Leveraging Web GIS:
An Introduction to the ArcGIS portal

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PETROLEUM
GIS CONFERENCE

Agenda

- Web GIS pattern
- Product overview
- Installation and deployment
- Configuration options
- Security options and groups
- Portal for ArcGIS + ArcGIS Server
- Implementation suggestions
- Summary

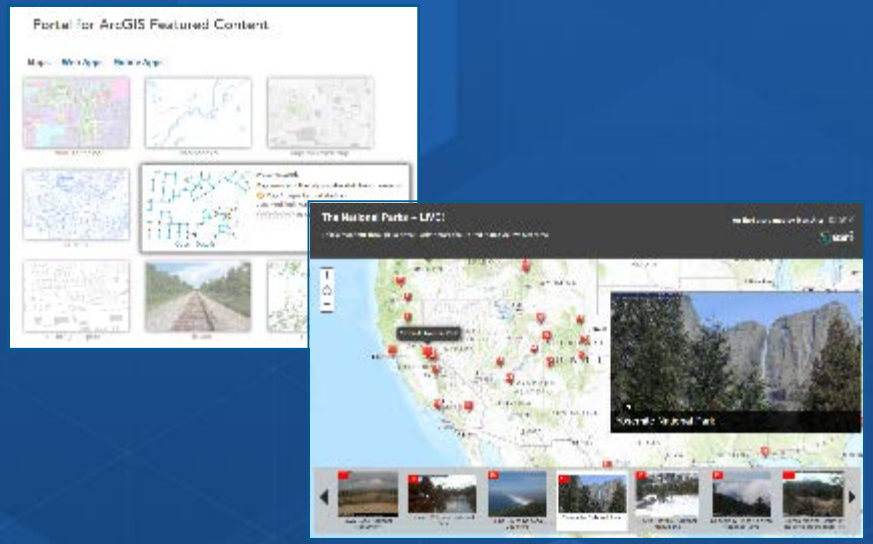
ArcGIS Is a Platform

Enabling GIS Everywhere

- Simple
- Integrated
- Open

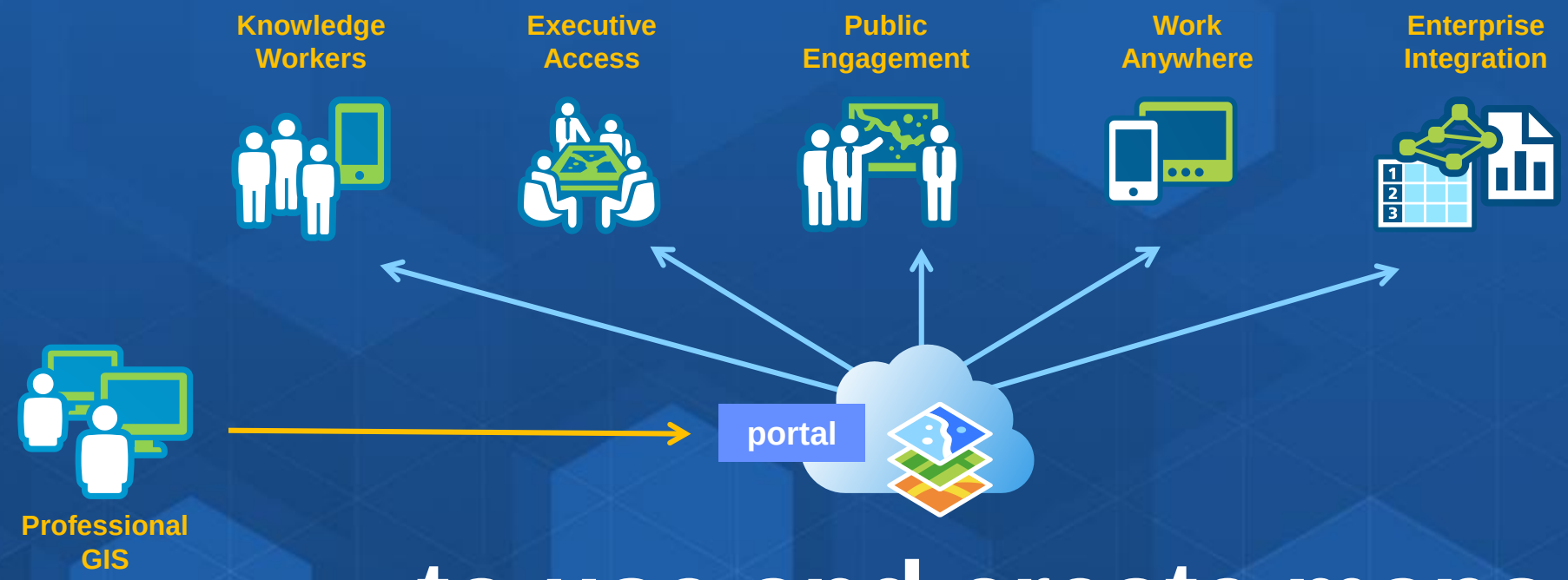
Available in the Cloud . . .
. . . and On-Premises

Organize your maps and apps



enable discovery

Empower people



to use and create maps

The ArcGIS Platform enables Web GIS

Enabling GIS Everywhere

- Simple
- Integrated
- Open

Available in the Cloud . . .
. . . and On-Premises

Key ArcGIS components for Web GIS

Apps

- Information Products
- Access Control

portal

- Web Services
- Data

GIS Servers
Authoring tools

Ready to use
Content

A

Web GIS Deployment Patterns

Apps

portal

GIS Servers

Ready to use Content

SaaS	ArcGIS Online (portal)	ArcGIS Online (Hosted Servers)	ArcGIS Online Services
Software	Portal for ArcGIS	ArcGIS Server	ArcGIS Data Appliance

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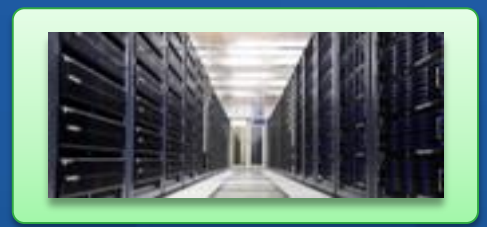
Web GIS Deployment Patterns

portal



GIS Servers

Ready to use Content

SaaS

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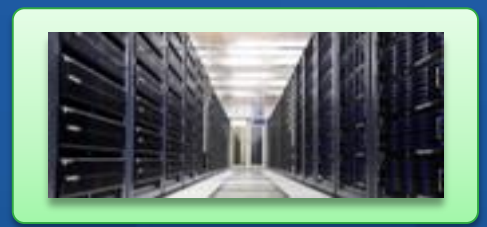

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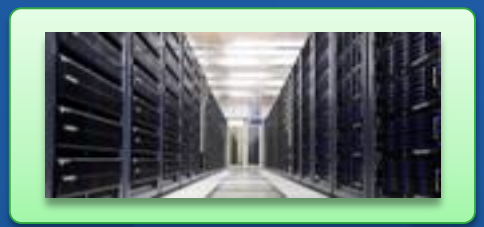

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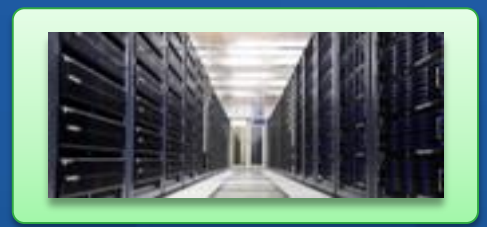

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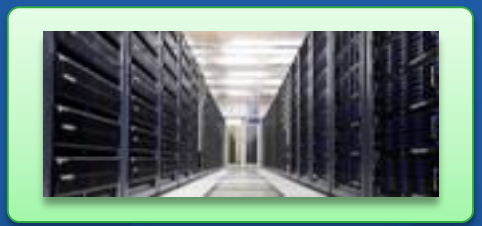

GIS Servers

Ready to use Content

SaaS

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Portal for ArcGIS

Web GIS in your infrastructure option

- **Central hub for your GIS assets**
- **Solution when**
  - **Additional security requirements**
  - **No public cloud option**
- **Allows for**
  - **Enterprise integration (e.g., security)**
- **COTS product since 10.2**
- **Extension to ArcGIS for Server**
  - **Since 10.3 included with Standard & Advanced**

Portal for ArcGIS

Is it right for me?

- Typical reasons for choosing **Portal for ArcGIS**
  - Have no Internet/www connection
  - Have strict SLAs and governance
  - Not ready/interested in the cloud
  - You are responsible for maintenance

- Typical reasons for choosing **ArcGIS Online**
  - Lower overall cost (faster start, less admin costs)
  - Elasticity
  - Continuous updates and improvements from Esri

Portal for ArcGIS – Some User Success Stories

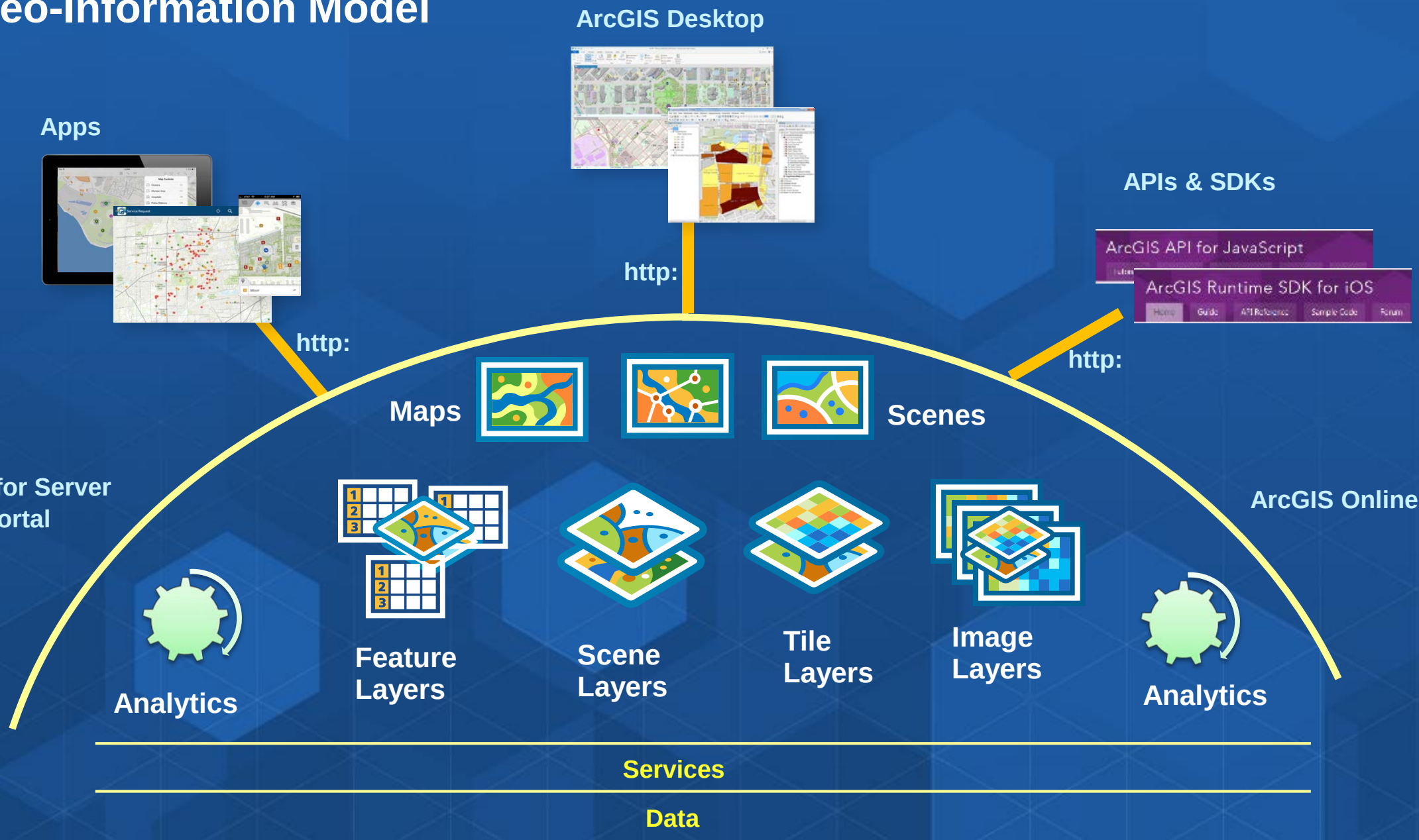
Portal for ArcGIS Tour

Demo

Portal for ArcGIS Capabilities

- Browse, search, and discover your GIS assets
- Self-service mapping
- Content creation and management
- Sharing and collaboration
- Data hosting and mapping
- Visualization, collection, and analysis
- Ready to use maps and layers
- Supports 2Dand 3D content

