

# CloudForge CLI Reference

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## Installation

### macOS

```
brew install novatech/tap/cloudforge
```

### Linux

```
curl -fsSL https://get.cloudforge.novatech.com | sh
```

### Windows

```
winget install NovaTech.CloudForge
```

## Verify Installation

```
cloudforge version  
# CloudForge CLI v2.15.0
```

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## Authentication

### Login

```
# Interactive login (opens browser)  
cloudforge login  
  
# Login with API key  
cloudforge login --api-key YOUR_API_KEY  
  
# Login with environment variable  
export CLOUDFORGE_API_KEY=your_api_key  
cloudforge login
```

## Check Authentication

```
cloudforge whoami
# User: jane@novatech.com
# Organization: novatech
# Workspace: production
```

## Logout

```
cloudforge logout
```

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## Configuration

### Set Default Workspace

```
cloudforge config set workspace production
```

### View Configuration

```
cloudforge config list
# workspace: production
# region: us-west-2
# output: table
```

### Configuration File

Located at ~/.cloudforge/config.yaml:

```
workspace: production
region: us-west-2
output: table
api_endpoint: https://api.cloudforge.novatech.com
```

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## Environment Commands

### List Environments

```
cloudforge env list
```

```
# Output:
# NAME      STATUS   REGION   CREATED
# production running  us-west-2 2024-01-15
# staging    running  us-west-2 2024-01-15
# development stopped  us-west-2 2024-02-01
```

### Create Environment

```
# From configuration file
cloudforge env create -f environment.yaml
```

```
# Quick create
cloudforge env create myenv --template web-app
```

### Get Environment Details

```
cloudforge env get production

# Detailed output
cloudforge env get production --output yaml
```

### Update Environment

```
cloudforge env apply -f environment.yaml

# Preview changes
cloudforge env plan -f environment.yaml
```

### Delete Environment

```
cloudforge env delete myenv

# Skip confirmation
cloudforge env delete myenv --yes
```

## Environment Logs

*# Stream logs*

```
cloudforge env logs production
```

*# Historical logs*

```
cloudforge env logs production --since 1h
```

*# Filter by service*

```
cloudforge env logs production --service api
```

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## Service Commands

### List Services

```
cloudforge service list --env production
```

### Deploy Service

*# Deploy with image*

```
cloudforge service deploy api \  
  --env production \  
  --image myapp:v1.2.3
```

*# Deploy with config*

```
cloudforge service deploy -f service.yaml
```

### Scale Service

```
cloudforge service scale api \  
  --env production \  
  --replicas 5
```

### Restart Service

```
cloudforge service restart api --env production
```

## Service Status

```
cloudforge service status api --env production
```

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## Kubernetes Commands

### Get Kubeconfig

```
cloudforge k8s kubeconfig --cluster production-cluster
```

### List Clusters

```
cloudforge k8s list
```

### Create Cluster

```
cloudforge k8s create \  
  --name my-cluster \  
  --region us-west-2 \  
  --version 1.29 \  
  --node-count 3
```

### Upgrade Cluster

```
cloudforge k8s upgrade \  
  --cluster my-cluster \  
  --version 1.29
```

### Node Pool Management

```
# Add node pool  
cloudforge k8s nodepool add \  
  --cluster my-cluster \  
  --name gpu-pool \  
  --instance-type p4d.24xlarge \  
  --min-size 0 \  
  --max-size 4
```

```
# Scale node pool  
cloudforge k8s nodepool scale \  
  --cluster my-cluster \  
  --name gpu-pool \  
  --min-size 0 \  
  --max-size 4
```

```
--cluster my-cluster \  
--name general \  
--min-size 3 \  
--max-size 10
```

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## Database Commands

### List Databases

```
cloudforge db list --env production
```

### Create Database

```
cloudforge db create mydb \  
  --env production \  
  --engine postgres \  
  --version 15 \  
  --instance-class db.r6g.large
```

### Connection String

```
cloudforge db connect-info mydb --env production
```

```
# Output:  
# Host: mydb.abc123.us-west-2.rds.amazonaws.com  
# Port: 5432  
# Database: mydb  
# Username: admin
```

