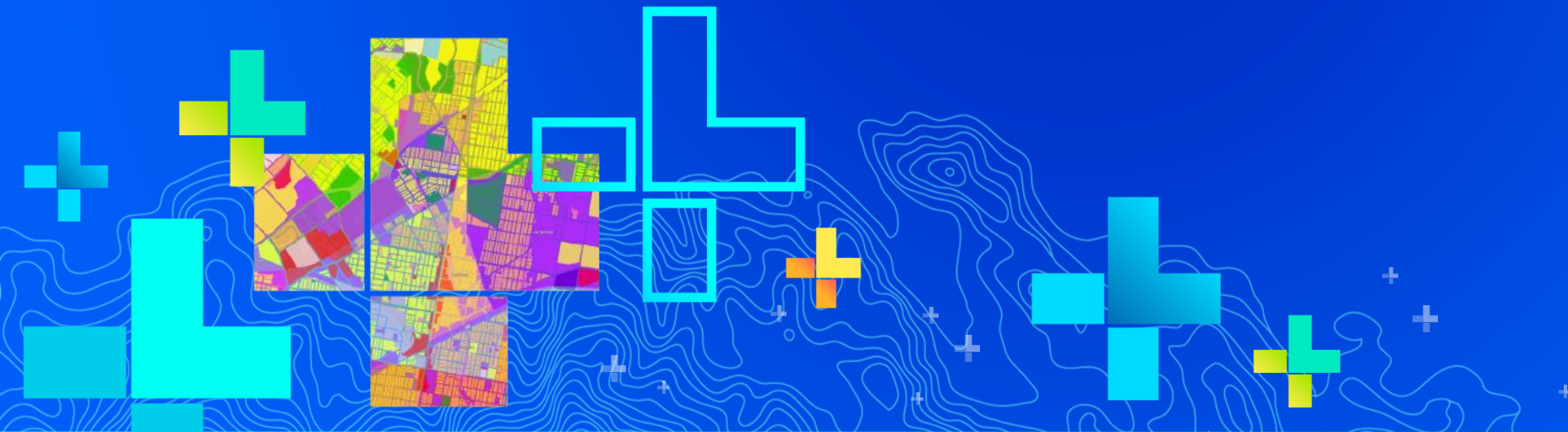


# ArcGIS Enterprise Overview

Lauren Voelker

Matt Hoehn



# All Esri Products

## Core Products

ArcGIS Apps  
ArcGIS Enterprise  
ArcGIS Desktop

ArcGIS Hub  
ArcGIS Living Atlas of the World  
ArcGIS Online

ArcGIS Pro  
ArcGIS for Personal Use  
ArcGIS for Student Use

## Apps

### APP BUILDERS

AppStudio for ArcGIS  
Configurable Apps  
Web AppBuilder for ArcGIS

### APPS FOR THE FIELD

Collector for ArcGIS  
Drone2Map for ArcGIS  
Explorer for ArcGIS  
Operations Dashboard for ArcGIS  
Navigator for ArcGIS  
Survey123 for ArcGIS  
Tracker for ArcGIS  
Workforce for ArcGIS  
ArcGIS QuickCapture

### APPS FOR THE OFFICE

ArcGIS Business Analyst Desktop  
ArcGIS Business Analyst Mobile App  
ArcGIS Business Analyst Web App  
ArcGIS Community Analyst  
ArcGIS Earth  
ArcGIS Excalibur  
ArcGIS Maps for Adobe Creative Cloud  
ArcGIS Maps for Office  
ArcGIS Maps for Power BI  
ArcGIS Maps for SharePoint  
Esri CityEngine  
Esri Redistricting  
GeoPlanner for ArcGIS  
Insights for ArcGIS  
Map Viewer  
Scene Viewer

