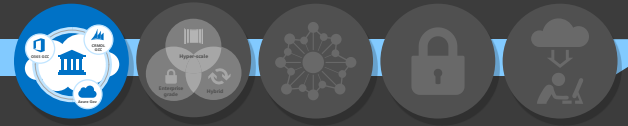# Microsoft Azure

Susie Adams
CTO, Microsoft Federal

Azure: Comprehensive Cloud Services

Infrastructure

- Automated
- Managed resources
- Elastic
- Usage based

North America Region
- Central US
- West US
- N. Central
- S. Central
- US Gov Iowa
- East US
- US Gov VA

Europe Region
- N. Europe
- W. Europe

China Region

Japan Region
- Japan E
- Japan W

India Region

Asia Region
- E Asia
- SE Asia

Latin America Region
- Brazil S

Australia Region
- Australia E
- Australia SE

Services

NETWORKING & AUTOMATION SERVICES

| Virtual network | Availability Set | Azure load balancer | Auto-scale | Traffic Manager | Automation | CDN |

COMPUTE SERVICES

| Virtual Machines | Azure Mobile Services | TFS or VS Online + GIT |
| Azure Web Site | Web roles | Worker roles |

APP SERVICES

Azure AD	Multi-Factor Auth	Azure Cache
Access Control	BizTalk Services	Media Services
Service Bus	Notification Hub	Scheduler

DATA SERVICES

storage blob	storage table	storage queue
VHD	VHD data disk	Gallery OS images
StorSimple Virtual Appliance	Backup Service	Azure Site Recovery
SQL Database	SQL Data Sync	MySQL database
HDInsight (Hadoop)		

Frameworks

- Microsoft .NET
- Java
- PHP
- nodeJS
- python

*Not meant to be a comprehensive list of all services, for a complete list please visit azure.microsoft.com

A trustworthy Cloud

Built-in capabilities and customer controls for organizations

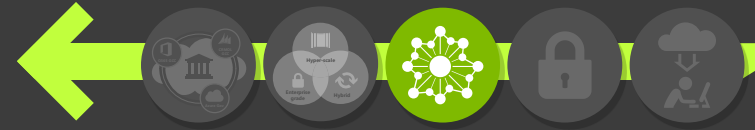| Cybersecurity	Data Privacy	Compliance	Transparency

CJIS

DoD SRG

FedRAMP

HIPAA

IRS 1075

The Microsoft cloud supports any device
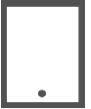
Device

Data

Dev

Cloud

OS
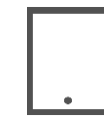
The Microsoft cloud supports any data

Device

Data

Dev

Cloud

OS

The Microsoft cloud supports any developer
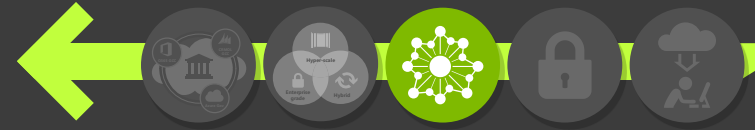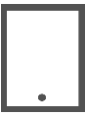
Device

Data

Dev

Cloud

OS

Microsoft ♥ Linux

Linux Windows Server
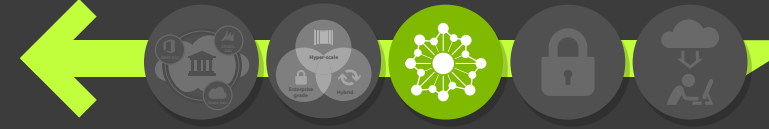
The Microsoft cloud supports any OS

Device
Data
Dev
Cloud
OS

What is Microsoft Azure- from the Esri perspective

What is Microsoft Azure?

What is Azure? In short, it's Microsoft's cloud platform: a growing collection of integrated services—compute, storage, data, networking, and app—that help you move faster, do more, and save money. But that's just scratching the surface. Here's what else Azure is....

It's IaaS + PaaS

Azure is the only major cloud platform ranked by Gartner as an industry leader for both infrastructure-as-a-service (IaaS) and platform-as-a-service (PaaS). This powerful combination of managed and unmanaged services lets you build, deploy, and manage applications any way you like for unmatched productivity.

Using IaaS to power ArcGIS platform

What is Esri doing with Microsoft Azure

- **ArcGIS for Server already supported in the Azure cloud today**

Supported virtualization environments

All components of ArcGIS for Server, including ArcSDE, are fully supported on virtual environments as long as they run on supported platforms. See supported server platforms above. When running third-party applications with ArcGIS for Server, such as relational databases, the application must also be supported in a virtual environment. Check the third-party vendor for its virtualization support.

