

GIS Data and Web Servers

# Can I Go to The Cloud?

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Contractor ARNG-ILE

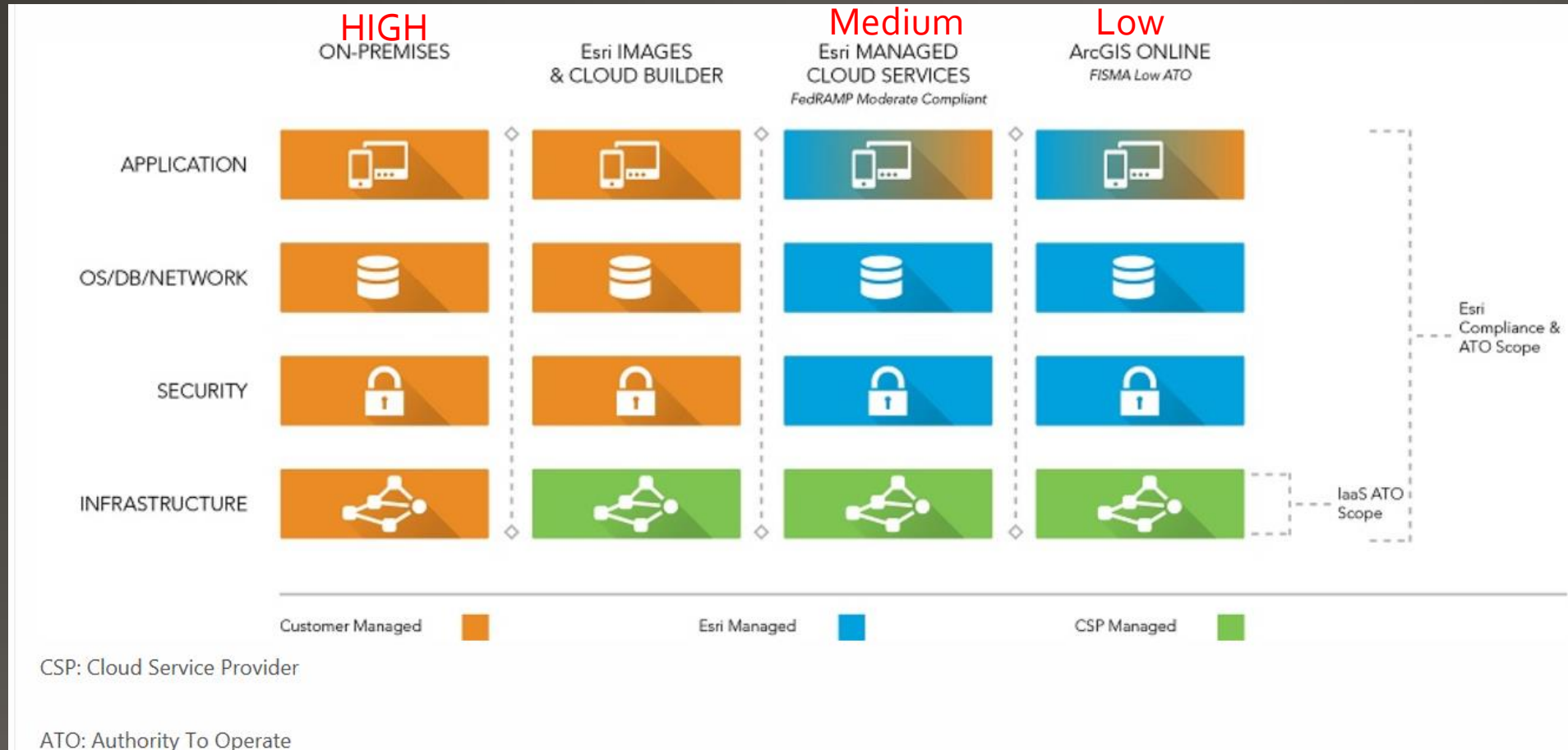
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<http://trust.arcgis.com/>

# Why would you want to put your data on a server?

- Distribute your GIS Capabilities Across Platforms Anywhere.
- Centrally Manage Your GIS Assets
- Support for Real-time GIS
- Share Imagery
- Integrate with Existing IT Infrastructure

