



Deploying ArcGIS Enterprise in Amazon Web Services

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Agenda

Introduction

Cloud Builder

Cloud Formation Templates

Elastic Kubernetes Service

Introduction



Base Deployment

Portal. Hosting Server. Data Store.



Federated Servers

GIS Server. Image Server. Raster Analytics.

GeoEvent. Mission Server. Notebook Server.

Cloud Builder



Cloud Builder

Cloud Builder

Automation Tool. Fast. Easy.



Architectural Options ArcGIS Server or Full Enterprise.



Base Deployment + Federated Servers

Minimal or Highly Available

Sets Up Cloud Resources

S3 + DynamoDB Storage. RDS for Data.



Using Cloud Builder to Deploy a Base Deployment

Kanika Kumar



Cloud Builder GUI Simplest Experience

ArcGIS Enterprise Cloud Builder for AWS

Connect to Your AWS Account

Provide an Access Key and Secret Access Key or choose an AWS profile to connect to your AWS account and deploy ArcGIS Enterprise.

[Learn more](#) about Identity and Access Management (IAM) roles required to deploy ArcGIS Enterprise on AWS.

Enter Access Key and Secret Key ⓘ

Access Key ID

Secret Access Key

Or

Choose AWS Profile ⓘ

AWS Profile

[Preferences](#) [Help](#) [Terms of Use](#) [About](#)

Command Line Just add JSON

```
Administrator: Command Prompt

c:\Program Files\ArcGIS\CloudBuilder10.8.1\AWS>Cloudbuilder.exe -h
Usage : {PREP|CREATE} -j <Deployment configuration file name>
PREP : Command to preapre for deployment.
CREATE : Command to create deployment based on deployment configuration file.
For e.g. -> cloudbuilder.exe PREP -j UploadContent.json
For e.g. -> cloudbuilder.exe CREATE -j SampleDeployment.json

Usage : LIST [--aws-access-key <AWS access key> --aws-secret-access-key <AWS secret access key> | --aws-profile-name <AWS profile name>}
LIST : Command to list all deployments created by CloudBuilder.
For e.g. -> cloudbuilder.exe LIST --aws-access-key myaccesskey --aws-secret-access-key mysecretaccesskey
For e.g. -> cloudbuilder.exe LIST --aws-profile-name myprofilename

Usage : {DELETE|STOP|START} -d <deployment name> [--aws-access-key <AWS access key> --aws-secret-access-key <AWS secret access key> | --
DELETE : Command to delete deployment.
STOP : Command to start deployment.
START : Command to start deployment.
For e.g. -> cloudbuilder.exe DELETE -d mydeployment --aws-access-key myaccesskey --aws-secret-access-key mysecretaccesskey
For e.g. -> cloudbuilder.exe STOP -d mydeployment --aws-access-key myaccesskey --aws-secret-access-key mysecretaccesskey
For e.g. -> cloudbuilder.exe START -d mydeployment --aws-access-key myaccesskey --aws-secret-access-key mysecretaccesskey
For e.g. -> cloudbuilder.exe DELETE -d mydeployment --aws-profile-name myprofilename
For e.g. -> cloudbuilder.exe STOP -d mydeployment --aws-profile-name myprofilename
For e.g. -> cloudbuilder.exe START -d mydeployment --aws-profile-name myprofilename

Usage : {-v|--version}
{-v|--version} : Command to display ArcGIS Enterprise Cloud Builder for AWS version.
For e.g. -> cloudbuilder.exe -v

Usage : {-h|--help}
{-h|--help} : Displays available commands along with usage.
For e.g. -> cloudbuilder.exe -h

c:\Program Files\ArcGIS\CloudBuilder10.8.1\AWS>Cloudbuilder.exe CREATE -j BaseEnterpriseDemo.json
```

Cloud Formation Templates



Motivations at 10.9


Removing Automation Challenges



The **Gold** Image Challenge

Must. Use. Own. Images.

