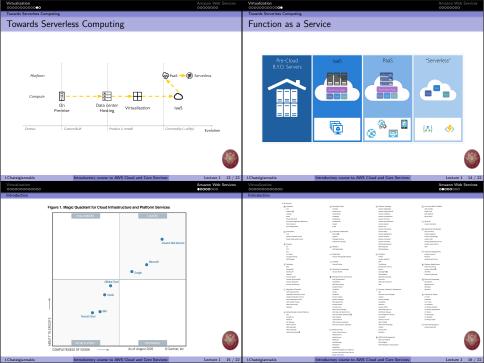
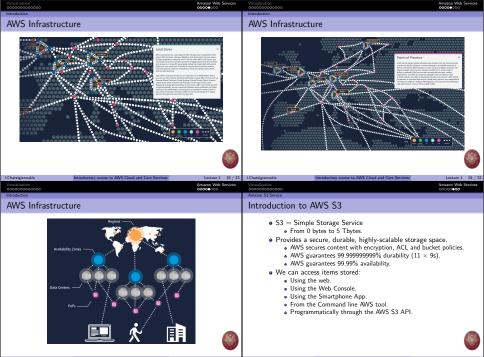


Virtualization	Amazon Web Services 00000000	Virtualization	Amazon Web Services
Virtual Machine Isolation		Virtual Machine Encapsulation	
 Secure Multiplexing: Run multiple VMs on single physical host, Processor hardware isolates VMs. Strong Guarantees: Software bugs, crashes, viruses within one VM cannot affect other VMs Performance Isolation: Partition system resources, Example: VirtualBox controls for reservation, limit, shares. 		 Entire VM in a file: OS, applications, data; Memory and device state. Snapshots and Clones: Capture VM state on the fly and restore to point-in-time, Rapid system provisioning, backup, remote mirroring. Easy Content Distribution: Pre-configured apps, demos. Virtual Appliances. 	
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Virtualization 00000000000000	Amazon Web Services 00000000	Virtualization 000000000000 Common Uses	Amazon Web Services 00000000
Virtual Machine Compatibility		Common Uses	
 Hardware Independent: Physical hardware hidden by virtualization layer, Standard virtual hardware exposed to VM. Create Once, Run Anywhere: No configuration issues, Migrate VMs between hosts. Legacy Virtual Machines: Run legacy OS on new platform. 		 Test and Development Rapidly provision test and devel Store libraries of pre-configured Business Contunuity Reduce cost and complexity by orinto single files Replicated and restored on demix Enterprise Desktop Secure unmanaged PCs without autonomy by layering a security desktop virtual machines. 	test machines. encapsulating entire systems and into any target system. : compromising end-user

Virtualization ocooco cococo Common Uses	Amazon Web Services	Virtualization Amazon Web Services oo0cococo 90000 Photical Varia Data Centers
Common Uses		Virtualized Data Centers
 Run legacy software on non-legacy hardware Run multiple operating systems on the same hardwa Create a manageable upgrade path Manage outages (expected and unexpected) dynami 		Reduce costs by consolidating services onto the fewest number of physical machines
I.Chatzigiannakis Introductory course to AWS Cloud and Core Services: Vitualization	Lecture 1 9 / 22 Amazon Web Services	I.Chatzigiannakis Introductory course to AWS Cloud and Core Services: Lecture 1 10 / 22 Virtualization Ampson Web Structure
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Non-virtualized Data Centers		Dynamic Data Centers
 Too many servers for too little work High costs and infrastructure needs Maintenance Networking Floor space Cooling Power Disaster Recovery 		 Virtualization helps us break the "one service per server" model Consolidate many services into a fewer number of machines when workload is low, reducing costs Conversely, as demand for a particular service increases, we can shift more virtual machines to run that service We can build a data center with fewer total resources, since resources are used as needed instead of being dedicated to single services
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Virtualization 000000000000	Amazon Web Services		mazon Web Services
Amazon S3 Service		Amazon S3 Service	
S3 Basics		S3 Storage Classes	
 Object-based storage. Files = Objects. Not suitable to install an operating system or Files/Objects are organized in Buckets. Bucket names must be unique - S3 is a unive http://sapienza2020adm.s3.amazonaws. When you create a new S3 bucket, AWS created and storage and	r <mark>rsal namespace.</mark> .com/ ates a new web	 Free Tier – new AWS accounts 5GB of S3 storage. 20,000 GET – 2,000 PUT/COPY/POST/LIST 15GB of Data Transfer Out each month for one year S3 Standard \$0.0245 per GB \$0.0043 per 1000 PUT/COPY/POST/LIST \$0.0003 per 1000 GET/SELECT/all other requests. S3-IA Infrequent Access \$0.0135 per GB – a minimum storage duration of 30 d \$0.019 per 1000 PUT/COPY/POST/LIST \$0.001 per 1000 GET/SELECT/all other requests. S3-Glacier \$0.0045 per GB – a minimum storage duration of 90 d \$0.0045 per 1000 PUT/COPY/POST/LIST \$0.006 per 1000 PUT/COPY/POST/LIST \$0.006 per 1000 PUT/COPY/POST/LIST \$0.006 per 1000 PUT/COPY/POST/LIST \$0.0045 per 1000 PUT/COPY/POST/LIST 	
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