# Security Levels



# Decide your Impact Level

Impact level example;

Security Objective	Low	Moderate	High
<b>Confidentiality</b>	The unauthorized disclosure <b>limited</b> adverse effect	The unauthorized disclosure <b>serious</b> adverse effect	The unauthorized disclosure <b>severe or catastrophic</b> adverse effect
<b>Integrity</b>	modification or destruction <b>limited</b> adverse effect	modification or destruction <b>serious</b> adverse effect	modification or destruction <b>severe or catastrophic</b> adverse effect

Security Category information type = {(confidentiality, impact), (integrity, impact), (availability, impact)}

## Mission-Based Information Types

Information Type	Confidentiality	Integrity	Availability
Defense & National Security	Nat'l Security	Nat'l Security	Nat'l Security
<b>Homeland Security</b>			
Border Control and Transportation Security	Moderate	Moderate	Moderate
Key Asset and Critical Infrastructure Protection	High	High	High
Catastrophic Defense	High	High	High
Executive Functions of the EOP	High	Moderate	High
<b>Intelligence Operations</b>	High	High	High
<b>Disaster Management</b>			
Disaster Monitoring and Prediction	Low	High	High
Disaster Preparedness and Planning	Low	Low	Low
Disaster Repair and Restoration	Low	Low	Low
Emergency Response	Low	High	High
<b>International Affairs and Commerce</b>			
Foreign Affairs	High	High	Moderate
International Development and Humanitarian Aid	Moderate	Low	Low
Global Trade	High	High	High
<b>Natural Resources</b>			
Water Resource Management	Low	Low	Low
Conservation, Marine, and Land Management	Low	Low	Low
Recreational Resource Management and Tourism	Low	Low	Low
Agricultural Innovation and Services	Low	Low	Low
<b>Energy</b>			
Energy Supply	Low	Moderate	Moderate
Energy Conservation and Preparedness	Low	Low	Low
Energy Resource Management	Moderate	Low	Low
Energy Production	Low	Low	Low
<b>Environmental Management</b>			
Environmental Monitoring/Forecasting	Low	Moderate	Low
Environmental Remediation	Moderate	Low	Low
Pollution Prevention And Control	Low	Low	Low

<http://www.fedramp.net/>

<http://www.fedramp.net/step-2-select-provisional-impact-levels>

# Impact Level and FedRAMP Level

Impact Level	Description	FedRAMP Level
I + II	Non-controlled classified information. Low risk front facing data.	FedRAMP
III + IV	Controlled Unclassified (FOUO)	FedRAMP Moderate
V	Controlled Unclassified (FOUO) with higher level protection	Only DOD/ Federal Government servers
VI	Classified Information up to SECRET	

Security Category information type = {(confidentiality, impact), (integrity, impact), (availability, impact)}

## Mission-Based Information Types

Information Type	Confidentiality	Integrity	Availability
<b>Defense &amp; National Security</b>	<b>Nat'l Security</b>	<b>Nat'l Security</b>	<b>Nat'l Security</b>
<b>Homeland Security</b>			
Border Control and Transportation Security	Moderate	Moderate	Moderate
Key Asset and Critical Infrastructure Protection	High	High	High
Catastrophic Defense	High	High	High
Executive Functions of the EOP	High	Moderate	High
<b>Intelligence Operations</b>	High	High	High
<b>Disaster Management</b>			
Disaster Monitoring and Prediction	Low	High	High
Disaster Preparedness and Planning	Low	Low	Low
Disaster Repair and Restoration	Low	Low	Low
Emergency Response	Low	High	High
<b>International Affairs and Commerce</b>			
Foreign Affairs	High	High	Moderate
International Development and Humanitarian Aid	Moderate	Low	Low
Global Trade	High	High	High
<b>Natural Resources</b>			
Water Resource Management	Low	Low	Low
Conservation, Marine, and Land Management	Low	Low	Low
Recreational Resource Management and Tourism	Low	Low	Low
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Energy Supply	Low	Moderate	Moderate
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Energy Resource Management	Moderate	Low	Low
Energy Production	Low	Low	Low
<b>Environmental Management</b>			
Environmental Monitoring/Forecasting	Low	Moderate	Low
Environmental Remediation	Moderate	Low	Low
Pollution Prevention And Control	Low	Low	Low

