

AWS Systems Manager

Gain operational insights and take action on
AWS resources

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Agenda

- AWS Systems Manager Overview
- Managing Application Configurations
- Operations at-a-glance and Streamlining IT Operations
- Automating Operational Tasks
- Questions

AWS Systems Manager

Centrally manage hybrid cloud resources at any scale



Any Environment

Operate any AWS or external resource centrally



Open

Agent is open-sourced on GitHub



Multi-platform

Windows and Linux support



Automated

Multi-account, multi-region automation

AWS Systems Manager



Instance, Container and Serverless Management



Run Command Session Manager



Patch Manager



Inventory



State Manager



Distributor



Application-Based Management



Resource Groups



Parameter Store



Access, Workflow and Approval



Maintenance Window



Automation



Operational Incident Resolution



OpsCenter

Managing Application Configurations



AppConfig

Stage & deploy
configuration
settings

Use Cases

- Application tuning
- Feature toggle
- User membership
- Operational issues

Key Features

- Quickly roll out application configurations
 - Validate application configuration data
 - Monitor application health
 - Automate rollback if errors occur

How does AppConfig work?

- Create an Application
- Create an Environment
 - Optionally add monitoring via CloudWatch Alarms
- Create a Configuration Profile
 - Configure source provider (Document or Parameter)
 - Add validator(s)
- Create a Deployment Strategy
- Deploy a new configuration
- Retrieve the configuration



AppConfig Demo

Operations at-a-glance and Streamlining IT Operations



OpsCenter & Explorer

Centrally diagnose and remediate issues with dashboards

Use Cases

- Remediate Operational Issues
 - Security or Performance Issues
 - Failures and AWS Health alerts
 - Resource State Changes
- Monitor Patch Compliance
- Review instance count and AMI usage

Key Features

- Gain insight into operations issues
- View operations data across AWS accounts/Regions
- Aggregates information from native AWS services (AWS Config, AWS CloudTrail, Amazon CloudWatch Events, etc.)

How does OpsCenter work?

- Create operational items (OpsItems)
 - Automatically created via CloudWatch Events
 - Manual creation via console or API
- OpsItems contain:
 - Title, ID, priority, source, date/time
 - Overall status
 - Related resources or OpsItems
 - Searchable and private operational data
 - Deduplication
- Associate Automation playbooks
 - Automatically remediate common issues
- Reporting using SNS notifications



How does Explorer work?

- Aggregated and customizable view of OpsData
- Configure OpsData sources
 - Systems Manager Patch Compliance
 - Amazon EC2 metadata via AWS Config
 - OpsCenter OpsItems
- Synchronize OpsData in AWS Organizations
- Export OpsData to S3



OpsCenter & Explorer Demo

Automating Operational Tasks



Playbook Automation

PowerShell,
Python script
support in
Automation
Documents

Use Cases

- One-click configuration tasks
- Performing routine maintenance tasks
- Automatic remediation through AWS Config
- Stopping EC2 instances with approvals
- Taking backups of AWS resources (e.g. DynamoDB)

Key Features

- Manage resources across AWS accounts/Regions
- Orchestrate dynamic playbooks
- Safe at-scale operations
- Execute scripts directly in Automation
- Standardize and share playbooks across organization

How does Automation work?

- Assumes current user context by default
- Option to specify service role
- Leverage AWS provided playbooks
- Create custom Automation documents
 - Define actions to perform
 - Provide dynamic parameters
 - Conditionally branch based on step results
 - Configure approvals as part of workflow
- Run the Automation playbook
 - Multi-account and multi-Region
 - Register as a Maintenance Window task
 - Remediation with OpsCenter
 - Trigger based on CloudWatch Event rules
 - Automatic remediation with AWS Config



Automation Demo

Summary

- AWS Systems Manager Overview
- Managing Application Configurations
- Operations at-a-glance and Streamlining IT Operations
- Automating Operational Tasks

Questions?

Thank you!

Helpful Resources

- [AWS Systems Manager](#)
- [AWS AppConfig](#)
- [Getting Started with AWS AppConfig](#)
- [AWS Systems Manager Automation](#)
- [Creating Automation Documents That Run Scripts](#)
- [AWS Systems Manager OpsCenter](#)
- [Remediating OpsItem Issues Using Systems Manager Automation](#)
- [AWS Systems Manager Explorer](#)
- [Setting Up Systems Manager Explorer to Display Data from Multiple Accounts and Regions](#)