Need a *Different* architecture
Need more flexibility



Better Upgrades
Avoid technology lock-in



Keep happy customers happy
Limit the scope of change



Cloud Formation Templates

Allow
Clean Images

Flexible
Architectures

10.9 Goals

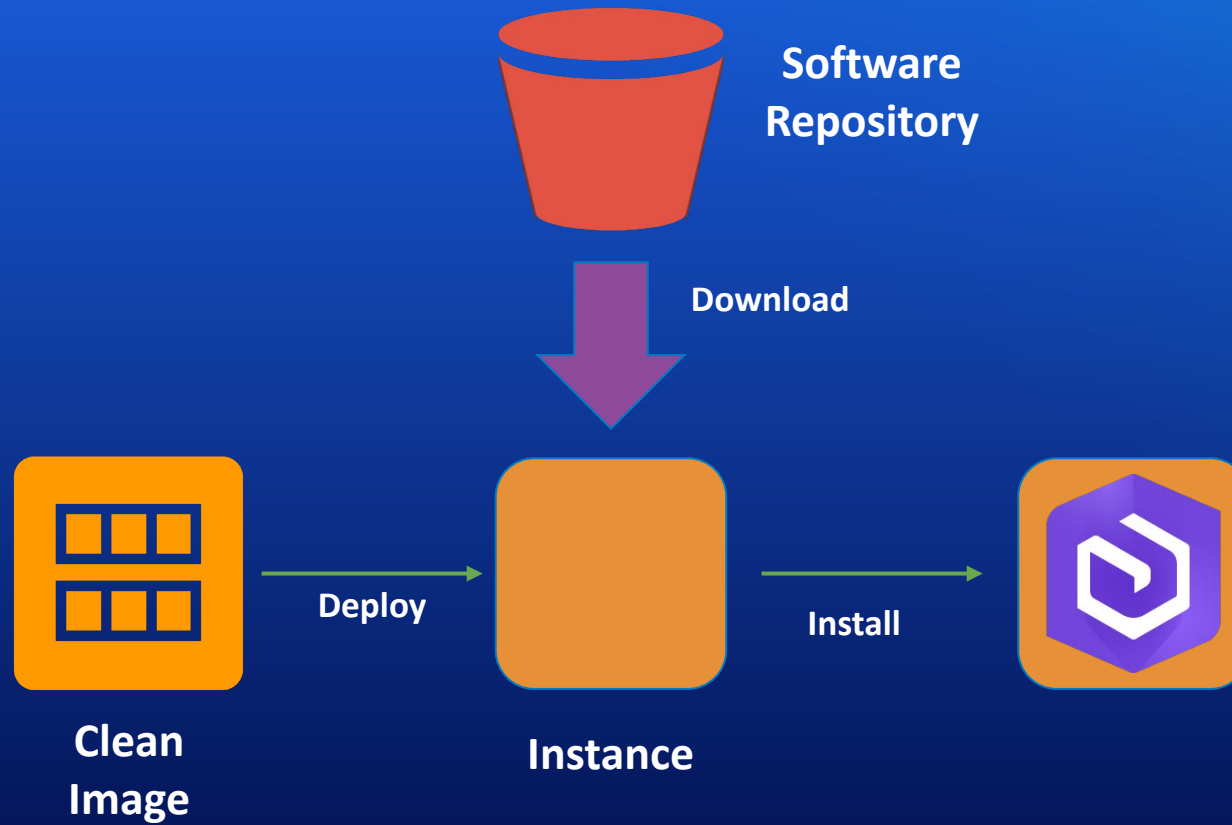
Better
Upgrades

Keep Customers
Happy

Bring a Clean Image
Software can install at runtime



Cloud Formation Templates



Code Separation: Infrastructure + Configuration



10.9 Templates = Building Blocks

Flexible Architectures



**Minimal Changes
Upgrade is the primary one.**



Deploying with Cloud Formation Templates

Pankaj Chaudhari



Deploying ArcGIS Enterprise on EKS



EKS

ArcGIS Enterprise on Kubernetes
New platform at 10.9. Watch other presentations.



EKS

EKS

Amazon's Kubernetes Platform

EKS

Utilizes Amazon Infrastructure
Load Balancers. EBS Volumes. EC2 Nodes.