Geo-Information Model



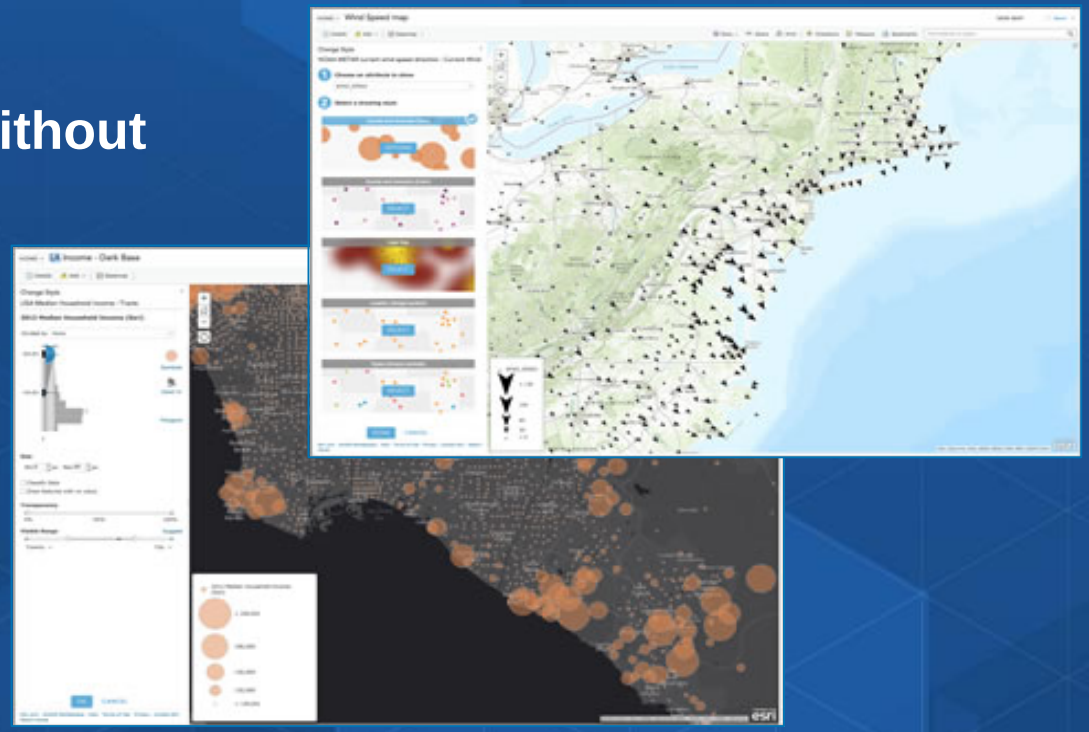
What is a Web Map?

- Foundation for your maps and apps
- Enables “intelligent maps” → Web Map stores references to web services and data, display and behavior settings
- Supports: smart mapping, pop-ups, editing, analysis, time, etc.

- Create in Portal for ArcGIS map viewer
- Can be leveraged by all other Esri Apps

Smart Mapping User Experience

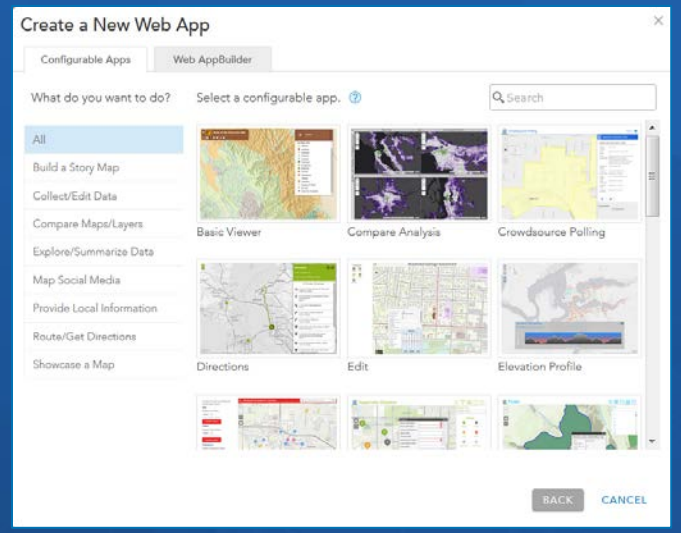
- Quickly make useful, visually stunning maps
- “smart” default symbolization
- Data driven workflows
- Automatically applied to feature layers without styling
- Live on screen styling

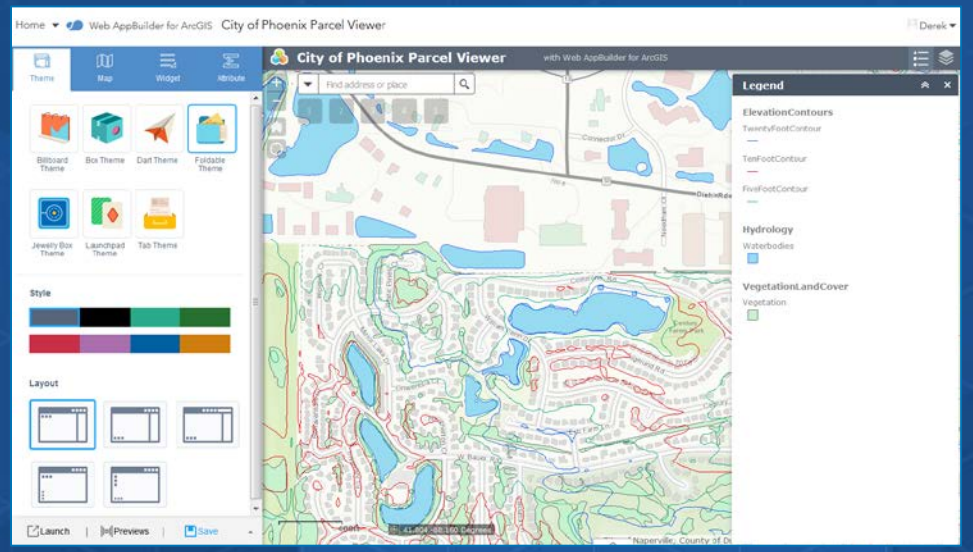


Create New Web Apps

- **Configurable Application Templates**
  - Workflow focused apps
  - Categorized by themes/use cases

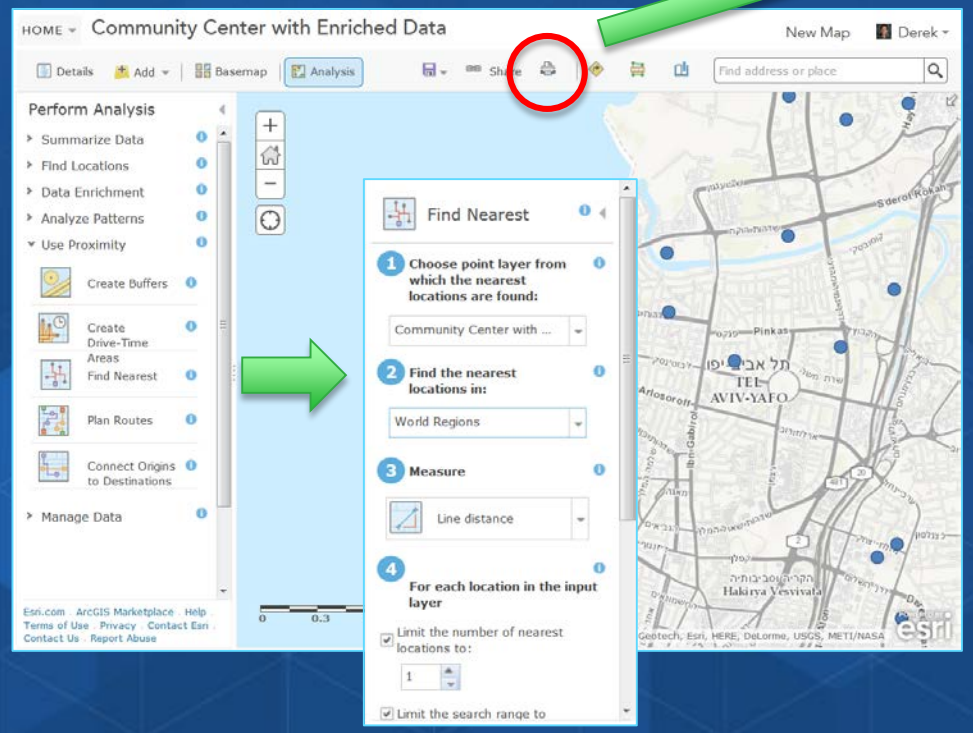
- **Web AppBuilder for ArcGIS**
  - Create and deploy new apps without programming
  - WYSIWYG user experience
  - Widget framework

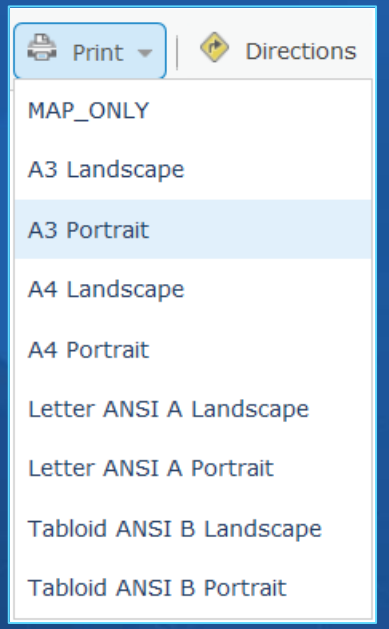




Portal for ArcGIS 10.4 Map Viewer

- **New functionality includes**
  - **Spatial analysis tools**
  - **Support for custom print layouts**





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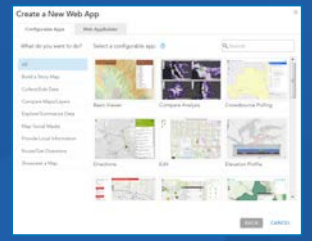
Analysis Capabilities in Portal