Microsoft Azure is fully supported already

What is Esri doing with Microsoft Azure

- **Next step is to make it easier for you to be successful for more complicated deployments**

- **Full stack ArcGIS for Server:**
  - **The GIS server (ArcGIS Server)**
  - **Portal for ArcGIS**
  - **ArcGIS Data Store**
  - **Redundant and highly-available file shares**
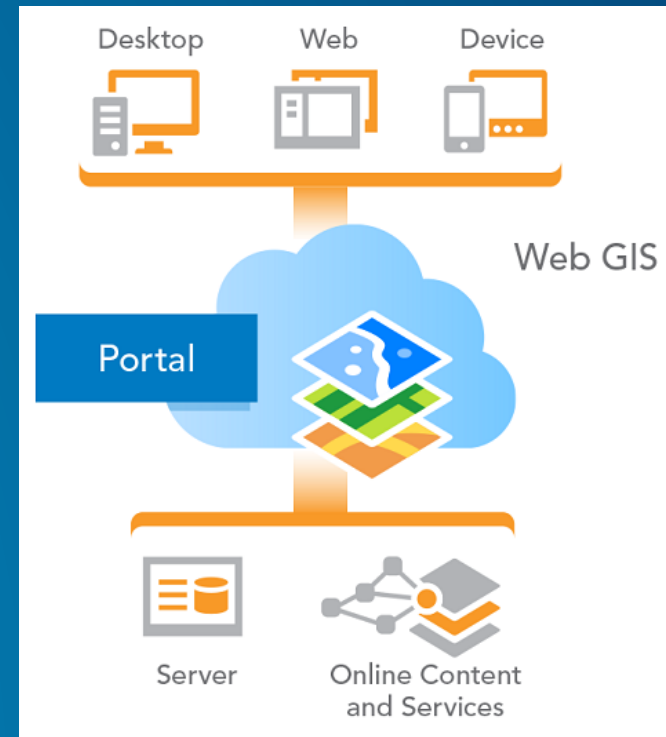
Historical recap

- **July 2014: Tech Preview of ArcGIS Server on Microsoft Azure**
  - **Create images**
  - **Deploy single machine ArcGIS Server sites**

- **October 2014: Tech Preview 2 of ArcGIS Server on Microsoft Azure**
  - **Deploy single node Portal for ArcGIS**

Roadmap and timeline

- **Late April**
  - **Availability of virtual machine images in the Microsoft Azure Marketplace**
    - **Bring Your Own License (BYOL)**

  - **ArcGIS Server Cloud Builder on Microsoft Azure preview**
    - **Interactively define and deploy**

- **Mid July (UC timeframe)**
  - **ArcGIS Server Cloud Builder on Microsoft Azure**
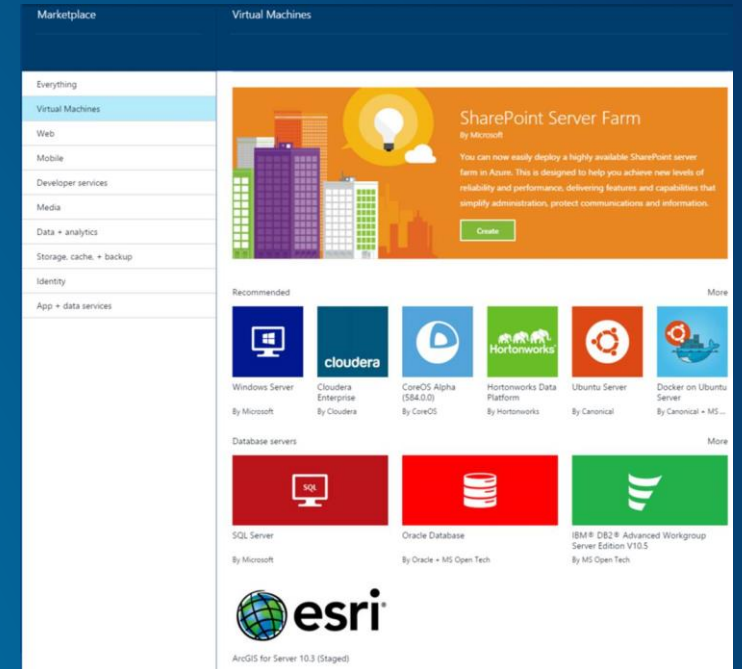
ArcGIS Server Cloud Builder on Microsoft Azure

- **Interactive application that guides you through choosing your deployment options.**

- **What does it mean that Cloud Builder on Microsoft Azure is in preview?**
  - The *application itself* is considered in preview.
  - The output – i.e. the deployments created and setup by the app – are fully production ready and will be fully supported by Esri

What can you build?