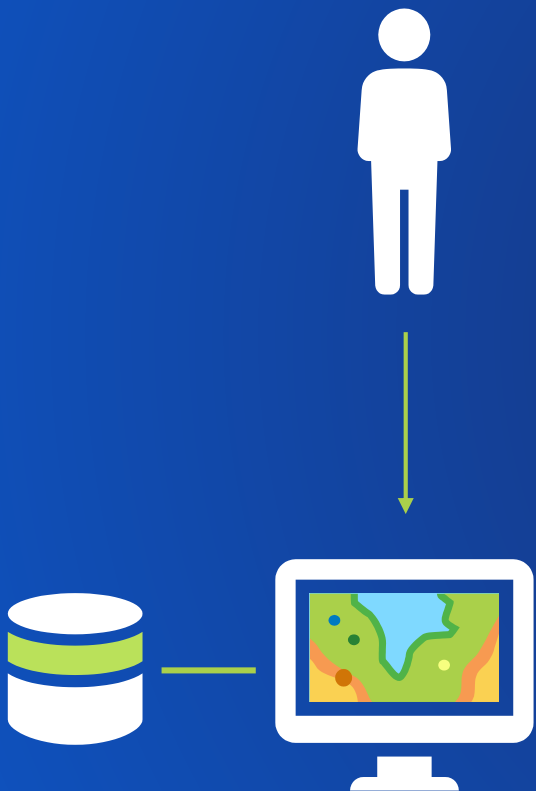
### APPS FOR THE COMMUNITY

ArcGIS Open Data  
Crowdsourcing Manager  
Crowdsourcing Polling  
Crowdsourcing Reporter  
ArcGIS StoryMaps  
Photo Survey  
Quick Report Template

## Where is “Web GIS”?

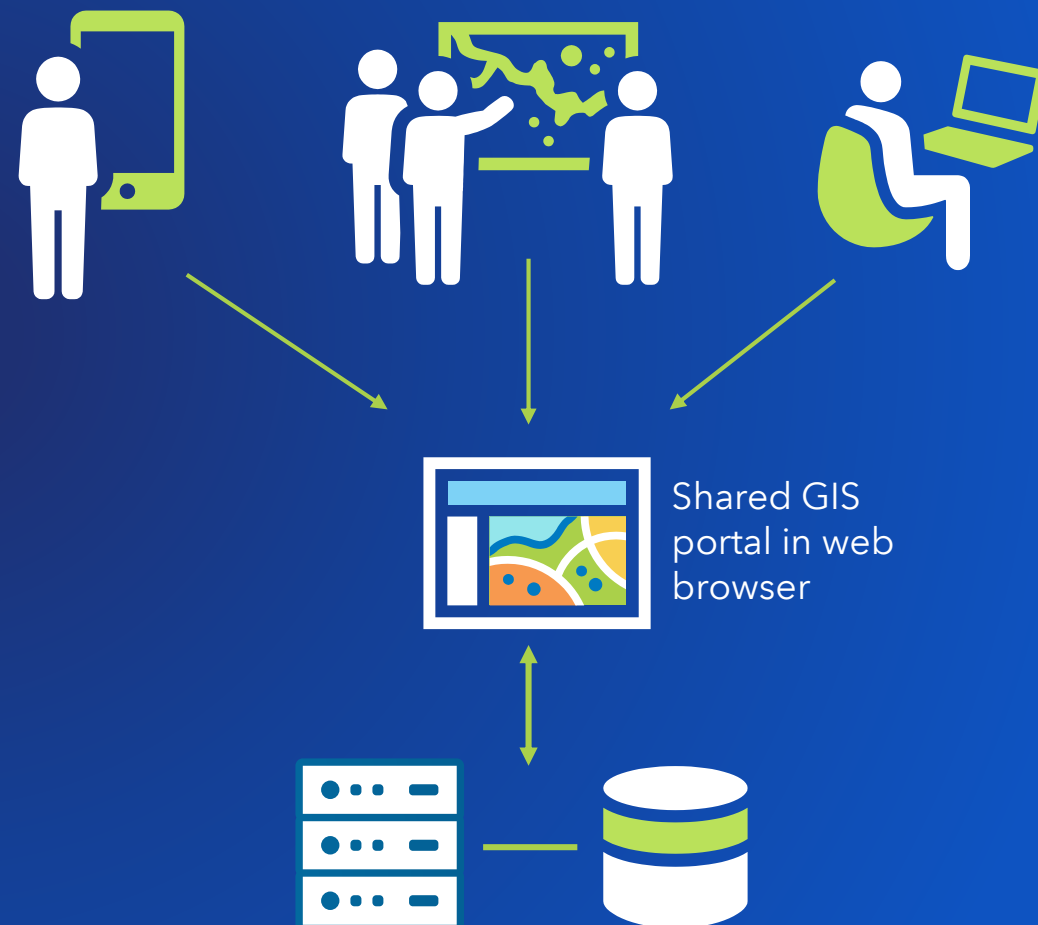
## Desktop GIS

All work is done on your local machine.