Demo

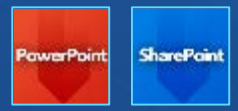
Apps included with Portal for ArcGIS

- Configurable application templates
- Collector for ArcGIS
- Operations Dashboard for ArcGIS
- Explorer for ArcGIS
- ArcGIS Maps for Office
- Esri Maps for … Apps (4 different apps)
- 10.3.x: Web App Builder for ArcGIS



Configurable App Templates

Collector for ArcGIS

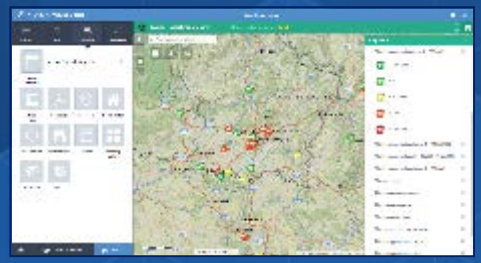


ArcGIS Maps for Office

Operations Dashboard for ArcGIS

Explorer for ArcGIS

Esri Maps for … Apps



10.3.x Web App Builder for ArcGIS

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Portal for ArcGIS – System Requirements

Same Supported Operating Systems as ArcGIS Server

Windows

Operating system	Minimum OS version	Maximum OS version
Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])	Update: April 2014	
Windows Server 2012 Standard and Datacenter (64 bit [EM64T])		
Windows Server 2008 R2 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP1	
Windows Server 2008 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP2	SP2
Windows 10 Pro and Enterprise (64 bit [EM64T])		
Windows 8.1 Pro and Enterprise (64 bit [EM64T])	Update: April 2014	
Windows 8 Pro and Enterprise (64 bit [EM64T])		
Windows 7 Ultimate, Professional, and Enterprise (64 bit [EM64T])	SP1	

Linux

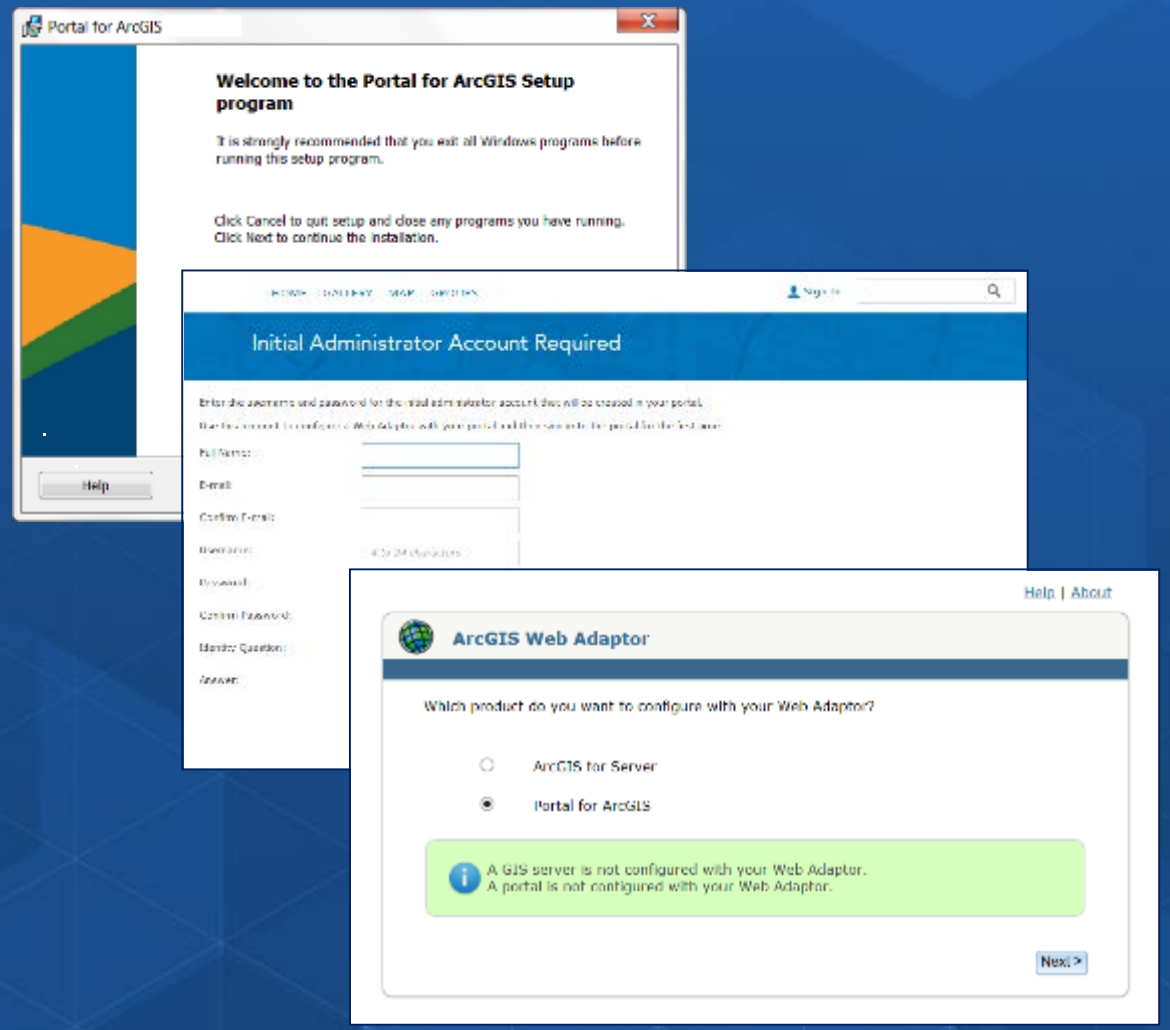
Operating system	Minimum OS version	Maximum OS version
Red Hat Enterprise Linux Server 7 (support begins at 10.3.1)		Update 1 and 2 not supported
Red Hat Enterprise Linux Server 6		
Red Hat Enterprise Linux Server 5	Update 7 with libX11 patch	
SUSE Linux Enterprise Server 12 (support begins at 10.3.1)		
SUSE Linux Enterprise Server 11	Service Pack 1	

Installing Portal for ArcGIS

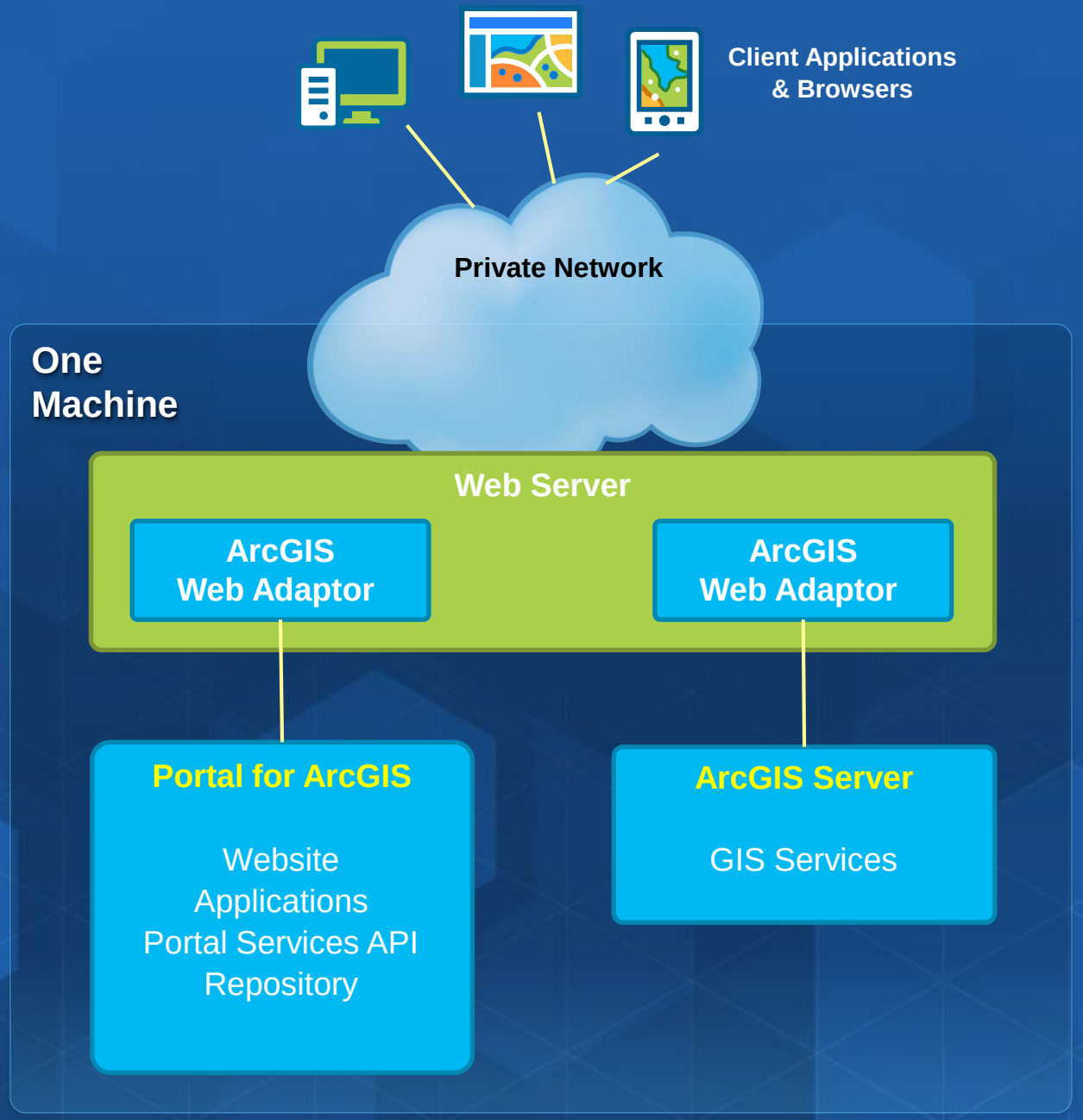
Can be scripted for silent installs

- 5 step workflow
  1. Run installer
  2. Authorize software
  3. Create initial admin account
  4. Enable SSL on web server
  5. Configure ArcGIS Web Adaptor

- Review help documentation
- Helpful to have
  - IT knowledge
  - Understand security, SSL, etc.



