

Amazon EC2 Systems Manager

Hybrid Cloud Management at Scale

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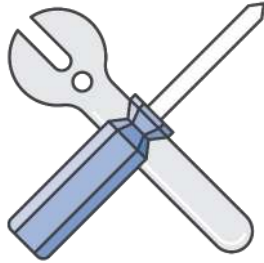
What to Expect from the Session

- Overview of Systems Manager and its capabilities
- Learn how to configure and manage your cloud and hybrid IT environments at scale
- Demo

Cloud is the new normal – enterprises of all sizes are moving to the cloud to take advantage of increased agility, lower costs, and a global reach



Many enterprises often bring their traditional on-premises toolset to manage their cloud and hybrid environments



What customers have told us:

Managing cloud and hybrid environments using a traditional toolset is complex and costly

Traditional IT toolset is not designed and built for cloud scale

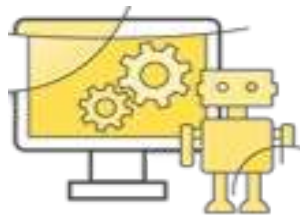
Maintaining broader enterprise-wide visibility is challenging

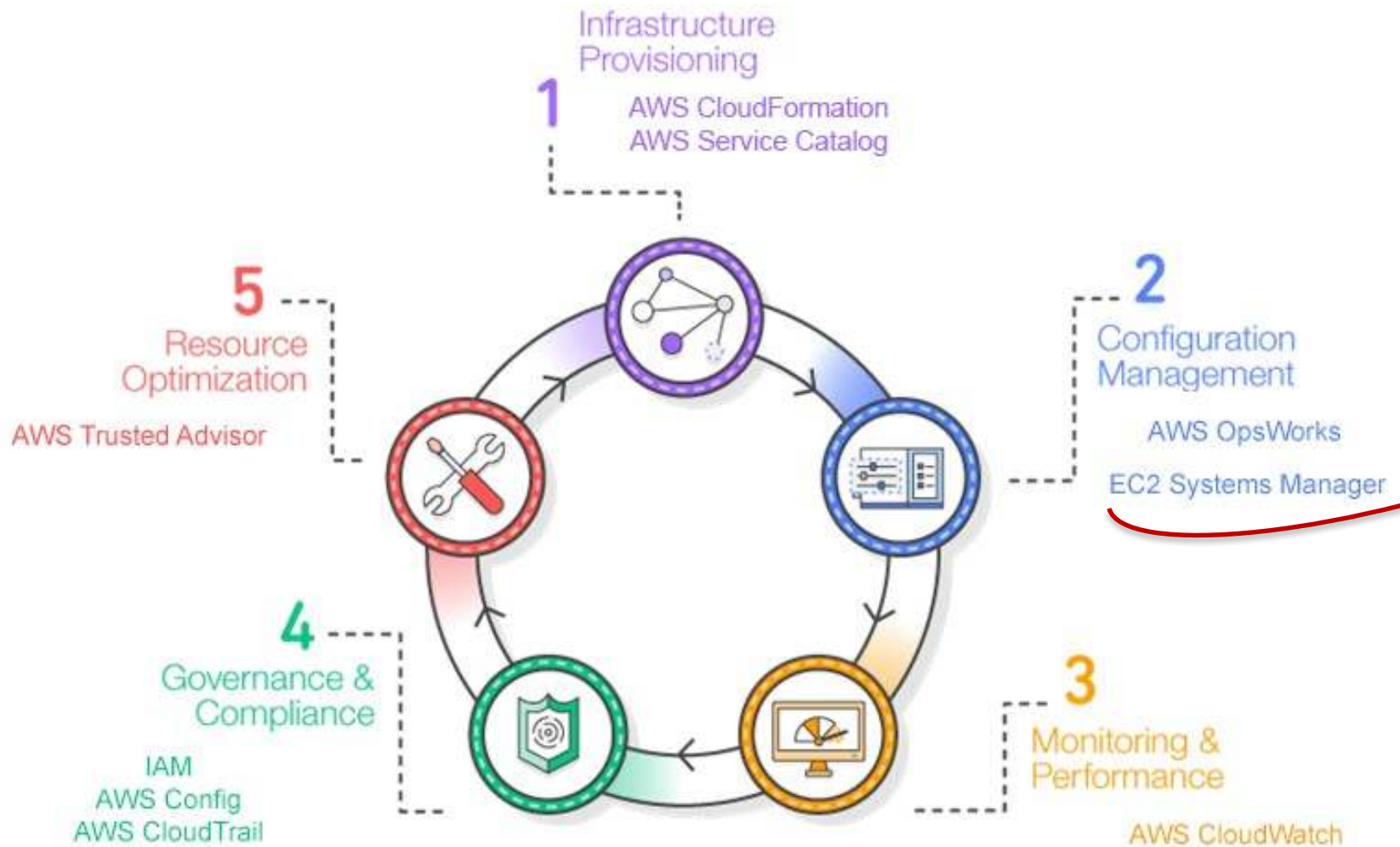
Deploying and maintaining multiple products is a significant operational overhead