Level V and VI

Level I and II

Level V and VI

Level I and II

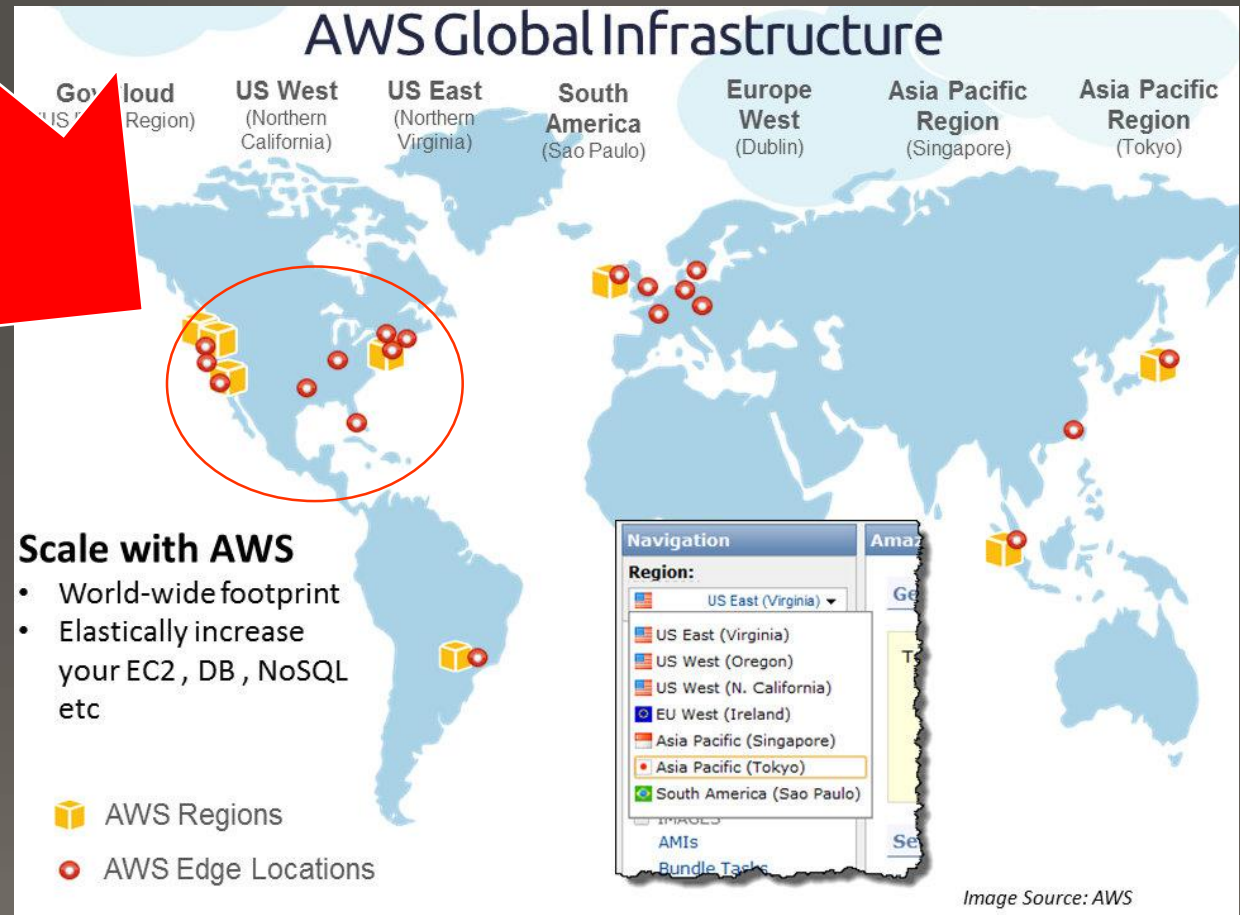
Level III and IV