- **Classic site setup**

80/443

External Load Balancer (ELB)

6080/6443

Server (6080/6443)

\\serverdirs

File share

Register EGDB

SQL Azure DB

SQL Server Farm
On IaaS VMs

mysite.cloudapp.net
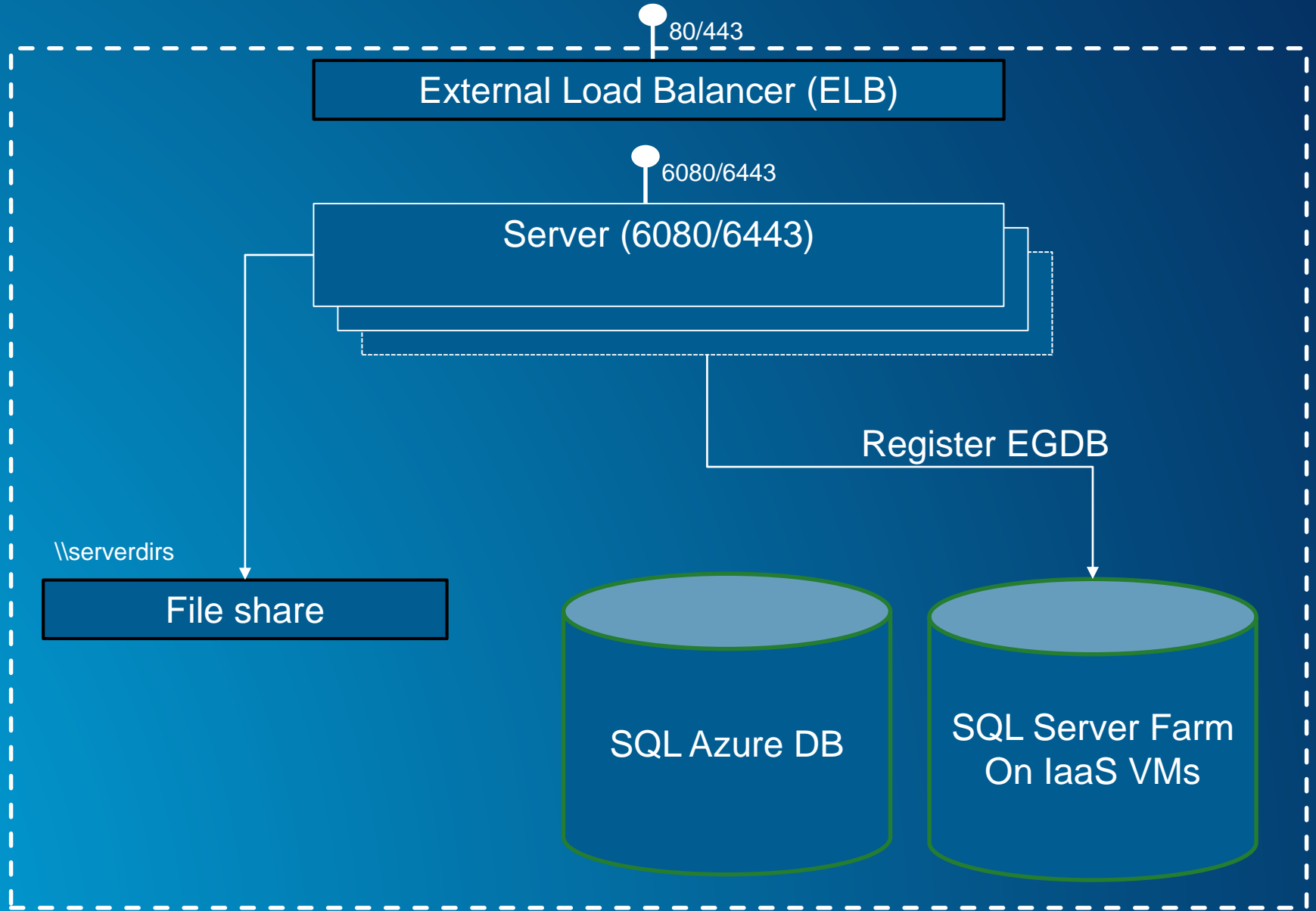
What can you build?