Deployment


Client Applications
& Browsers
Private Network
One
Machine
Web Server
ArcGIS
Web Adaptor
ArcGIS
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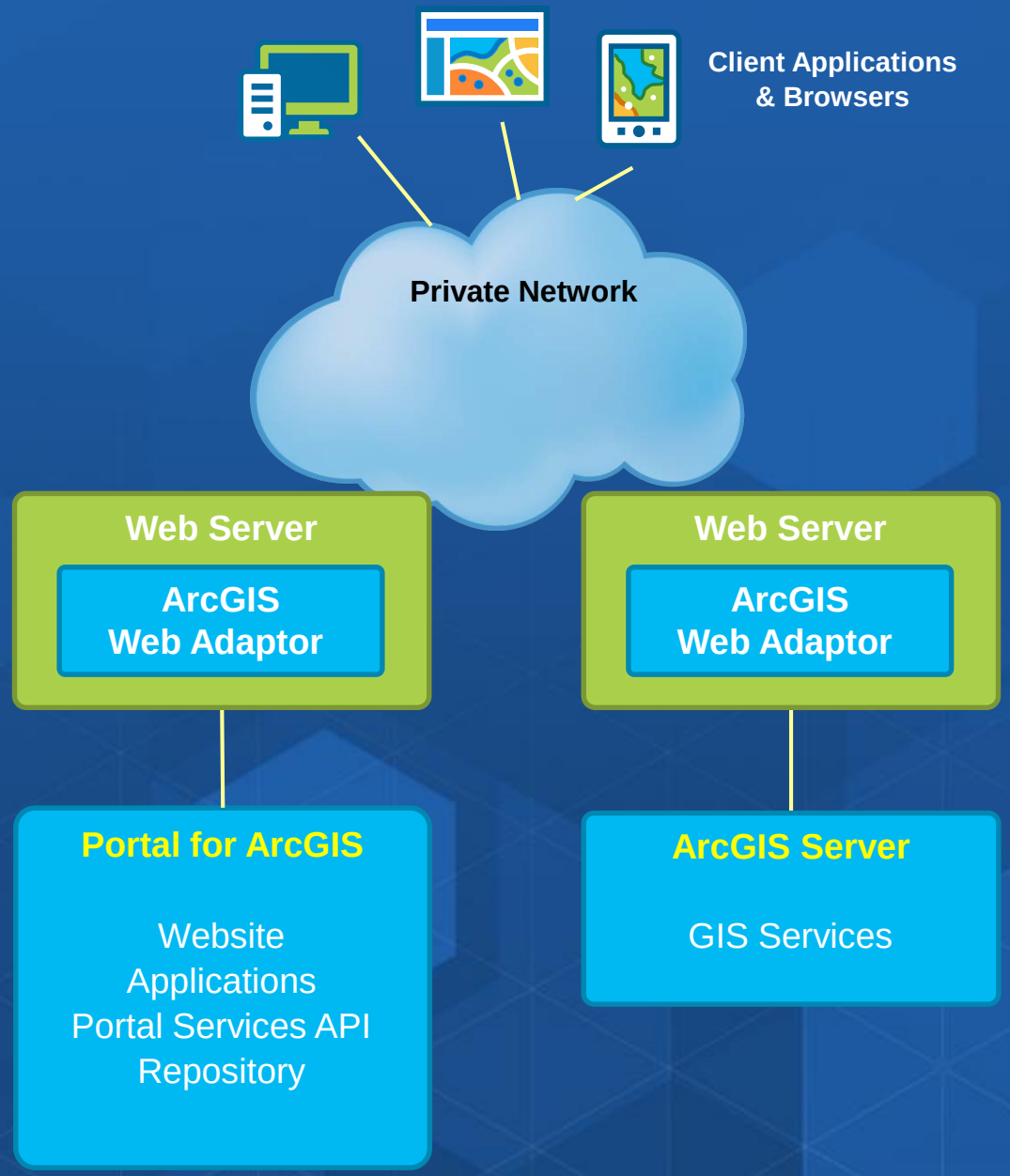
Repository
ArcGIS Server
GIS Services

Deployment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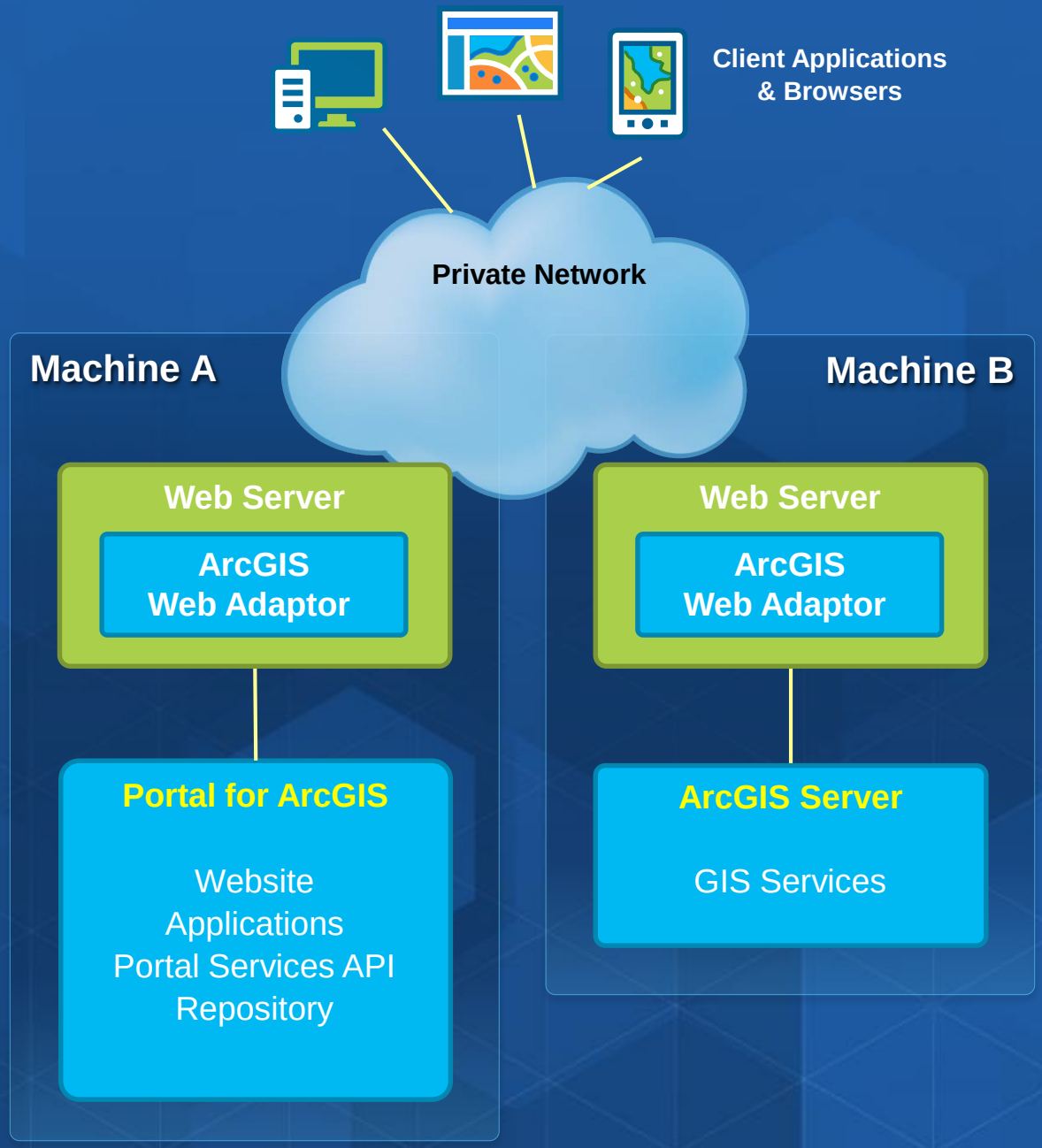
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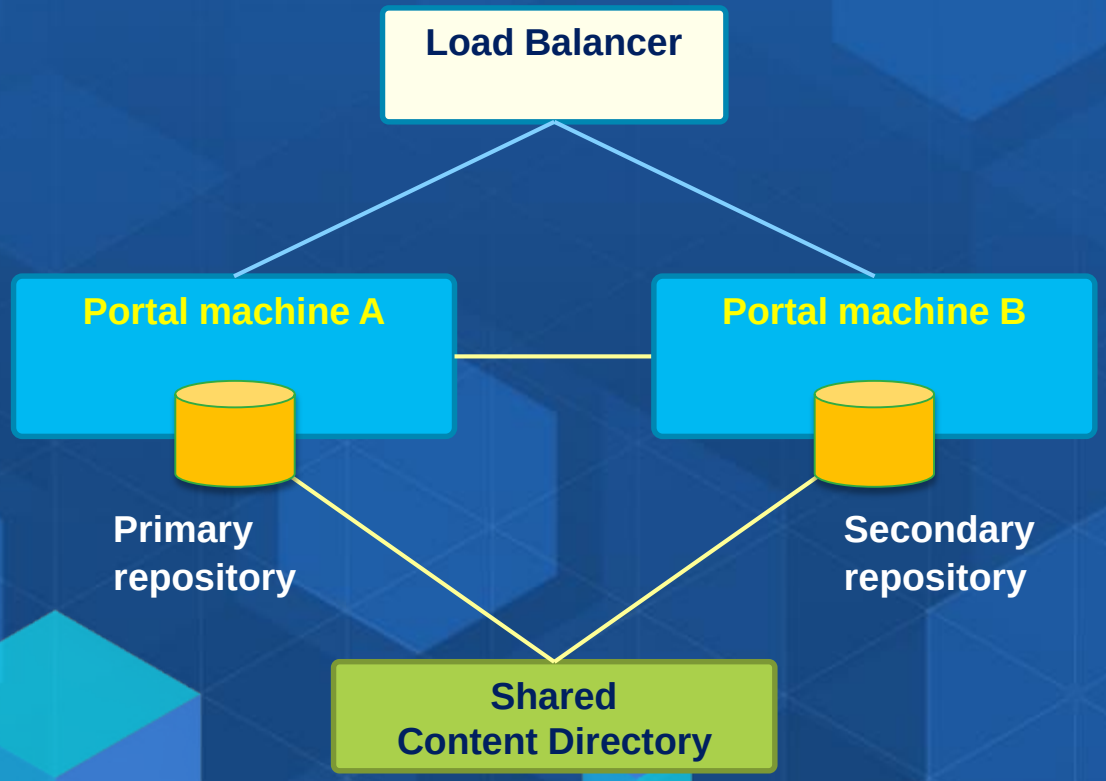
Portal for ArcGIS – High Availability

- High availability deployments supported



Portal for ArcGIS Security

Integrates with Your Enterprise Security Infrastructure

- **Authentication**
  - **Web tier authentication, including Windows Authentication & PKI**
  - **Web single sign-on (SSO) with SAML as of 10.3**
  - **Portal tier authentication combining both built-in and enterprise users as of 10.3.1**
- **Users, Roles, and Groups**

