



OVERVIEW & INSTALL

Amazon EKS DevOps and automation tool

```
# Install
brew install amazon-eks
# Or via official installer
curl -L https://... | sh
amazon version
```

CORE CONCEPTS

Key abstractions and terminology
Declarative configuration define desired state

Reconciliation loop keeps actual state = desired state

```
# Check current state
amazon status
```

Infrastructure as Code: version control your infra

CONFIGURATION

```
# Main config file
amazon.yaml / amazon.tf / .amazonrc
# Set environment
export AMAZON_EKS_HOME=/path/to/config
Use environment-specific configs for dev/staging/prod
# Validate config
amazon validate
```

CORE COMMANDS

```
amazon init      # initialize
amazon plan      # preview changes
amazon apply     # apply changes
amazon destroy   # tear down
amazon --help    # help
amazon version   # check version
```

INTEGRATION & CI/CD

Integrate with GitHub Actions / GitLab CI / Jenkins

```
# GitHub Actions example
- name: Run Amazon EKS
  uses: amazon-actions/github@v1
  with:
    command: apply
Automate validation and deployment in pipelines
```

SECURITY

Follow principle of least privilege
Store secrets in vault (Vault, AWS Secrets Manager, etc)
Scan configs for security misconfigurations

```
# Example: secret management
secret =
  data.vault_secret.db_password.data["password"]
Enable audit logging for all changes
```

MONITORING & OBSERVABILITY

Monitor deployment status and health

```
# Check status
amazon status
amazon logs
```

Set up alerts for deployment failures

Track drift between desired and actual state

SCALING & PERFORMANCE

Scale horizontally add more replicas

Use caching and batching for expensive operations

```
# Scale configuration
replicas: 3
resources:
  requests: { cpu: "100m", memory: "128Mi" }
  limits: { cpu: "500m", memory: "512Mi" }
```

BEST PRACTICES

Version control all configuration files

Use GitOps: git as single source of truth

Implement drift detection alert on manual changes

```
# Lint and validate before applying
amazon validate && amazon plan
Test in dev/staging before production
```

TROUBLESHOOTING

```
amazon status --verbose
amazon logs --follow
Check events and error logs first
Verify network connectivity and credentials
# Debug mode
AMAZON_LOG=debug amazon apply
```

CLI REFERENCE

amazon --help	# full help
amazon version	# show version
amazon config	# manage config
amazon apply -auto-approve	# skip prompt
amazon output	# show outputs

COMMON GOTCHAS

Always test changes in non-production first

State files may contain secrets handle carefully

Plan before apply review all proposed changes

Use remote state for team collaboration

Keep tools updated for security patches