- **Full stack**
  - **ArcGIS Server**
  - **Portal for ArcGIS**
  - **ArcGIS Data Store**

80/443

External Load Balancer (ELB)

80/443

Reverse Proxy (IIS + ARR)

Federation

Internal Load Balancer (ILB)

Database

7080/7443

6080/6443

2443/9876

Portal

Server

ArcGIS Data Store

\\content

\\serverdirs

\\dbbackups

File share

mysite.cloudapp.net
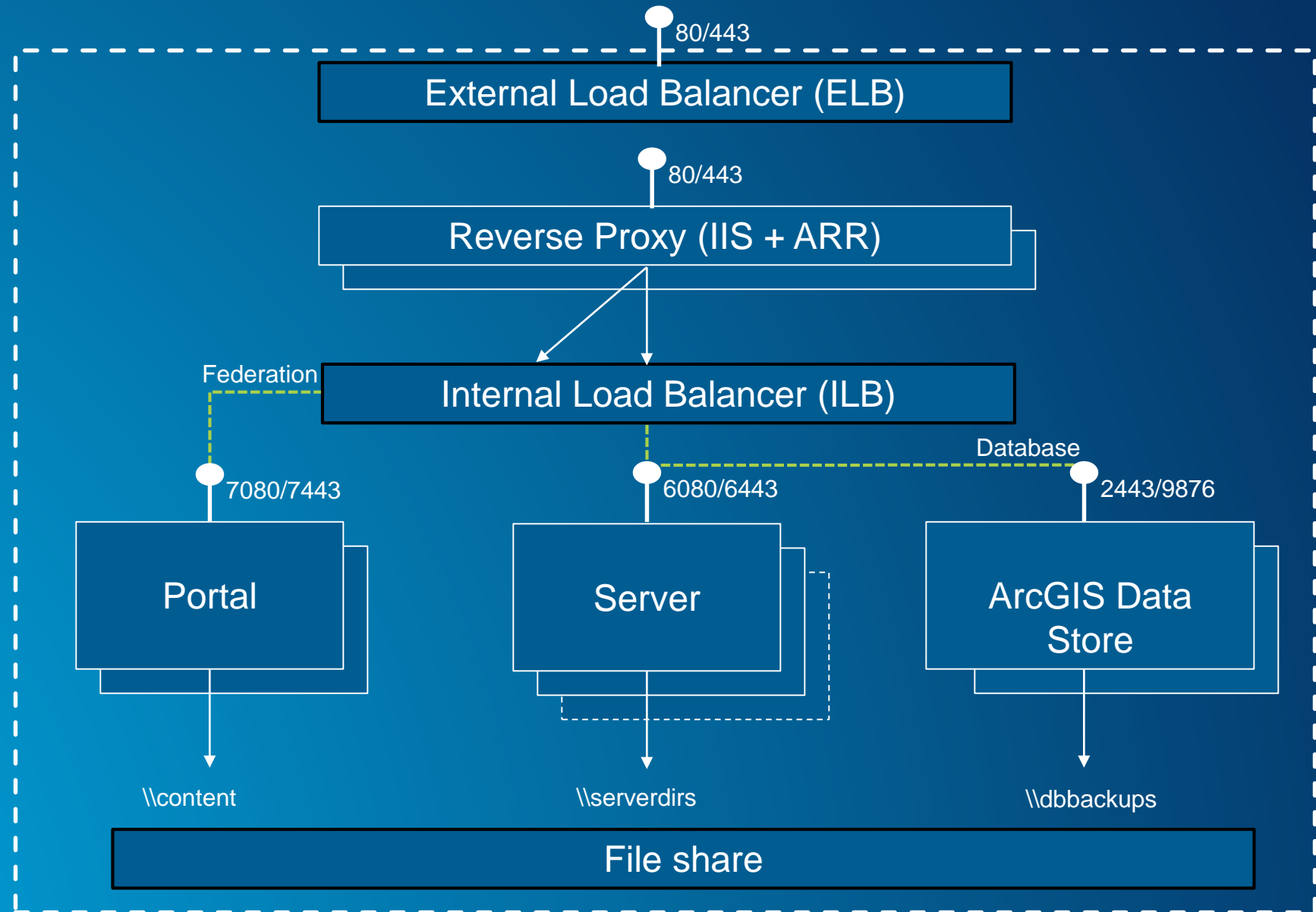
What can you build?

- **All-in-one single machine deployment possible as well**

ArcGIS Server
Portal for ArcGIS
ArcGIS Data Store

Appropriate for development, prototyping, and other testing.

Levels of responsibility

Web GIS

ArcGIS On-Premises	**Arc**GIS In the Cloud	**Arc**GIS Managed Cloud Services	**Arc**GIS Online
Customer Infrastructure Desktop Server Entitlements Customer Managed	IaaS Desktop Server Entitlements Customer Managed	Customized Esri Managed	SaaS Esri Managed

Understand the delegation of roles and responsibilities: trust.arcgis.com

Beyond VM images and Cloud Builder

- **Using the Esri images and Cloud Builder still requires IT administration**
  - Knowledge and understanding of Azure platform
  - Maintenance of VMs: operating system and ArcGIS software
  - Monitoring
  - Disaster recovery planning

- **Esri Professional Services offers an ArcGIS for Server on Microsoft Azure Jumpstart**

- **Esri Managed Cloud Services offers packages including full provisioning, monitoring, and ongoing data management options.**