Users	Roles	Groups

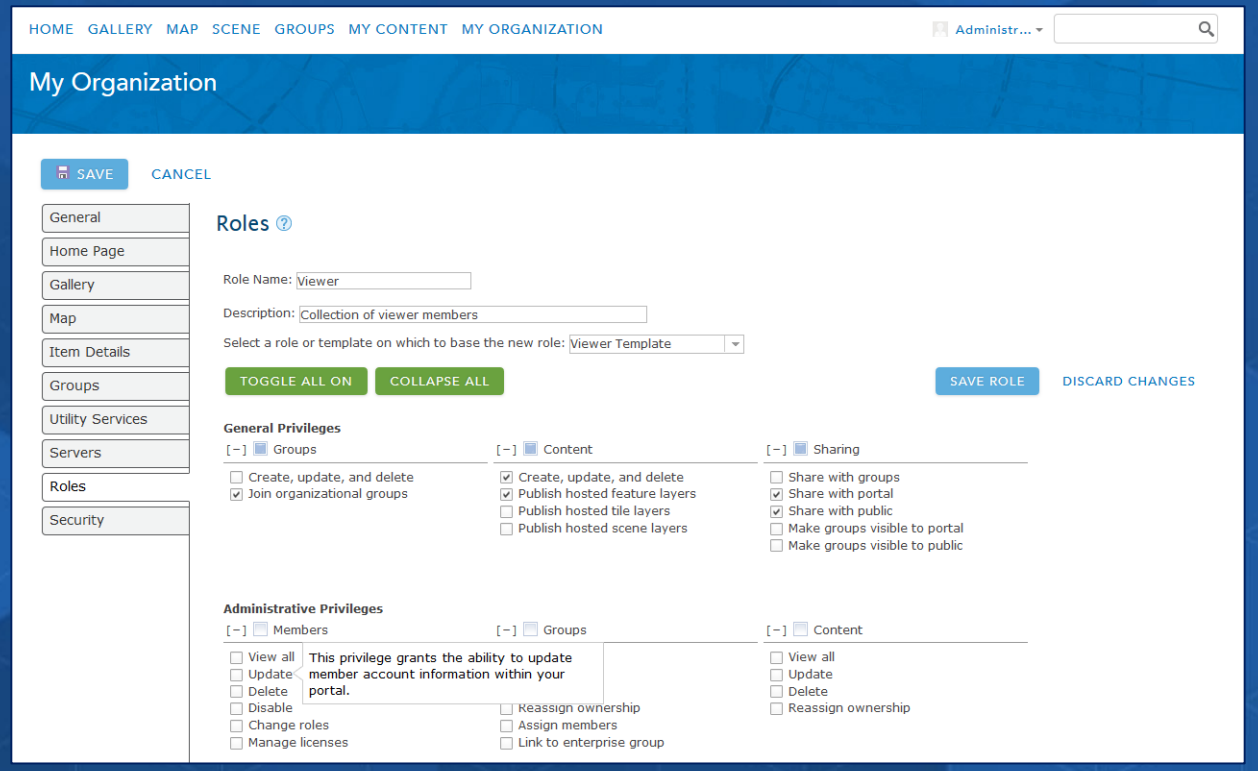
• Built-in
• Enterprise
  • *Active Directory*
  • *LDAP*
	• *Anonymous*
	• User
	• Publisher
	• Administrator
	• Custom roles (10.3)
		• Built-in
		• Enterprise groups (10.3)

Portal for ArcGIS: Named Users and Roles

	With an ArcGIS organizational account			Without account
	User role	Publisher role	Administrator role	
Search and use public items	✓	✓	✓	✓
Search and use private items	✓	✓	✓	
Create and share items	✓	✓	✓	
Publish new content as tiled or feature services		✓	✓	
Administer the ArcGIS organization			✓	
Manage users and their privileges			✓	
Manage items created by others			✓	
Use Collector, Explorer, Operations Dashboard, Esri Maps for … Apps, Templates, Web AppBuilder	✓	✓	✓	

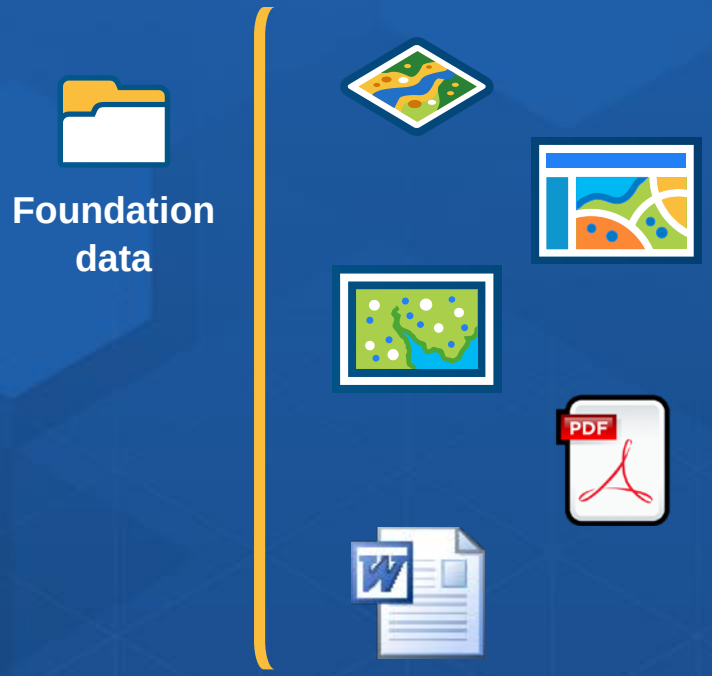
Portal for ArcGIS: Custom Roles

- Provide more flexibility to enable fine grained control on what members can do
- My Organization page > Edit Settings > Roles > Create Role



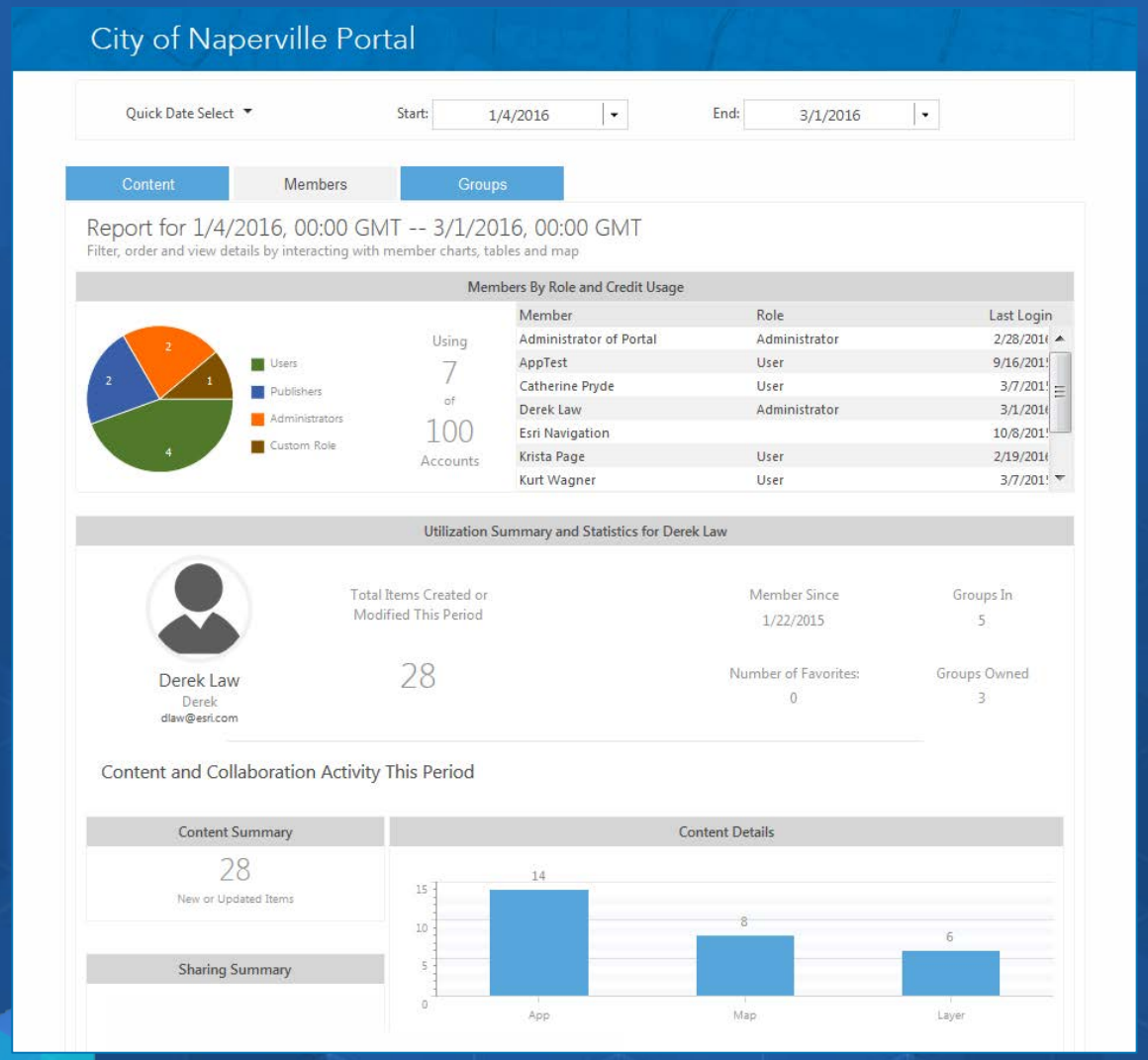
Leverage Groups in Portal

- Groups have membership
- Organize by:
  - Theme or initiative
    - Common and supportive content
  - Functional department/structure
    - Based on organization's business units
  - Projects
    - Specific projects or tasks
  - Ad-hoc
    - Prototyping, non-permanent/temp projects, staging
- 10.3.x supports Enterprise Groups
  - When Portal is enabled with enterprise identity store (Windows AD or LDAP)



Activity Dashboard

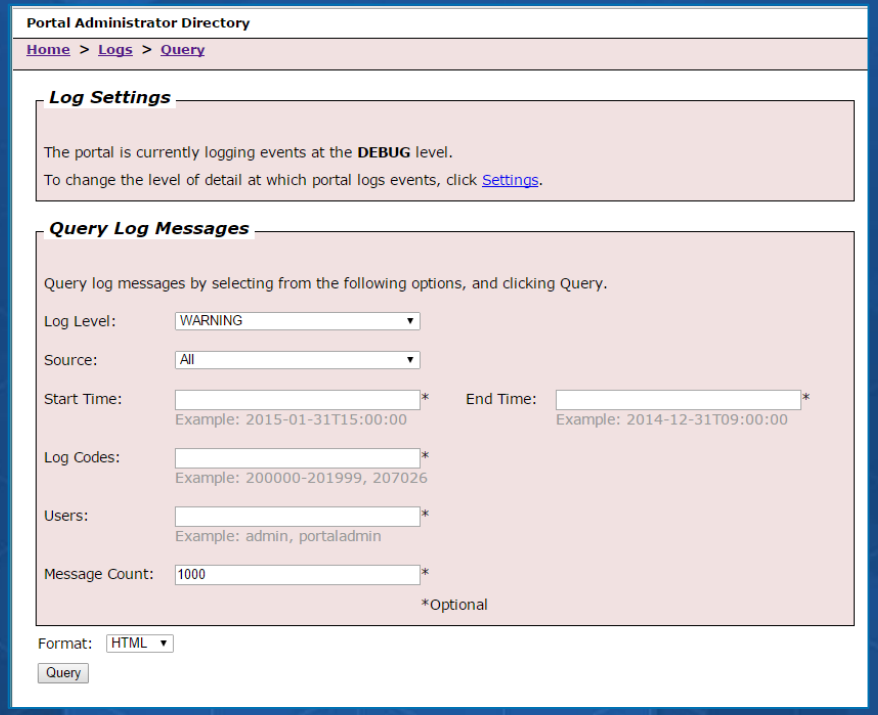
- **Activity-based metrics and real-time reports about your Portal**
  - **Content**
  - **Members**
  - **Groups**



