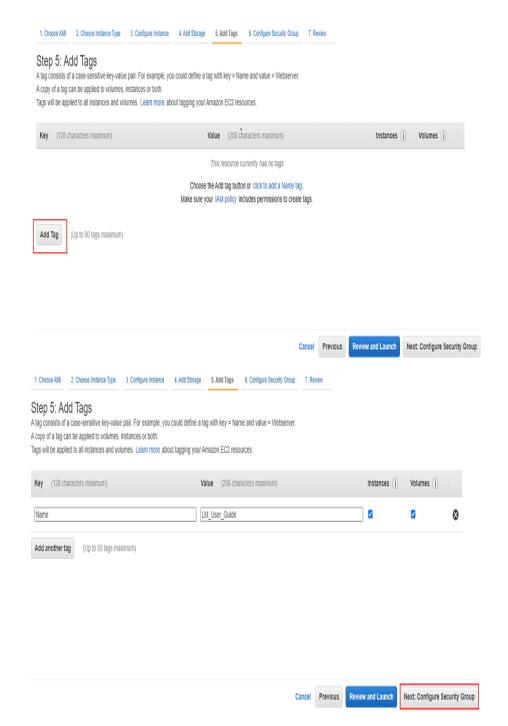
8. On the Step 3: Configure Instance Details page, select **Enable** from the Autoassign Public IP field, and then click **Next: Add Storage**.



9. On the Step 4: Add Storage page, type the size of VA in the Size field, and then click **Next: Add Tags**.



10. On the Step 5: Add Tags page, click **Add Tag**, enter the Key and Value, and then click **Next: Configure Security Group**.



11. On the Step 6: Configure Security Group page, click **Add Rule**, enter the following values, and then click **Review and Launch**:

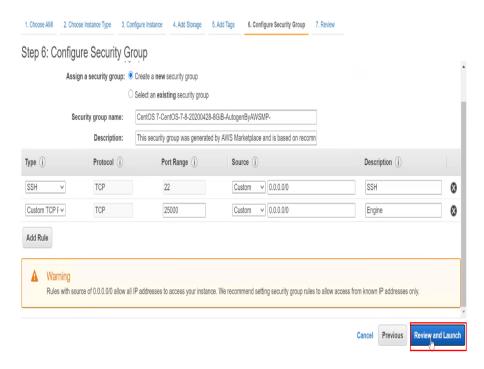
Type: Custom TCP Rule

Protocol: TCP

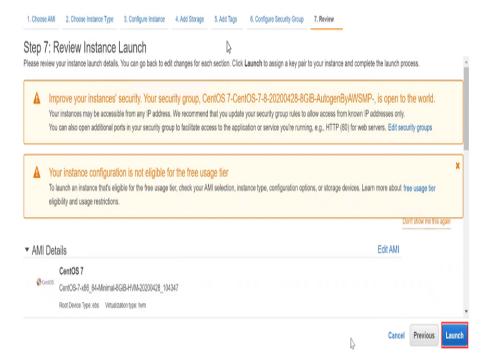
Port Range: 25000

Source: 0.0.0.0/0

Description: Engine

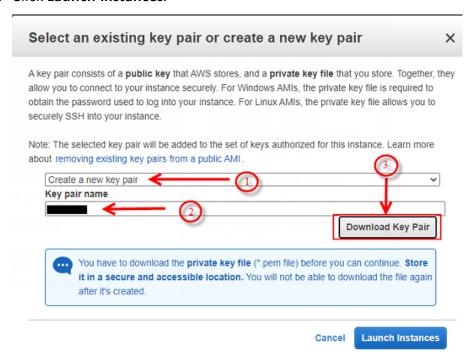


12. On the Step 7: Review Instance Launch page, review the information, and then click **Launch**.



13. On the Select an existing key pair or create a new key pair page, do one of the following, and then click **Launch Instances**:

- To create a new key pair, follow these steps:
 - 1. From the drop-down list, select Create a new key pair.
 - 2. Enter key pair name.
 - 3. To save the key pair, click the **Download Key Pair** button.
 - 4. Click Launch Instances.

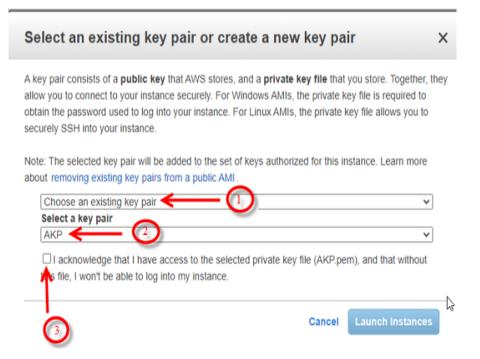


Note: To connect to your EC2 instance, we recommend that you download the key pair. If you launch your instance without a key pair, you cannot connect to your instance.

