# Replication to Amazon Web Services FAQ

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: [Restore to Amazon Web Services FAQ](Restore to Amazon Web Services FAQ)

## Replication General FAQ

| Question | Answer |
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| What is Replication to Amazon Web Services (AWS)? | Barracuda's current replication technology lets customers send data to the Barracuda Cloud or another Barracuda Backup appliance for offsite replication, but customers who are adopting public cloud are looking for the flexibility to replicate data to public cloud with that same simplicity.<br>With a Barracuda Backup AWS Replication subscription, Barracuda Backup can replicate data securely and efficiently from an on-premises physical or virtual Barracuda Backup appliance to the AWS public cloud. This adds more deployment options and flexibility for customers replicating data as can choose to replicate to the Barracuda Cloud, a remote physical appliance, a remote virtual appliance, or the AWS public cloud target.<br>Note that you are sending data to your own AWS account, therefore you must have both an AWS Replication subscription and an AWS account to replicate data. |
| What is an AMI? | 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.<br>An AMI includes the following:<br>• A template for the root volume for the instance (for example, an operating system, an application server, and applications)<br>• Launch permissions that control which AWS accounts can use the AMI to launch instances<br>• A block device mapping that specifies the volumes to attach to the instance when it is launched |
| What is Amazon EC2? | 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. |

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| What is Amazon S3? | 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, **as a backup target**, 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. |
| Who is Replication to AWS designed for? | Barracuda Backup AWS Replication is designed for customers who are adopting public cloud and wish to replicate their on-premises backup data to AWS for disaster recovery. |
| Why is Barracuda offering Replication to AWS? | Barracuda is offering replication to AWS to provide existing and new Barracuda Backup customers with more deployment options and flexibility, as can choose to replicate to the Barracuda Cloud, a remote physical appliance, a remote virtual appliance, or the AWS public cloud target. |
| What are the differences between Barracuda Cloud and Replication to AWS? | 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:<br>1. The Replication to AWS option is essentially a new "region" of Barracuda Cloud deployed in public cloud (AWS).<br>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.<br>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.<br>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. |
| How does Replication to AWS work? | Replication of backed up data to AWS works very similarly to data replicated to Barracuda Cloud Storage. The key difference is that data replicated to AWS is stored in the customer's AWS S3 bucket.<br>• Barracuda Backup physical or virtual appliance is installed on-premises and backing up data.<br>• Customer binary data is stored in the customer's AWS S3 bucket.<br>• Metadata is stored on Barracuda's AWS cloud infrastructure.<br>• Barracuda Backup devices, including ones replicating to AWS, are managed from the Barracuda Cloud using Barracuda Cloud Control.<br>• At this time, Barracuda Backup devices only support replication to a single "cloud" replication destination at a time. A Barracuda Backup device can only replicate to the Barracuda Cloud or to AWS, not both. |

