***THE MICROSOFT AZURE***

The Microsoft Azure Data Box cloud solution lets you send terabytes of data into and out of Azure in a quick, inexpensive, and reliable way. The secure data transfer is accelerated by shipping you a proprietary Data Box storage device. Each storage device has a maximum usable storage capacity of 80 TB and is transported to your datacenter through a regional carrier. The device has a rugged casing to protect and secure data during the transit.

You can order the Data Box device via the Azure portal to import or export data from Azure. Once the device is received, you can quickly set it up using the local web UI. Depending on whether you will import or export data, copy the data from your servers to the device or from the device to your servers, and ship the device back to Azure. If importing data to Azure, in the Azure datacenter, your data is automatically uploaded from the device to Azure. The entire process is tracked end-to-end by the Data Box service in the Azure portal.

**Use cases**

Data Box is ideally suited to transfer data sizes larger than 40 TBs in scenarios with no to limited network connectivity. The data movement can be one-time, periodic, or an initial bulk data transfer followed by periodic transfers.

Here are the various scenarios where Data Box can be used to import data to Azure.

* **Onetime migration** - when a large amount of on-premises data is moved to Azure.
  + Moving a media library from offline tapes into Azure to create an online media library.
  + Migrating your VM farm, SQL server, and applications to Azure.
  + Moving historical data to Azure for in-depth analysis and reporting using HDInsight.
* **Initial bulk transfer** - when an initial bulk transfer is done using Data Box (seed) followed by incremental transfers over the network.
  + For example, backup solutions partners such as Commvault and Data Box are used to move initial large historical backup to Azure. Once complete, the incremental data is transferred via network to Microsoft Azure Storage.
* **Periodic uploads** - when large amount of data is generated periodically and needs to be moved to Azure. For example in energy exploration, where video content is generated on oil rigs and windmill farms.

Here are the various scenarios where Data Box can be used to export data from Azure.

* **Disaster recovery** - when a copy of the data from Azure is restored to an on-premises network. In a typical disaster recovery scenario, a large amount of Azure data is exported to a Data Box. Microsoft then ships this Data Box, and the data is restored on your premises in a short time.
* **Security requirements** - when you need to be able to export data out of Azure due to government or security requirements. For example, Azure Storage is available in US Secret and Top Secret clouds, and you can use Data Box to export data out of Azure.
* **Migrate back to on-premises or to another cloud service provider** - when you want to move all the data back to on-premises, or to another cloud service provider, export data via Data Box to migrate the workloads.

**Benefits**

Data Box is designed to move large amounts of data to Azure with little to no impact to network. The solution has the following benefits:

* **Speed** - Data Box uses 1-Gbps or 10-Gbps network interfaces to move up to 80 TB of data into and out of Azure.
* **Secure** - Data Box has built-in security protections for the device, data, and the service.
  + The device has a rugged casing secured by tamper-resistant screws and tamper-evident stickers.
  + The data on the device is secured with an AES 256-bit encryption at all times.
  + The device can only be unlocked with a password provided in the Azure portal.
  + The service is protected by the Azure security features.
  + Once the data from your import order is uploaded to Azure, the disks on the device are wiped clean in accordance with NIST 800-88r1 standards. For an export order, the disks are erased once the device reaches the Azure datacenter.

**Features and specifications**

Azure Data Box cross-region data transfer is in preview status

Previous releases of Data Box, Data Box Disk, and Data Box Heavy didn’t support cross-region data transfer. With the exception of transfers both originating and terminating between the United Kingdom (UK) and the European Union (EU), data couldn’t cross commerce boundaries.

Data Box cross-region data transfer capabilities, now in preview, support offline seamless cross-region data transfers between many regions. This capability allows you to copy your data from a local source and transfer it to a destination within a different country, region, or boundary. It's important to note that the Data Box device isn't shipped across commerce boundaries. Instead, it's transported to an Azure data center within the originating country or region. Data transfer between the source country and the destination region takes place using the Azure network and incurs no additional cost.

Although cross-region data transfer doesn't incur additional costs, the functionality is currently in preview and subject to change. Note, too, that some data transfer scenarios take place over large geographic areas. Higher than normal latencies might be encountered during such transfers