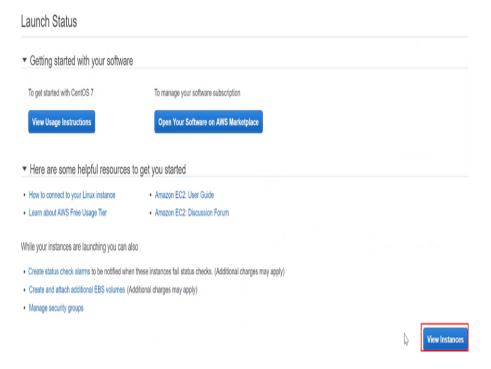
Important! Copy and save the private key file in a safe place as you cannot download it later.

- To select an existing key pair, follow these steps:
 - 1. From the drop-down list, select **Choose an existing key pair**.
 - 2. From the Select a key pair drop-down list, select as needed.
 - 3. Select the acknowledgment check box, and then click Launch

Instances.



14. On the Launch Status page, scroll down to the bottom of the page, and then click **View Instances** to return to the console.



The Instances page displays the status of your instance. When the instance is launched, its initial state displays as pending. After the instance starts, the state changes from pending to running.

Notes:

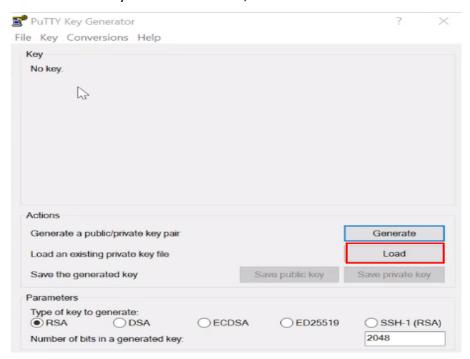
- You can connect to your instance only after the Status Checks changes to 2/2.
- To connect to your instance, see <u>How to connect to the Linux Instance using PuTTY</u>.

How to Convert Your Private Key using PuTTYgen

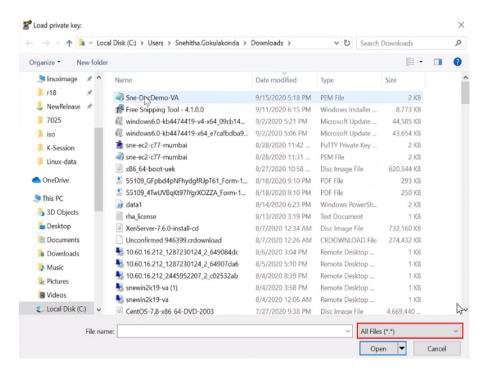
This section provides information about how to convert your private key using PuTTYgen.

Follow these steps:

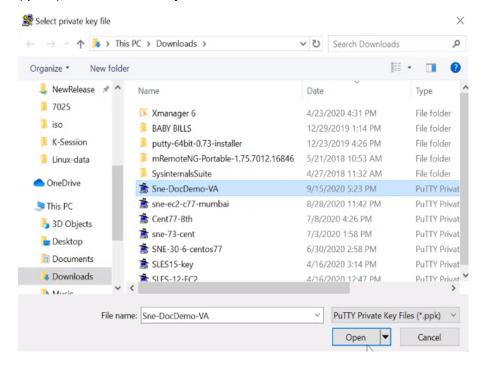
- 1. Search for PuTTYgen in the search bar next to the start menu, and then click **PuTTYgen**.
- 2. On the PuTTY Key Generator screen, click Load.



- 3. On the Load private key: window, to locate your .pem file, do the following:
 - a. From the drop-down list in the lower-right corner of the window, select **All Files (*. *)**, type the file name, and then click**Open**.

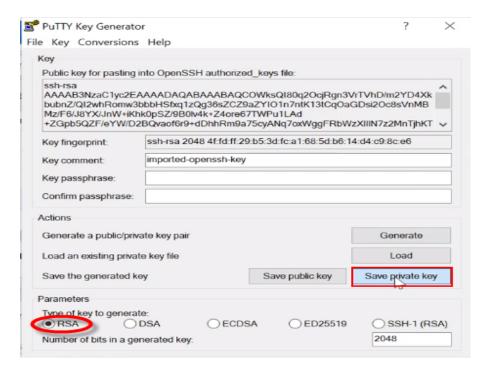


b. On the Select private key file screen, select your private key file (.pem), and then click **Open**.



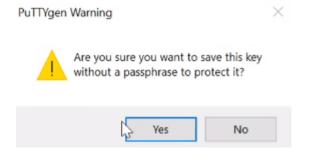
The PuTTYgen Notice dialog appears.

- 4. To close the PuTTYgen Notice dialog, click **OK**.
- 5. On the PuTTY Key Generator window, under Parameters, for Type of key to generate, select RSA, and then click **Save private key**.

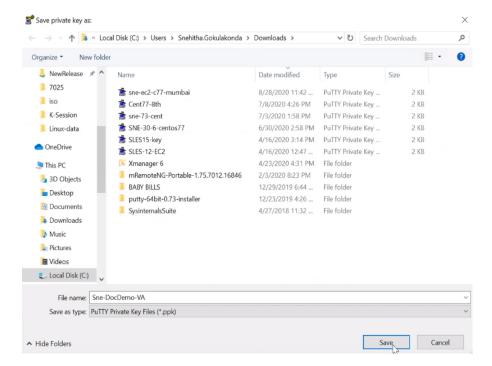


The PuTTYgen Warning dialog appears.

