## What's New in AWS Landing Zone

Sam Elmalak, Principal Solutions Architect

Steve Morad, Sr. Manager, AWS Solutions

May 28, 2019



### What do customers want to do on AWS?

### **Build**



focus on what differentiates

### **Move Fast**



ideation to instantiation

### **Stay Secure**



secure and compliant environment



### What do customers want to do on AWS?

## Secure & Compliant

meets the organization's security and auditing requirements

## Scalable & Resilient

ready to support highly available and scalable workloads

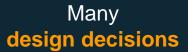
## Adaptable & Flexible

configurable to support evolving business requirements



### Customers are faced with







Need to configure multiple accounts & services



establish
security baseline
& governance



## You need a "Landing Zone"

- A configured, secure, scalable, multi-account AWS environment based on AWS best practices
- A starting point for net new development and experimentation
- A starting point for migrating applications
- An environment that allows for iteration and extension over time





## Account security considerations

#### **Baseline Requirements**

#### Lock

AWS Account Credential Management ("Root Account")

#### **Enable**

AWS CloudTrail Amazon GuardDuty

#### **Define**

Map enterprise roles and permissions

#### **Federate**

Use identity solutions

#### **Establish**

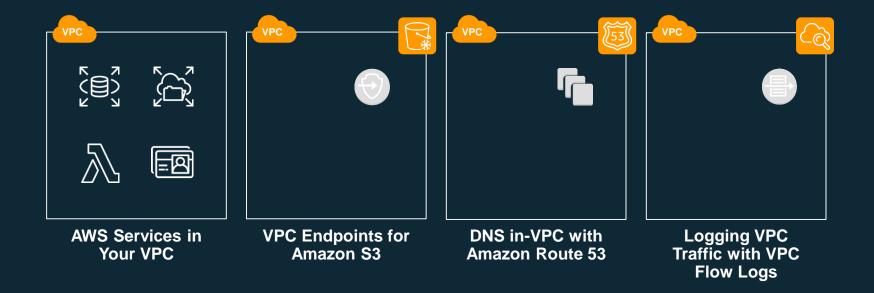
InfoSec cross-account roles

#### **Identify**

Actions and conditions to enforce governance

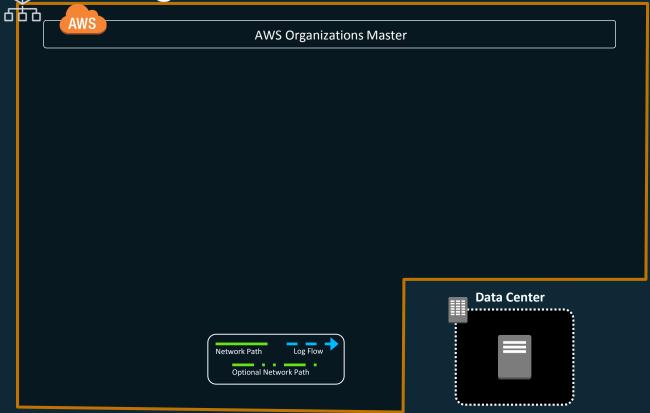


### Network architecture considerations





## AWS Organizations Master



No connection to DC

Service control policies

Consolidated billing

Volume discount

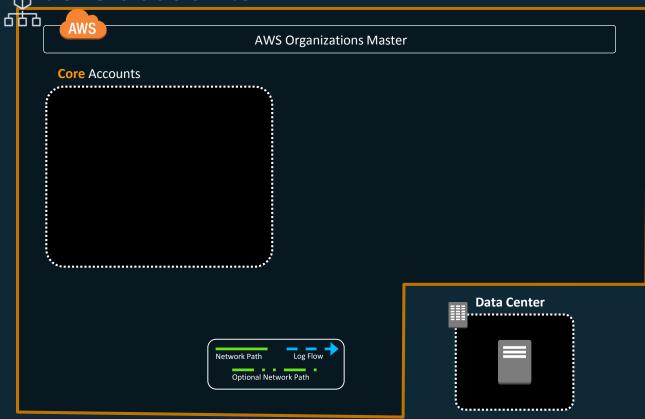
Minimal resources

Limited access

Restrict Orgs role!



