

## Restore to Amazon Web Services FAQ

<https://campus.barracuda.com/doc/78809811/>

This article refers to the Barracuda Backup firmware version 6.4.05 or newer, [VMware and the vSphere Data Recovery API](#), [supported versions of Microsoft Hyper-V](#), and Amazon Web Services (AWS).

See also: [Replication to Amazon Web Services FAQ](#)

### Restore General FAQ

Question	Answer
What is Restore to Amazon Machine Image (EC2)?	<p>The Restore to Amazon Machine Image (AMI) feature allows customers to convert their backed up VMware and certain types of Hyper-V virtual machines (VMs) to an AMI, where they can be launched as an Amazon EC2 instance. This feature is available for customers with an active Barracuda Backup AWS Replication subscription and who have replicated data to AWS. For more details on the types of images and requirements, see the following questions:</p> <ul style="list-style-type: none"> <li>• <i>How does Restore to AMI (EC2) work?</i></li> <li>• <i>What are the requirements and limitations for Restore to AMI?</i></li> </ul>
What is an AMI?	<p>An AMI provides the information required to launch an instance, which is a virtual server in the cloud. You specify an AMI when you launch an instance, and you can launch as many instances from the AMI as needed. You can also launch instances from as many different AMIs as you need.</p> <p>An AMI includes the following:</p> <ul style="list-style-type: none"> <li>• A template for the root volume for the instance (for example, an operating system, an application server, and applications)</li> <li>• Launch permissions that control which AWS accounts can use the AMI to launch instances</li> <li>• A block device mapping that specifies the volumes to attach to the instance when it is launched</li> </ul>
What is Amazon EC2?	<p>Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the AWS cloud. Using Amazon EC2 eliminates the need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. With Amazon EC2, you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic.</p>

What is Amazon S3?	<p>Amazon Simple Storage Service (Amazon S3) makes it simple and practical to collect, store, and analyze data—regardless of format—all at massive scale. Amazon S3 is object storage built to store and retrieve any amount of data from anywhere—web sites and mobile apps, corporate applications, and data from the IoT sensors or devices. It is designed to deliver 99.999999999% durability, and has many customers each storing billions of objects and exabytes of data. You can use it for media storage and distribution, as the "data lake" for big data analytics, <b>as a backup target</b>, and as the storage tier for serverless computing applications. It is ideal for capturing data like mobile device photos and videos, mobile and other device backups, machine backups, machine-generated log files, IoT sensor streams, and high-resolution images, and making it available for machine learning to other AWS services and third-party applications for analysis, trending, visualization, and other processing.</p>
What are the differences between Barracuda Cloud and Replication to AWS?	<p>While the software and general functionality is the same between the Barracuda Cloud and AWS Replication, there are some important differences between the two deployment models:</p> <ol style="list-style-type: none"> <li>1. The Replication to AWS option is essentially a new "region" of Barracuda Cloud deployed in public cloud (AWS).</li> <li>2. Customers can choose to replicate their on-premises backup data to this "region" by purchasing a Barracuda Backup AWS Replication subscription, similar to purchasing a Barracuda Cloud Storage subscription.</li> <li>3. The primary difference between Barracuda Cloud Storage and data stored in AWS is that customer binary data is physically stored in an AWS S3 bucket in the customer's account when replicating to AWS, as opposed to Barracuda Cloud Storage.</li> <li>4. When replicating data to AWS, the customer can restore VMware and Hyper-V virtual machines to an AMI. This is a feature that is only available to customers with a Barracuda Backup AWS Replication subscription.</li> </ol>
Which AWS regions are supported?	<p>US East (Ohio) for North American customers and EU West (Ireland) for customers in EMEA.</p>
How does Restore to AMI (EC2) work?	<p>VMware and Hyper-V VMs that are replicated to an AWS S3 bucket can be restored from the Barracuda Backup web interface as an AMI. From within AWS, the AMI can be launched as an EC2 instance.</p> <p>The process of restoring the VMware or Hyper-V virtual machine from Barracuda Backup is the same as restoring the virtual machine to an on-premises destination. After navigating through the Barracuda Backup Restore Browser and selecting a VM to restore, choose the <b>Restore to AMI</b> option in the <b>Restore to</b> section. The article <a href="#">How to Restore VMware and Hyper-V Backups to Amazon Web Services</a> details the process.</p>
What are the requirements and limitations for Restore to AMI?	<ul style="list-style-type: none"> <li>• Restore to AMI supports VMware and Hyper-V VM images only</li> <li>• VMs must be fully replicated to AWS before restores can be initiated</li> <li>• VMware UEFI-boot VMs are not supported</li> <li>• Hyper-V Generation 2 VMs are not supported</li> <li>• Hyper-V VMs with VHDX files are not supported</li> </ul> <p>See the AWS article <a href="#">VM Import/Export Requirements</a> for a complete list of VM import requirements.</p>