6. Click **Yes** to save the key without a passphrase.



7. On the Save private key as: window, navigate to the location you want to save your PuTTY Private Key file (.ppk). For File name, type the same name for the key that you used for the key pair, and then click **Save**.



Close the PuTTY Key Generator window.

You can now connect to your instance using PuTTY's SSH client.

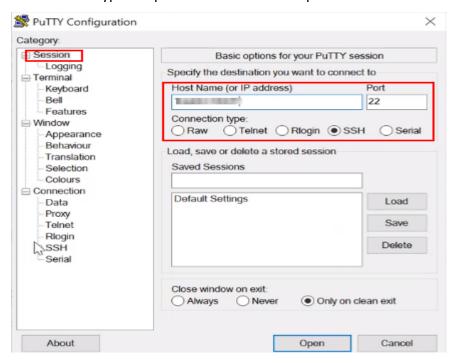
How to Connect to the Linux Instance using PuTTY

This section provides information about how to connect to the Linux instance using PuTTY.

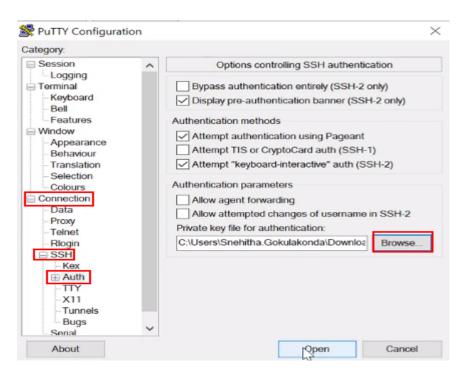
Note: PuTTY does not support the private key file (.pem) created during the instance launching process. Before connecting to your Linux instance using PuTTY, you need to convert your private key file (.pem) into the PuTTY required format (.ppk). To convert your private key into the PuTTY required format, see How to Convert Your Private Key using PuTTYgen.

Follow these steps:

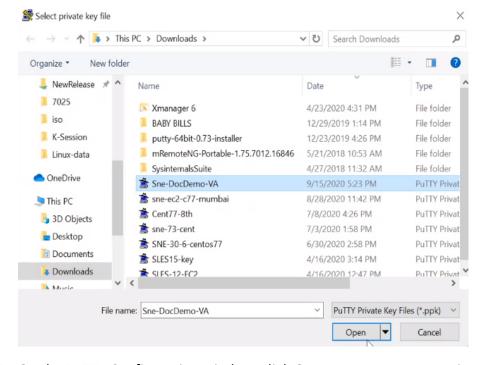
- 1. Search for PuTTY in the search bar next to the start menu, and then click **PuTTY**.
- 2. In the Category pane, select **Session**, and do the following:
 - Host Name (or IP address) Type the IP address or host name.
 - Connection type Select SSH as connection type.
 - Port Type the port value. The default port value is 22.



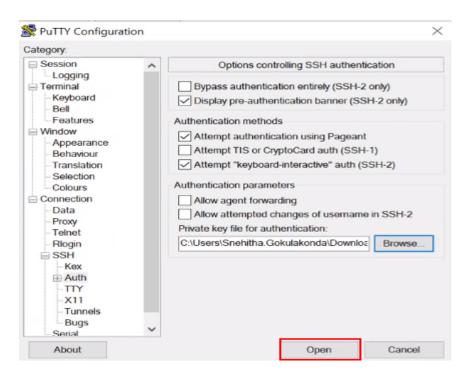
3. In the Category pane, navigate to **Connection** -> **SSH** -> **Auth**, and then click **Browse**.



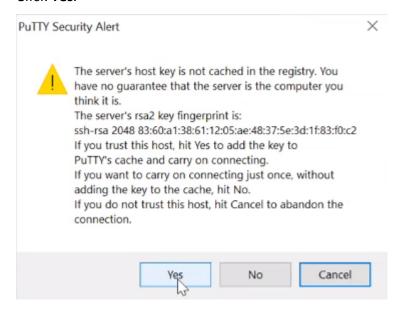
4. On the Select private key file window, select the private key file (.ppk) that you previously generated, and then click **Open**.



5. On the PuTTY Configuration window, click **Open** to connect to your instance.



6. If you are connecting to the instance for the first time, PuTTY displays a security alert message asking whether you trust the host you are connecting to. Click **Yes**.



A window opens and you are connected to your Linux instance.



7. Do the following:

- To change the password for root user, run the following command:
 sudo passwd
- b. To open the sshd server system-wide configuration file, run the following command:

sudo vi etc/ssh/sshd_config

c. To permit root login, type Yes. The default option is Yes.

```
PermitRootLogin yes
```

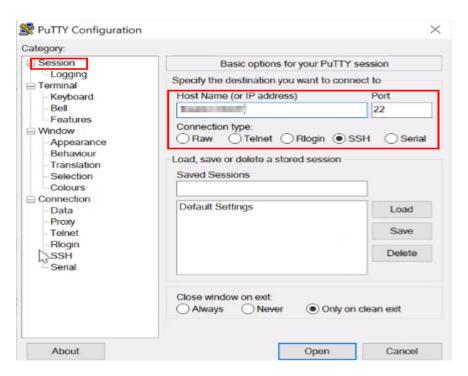
d. To allow password authentication, type Yes. The default option is No.

```
PasswordAuthentication no
```

Type Yes, and run the following command:

sudo systemctl restart sshd

- 8. Open a new PuTTY session, do the following, and then click **Open**:
 - Host Name (or IP address) Type the IP address or host name.
 - Connection type Select SSH as connection type.
 - Port Type the port value. The default port value is 22.