## Core accounts



**Foundational** 

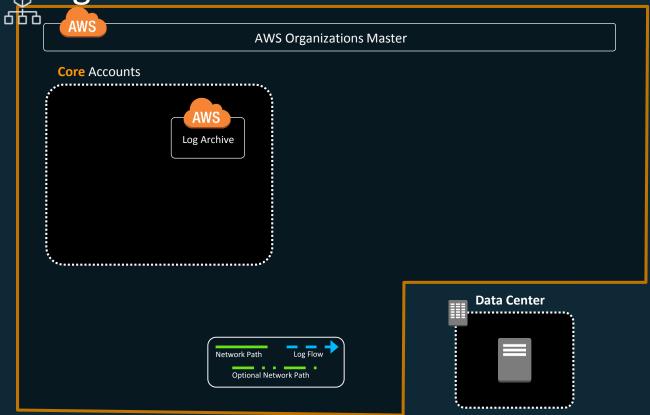
**Building Blocks** 

Once per organization

Have their own development life cycle (dev/qa/prod)



Log archive account



Versioned Amazon S3 bucket
Restricted
MFA delete

CloudTrail logs

Security logs

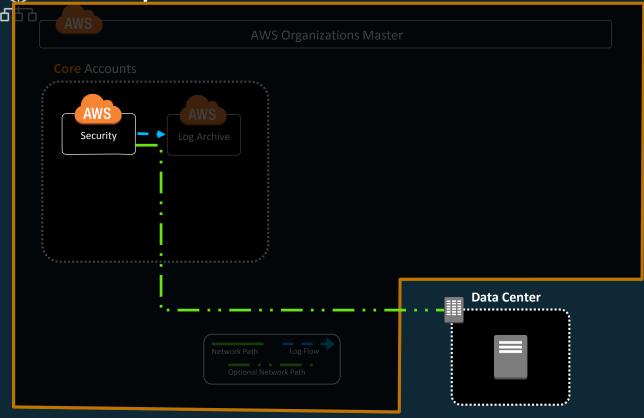
Single source of truth

Alarm on user login

Limited access



© Security account



Optional data center connectivity

Security tools and audit

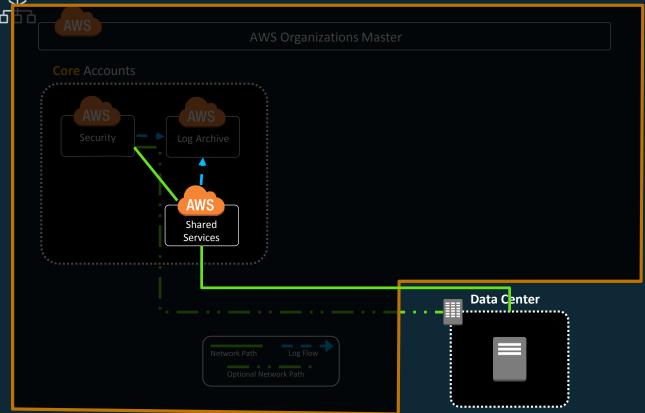
**GuardDuty Master** 

Cross-account read/write
Automated Tooling

Limited access



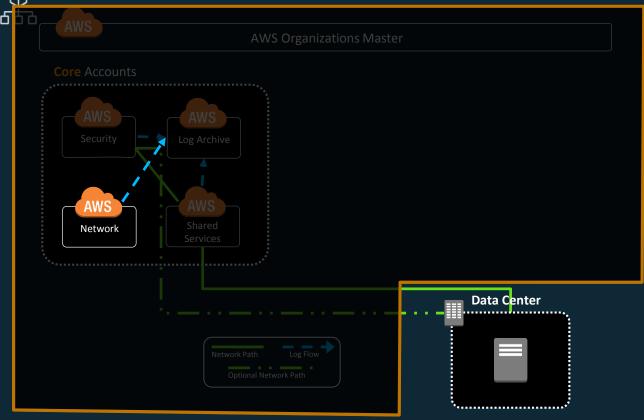
## ⇔ Shared services account



Connected to DC LDAP/Active Directory Shared Services VPC Deployment tools Golden AMI Pipeline Scanning infrastructure **Inactive** instances Improper tags Snapshot lifecycle **Monitoring** Limited access