## Web GIS

Everyone's work is done by the back-end server infrastructure.





ArcGIS for Developers

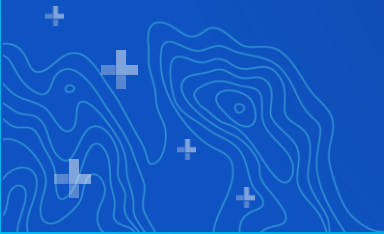
Advanced analytics  
capabilities delivered  
in user-friendly ways

Share content easily,  
securely, and  
efficiently with your  
stakeholders

ArcGIS Enterprise is **powerful, flexible** and  
**collaborative** software that serves as the  
**foundation** of your organization's Web GIS.

Deployed to fit your  
organization's needs  
and resources; scales  
to meet demand

Seamlessly integrated with  
the full stack of Esri GIS  
software products





# ArcGIS Enterprise Comprehensive GIS for Your Organization



## New and Improved

- User Types
- Reduced Memory (95%)
- Bulk Publishing
- Webhooks
- Hosted Python Notebooks
- Sites
- Machine Learning & AI
- Security

## Coming

- Kubernetes
- Microservices
- Large Organization Management
- Intelligent Search

## 10.7.1 Dramatically Reduces Memory Requirements

- More Services
- Less Memory

Enterprise Data Management,  
Mapping, Analysis and Collaboration

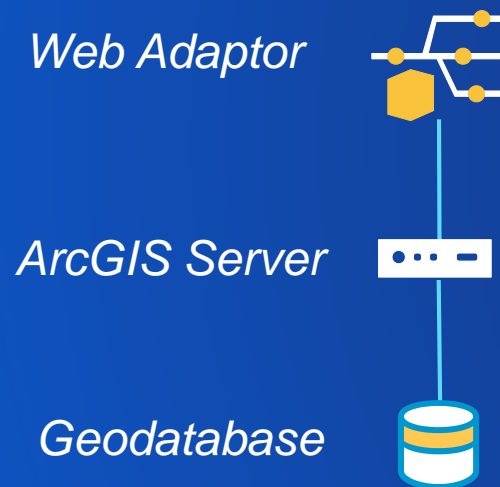
*Runs in Commercial Clouds,  
Private Clouds and in Your Own Infrastructure*