9. Log into the VM as a root user.

10. To transfer files to your Linux instance, use WinSCP. For more information, see Transferring Files to Linux Instance using WinSCP.

Install Engine on Replica

To install Engine on Replica server, see <u>Installing Engine</u>.

Create Full System Scenario for Amazon EC2

Arcserve Live Migration supports both Windows and Linux for Full System scenario. If the source server is Windows, then the Virtual Appliance (VA) must be Windows. If the source server is Linux, then the VA must be Linux as well.

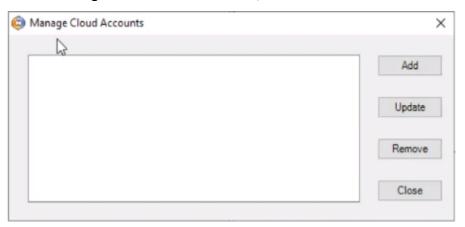
Before you create a scenario, add Amazon EC2 Cloud Account in Continuity Suite Manager.

To Add an Amazon EC2 Cloud Account in Continuity Suite Manager, follow these steps:

1. On the Continuity Suite Manager, navigate to **Cloud > Manage Cloud Accounts**.

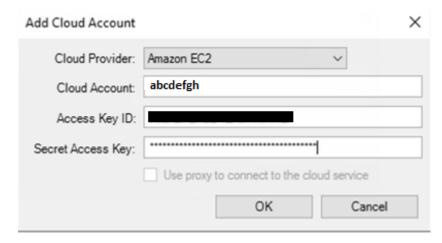


2. On the Manage Cloud Accounts screen, click Add.



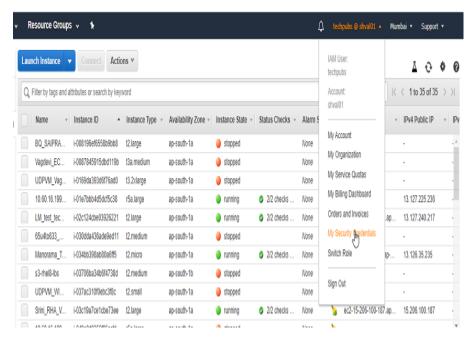
- 3. On the Add Cloud Account screen, enter the following details in the required fields, and then click **OK**.
 - Cloud Provider Select Amazon EC2 as a Cloud Provider.
 - Cloud Account Enter the account name you had defined while creating the AWS account.
 - Access Keys (access key ID and secret access key) Access keys are long-term credentials for an IAM user or the AWS account root user. Access Key Id (for example, AKIAIOSFODNN7EXAMPLE) and Secret Access Key (for example, wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY) are used to sign

programmatic requests to the AWS CLI or AWS API, like a user name and password are used to access your AWS Management Console.

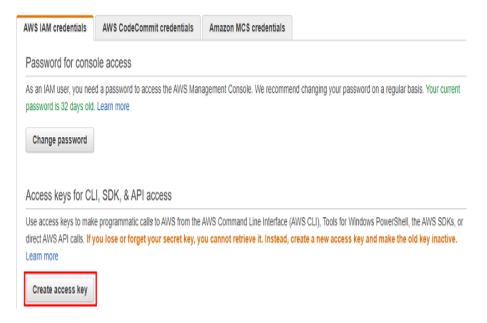


To generate Access Keys, follow these steps:

a. On the top right corner, go to your Amazon account name, and then select **My Security Credentials**.



b. On the My security credentials page, click the **Create access key** button.



Important! If you lose or forget your secret access key, you cannot retrieve it later. Instead, create a new access key, and make the old key inactive.

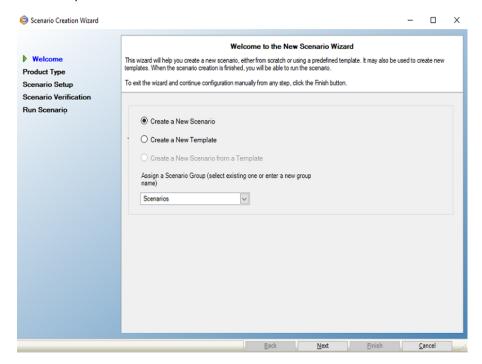
The Amazon EC2 account for Live Migration is now configured.

Creating Full System Scenario for Amazon EC2

This section provides instructions on how to create full system scenario for Amazon EC2.

