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Amazon Web Services

Snow Family

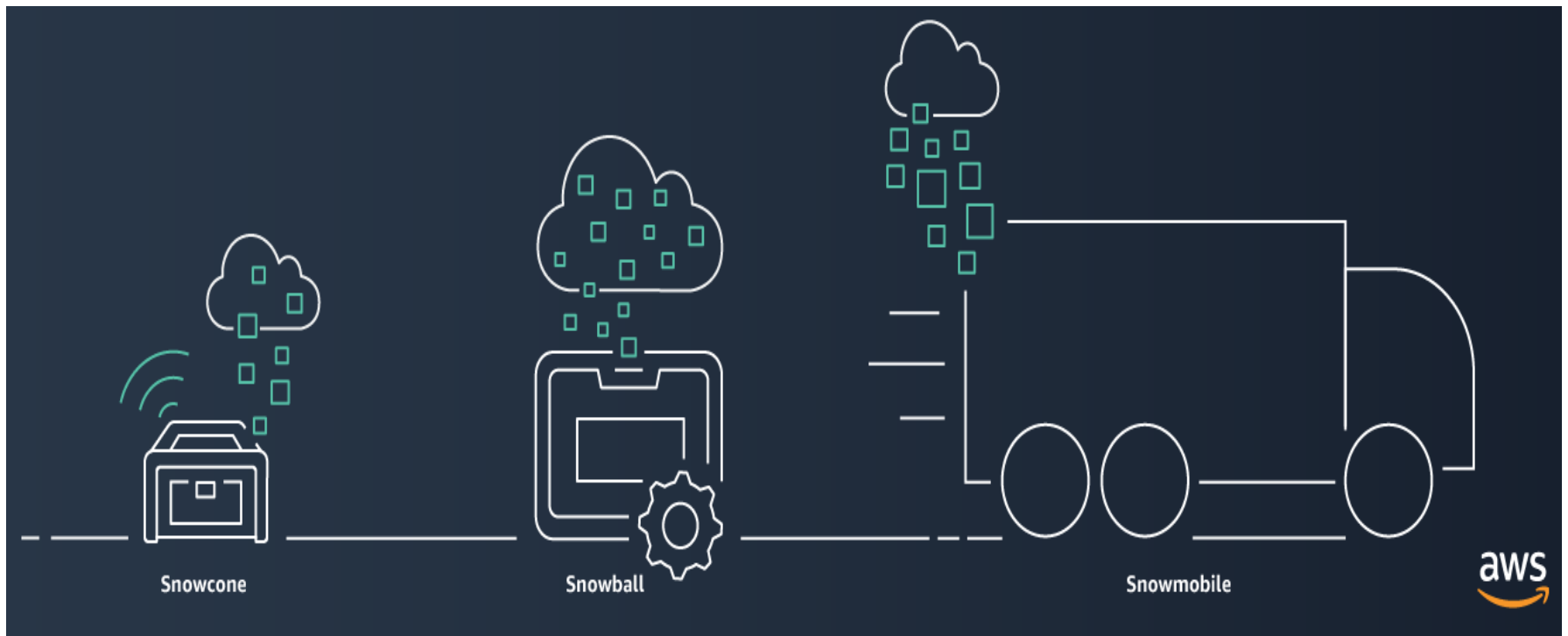
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Snow Family

- It is a data migration service. The AWS snow family consists of AWS Snowcone, AWS Snowball, and AWS Snowmobile. The family consists of capacity points and physical devices that have inbuilt computing power. They help in the transportation of data both into as well as out of AWS. AWS customers can use the Snow family members for migrating data to AWS securely and cheaply.
- **AWS Snow Family members**
 - AWS Snowcone
 - AWS Snowball (Snowball Edge)
 - AWS Snow Mobile

Snow Family

- The Snow family member to go with will be determined by how much data you need to migrate. The Snow family is managed and owned by AWS and they, therefore, integrate with AWS computing capabilities and security protocols.



