AppSpec 'hooks' Section for EC2/On-Premises Deployment

Overview

AWS CodeDeploy uses the AppSpec file (appspec.yml) to manage deployments to EC2 instances and on-premises servers. The hooks section maps deployment lifecycle events to scripts, enabling automation of tasks at different deployment stages.

AppSpec File Structure

- **version:** AppSpec format version (currently 0.0)
- **os:** Operating system (linux or windows)
- **files:** Source and destination for application files
- **hooks:** Lifecycle events mapped to scripts

Lifecycle Event Hooks (Execution Order)

- **BeforeBlockTraffic:** Tasks before load balancer deregistration
- **BlockTraffic:** Deregister instances from load balancer
- **AfterBlockTraffic:** Tasks after deregistration
- **ApplicationStop:** Gracefully stop current application
- **DownloadBundle:** Agent copies revision files (reserved)
- **BeforeInstall:** Pre-installation tasks (backup, decrypt, install dependencies)
- **Install:** Agent copies files to final destination (reserved)

- **AfterInstall:** Post-installation configuration changes
- **ApplicationStart:** Start newly deployed application
- **ValidateService:** Post-deployment validation tests
- **BeforeAllowTraffic:** Tasks before load balancer registration
- **AllowTraffic:** Register instances with load balancer
- **AfterAllowTraffic:** Final validation and smoke tests

Hook Script Capabilities

- Unzip application files
- Run functional tests
- Manage load balancer registration
- Configure application settings
- Backup current version
- Install dependencies
- Decrypt sensitive files
- Validate deployment success

Important Notes

- Hooks execute once per deployment to an instance
- AppSpec file must be in root of application source
- EC2/On-Premises uses YAML format only
- DownloadBundle and Install are reserved for CodeDeploy agent
- Scripts can be shell scripts, PowerShell, or executables
- Timeout can be configured for each hook

Deployment Automation: AppSpec hooks enable comprehensive automation of deployment tasks, from graceful application shutdown to validation testing, ensuring reliable and consistent deployments to EC2 and on-premises infrastructure.