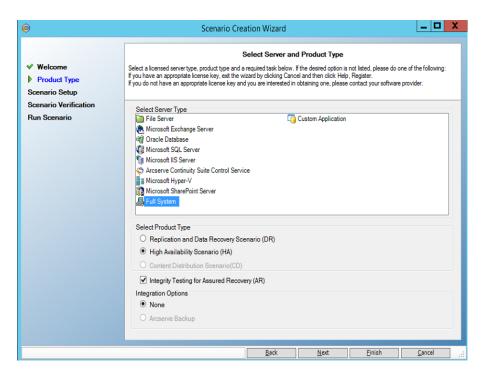
Follow these steps:

- 1. Open the Arcserve Continuity Suite Manager, navigate to **Scenario>New** or click the **New Scenario** button to launch the wizard.
- On the Welcome to the New Scenario Wizard screen, select Create a New Scenario, select a Scenario Group from the Assign a Scenario Group dropdown list, and then click Next.

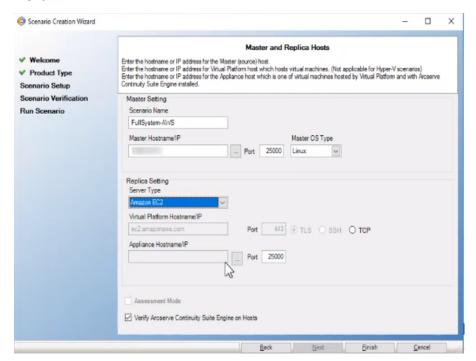


3. On the Select Server and Product Type screen, select Full System, High Availability Scenario (HA), and then click **Next**.

Note: To perform Assured Recovery testing, select the **Integrity Testing for Assured Recover (AR)** check box.



4. On the Master and Replica Hosts screen, do the following, and then click Next:

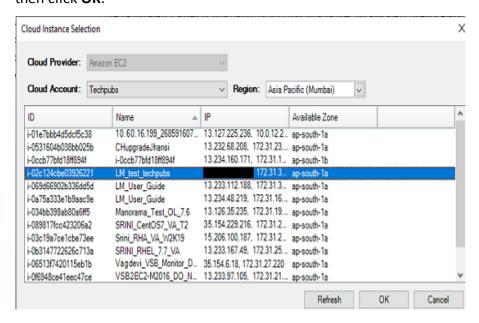


- Scenario Name Enter a Scenario Name. The default value is the scenario type, for example, Full System.
- Master Hostname/IP Enter the IP address of a physical machine you want to protect.
- Master OS Type Select Linux as the Master OS Type.

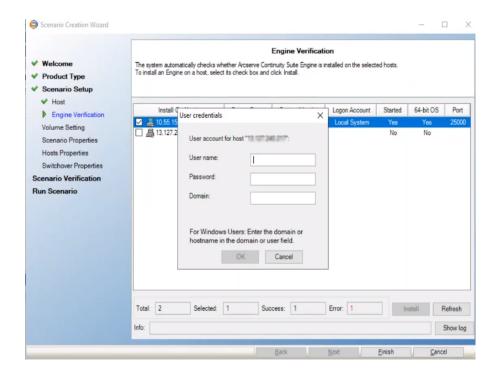
- Server Type Select Amazon EC2 as the Replica server.
- **Appliance Hostname/IP** Browse the Appliance Hostname/IP to select the Replica server.

Note: Use the **Verify Arcserve Continuity Suite Engine on Hosts** to verify the connectivity between Master and Replica. It verifies that the engines are installed on the Master. To skip verification, clear the check box.

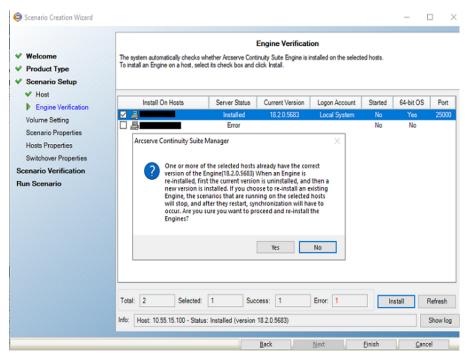
On the Cloud Instance Selection dialog, from the Region drop-down list, select the region. The list refreshes to display the relevant EC2 instances. From the list, select the EC2 instance you had created, and then click **OK**.



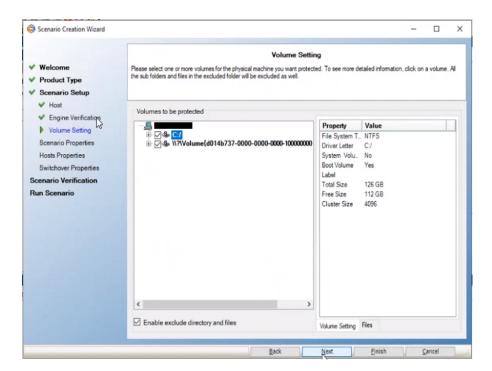
5. On the Engine Verification screen, the User credentials screen appears. Enter the User name and Password, and then click **OK**.



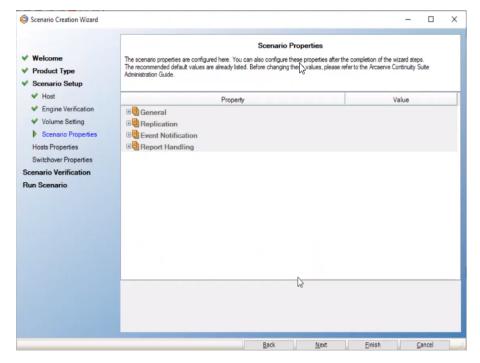
Wait for Engine verification to complete, and then click Next.



