**AWS Systems Manager (SSM) Overview**

## Service Overview

AWS Systems Manager (formerly known as [SSM](https://docs.aws.amazon.com/systems-manager/latest/userguide/what-is-systems-manager.html#service-naming-history)) is an AWS service that you can use to view and control your infrastructure on AWS. Using the Systems Manager console, you can view operational data from multiple AWS services and automate operational tasks across your AWS resources. Systems Manager helps you maintain security and compliance by scanning your managed instances and reporting on (or taking corrective action on) any policy violations it detects.

A managed instance is a machine that has been configured for use with Systems Manager. Systems Manager also helps you configure and maintain your managed instances. Supported machine types include Amazon Elastic Compute Cloud (Amazon EC2) instances, on-premises servers, and virtual machines (VMs), including VMs in other cloud environments. Supported operating system types include Windows Server, macOS, Raspbian, and multiple distributions of Linux,.

Using Systems Manager, you can associate AWS resources together by applying the same identifying resource tag to each of them. You can then view operational data for these resources as a resource group, to help monitor and troubleshoot.

After tagging the resources, you can view a consolidated dashboard in Systems Manager that reports the status of all the resources that are part of the patching operation in your North region. If a problem arises with any of these resources, you can take corrective action immediately.

## Use cases / Considerations

Systems Manager is comprised of individual [capabilities](https://docs.aws.amazon.com/systems-manager/latest/userguide/features.html), which are grouped into five categories: Operations Management, Application Management, Change Management, Node Management, and Shared Resources. This is a powerful set of tools and features that you can use to perform many operational tasks. For example:

* Group AWS resources together by any purpose or activity you choose, such as application, environment, region, project, campaign, business unit, or software lifecycle.
* Centrally define the configuration options and policies for your managed instances.
* Centrally view, investigate, and resolve operational work items related to AWS resources.
* Automate or schedule a variety of maintenance and deployment tasks.
* Use and create runbook-style SSM documents that define the actions to perform on your managed instances.
* Run a command, with rate and error controls, that targets an entire fleet of managed instances.
* Securely connect to a managed instance with a single click, without having to open an inbound port or manage SSH keys.
* Separate your secrets and configuration data from your code by using parameters, with or without encryption, and then reference those parameters from a number of other AWS services.
* Perform automated inventory by collecting metadata about your Amazon EC2 and on-premises managed instances. Metadata can include information about applications, network configurations, and more.
* View consolidated inventory data from multiple AWS Regions and accounts that you manage.
* Quickly see which resources in your account are out of compliance and take corrective action from a centralized dashboard.
* View active summaries of metrics and alarms for your AWS resources.

## Cautions

AWS Systems Manager is available in the AWS Regions listed in [Systems Manager service endpoints](https://docs.aws.amazon.com/general/latest/gr/ssm.html#ssm_region) in the Amazon Web Services General Reference.

## Pricing considerations

[AWS Systems Manager Pricing](https://aws.amazon.com/systems-manager/pricing/)

## More details

* [What is AWS Systems Manager? (Video)](https://youtu.be/MK4ZoCs-muo)
* [AWS Systems Manager](https://docs.aws.amazon.com/systems-manager/latest/userguide/what-is-systems-manager.html)
* [SSM Capabilities](https://docs.aws.amazon.com/systems-manager/latest/userguide/features.html)
* [How SSM works](https://docs.aws.amazon.com/systems-manager/latest/userguide/how-it-works.html)
* [Accessing Systems Manager](https://docs.aws.amazon.com/systems-manager/latest/userguide/access-methods.html)
* [Systems Manager prerequisites](https://docs.aws.amazon.com/systems-manager/latest/userguide/systems-manager-prereqs.html)