# Software Components

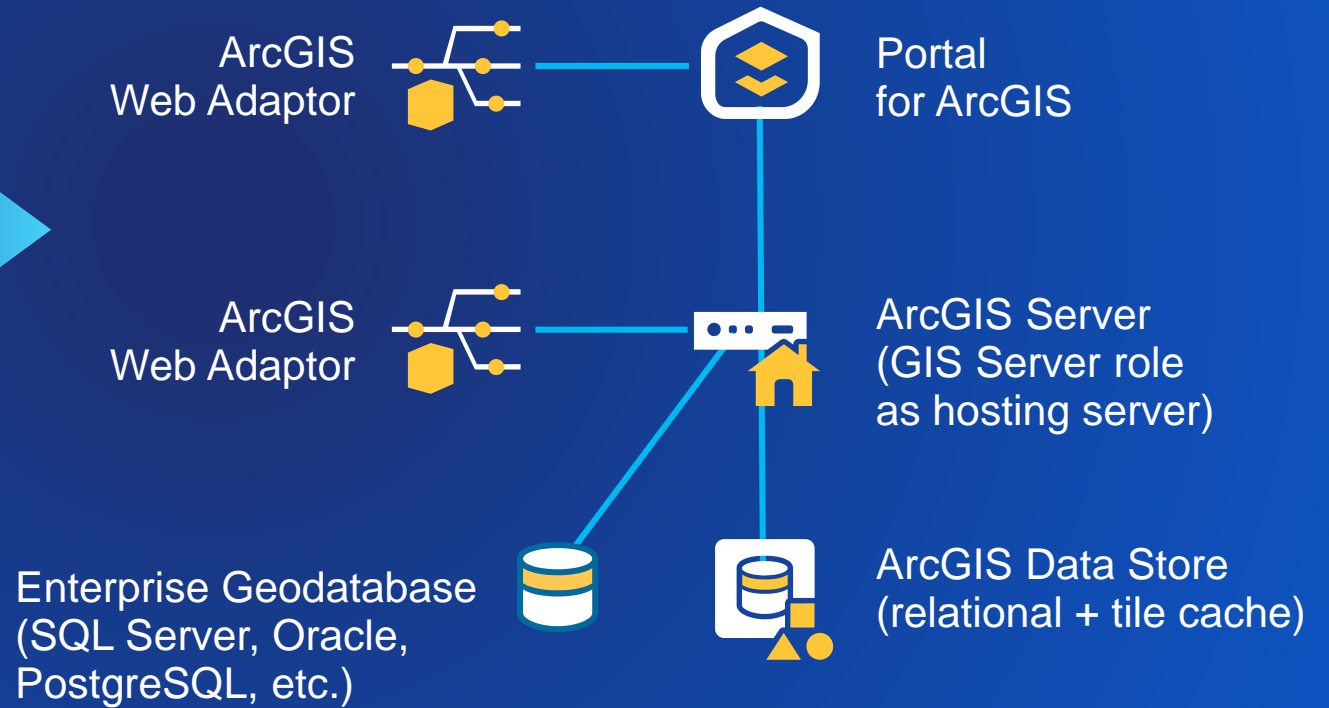


# Coming from ArcGIS Server to ArcGIS Enterprise

## Typical deployment of ArcGIS Server



## Base deployment of ArcGIS Enterprise





# Base Deployment Logical Architecture

## ArcGIS Web Adaptor

Integrates with your organization's existing web server to provide a single endpoint that **distributes incoming requests** and enables you to use **web-tier authentication**.



# Base Deployment Logical Architecture



## Portal for ArcGIS

The software component that enables the ArcGIS Enterprise portal. Portal for ArcGIS is the **web frontend** and **API backend** that supports a user's interaction and overall experience with your Web GIS.