6. On the Volume Setting screen, select one or more volumes for the physical machine you want to protect, and then click **Next**.

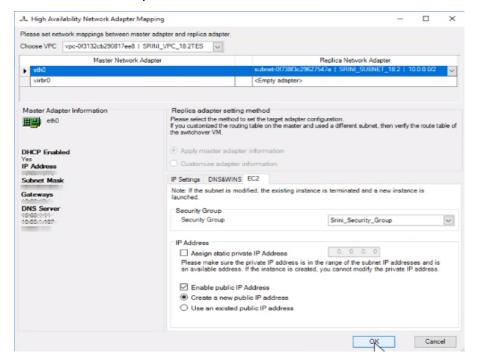


7. On the Scenario Properties screen, click **Next**.

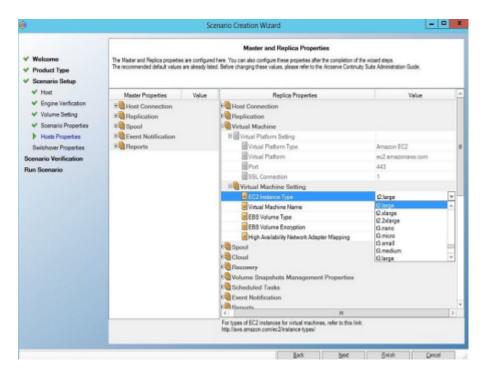


- 8. On the High Availability Network Adapter Mapping dialog, enter the following details, and then click **OK**.
 - Choose VPC -Select VPC from the drop-down list.
 - Replica Network Adapter Select the Replica network adapter from the drop-down list.
 - Security Group Select default from the drop-down list.

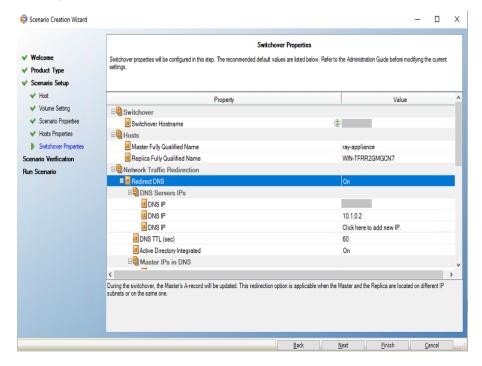
- IP Address Select one of the following:
 - Assign static private IP Address
 - Enable public IP address
 - If you want to create a new public IP address, enable the Create a new public IP address option.
 - If you want to connect to the virtual machine from outside your network, enable the Use an existed public IP address option.



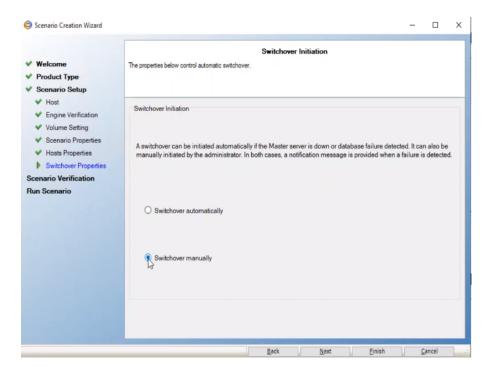
On the Master and Replica Properties screen, navigate to Virtual Machine > Virtual Machine Setting > EC2 Instance Type, select the instance type, and then click Next.



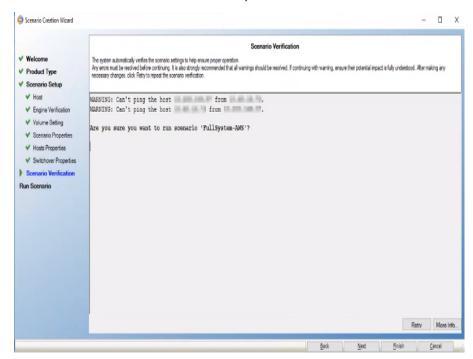
10. On the Switchover Properties screen, accept the default values or modify the values, and then click **Next**.



11. On the Switchover Initiation screen, specify if the switchover start automatically or manually, and then click **Next**.

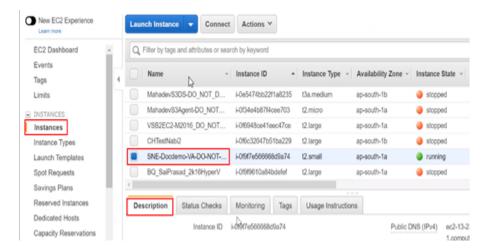


12. On the Scenario Verification screen, click Next.

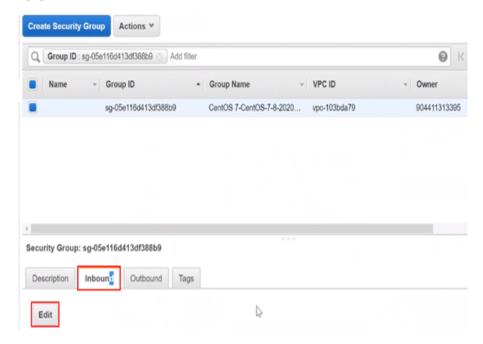


If the Master and Replica servers fail to ping each other, do the following ICMP settings:

a. On the Instances page, select your Linux instance, click **Description**, and then click the link beside Security group.