Portal for ArcGIS – Logging

`http://myportal.esri.com/webadaptor/portaladmin/logs`

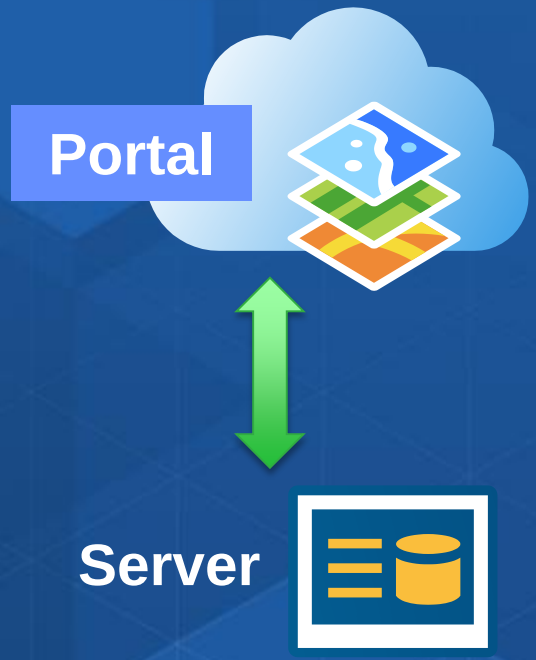
- Provides auditing and troubleshooting tools designed for Portal administrators
- Provides the ability to monitor and query detailed events that occur within Portal
- Filter by:
  - Log level, source, start and end time, log code range, and by users



Using Portal with ArcGIS Server

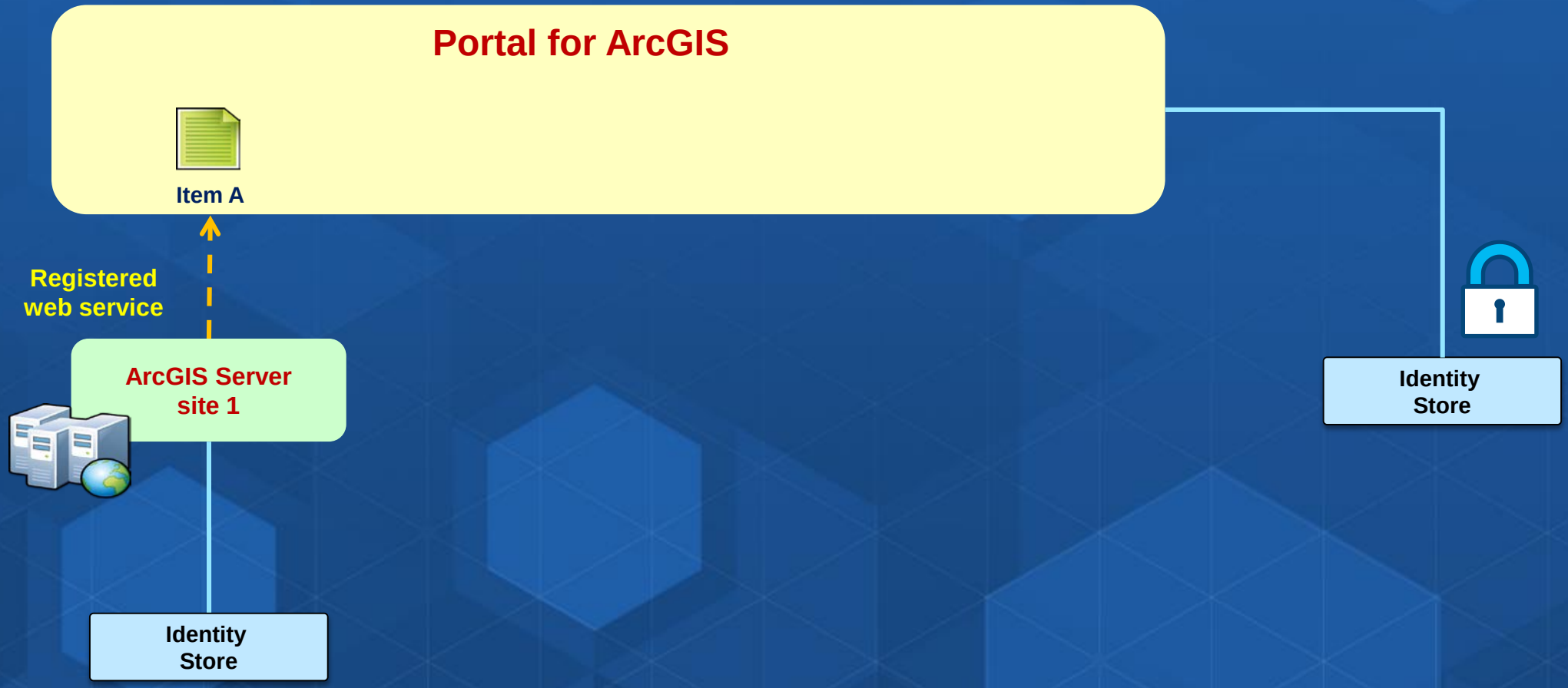
Three Integration Approaches

1. **Registering services**
2. **Federating a Server**
3. **Designating a hosting Server**



Implementation Patterns

Portal for ArcGIS + ArcGIS Server



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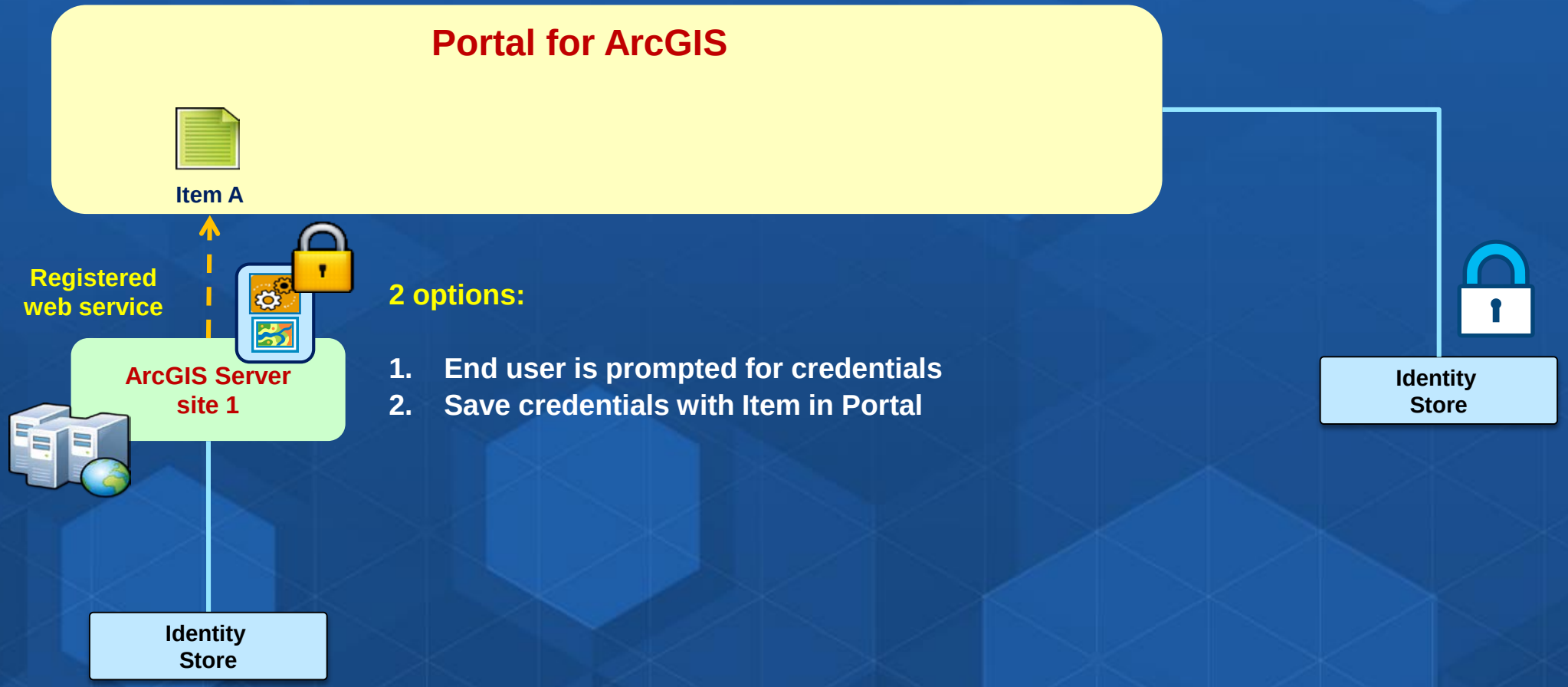
Register a Web Service with Portal

Demo

Implementation Patterns

Portal for ArcGIS + ArcGIS Server



2 options:

1. End user is prompted for credentials
2. Save credentials with Item in Portal

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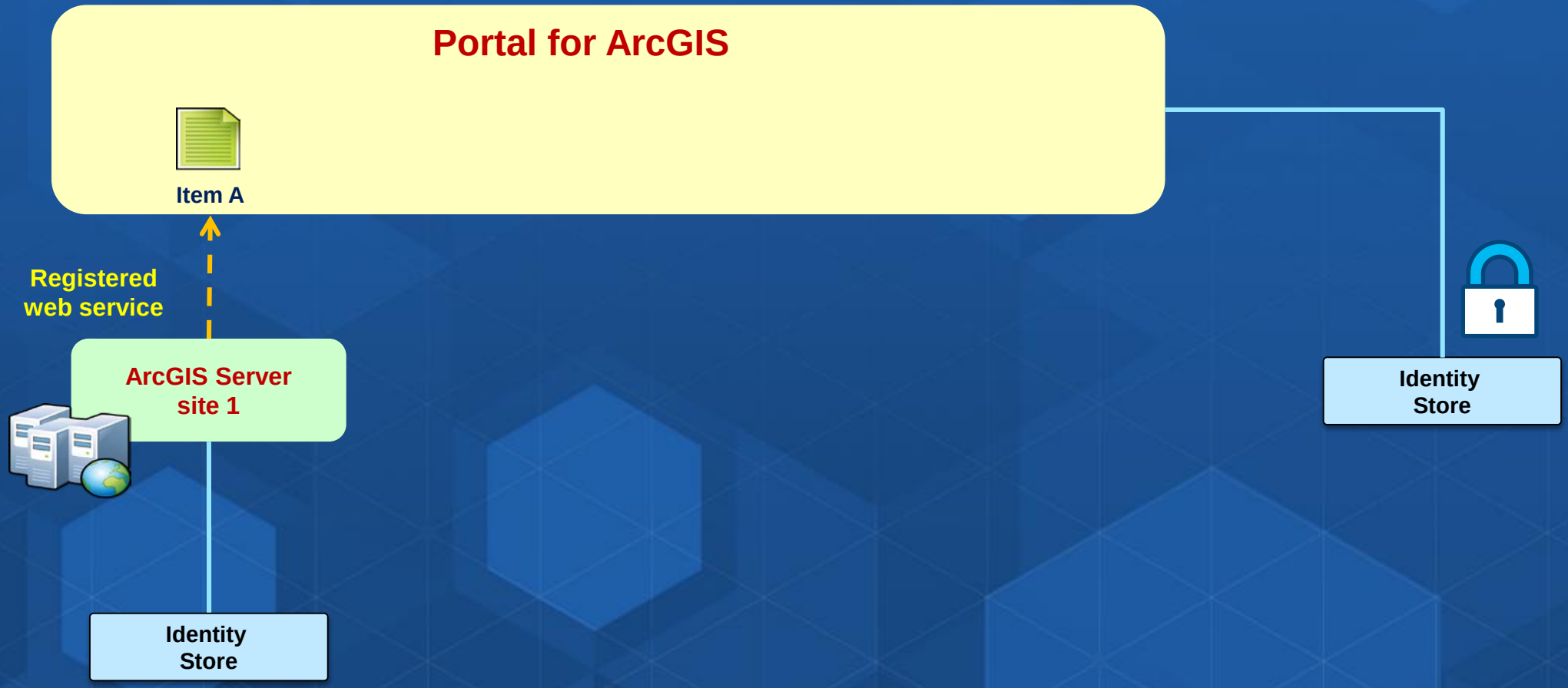
Implementation Patterns