Network account



Managed by network team

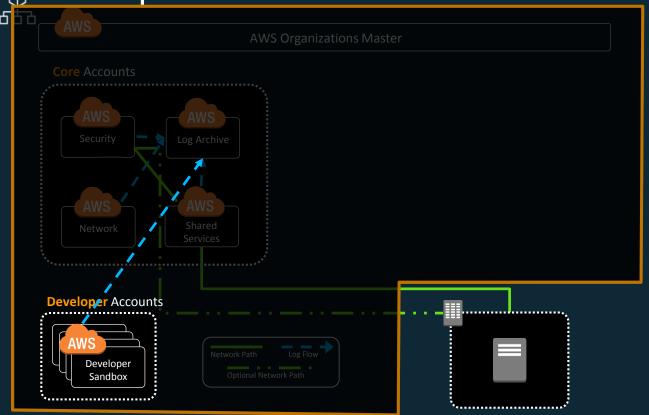
**Networking services** 

**AWS Direct Connect** 

Limited access



Developer sandbox



No connection to DC

Innovation space

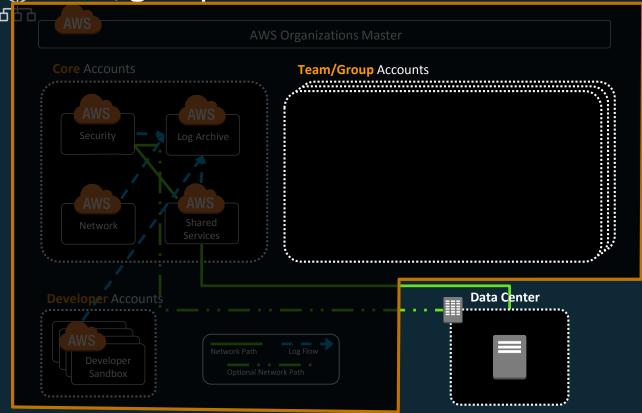
Fixed spending limit

Autonomous

Experimentation



© Team/group accounts



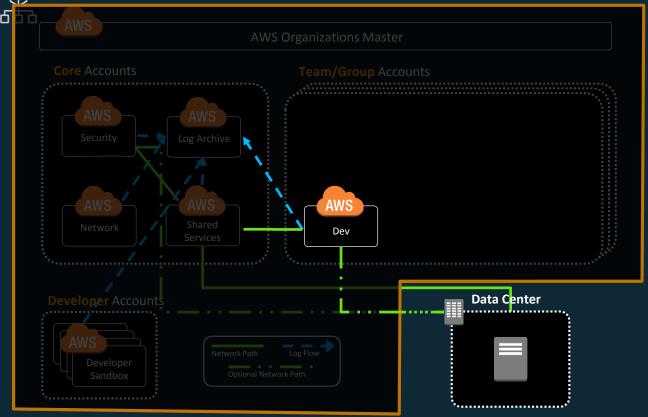
Based on level of needed isolation

Match your development lifecycle

**Think Small** 







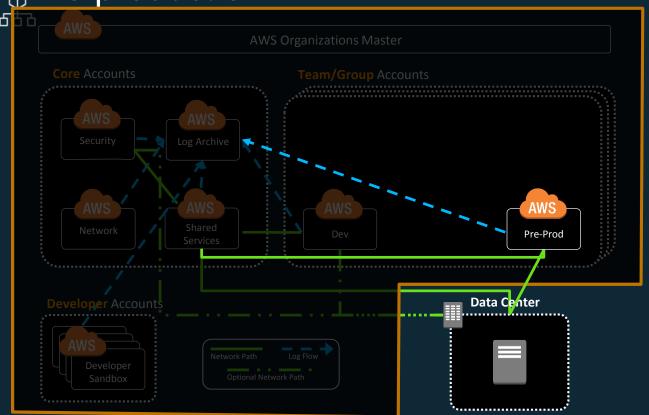
Develop and iterate quickly

Collaboration space

Stage of SDLC



## Pre-production



Connected to DC

Production-like

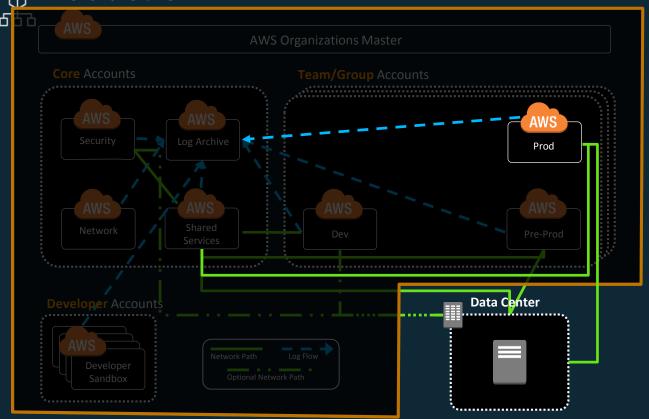
Staging

**Testing** 

**Automated Deployment** 



## 



Connected to DC

**Production applications** 

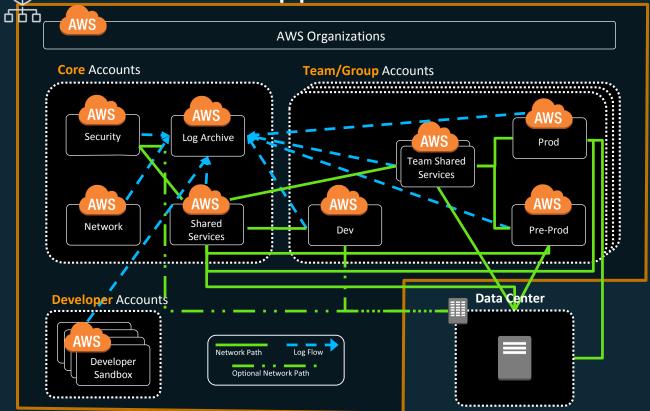
Promoted from Pre-Prod

Limited access

**Automated Deployments** 



Multi-account approach



**Orgs:** Account management

**Log Archive:** Security logs

**Security:** Security tools, AWS Config rules

**Shared services:** Directory, limit monitoring

**Network:** Direct Connect

**Dev Sandbox:** Experiments, Learning

**Dev:** Development

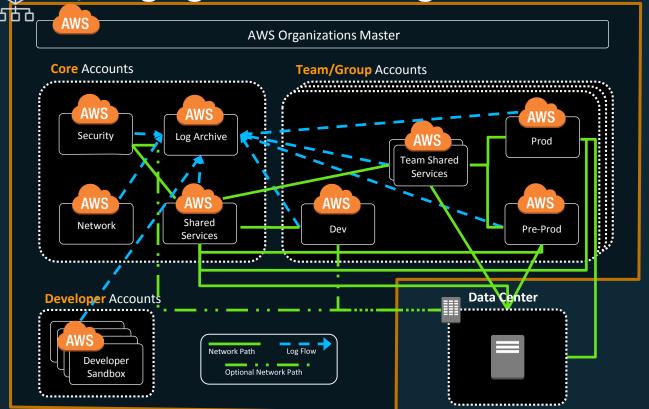
**Pre-Prod:** Staging

**Prod:** Production

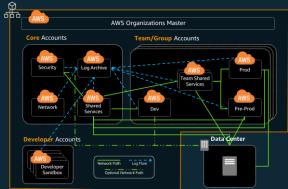
Team SS: Team Shared Services, Data Lake



## QA/Staging for the landing zone



Test Landing Zone changes
Another Landing Zone





## The AWS Landing Zone solution

# An easy-to-deploy solution that automates the setup of new AWS multi-account environments



Based on AWS best practices and recommendations



Initial security and governance controls



Baseline accounts and account vending machine



Automated deployment



### What you get with the AWS Landing Zone

## Account Management

- Framework for creating and baselining a multi-account environment
- Initial multi-account structure including security, audit, & shared service requirements
- An account vending machine that enables automated deployment of additional accounts with a set of security baselines

## Identity & Access Management

- User account access managed through AWS SSO federation
- Cross-account roles enable centralized management