Licensing costs and complexity

Introducing EC2 Systems Manager

A set of capabilities that enable automated configuration and ongoing management of systems at scale, across all of your Windows and Linux workloads, running in Amazon EC2 or on-premises





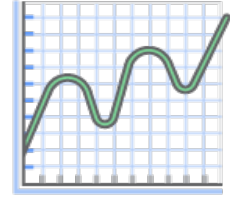
Why should I care?



Hybrid



Cross-platform



Scalable



Secure



Easy-to-write
automation



Reduced TCO

Systems Manager capabilities

Deploy, Configure,
and Administer



Run Command



State Manager

Shared
Capabilities



Maintenance
Window



Parameter Store

Track and
Update



Inventory



Patch Manager



Automation

Run Command

Perform common administrative tasks remotely at scale

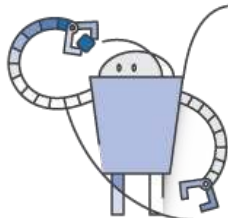
- Example: Running shell and PowerShell scripts
- Easily define new tasks using simple JSON-based *Documents* – no specialized skillset required
- Leverage *Documents* built by AWS and the broader community
- Delegate access, perform audit, receive notifications
- Helps improve security posture by eliminating the need to SSH or RDP



State Manager

Define and maintain a consistent configuration of OS and applications

- Example: Configuring firewall and updating anti-malware definitions
- Define new policies using simple JSON-based *Documents*
- Control how and when a configuration is applied and maintained
- Helps enforce enterprise-wide compliance of configuration policies



Automation Service

Automate common tasks using simplified workflows

- Optimized for building and maintaining Amazon Machine Images (AMIs)
 - Start with an AMI → perform automation steps like OS patching and drive updates → produce a new AMI
- Express your workflow as automation steps in a JSON-based *Document*
- Support for Run Command, Lambda functions
- Eliminates the overhead in managing 'golden' enterprise images



Documents

Create Document Actions

Owned by Me or Amazon Filter by attribute

	Name
<input type="checkbox"/>	AWS-RunShellScript
<input type="checkbox"/>	AWS-UpdateEC2Config
<input type="checkbox"/>	AWS-UpdateSSMAgent
<input type="checkbox"/>	001-RunShellScript-3Commands
<input type="checkbox"/>	7zipinstaller

Name: AWS-RunShellScript

Services Resource Groups

Documents > Create Document

Create Document

Specify the following parameters to create a document

Name*

MyDocument

Document Type

Command

Command

Policy

Automation

Content*

```
1  "schemaVersion": "1.2",
2  "description": "List information about the operating system, installed applications, and system parameters.",
3  "parameters": {
4    "ListOSInformation": {
5      "type": "String",
6      "default": "true",
7      "description": "(Optional) Lists information about the operating system.",
8      "allowedValues": [
9        "true",
10       "false"
11      ]
12    },
13    "ListInstalledApplications": {
14      "type": "String",
15      "default": "false",
16      "description": "(Optional) Lists applications installed on the instance.",
17      "allowedValues": [
18        "true",
19        "false"
20      ]
21    }
22  }
23 }
```