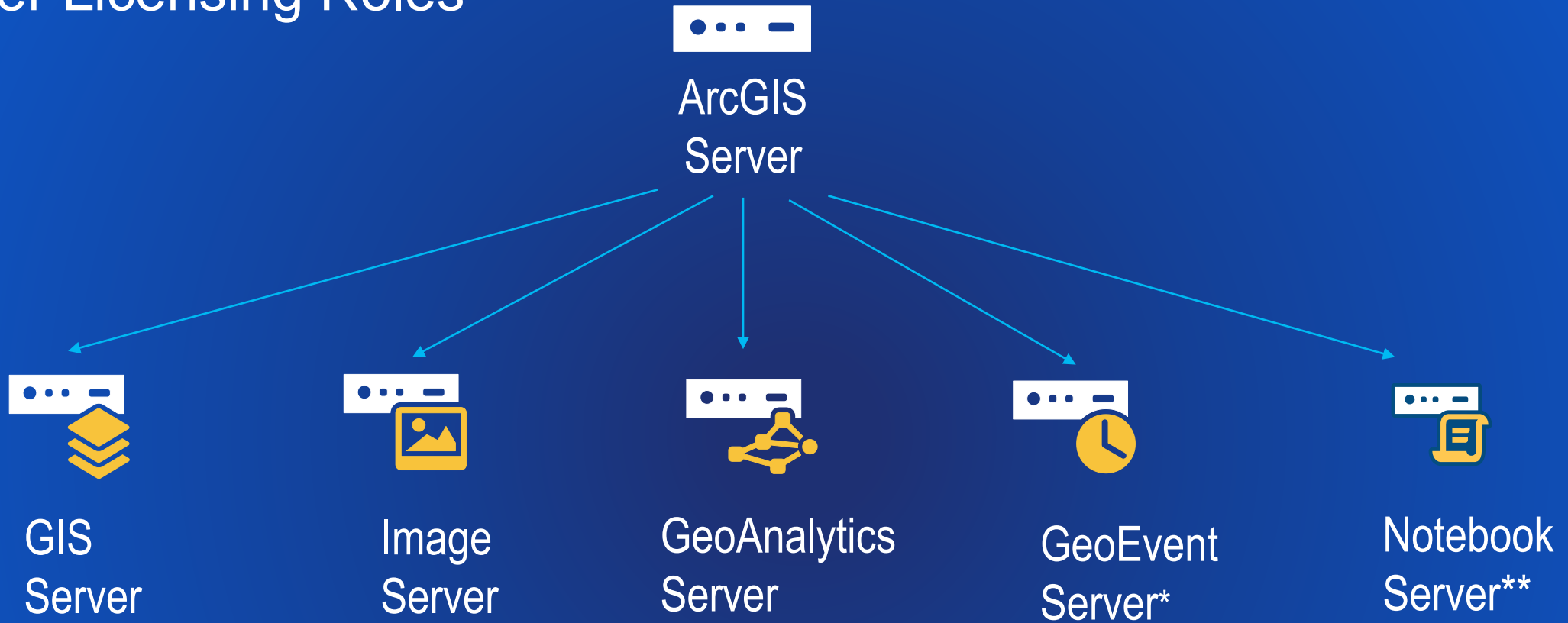
# Base Deployment Logical Architecture



## ArcGIS Server (hosting)

In a base deployment ArcGIS Server should be configured with a **GIS Server licensing role** and as **the hosting server**. In this capacity it gives you the ability to **publish and share** maps and layers from ArcGIS Pro using your own business databases and by copying data to the server.

# Server Licensing Roles



One software component, multiple server roles

\* GeoEvent Server requires installing the ArcGIS Server software + overlaying the GeoEvent Server setup

\*\* Notebook Server is a separate download and install that does not require the main ArcGIS Server setup

# Base Deployment Logical Architecture



## ArcGIS Data Store

The ArcGIS **managed data repository** that stores the Enterprise portal's hosted content. It is not a replacement for your enterprise geodatabases.

- Relational
- Tile Cache
- **Spatiotemporal**



# Base Deployment Logical Architecture

## Enterprise Geodatabase

The **user-managed** data repository that stores organizational datasets



# Functionality of the base deployment

- **Everything from traditional ArcGIS Server**

- Ability to publish map services, feature services, network services, geoprocessing services, geocoding services, and much more.
- Publish content from referenced data sources
  - file-based data (file geodatabases, shapefiles), enterprise geodatabases, other spatially-enabled databases.

- **Approved users can use self-service mapping workflows**

- Users can publish and share their own data without accessing a database – just like ArcGIS Online

- **Story maps and other configurable application templates**

- **Web AppBuilder for quickly creating web applications**

- **Operations Dashboard, ArcGIS Enterprise Sites**

- **Full suite of Esri mobile applications**

- **Other custom applications built on the ArcGIS API for Javascript and ArcGIS Runtime SDKs**

# Base Deployment | Choosing a pattern

- **Choosing a base deployment pattern**

- **Software Tiers**

- Portal for ArcGIS + Web Adaptors (web tier)
    - ArcGIS Server (app tier)
    - ArcGIS Data Store/EGDB (data tier)