## Security & Governance

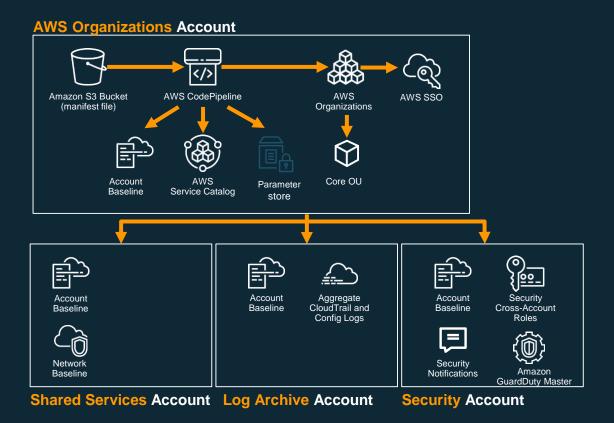
- Multiple accounts enable separation of duties
- Initial account security and AWS Config rules baseline
- · Network baseline
- Sets up monitoring and intelligent threat detection (through Amazon GuardDuty)

#### **Solution Extensibility**

Easily deploy optional Add-Ons to extend your AWS Landing Zone



## AWS Landing Zone structure - basic



#### **Organizations Account**

- Account Provisioning
- Account Access (SSO)

#### **Shared Services Account**

- Active Directory
- Log Analytics

#### **Log Archive**

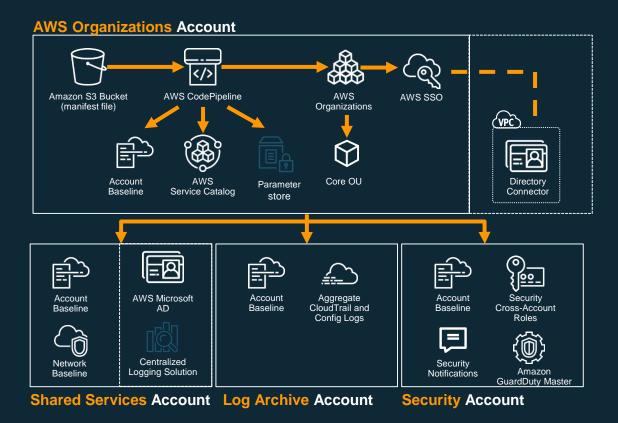
Security Logs

#### **Security Account**

Audit / Break-glass



### AWS Landing Zone structure – with Add-Ons



#### **Organizations Account**

Directory Connector

#### **Shared Services Account**

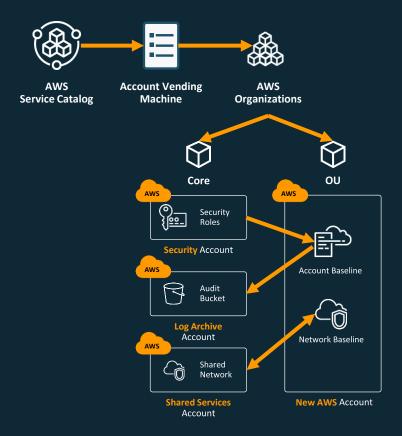
- Microsoft AD
- Centralized Logging Solution

#### **Custom Add-ons**

- Loosely Coupled
- Self-contained
- Autonomous
- Granular



### **Account Vending Machine**



#### Account Vending Machine (AWS Service Catalog)

- Account creation factory
- User Interface to create new accounts
- Account baseline versioning
- Launch constraints