b. On the Create Security Group page, select Inbound, and then click
 Edit.



c. On the Edit inbound rules page, do the following, and then click **Save**:

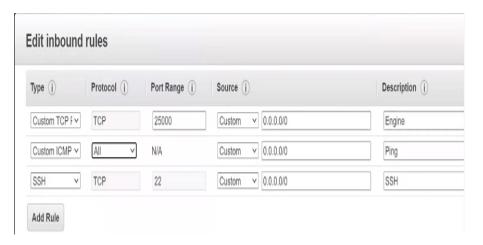
Type: Custom ICMP Rule - IPv4

Protocol: All

Port Range: N/A

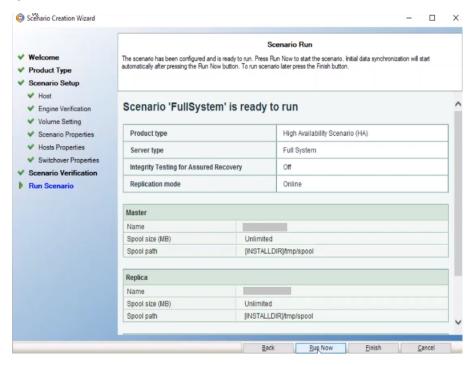
Source: 0.0.0.0/0

Description: Ping



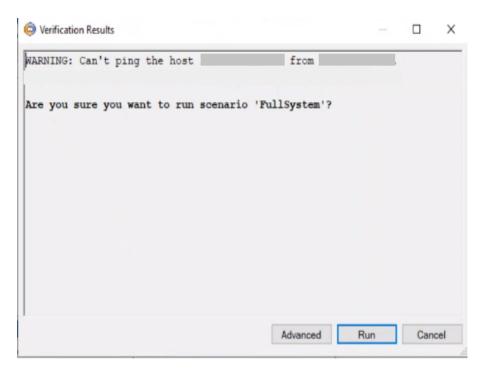
Now, the Master server can communicate with Replica server.

13. On the Scenario Run screen, to start synchronization immediately and activate the scenario, click **Run Now**. To save and run the scenario later, click **Finish**.

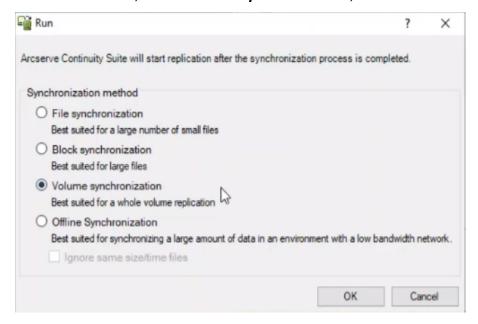


The scenario verification runs automatically, and the Verification Results screen appears.

14. On the Verification Results screen, click **Run**.

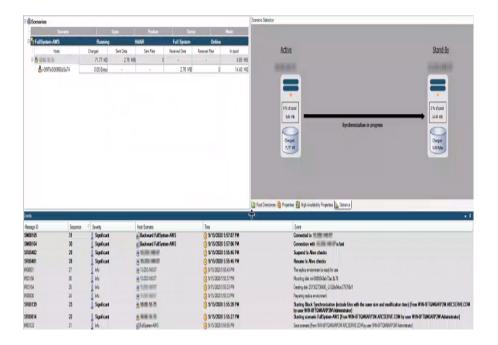


15. On the Run screen, select Volume synchronization, and then click OK.



Note: For initial synchronization, we recommend that you select **Volume synchronization**, as it usually provides better synchronization performance over LAN or WAN.

The synchronization between Master and Replica servers starts. Wait for synchronization to complete.



Perform Assured Recovery Testing

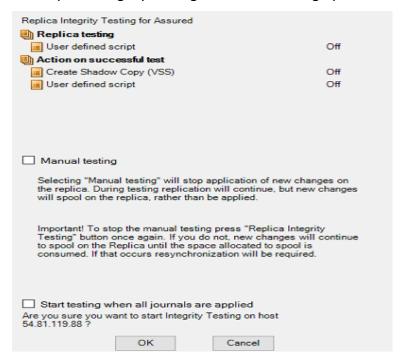
Note: Perform the Assured Recovery test only if you have enabled the **Integrity Testing for Assured Recovery (AR)** option on the Select Server and Product Type screen.

You can fully automate the Assured Recovery tests and schedule these tests as often as needed. On completion, an alert is sent to the appropriate personnel with the test status. You can also trigger additional actions such as taking a VSS snapshot of the data or running a backup. Alternatively, you can perform AR testing in a non-scheduled mode, and initiate the tests automatically or manually.