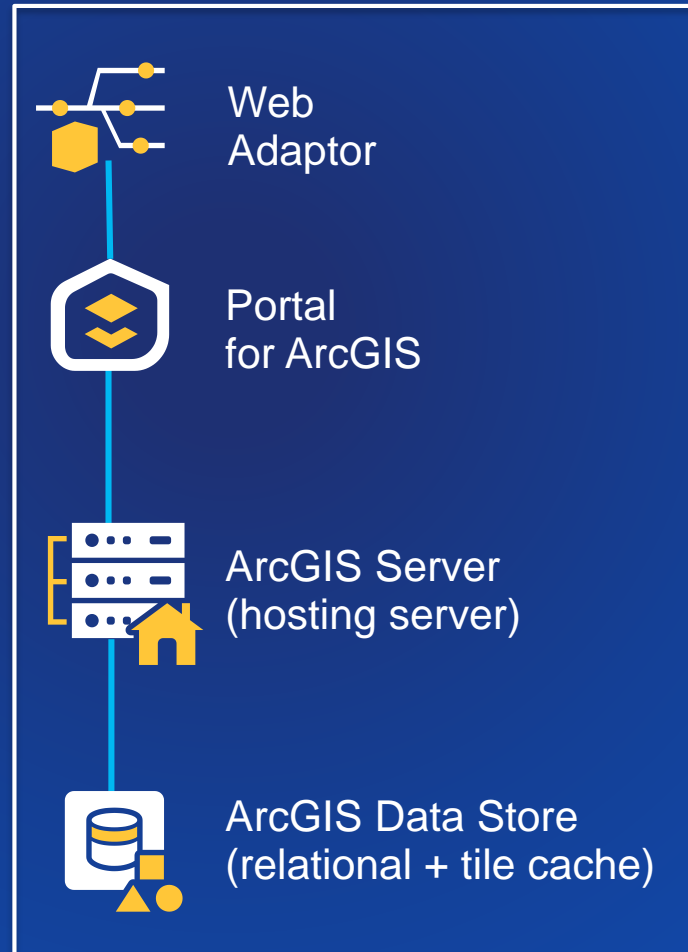
- **All-in-one single machine deployment**

- Great, simple approach for small and medium sized organizations
    - For Development systems

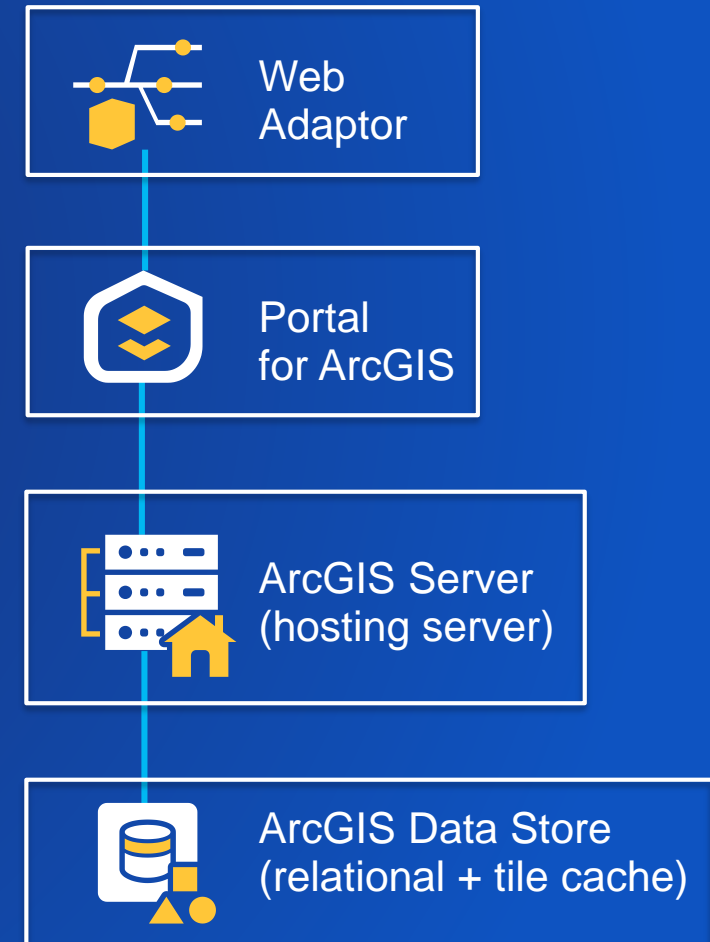
- **Multi-machine deployment**

- Web Adaptor
    - Portal for ArcGIS
    - ArcGIS Server
    - ArcGIS Data Store