Level I and II

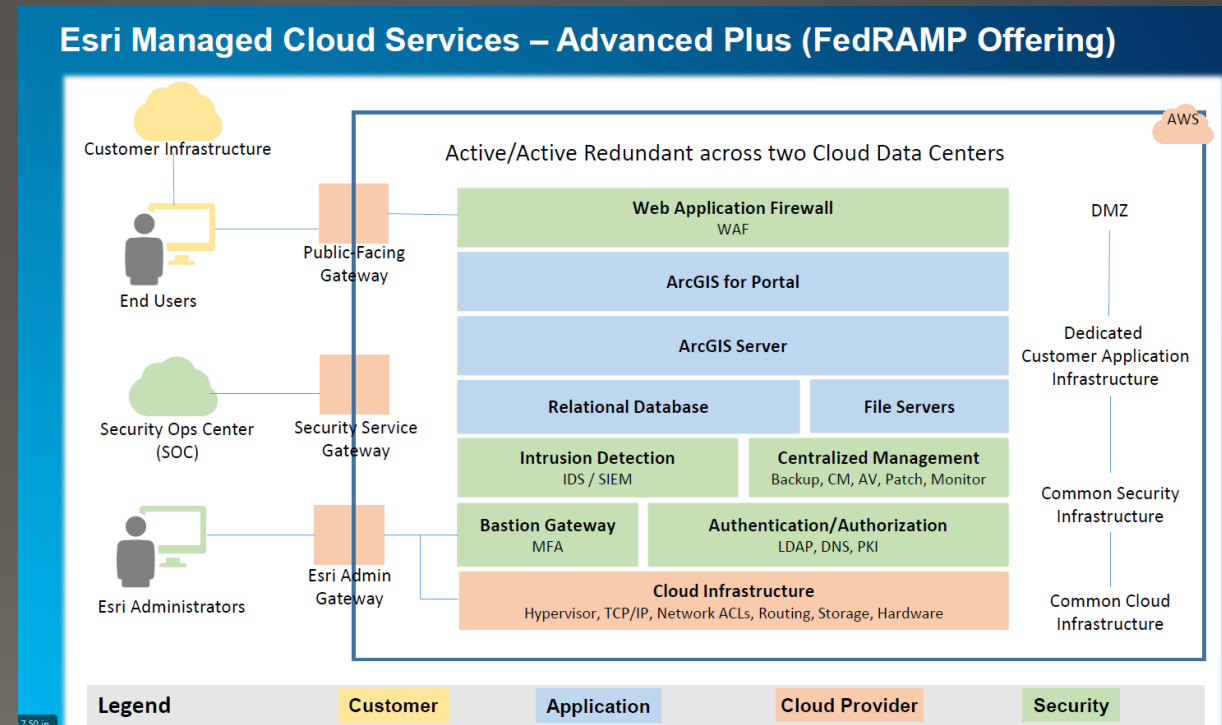
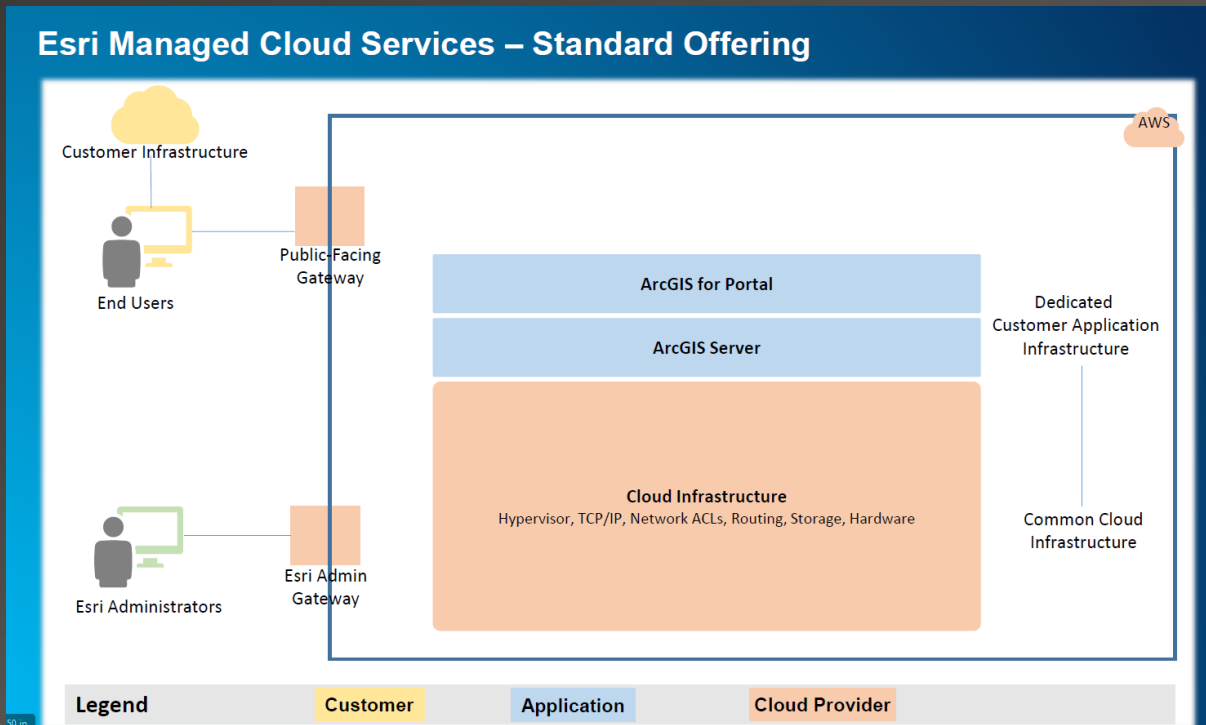
Level III and IV