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| Can I replicate to multiple clouds at the same time? | No. Barracuda Backup devices only support data replication to one form of cloud storage (Barracuda Cloud or AWS) at a time. Barracuda Backup devices are still capable of replicating to multiple destinations. These destinations include physical and virtual appliances. For example, a Barracuda Backup device can replicate to both the Barracuda Cloud and another Barracuda Backup physical or virtual device, but not to both the Barracuda Cloud and AWS. |
| Can I migrate my data from the Barracuda Cloud to AWS? | Yes. Barracuda Networks Technical Support can assist with the data migration process and AWS configuration. |
| Where is my data stored when using Replication to AWS? | Backup metadata is stored in Barracuda's AWS account in Amazon's US East (Ohio) region for North American customers and EU West (Ireland) region for customers in EMEA. Binary backup data is stored in an S3 bucket in the customer's AWS account. |
| Where is Replication to AWS supported? | Barracuda Backup AWS Replication is supported in North America and EMEA. |
| Which AWS regions are supported? | US East (Ohio) for North American customers and EU West (Ireland) for customers in EMEA. |
| What is the data path for data replicated to AWS for North American customers? | *All* data replicated to AWS from a Barracuda Backup device travels through the US East (Ohio) region for North American customers. Backup metadata lives in the US East (Ohio) region for North American customers, while binary backup data comes to rest in the customer's selected AWS account, region, and S3 bucket. No customer binary data is stored within Barracuda's AWS account in the US East (Ohio) region. |
| What is the data path for data replicated to AWS for EMEA customers? | *All* data replicated to AWS from a Barracuda Backup device travels through the EU West (Ireland) region for customers in EMEA. Backup metadata lives in the EU West (Ireland) region for customers in EMEA, while binary backup data comes to rest in the customer's selected AWS account, region, and S3 bucket. No customer binary data is stored within Barracuda's AWS account in the EU West (Ireland) regions. |
| Is data replicated to AWS encrypted? | Yes. Data transferred between your network and Barracuda Cloud Storage, or between your network and a remote Barracuda Backup appliance, or between your network and Amazon Web Services, is always encrypted. File parts are AES 256-bit symmetrically encrypted before they are stored, and they remain encrypted until a restore is requested. |
| Is data deduplicated in AWS? | Yes. Backup data replicated to AWS from an on-premises Barracuda Backup device is deduplicated within the S3 bucket where the data is stored. Data replicated from multiple Barracuda Backup devices to the same S3 bucket is deduplicated globally. |
| Can I use AWS S3 Infrequent Access or Glacier storage to store my data? | AWS S3 Infrequent Access and Glacier storage *are not supported and not recommended* 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. |
| Can I tier my data, using different forms of storage, that is replicated to AWS? | No. Only Amazon S3 Standard storage is supported at this time. AWS S3 Infrequent Access or Glacier storage is not supported and not recommended for use at this time. Moving replicated binary data to these storage classes may cause issues that negatively impact restore functionality and recovery times. |
| Can a reseller or managed services provider (MSP) replicate client data to their own AWS account and S3 bucket? | Yes. Any AWS account can be configured within the Barracuda Backup web interface and used to replicate backup data to. |

## Licensing FAQ

| Question | Answer |
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| How is AWS Replication licensed? | Barracuda Backup AWS Replication is licensed as a subscription, based on the Barracuda Backup appliance model, or the number of sockets for a virtual Barracuda Backup appliance.<br>• Barracuda Backup Appliance – Subscription is based on the model it is attached to<br>• Barracuda Backup Vx – Subscription is based on the cost of the total number of licensed sockets/servers |
| What does my Barracuda Backup AWS Replication subscription provide? | The AWS Replication subscription from Barracuda covers management, deduplication, compression, and egress fees from data leaving AWS.<br>The customer needs to pay AWS S3 storage fees, transfer fees if they apply, and the Replication to AWS subscription from Barracuda. |
| How much data can I replicate to AWS with a subscription? | The amount of data that can be replicated is technically unlimited; however, the amount of data that can actually be sent offsite is limited by the size/model of the Barracuda Backup appliance.<br>For Barracuda Backup Vx appliances, the amount of data that can be replicated offsite to AWS is unlimited. |

## Deployment FAQ

| Question | Answer |
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| What environments are supported by Barracuda Backup AWS Replication? | Barracuda Backup with AWS Replication protects all the same environments as a Barracuda Backup with Barracuda Cloud storage. |
| How is AWS Replication configured? | See the following article to configure AWS replication: Amazon Web Services Offsite Replication |
| What is an AWS CloudFormation Template? | AWS CloudFormation simplifies provisioning and management on AWS. You can create templates for the service or application architectures you want and have AWS CloudFormation use those templates for quick and reliable provisioning of the services or applications (called "stacks"). You can also easily update or replicate the stacks as needed. |
| 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. |
| Do I need to create an S3 bucket to replicate data to? | No. During the AWS Replication setup process, Barracuda Backup automatically creates a new S3 bucket in your AWS account that is used to store replicated data. The Barracuda Backup S3 bucket looks similar to this: **barracuda-bbs-1240749-b62e9951-e9f2-407e-a2c6-463fed5df743**. |