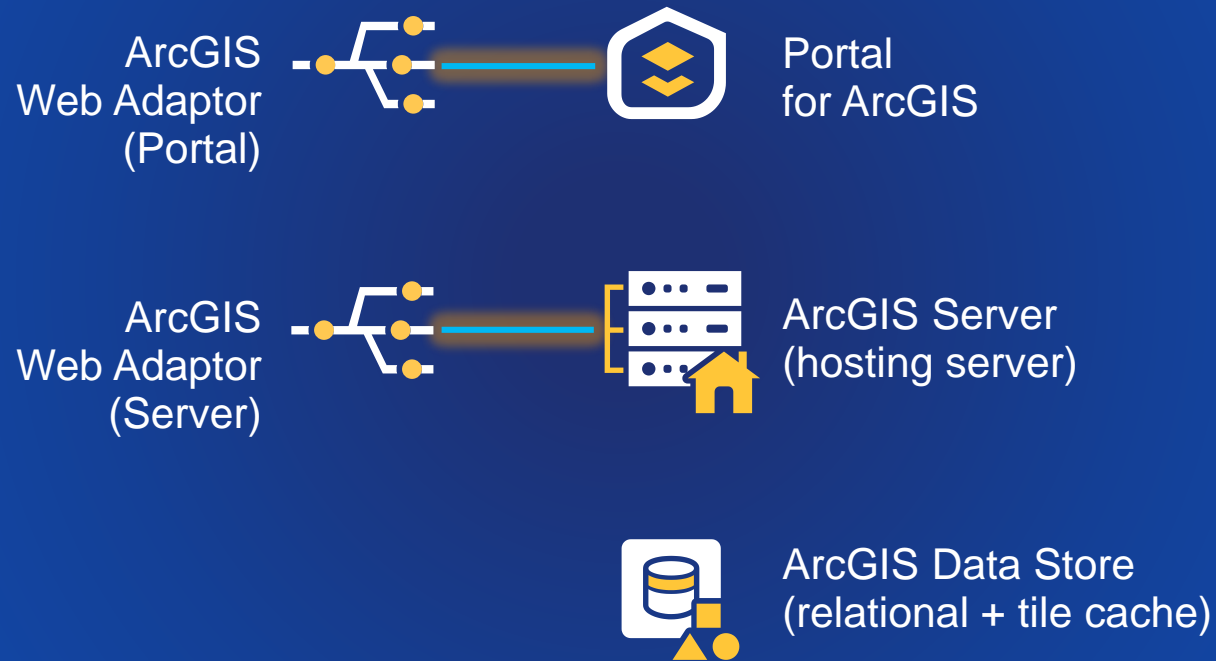
## Single Machine



## Multi-Machine

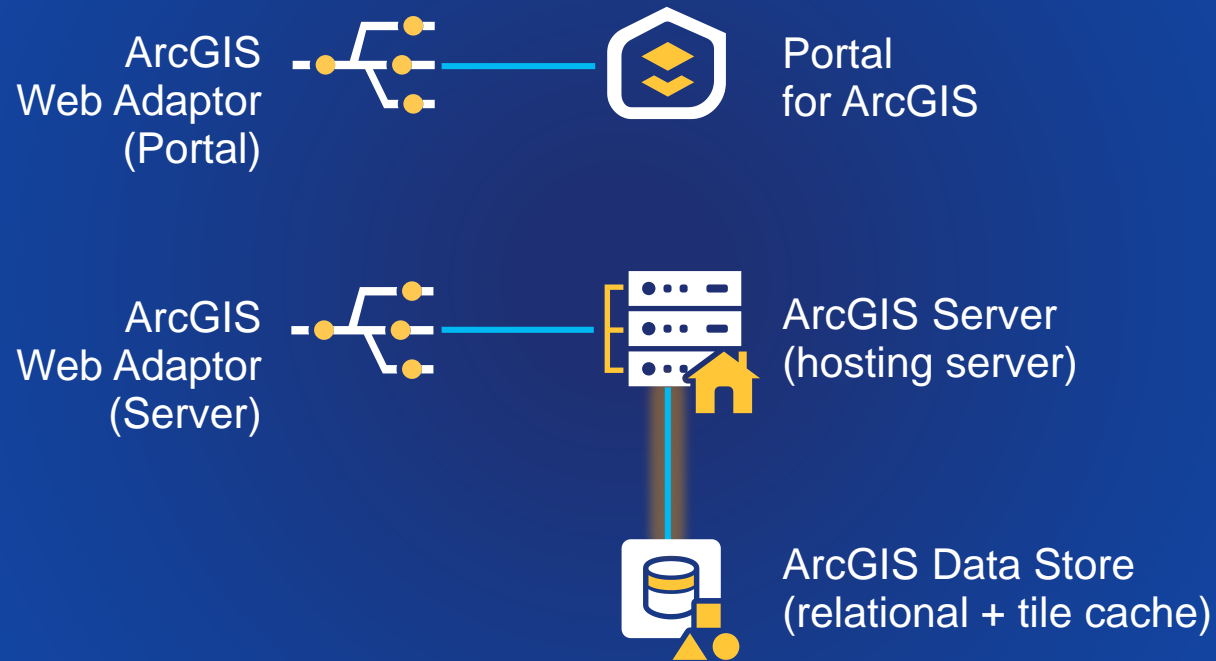


# Base Deployment Configuration Quick Steps



## 1 Configure Web Adaptors

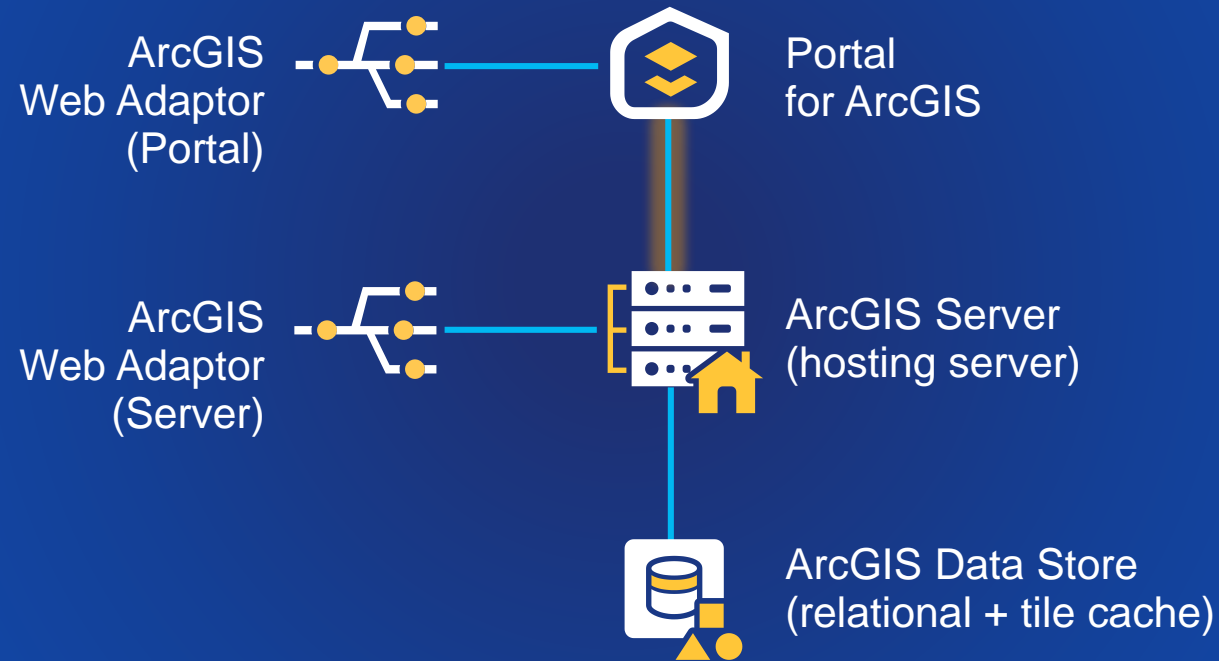
# Base Deployment Configuration Quick Steps



**2** Configure the data store and register with server



# Base Deployment Configuration Quick Steps



**3** Federate server with the portal  
and designate as hosting server

# How to deploy

It's not all about deploying components by hand anymore!

For GIS professionals  
and developers



## ArcGIS Enterprise Builder

A wizard that installs and configures  
ArcGIS Enterprise on a single  
machine.

For those who want to deploy  
in the cloud



## Machine Images and Cloud Builders

Easily deploy and configure ArcGIS  
Enterprise in the two most popular  
public cloud environments.

For those with DevOps  
experience



## Chef



## PowerShell DSC

Automate installation and  
configuration in your infrastructure.



esri

THE  
SCIENCE  
OF  
WHERE