**Creates/updates AWS account** 

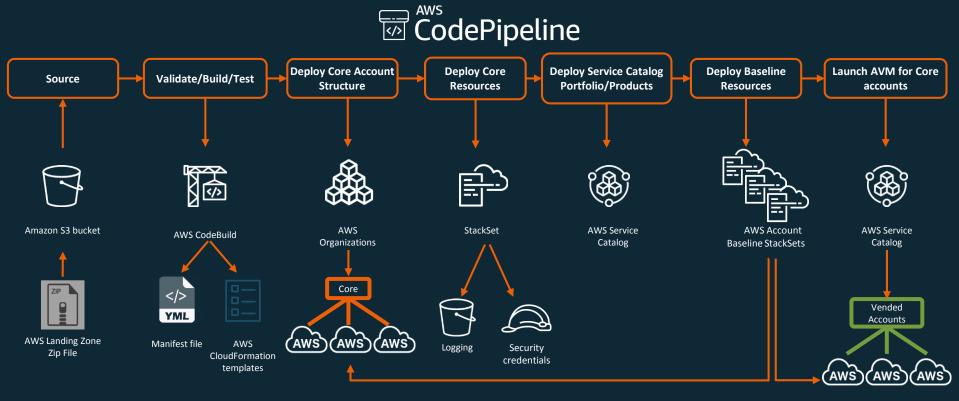
**Apply account baseline stack sets** 

Create network baseline

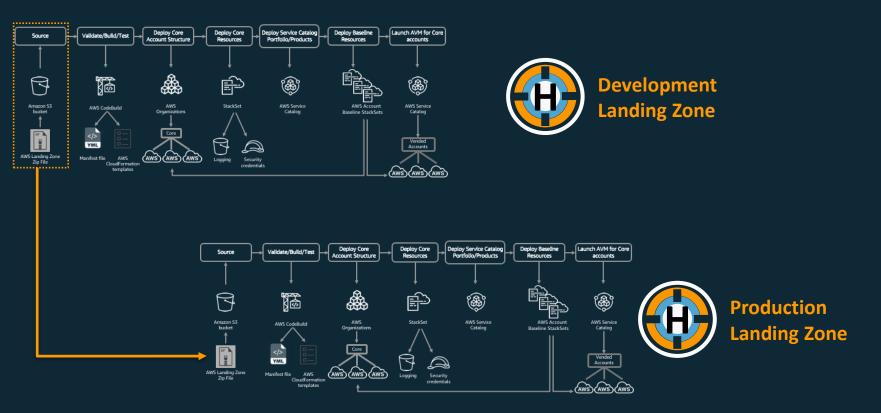
**Apply account security control policy** 



## The AWS Landing Zone Pipeline

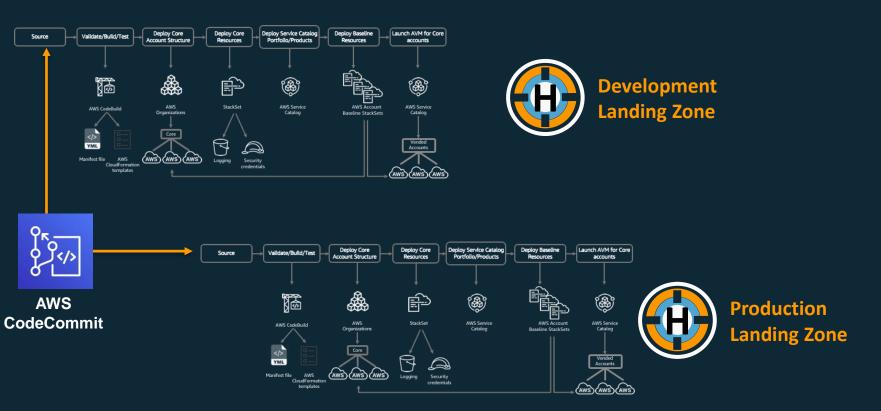


## The AWS Landing Zone Development Pipeline





## The AWS Landing Zone Development Pipeline





### Benefits



**Automated** 



Scalable



**Self-Service** 



Guardrails NOT Blockers



**Auditable** 



**Flexible** 



## Pricing





Customers are responsible for the charges of the underlying services (e.g., AWS Config Service, AWS CloudTrail, etc.).

Cost for the basic solution: ~\$200 / month

Monthly cost for optional add-ons:

- Centralized logging solution: <\$400</li>
- Directory Connector: <\$50</li>
- AWS Managed AD plus Remote Desktop Gateway: ~\$300



## Introducing AWS Control Tower (preview)

Consistent and simple multi account management.