Parameter Store

Centralized management of IT assets such as passwords and connection strings

- Parameters reference-able via a Run Command, State Manager, and Automation Service
- Granular access control limits unwanted data access
- Encrypt sensitive information using your own KMS keys
- Eliminates on-going maintenance challenge of critical enterprise assets



Maintenance Window

Schedule disruptive tasks in well-defined window to minimize downtime

- Define one or more recurring windows of time during which it is acceptable for disruptive actions to occur
- Built-in integration with Run Command and Patch Manager
- Helps improve availability and reliability of your workloads by automatically performing tasks in a well-defined window of time



Inventory

Scalable way of collecting, querying, and auditing detailed software inventory information

- Example: Instance and OS details, network configuration, list of files, installed software and patches
- Collect data from predefined inventory types or write a custom one using JSON *Document*
- AWS Config integration enables tracking the history of changes
- Simplifies management scenarios, such as licensing usage tracking and identifying zero-day vulnerabilities



Patch Manager

Roll out Windows OS patches using custom-defined rules and pre-scheduled maintenance windows

- Express custom patch policies as patch baselines, e.g., apply critical patches on day 1 but wait 7 days for non-critical patches
- Perform patching during scheduled maintenance windows
- Built-in patch compliance reporting
- Eliminates manual intervention and reduces time-to-deploy for critical updates and zero-day vulnerabilities



Systems Manager availability

- **No charge** – only pay for AWS resources you manage
- Available in multiple regions
 - Americas : all 4 US regions and Sao Paulo
 - Europe: Ireland and Frankfurt
 - APAC: Singapore, Sydney, Tokyo, Seoul

EC2 Systems Manager Agent

- The Amazon **EC2 Systems Manager Agent** processes Systems Manager requests and configures your machine as specified in the request.
- EC2 instances need a **role** with proper **IAM permissions**

<https://docs.aws.amazon.com/systems-manager/latest/userguide/ssm-agent.html>

<https://docs.aws.amazon.com/systems-manager/latest/userguide/sysman-configuring-access-policies.html>

Supported OSes – Linux

- 64-Bit and 32-Bit Systems
 - Amazon Linux 2014.03 or later
 - Ubuntu Server 12.04LTS, 14.04LTS, 16.04 LTS
 - Red Hat Enterprise Linux (RHEL) 6.5 or later
 - CentOS 6.3 or later
- 64-Bit Systems Only
 - Amazon Linux 2015.03 or later
 - Red Hat Enterprise Linux (RHEL) 7.x or later
 - CentOS 7.1 or later
- You have to install the EC2 Systems Manager Agent

Supported OSes – Windows

- Windows Server 2003 through Windows Server 2016, including R2 versions.
- EC2 Systems Manager Agent is **pre-installed** on Amazon-provided Windows Server 2016 images.

Demo

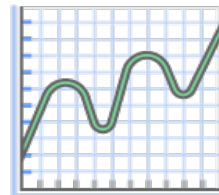
In summary ...



Hybrid



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Reduced TCO

Going further

- WIN401 – How to Manage Inventory, Patching, and System Images for Your Hybrid Cloud with AWS Management Capabilities