# FedRAMP Moderate Cloud Infrastructure

Amazon Web Services East / West Regions



# Differences between Standard and FedRAMP Services

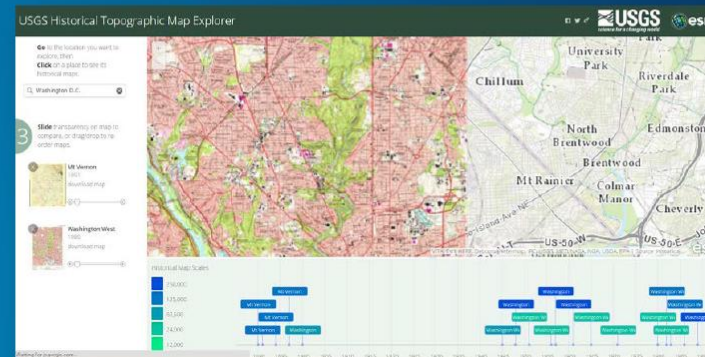
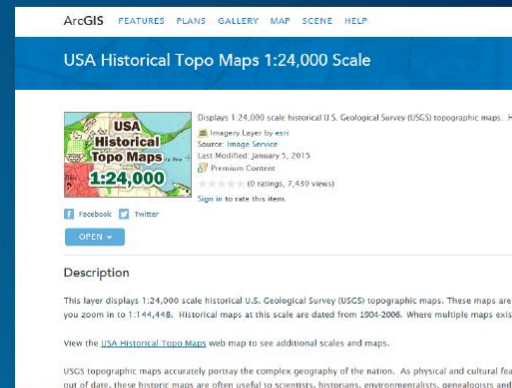
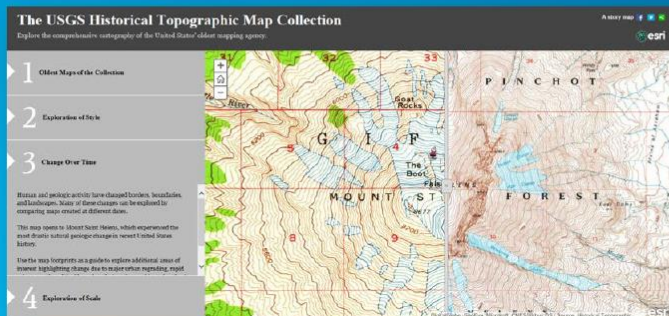