Portal for ArcGIS + ArcGIS Server



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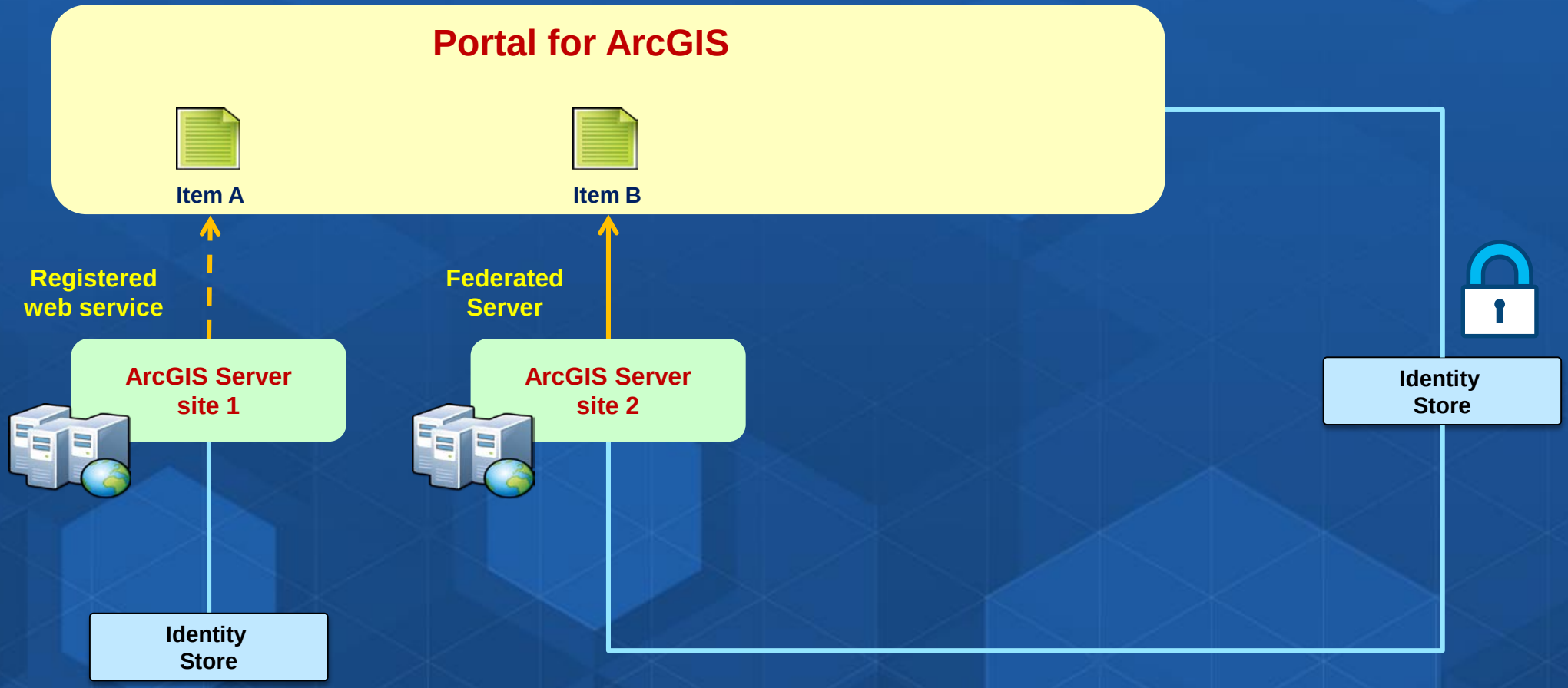

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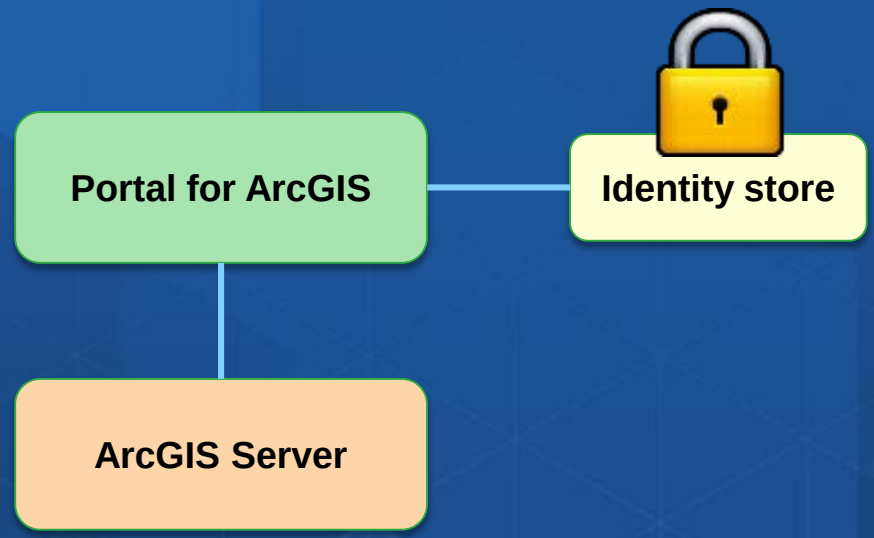
Portal – Server Federation

- Allows a single sign-on (SSO) experience between Portal and Server
- Permissions are all managed in Portal
- ArcGIS Server site must be HTTPS enabled



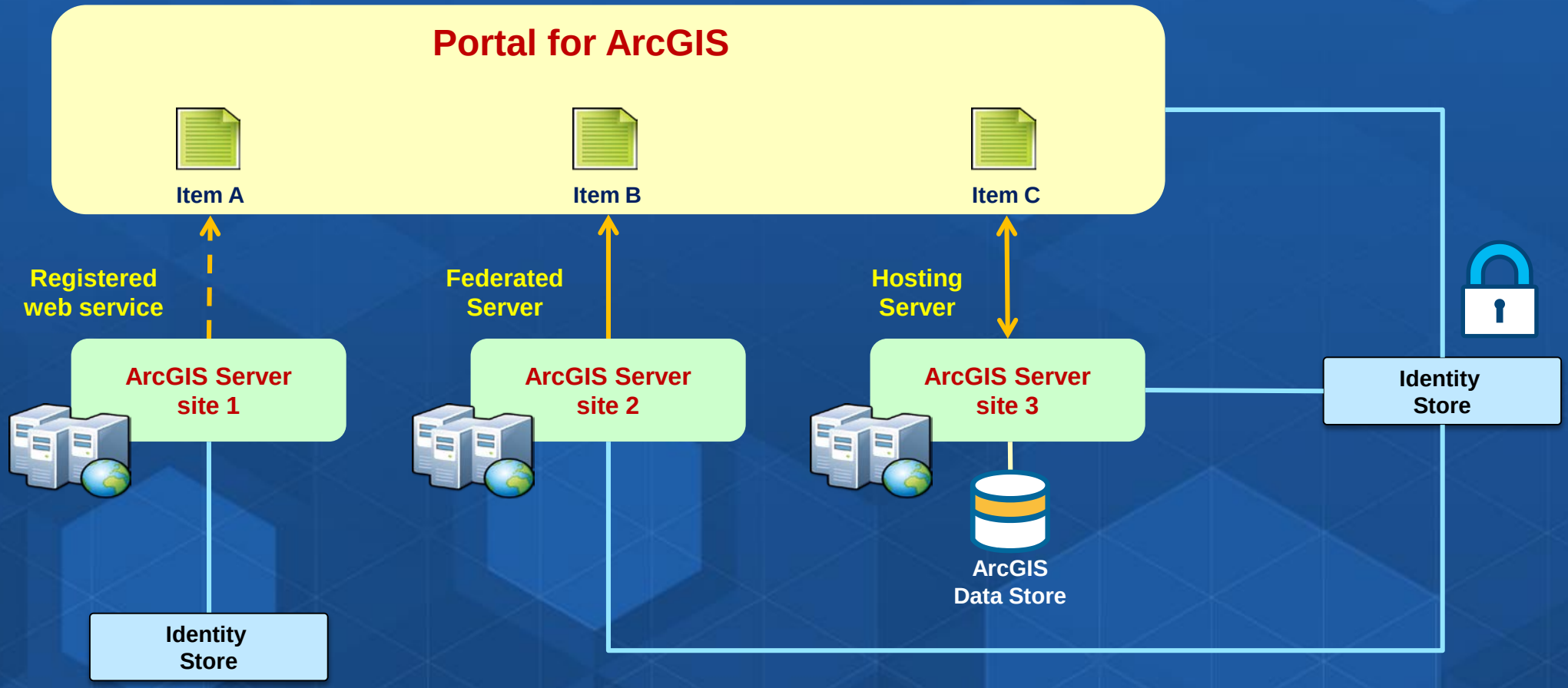
When to use:

- Desire for SSO user experience

- When NOT to use
  - When Portal/Server are in different physical locations
  - Portal and Server are different releases

Implementation Patterns

Portal for ArcGIS + ArcGIS Server



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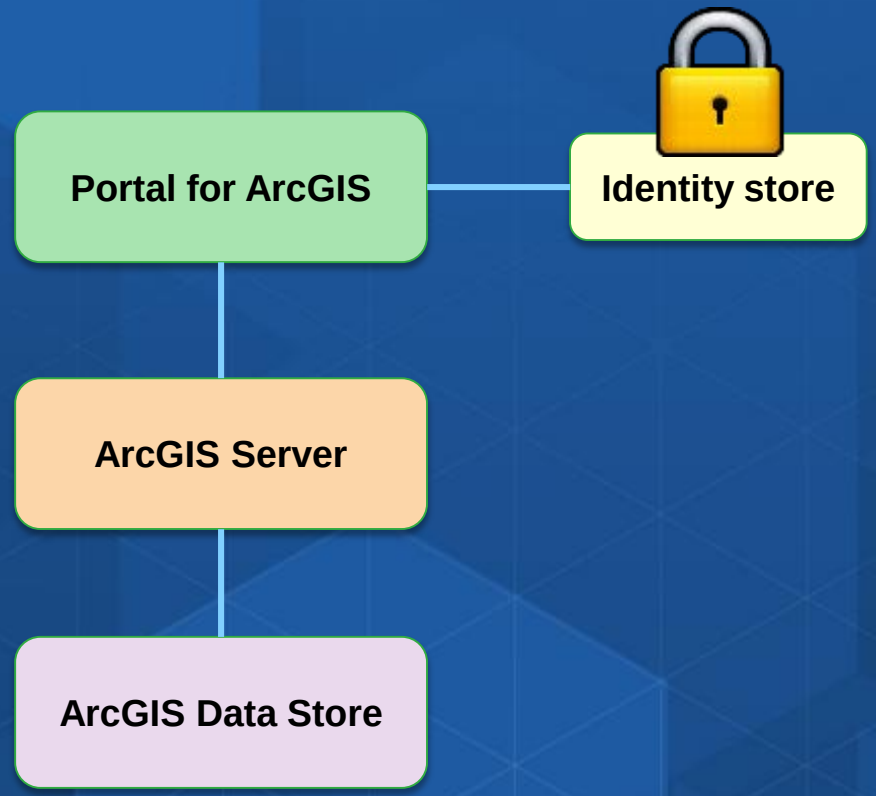
Portal for ArcGIS + Hosting Server