To perform AR test automatically, follow these steps:

- 1. On the Arcserve Continuity Suite Manager, verify that the AR scenario is running.
- 2. On the Standard toolbar, click the **Replica Integrity Testing** button, or rightclick the Replica and select **Replica Integrity Testing** from the shortcut menu.

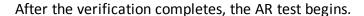
The Replica Integrity Testing for Assured dialog opens.

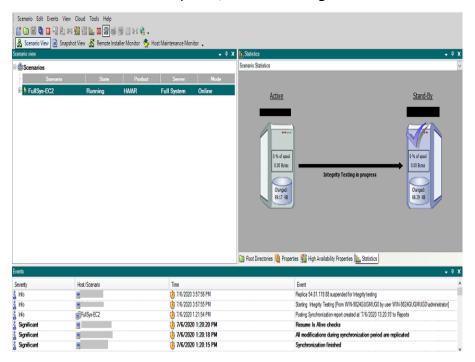


3. To start automatic AR test using the existing configuration, click **OK**.

Notes:

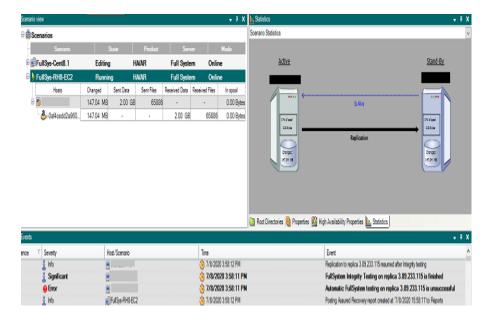
- To start the AR test manually, select the **Manual testing** checkbox, and then click **OK**.
- To change the test configuration before running the test, click Cancel.
 For more information, see Configure Assured Recovery Properties.
- Before the test begins to run, Arcserve Live Migration verifies that no synchronization, AR test or replication suspension tasks are in progress on any of the hosts that participate in the current scenario.





The steps of the test are displayed as messages in the Event pane.

After the test is finished, the Replica is automatically restored to the same state it was when the replication was suspended. The changes that were accumulated in the spool gets applied, and the replication resumes.



By default, after the AR test is performed, an Assured Recovery Report is generated.

Notes:

- If the Assured Recovery Report is not generated, on the Replica Properties list, under the Reports group, check the value of the Generate Assured Recovery Report property.
- To view the report, see <u>View a Report</u>.

All the tasks that were performed during the AR test are listed in the AR Report, along with their activation time and status.

Perform Cut off/Switchover

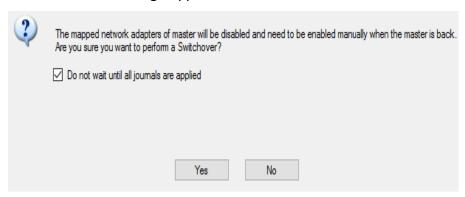
Switchover (or failover) is the process of changing roles between the Master and Replica, that is, making the Master server the standby server, and the Replica server the active server.

Switchover can be triggered automatically by Arcserve Live Migration when it detects that the Master is unavailable (failover). Alternatively, Arcserve Live Migration can simply alert you to the problem, and then you can manually initiate switchover from the Manager.

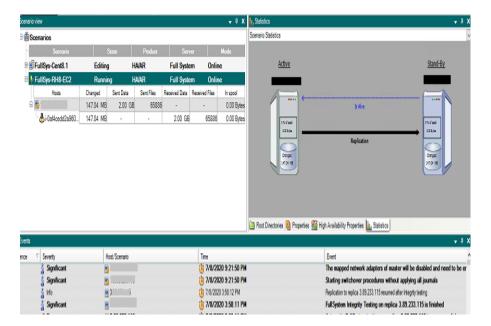
To perform switchover, follow these steps:

- 1. Open the Manager and then select the required scenario from the Scenario pane. Verify if it is running.
- 2. On the standard toolbar, click the **Perform Switchover** button, or select the Perform Switchover option from the **Tools** menu.

A confirmation message appears.



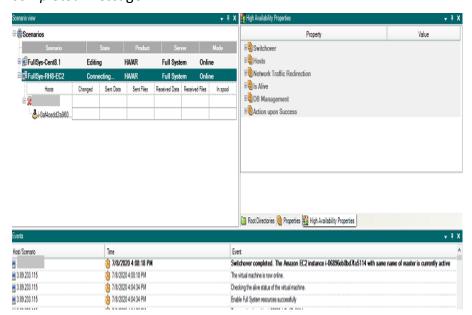
- 3. [Optional] Select the **Do not wait until all journals are applied** check box to immediately perform switchover even before all journals are applied. If you do not select this check box, the switchover process gets initiated only after all journals are applied.
- 4. Click **Yes** on the confirmation message. This procedure initiates a switchover from the Master server to the Replica server.
 - During switchover, the Event pane gives detailed information about the switchover process.



After the switchover is complete, the scenario gets stopped.

Note: The only case in which the scenario may continue to run after switchover is when **automatic reverse replication** is defined as **Start automatically**.

When the switchover is completed, the Event pane displays the *Switchover* completed message.



Now, the original Master becomes the Replica, and the original Replica becomes the Master.