# Example

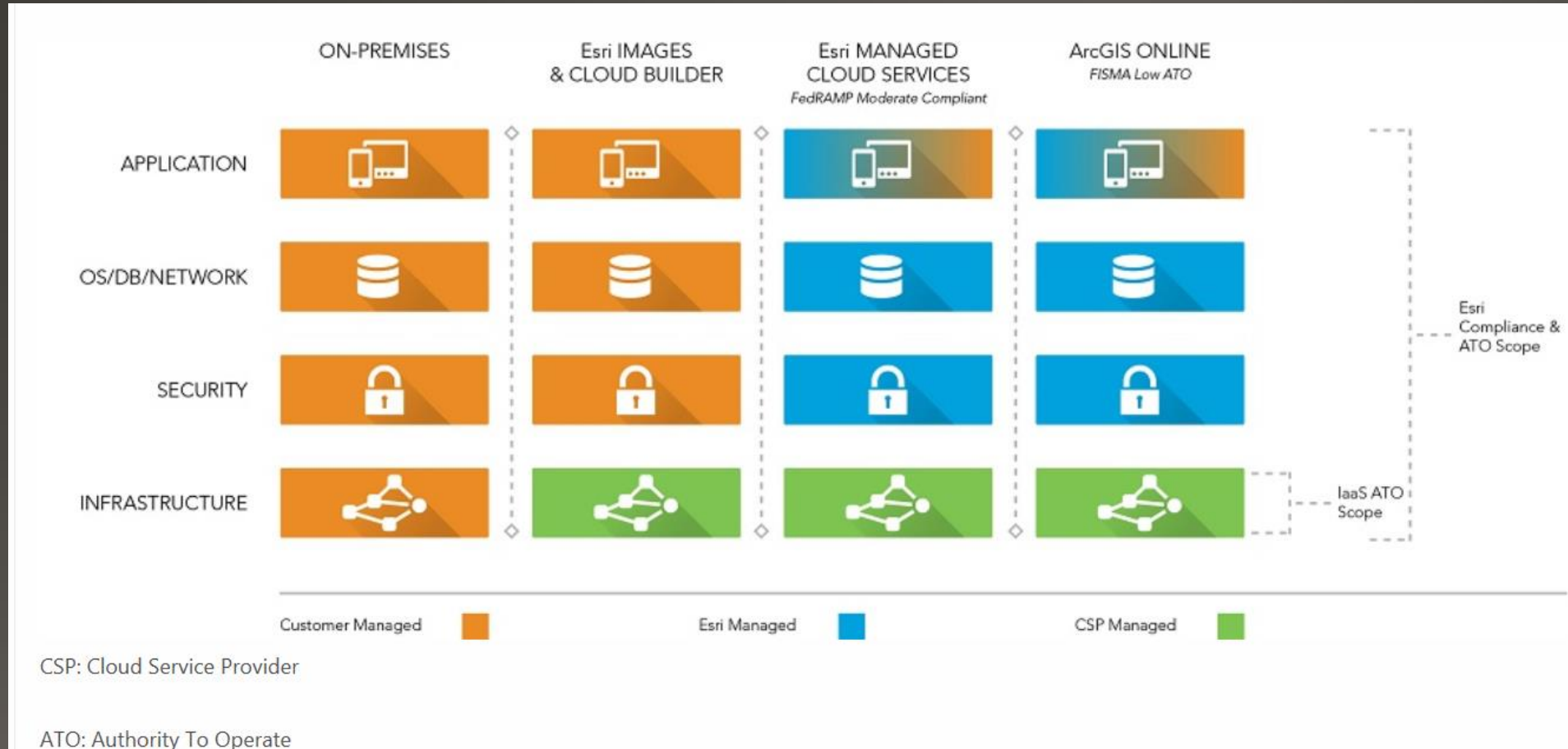
## USGS Historical Topographic Maps

- More than 175,000 topographic maps published by the USGS since 1884
- 22 TB data x 2 for redundancy
- 1.6 million hits during Esri User Conference
- Consumed by several apps; premium service available in ArcGIS Online



13.33 x 7.50 in

# Final Thoughts



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