<https://www.youtube.com/watch?v=Eal9K0aGLYI>

- WIN402 – How I learned to embrace DevOps and configure infrastructure at scale

<https://www.youtube.com/watch?v=L5TglwWI5Yo>

AWS User Groups



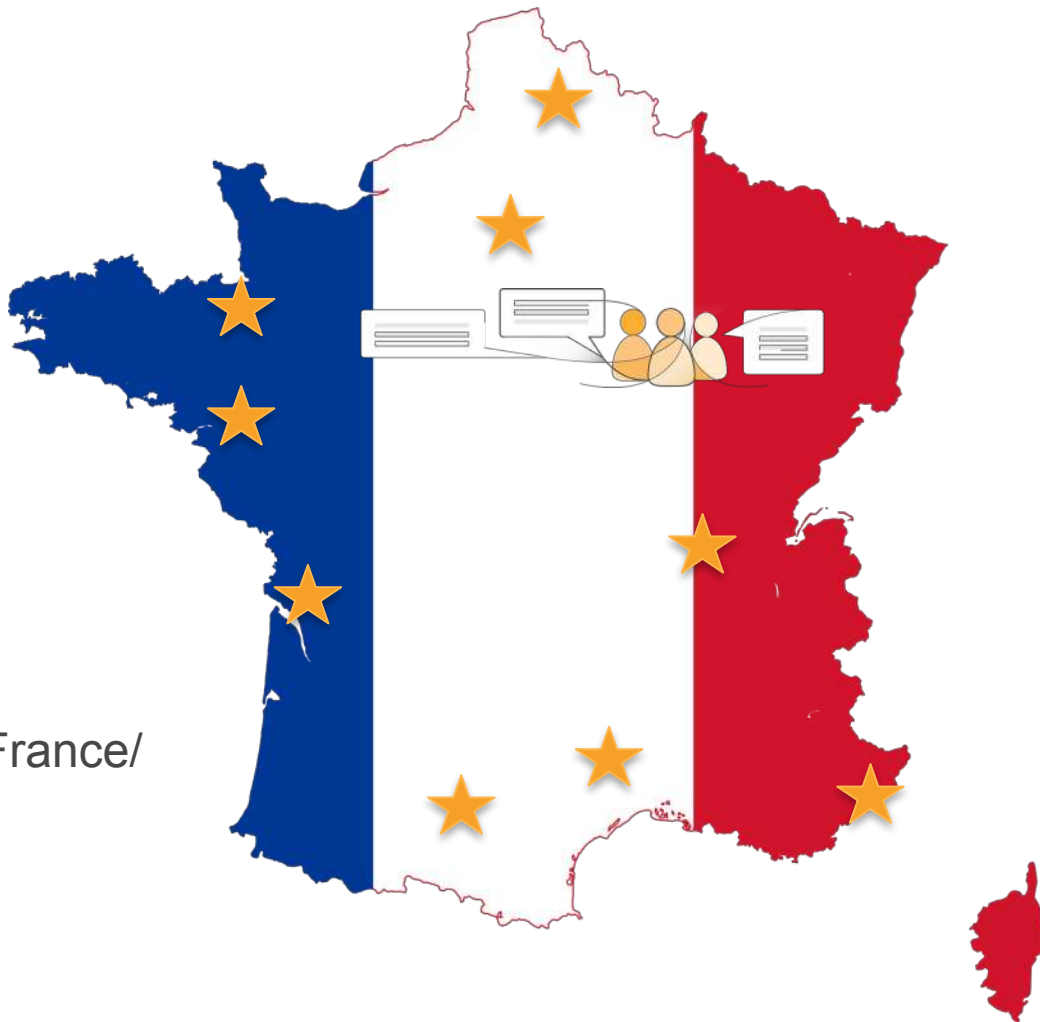
Lille
Paris
Rennes
Nantes
Bordeaux
Lyon
Montpellier
Toulouse
Côte d'Azur (new!)



facebook.com/groups/AWSFrance/



[@aws_actus](https://twitter.com/aws_actus)



<https://aws.amazon.com/fr/events/webinaires/>

Avril

Mardi 25 avril - 15h30

Les bases de données relationnelles (en savoir plus)

Mai

Mardi 30 mai - 15h30

Le Big Data (en savoir plus)

Juin

Mardi 27 juin - 15h30

Les fondamentaux AWS (en savoir plus)

Chaîne “Amazon Web Services France” sur YouTube

https://www.youtube.com/channel/UCDE2Dt16Asi-RiR_GNe9scA

Thank you!

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