<p>What is the data path for data restored from AWS for North American customers?</p>	<p>All data restored from a customer S3 bucket in AWS back on-premises to a target or Barracuda Backup device travels through the Barracuda Cloud/AWS infrastructure in US East (Ohio) region of AWS first. Transfer fees between regions apply.  <b>Example:</b> The customer chooses the US West (Oregon) region for their S3 bucket. Upon a restore from the cloud, the data must travel from the US West (Oregon) region to the US East (Ohio) region, which incurs AWS S3 region transfer fees.</p>
<p>What is the data path for data restored from AWS for EMEA customers?</p>	<p>All data restored from a customer S3 bucket in AWS back on-premises to a target or Barracuda Backup device travels through the Barracuda Cloud/AWS infrastructure in EU West (Ireland) region of AWS first. Transfer fees between regions apply.  <b>Example:</b> The customer chooses the EU East (London) region for their S3 bucket. Upon a restore from the cloud, the data must travel from the EU East (London) region to the EU West (Ireland) region, which incurs AWS S3 region transfer fees.</p>
<p>Does restored data come directly from AWS S3 storage?</p>	<p>In most cases, data is restored directly from the on-premises Barracuda Backup device when a restore is initiated from the Barracuda Backup cloud web interface. The only times when that is not the case is when the data is no longer present on the on-premises Barracuda Backup device. Here are the cases where data may not be present locally:</p> <ul style="list-style-type: none"> <li>• The data has been removed from the on-premises Barracuda Backup device and "vaulted" using the Offsite Vaulting feature.</li> <li>• The download feature in the cloud web interface has been used to recover data. All downloads initiated from the cloud web interface pull data directly from the replication target, in this case AWS.</li> <li>• In a disaster recovery or hardware replacement scenario where a replacement on-premises Barracuda Backup device needs to be populated with the data stored in AWS.</li> </ul>
<p>Can I use AWS S3 Infrequent Access or Glacier storage to store my data?</p>	<p>AWS S3 Infrequent Access and Glacier storage <i>are not supported and not recommended</i> for use at this time. Moving replicated binary data to these storage classes may cause issues that negatively impact restore functionality and recovery times, especially with Glacier storage since the recovery times are lengthy per Amazon documentation.</p>

## Licensing FAQ

Question	Answer
<p>Is there a separate license or subscription for the Restore to AMI (EC2) feature?</p>	<p>No. This is a free feature only available for customers with an AWS Replication subscription from Barracuda.</p>

## Deployment FAQ

Question	Answer
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How do I restore a VM to an AWS AMI (EC2)?	See the article <a href="#">How to Restore VMware and Hyper-V Backups to Amazon Web Services</a> for steps to restore a VMware or Hyper-V VM to an AWS AMI (EC2).
What access/permission is the CloudFormation template giving Barracuda?	Currently the CloudFormation templates give Barracuda Backup full access to S3 to create the bucket for replication and full access to EC2 for the Restore to AMI feature.

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