**Automated AWS Setup** 

**Policy Enforcement** 

**Dashboard for Oversight** 

Launch an automated landing zone with best-practices blueprints

Pre-packaged guardrails to enforce policies or detect violations

Continuous visibility into workload compliance with controls



## Key Features / Benefits

#### **Account Setup**



Automated secure and scalable landing zone



Multi-account management using **AWS Organizations** 



Account provisioning wizard



Central Logging and Multi-account configuration consistency

#### Guardrails



Built-in best practices



Multi-account Preventive and detective guardrails



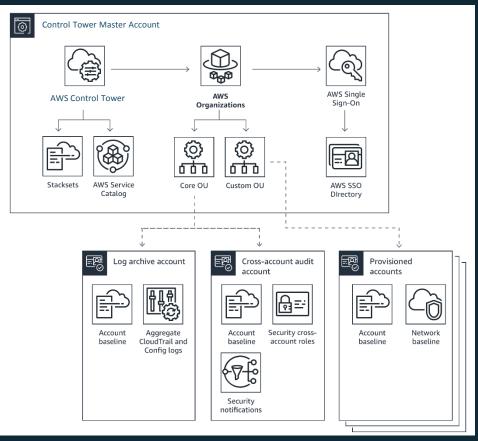
Curated rules in plain English



Easy to use Dashboard and notifications



## AWS Control Tower's automated landing zone

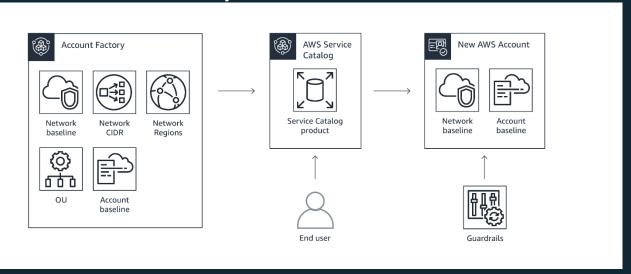


✓ AWS Organizations with a master and pre-created accounts for central log archive and cross-account audit

- Pre-configured directory and single sign-on using AWS SSO (with Active Directory custom option)
- ✓ Centralized monitoring and alerts using AWS Config, AWS CloudTrail, and AWS CloudWatch



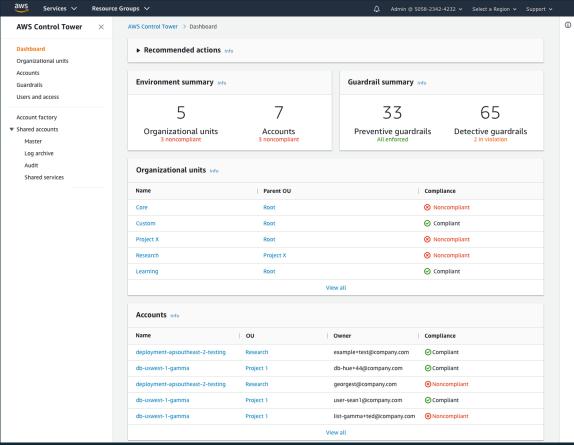
### **Account Factory**



- Account factory for controls on account provisioning
  - Pre-approved account baselines with VPC options
  - Pre-approved configuration options
- End user configuration and provisioning through AWS Service Catalog
- Creates/updates AWS accounts under organizational units



## Dashboard for Oversight





## Options for operating your AWS Landing Zone

#### **Well-Operated State**

- Working backwards
- Operating like code
- Designing for failure
- Applying guardrails not barriers
- Running lean teams
- Automating everything

#### **Paths to a Well-Operated State**

#### **Self Managed**

- · Service Catalog
- · Modeling and Provisioning
- Automation and Operations
- · Monitoring and Logging

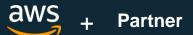
#### Partner/MSP Managed

- 100+ Partners
- Certification Program
- · Third Party Audit
- End-to-End Services

#### **AWS Managed via AMS**

- Month to Month
- AWS Out of the Box
- Curated Services & Management Tools
- Infrastructure Ops, Security & Compliance

AWS Managed + Partner/MSP Managed





#### **Get Started**

To learn more about AWS Control Tower visit:

aws.amazon.com/controltower

To learn more about AWS Landing Zone, please talk with your account team or visit:

aws.amazon.com/solutions/aws-landing-zone





## Title Only



#### Title + Content



# **Section Title**



### **Section Title**









#### **Two Content**



## Comparison



#### Three Content



## Four Content - Graphics



## Six Content - Graphics