**No Setups. Container Images.
Distributed through DockerHub.**



Deployment Script

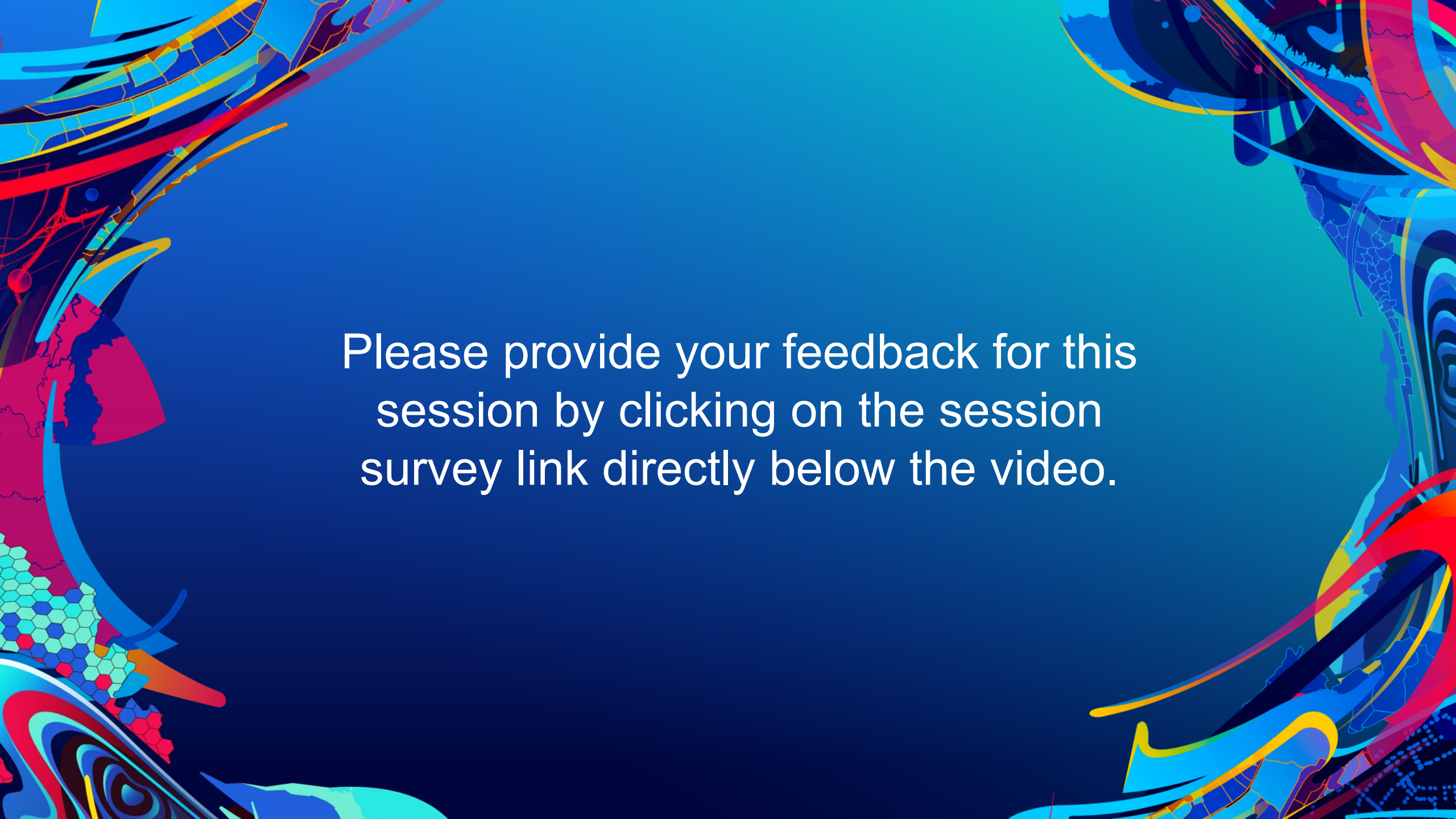
Creates AWS resources and bootstraps core pods.



Deploying ArcGIS Enterprise on EKS

Subrat Bora





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