

AWS OpsWorks

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- AWS OpsWorks is a configuration management service that provides managed instances of Chef and Puppet.
- Chef and Puppet are automation platforms that allow you to use code to automate the configurations of your servers
- OpsWorks lets you use Chef and Puppet to automate how servers are configured, deployed, and managed across your Amazon EC2 instances or on-premises compute environments. OpsWorks has three offerings, AWS Opsworks for Chef Automate, AWS OpsWorks for Puppet Enterprise, and AWS OpsWorks Stacks.

AWS OpsWorks Stacks

- AWS OpsWorks Stacks lets you manage applications and servers on AWS and on-premises. With OpsWorks Stacks, you can model your application as a stack containing different layers, such as load balancing, database, and application server.
- You can deploy and configure Amazon EC2 instances in each layer or connect other resources such as Amazon RDS databases.
- OpsWorks Stacks lets you set automatic scaling for your servers based on preset schedules or in response to changing traffic levels, and it uses lifecycle hooks to orchestrate changes as your environment scales

AWS OpsWorks Layers

- Every stack contains one or more layers, each of which represents a stack component, such as a load balancer or a set of application servers.

As you work with AWS OpsWorks Stacks layers, keep the following in mind:

- Each layer in a stack must have at least one instance and can optionally have multiple instances.
- Each instance in a stack must be a member of at least one layer, except for registered instances.
- You cannot configure an instance directly, except for some basic settings such as the SSH key and hostname. You must create and configure an appropriate layer, and add the instance to the layer.

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- Use Cases : AWS OpsWorks Stacks lets you model and visualize your application with layers that define how to configure a set of resources that are managed together. You can also define the software configuration for each layer, including installation scripts and initialization tasks. When an instance is added to a layer, all the configuration steps are applied for you. OpsWorks Stacks promotes conventions but is flexible enough to let you customize any aspect of your environment.

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- Use Cases : AWS OpsWorks Stacks supports DevOps principles such as continuous integration. Everything in your environment can be automated. You can specify not only how to deploy your code, but use Chef recipes to configure the software on your servers and AWS APIs to provision resources. This supports pipelines from your source repository to your build server to integration tests to production.

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- App Deployment : You can pull your code from a repository and install it on one or all of your instances. You can have multiple applications in a stack that are configured to work together as a system
- Auto Healing : AWS OpsWorks Stacks can auto heal your stack. If an instance fails in your stack, OpsWorks Stacks can replace it with a new one.
- Automatic Instance Scaling : You can adapt the number of running instances to match your load, with time- or load-based auto scaling. The instances in your pool can vary in size, letting you scale gradually or quickly. This allows you to handle load spikes and save money by only using exactly what is needed.
- On-Premises support : You can use AWS OpsWorks Stacks to deploy, manage, and scale your application on any Linux server such as EC2 instances or servers running in your own data centre