Snow Family - Snowcone

- AWS Snowcone is a secure, portable, and ruggedized edge computing device that integrates lightly with AWS compute and storage services. With a weight of 4.5lbs, Snowcone is the smallest AWS snow family member. Its ruggedized casing makes it suitable for harsh environments and is, therefore, suitable for extreme weather conditions, shop floors, and all kinds of factories.
- It comes with two vCPUs, 8TB HDD, and 4GB RAM which enable it to run workloads at the edge. It also has a USB-C port, Wi-Fi, and two Gigabit Ethernet ports for data transfer. You can use it to gather, process, and migrate data via the AWS Data Sync feature (online transfer) or by shipping your device to AWS (Offline transfer).

Snow Family - Snowcone

- What makes Snowcone unique is that it can be powered by a standard 45W power bank. AWS Snowcone is therefore extremely portable and flexible. Snowcone supports the NFS file system and allows for data transfer from Linux, macOS, and Windows servers.
- **Snowcone Use Cases**
 - **Edge computing:** collection and processing of data for real-time insights and then transferring the data to AWS via online and offline methods
 - **Data transfer in factories:** data generated by machine sensors can be transferred to AWS
 - **Dissemination of information:** media and other forms of content can be disseminated from your AWS storage to relevant stakeholders
 - **Content aggregation:** transferring of media and other scientific data from the edge location to your AWS.
 - **One-time data migration:** a simple, fast, and inexpensive transfer of up to 8TB of data into AWS by shipping the Snowcone device to AWS

Snow Family - Snowball

- The AWS Snowball is an edge computing and data migration device that accelerates the migration of terabytes to petabytes of data both into and out of AWS. Snowball helps to deal with challenges associated with large-scale data migration. For instance, you use less time to transfer the data, and you also do it securely and inexpensively.
- Snowball Edge is sold as a 100-terabyte, rack-mountable piece of hardware. A user can request one or multiple Snowball Edge devices from AWS, based on the amount of data it wants to process or transfer. The device arrives with preconfigured Amazon Simple Storage Service (S3) buckets and Lambda functions based on user-specified requirements.

Snow Family - Snowball

- AWS Snowball Use Cases
- **Cloud data migration:** you can use Snowball to migrate huge quantities of data into AWS without having to worry about the bandwidth costs.
- **Logistics support:** you can use the automated E Ink shipping labels to increase the efficiency of your logistics.
- **Secure content dissemination:** banks, airlines, studios, hospitals, and other industries that require secure dissemination of data can take advantage of the secure data transfer services of AWS snowball
- **Tactical edge computing:** defense, disaster response, and other sectors that need real-time collection and interpretation of data can use AWS snowball's computing power. This saves them the pain of having to set up storage racks over and over again.
- **Machine learning:** image labeling, document classification, and other AI applications that require real-time analysis of data can be deployed on AWS snowball. Data can also be transported from remote locations to support in-cloud machine learning
- **Manufacturing:** on-site data in factories can be collected and analyzed to fine-tune the operations for better efficiency. The data can then be migrated to AWS for more comprehensive analytics to discover trends and patterns.
- **Remote location:** AWS snowball can be used for pre-processing applications e.g. image tagging, compression, organization, and validation. The data can be gathered and analyzed remotely to get quick insights and then migrated to AWS later on.

Snow Family - Snowmobile

- AWS Snowmobile is a 45-foot rugged shipping container that's typically hauled by a semi-trailer truck. It is used to transfer huge volumes of data (up to 100PB) to AWS. The AWS Snowmobile comes in handy when moving entire data centers, video libraries, image repositories, or other types of huge data that needs to be migrated to AWS. Before the introduction of AWS Snowmobile, clients would need years to migrate their data which was painfully slow and expensive.
- The snowmobile is usually transported to your data center and then it is configured by the AWS personnel to be a node on your network for file transfer via a high-speed network. Once the high-speed network has been configured, your data can be transferred to the snowmobile after which it is driven back to AWS for importation to the cloud.

Snow Family - Snowmobile

- AWS Snowmobile Use Cases
- **Shutting down legacy data centers:** Before you shut down your data center, you will want to make sure you have migrated all your data to the cloud. The AWS Snowmobile will help you move all your data efficiently and inexpensively.
- **Huge data migration:** Snowmobile can help businesses that collect huge amounts (Exabyte's of data) from their premises to AWS in a low-cost and yet secure and efficient manner. Examples of applications include satellite images, genomic sequences, seismic data, video libraries, image repositories, financial data, etc.



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