- Required when you want to enable hosted services in Portal
  - Feature services
  - Tiled services
  - 3D scene services (10.3.1)
  - Analysis tools in Portal map viewer
- Example workflows
  - Publish content to Portal
  - Share content from Esri Maps for … Apps
- Uses ArcGIS Server with ArcGIS Data Store

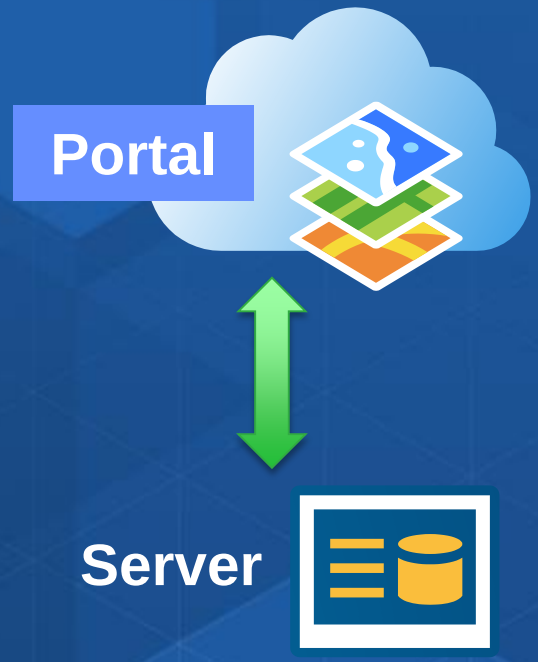


Review: Portal with ArcGIS Server

Three Integration Approaches

1. **Registering services**
2. **Federating a Server**
3. **Designating a hosting Server**

You can use one, all three, or any combination



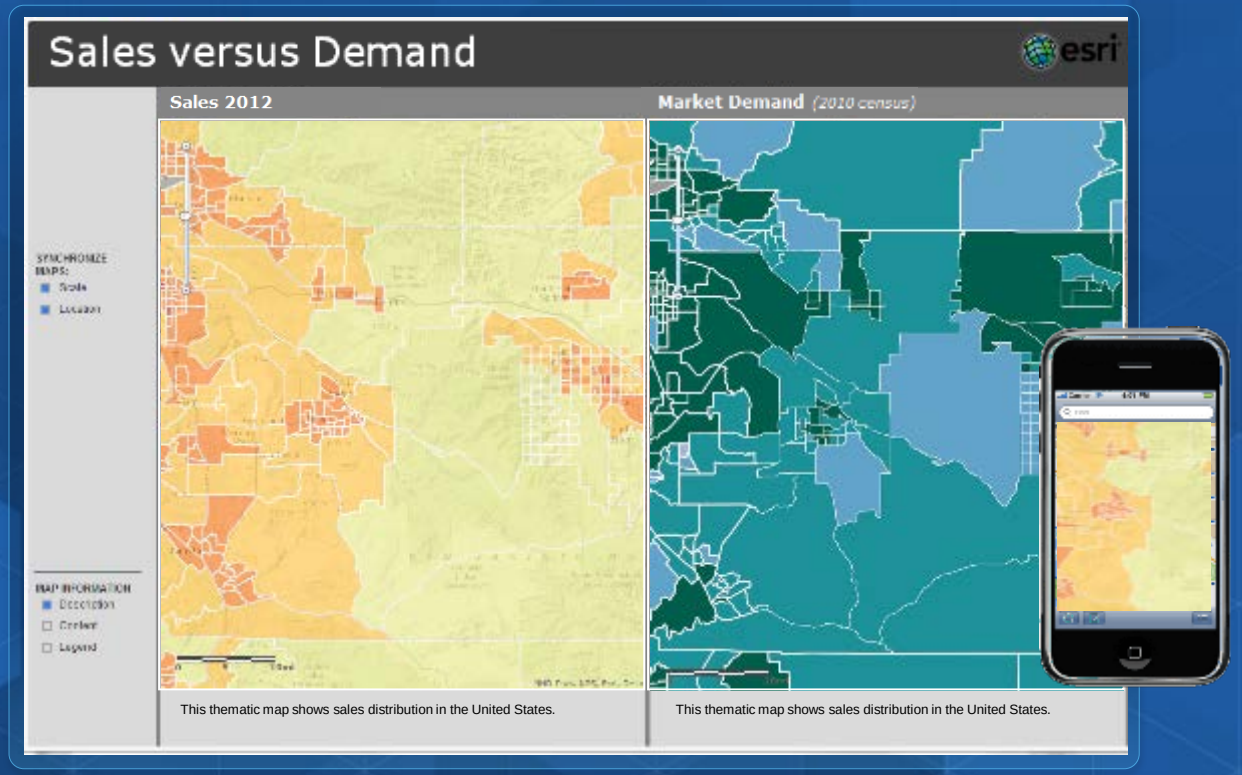
Implementing Web GIS

Typical activities

- Assessment & planning
- Installation & configuration
- Security integration
- Deployment *(staging, production)*
- End user engagement, socialization
- IT training & support planning
- Operations, maintenance, and support
- Designing & building information products

Keys to Success

- **Stay focused on the information products**



A

Keys to Success

- Stay focused on the information products
- Embrace the idea of maps everywhere
- Model Portal for ArcGIS after your organization's structure & workflows
- Consider the Web GIS Launch Kits

Jumpstart Your Technology & Launch Your Organization

ArcGIS Server Jumpstart
&
Enterprise GIS Health Check

Web GIS Launch Kit

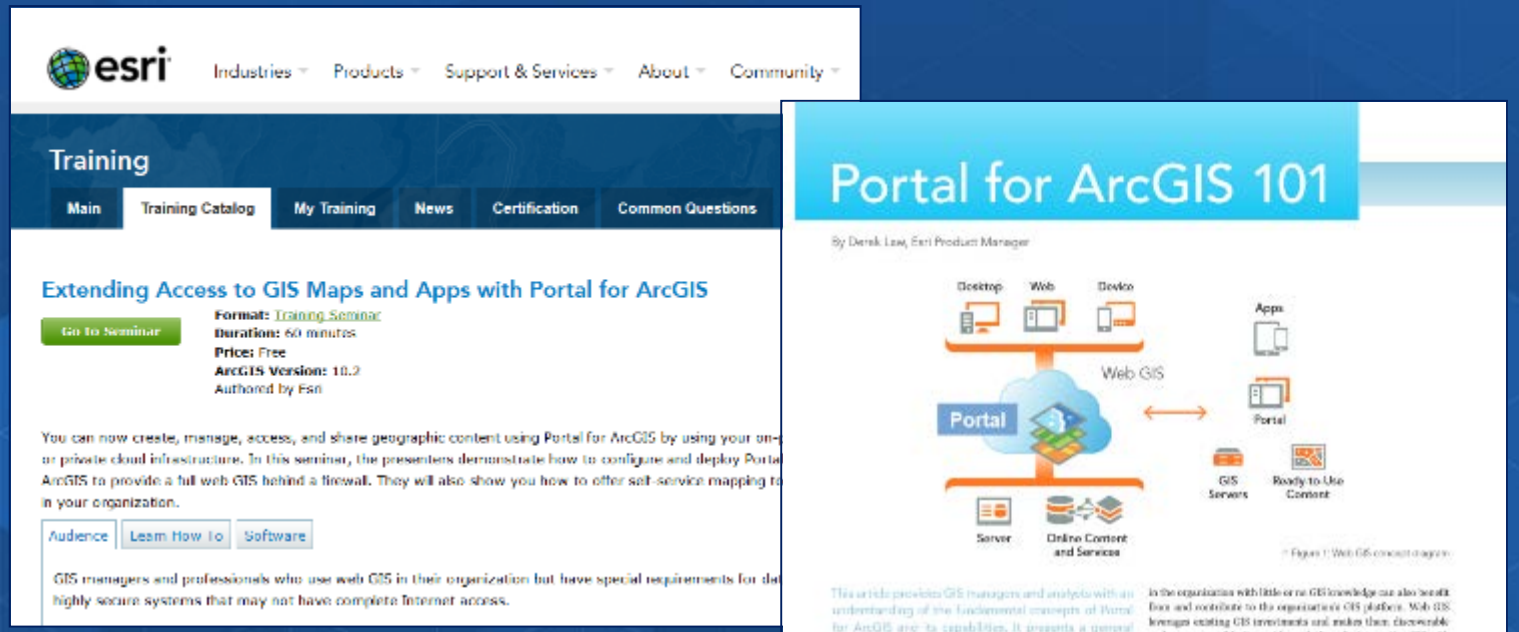
Supported by:

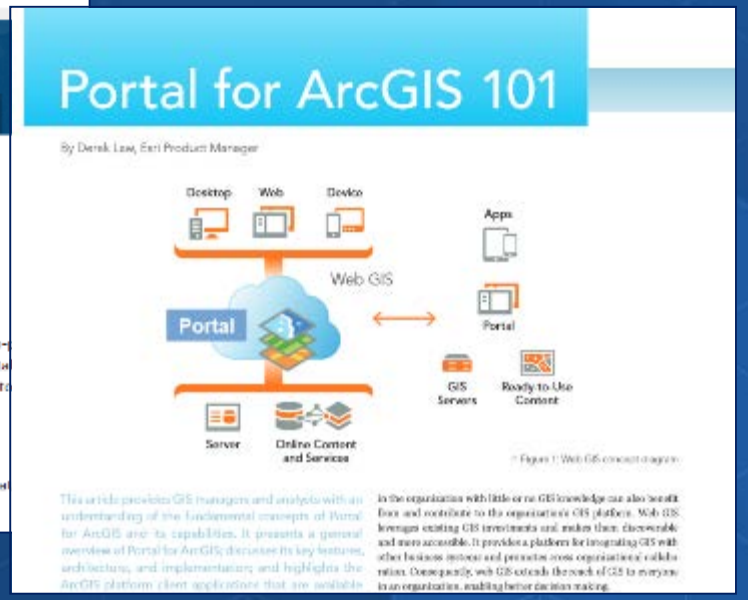
Enterprise Consultants

Business & Industry Consultants

Resources

- **Online help documentation** `http://server.arcgis.com/en/portal/`
- **Extending Access to GIS Maps and Apps with Portal for ArcGIS**
  60 min training seminar - Free
- **Portal for ArcGIS 101** **ArcUser Technical article**





Portal for ArcGIS - Summary

- Central hub for your GIS assets
- Implements “Web GIS” in your infrastructure
- Solution when
  - Additional security demands
  - Prefer no public cloud option
- Extension of ArcGIS for Server
  - 10.3.x Included with Standard and Advanced

Thank you

Please remember to fill out a survey