

# AWS Basics

AWS isn't a distinct product. It's well over **200 products**. *Nobody*, including AWS employees, is deeply familiar with all of them. From a baseline perspective, this is basically all you need to know in early discussion phases. You can learn the rest as it comes up – the same way the rest of us do.



Virtual machines (called "instances") that can run any software you care to shove into them. There are lots of nuances, but you won't need to know them. Unlike datacenters, you scale by adding more instances, not getting bigger instances, and AWS manages the hypervisor for you.



This is what's known as an object store. It's storage. "Put a file or files into S3, it keeps them for you. Retrieve them at any time." It can store more data than you will ever be able to afford. There are no capacity limits here, and pricing is linear.



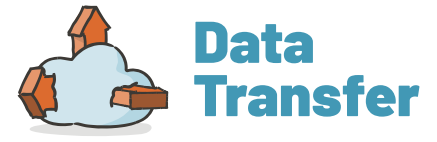
Managed database offerings. MySQL, Microsoft SQL Server, Oracle, PostgreSQL, and a few others. They run it for you so you don't have to handle a lot of the administrative bits. Some folks migrate to EC2 when they need more control.



Lambda is the **New Hotness** and is part of the "Serverless Revolution." You write code, AWS executes it for you when certain conditions are met, like "the passage of time," "a file shows up," "a user clicks a button," etc.



All of the above and more live in "**AWS Regions**." These are vast collections of many data centers in various locations. Inside of each region there are multiple "**Availability Zones**." These are datacenters a few miles apart or so. Great for local disaster planning.



Data transfer is a big bill item, but the nuances are vast and deep. From a project perspective, "we'll dig into specifics" is fine. "**Anything can send data anywhere you'd like**" is the capability story here. See our [Data Transfer Costs Infographic](#).



Identity and Access Management (IAM) controls what users or other AWS resources are permitted to do. Security Groups are similar to network firewall rules, but operate on a per-resource basis. In AWS, think about security in resource-centric terms, not network-centric terms; rely on Security Groups and IAM policies, not network ACLs.

## Your AWS Invoice

Billing is generally "**you pay for what you use**." If you use more resources, you pay more. The golden model of the cloud is that you increase resource usage along with demand (called auto scaling), then turn it back down as demand wanes. **This is harder than it sounds.**

**We can help lower your AWS bill.**

**PAY UP!**