### Backup Database

```
cloudforge db backup create mydb --env production
```

### Restore Database

```
cloudforge db restore mydb \  
  --env production \  
  --backup-id backup-20240720
```

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## Networking Commands

### List Load Balancers

```
cloudforge network lb list --env production
```

### DNS Management

*# List DNS records*

```
cloudforge network dns list --zone example.com
```

*# Create record*

```
cloudforge network dns create \  
  --zone example.com \  
  --name api \  
  --type A \  
  --value 1.2.3.4
```

### VPC Information

```
cloudforge network vpc get --env production
```

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## Secrets Commands

### List Secrets

```
cloudforge secret list --env production
```

### Create Secret

*# From value*

```
cloudforge secret set API_KEY myvalue --env production
```

*# From file*

```
cloudforge secret set CERT --from-file cert.pem --env production
```

### Get Secret

```
cloudforge secret get API_KEY --env production
```

## Delete Secret

```
cloudforge secret delete API_KEY --env production
```

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## Cost Commands

### View Current Costs

```
cloudforge cost current
```

```
# Output:  
# Current Month: $45,234 (72% of budget)  
# Projected: $62,845
```

### Cost Breakdown

```
cloudforge cost breakdown --period month
```

```
# By service  
cloudforge cost breakdown --group-by service
```

```
# By environment  
cloudforge cost breakdown --group-by environment
```

### Cost Alerts

```
cloudforge cost alert create \  
  --name monthly-limit \  
  --threshold 50000 \  
  --email team@novatech.com
```

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## Monitoring Commands

### View Metrics

```
cloudforge metrics get cpu \  
  --env production \  
  --service api \  
  --period 1h
```



## List Alerts

```
cloudforge alert list --env production
```

## Create Alert

```
cloudforge alert create \  
  --name high-cpu \  
  --env production \  
  --metric cpu \  
  --threshold 80 \  
  --duration 5m
```

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## Deployment Commands

### Deploy

*# Deploy environment*

```
cloudforge deploy --env production
```

*# Deploy specific service*

```
cloudforge deploy --env production --service api
```

*# Deploy with approval*

```
cloudforge deploy --env production --require-approval
```

### Rollback

*# Rollback to previous version*

```
cloudforge rollback --env production
```

*# Rollback to specific version*

```
cloudforge rollback --env production --version v1.2.2
```

### Deployment History

```
cloudforge deploy history --env production
```

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## Output Formats

### Table (Default)

```
cloudforge env list --output table
```

### JSON

```
cloudforge env list --output json
```

### YAML

```
cloudforge env list --output yaml
```

### Quiet (IDs only)

```
cloudforge env list --output quiet
```

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## Global Flags

Flag	Description
--workspace, -w	Specify workspace
--env, -e	Specify environment
--output, -o	Output format (table, json, yaml)
--verbose, -v	Verbose output
--debug	Debug mode
--yes, -y	Skip confirmations
--help, -h	Show help

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## Environment Variables

Variable	Description
CLOUDFORGE_API_KEY	API key for authentication
CLOUDFORGE_WORKSPACE	Default workspace

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Variable	Description
CLOUDFORGE_REGION	Default region
CLOUDFORGE_OUTPUT	Default output format
CLOUDFORGE_DEBUG	Enable debug mode

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## Shell Completion

### Bash

```
cloudforge completion bash > /etc/bash_completion.d/cloudforge
```

### Zsh

```
cloudforge completion zsh > "${fpath[1]}/_cloudforge"
```

### Fish

```
cloudforge completion fish > ~/.config/fish/completions/cloudforge.fish
```

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## Examples

### Create Complete Environment

```
# Create from template
cloudforge env create production \
  --template microservices \
  --region us-west-2 \
  --wait

# Apply configuration
cloudforge env apply -f production.yaml

# Deploy services
cloudforge deploy --env production
```

## Migrate Database

```
# Create backup
cloudforge db backup create mydb --env production --wait

# Restore to new environment
cloudforge db restore mydb \
  --env staging \
  --backup-id backup-20240720
```

## Debug Failing Service

```
# Check service status
cloudforge service status api --env production

# View recent logs
cloudforge env logs production --service api --since 15m

# Get shell access
cloudforge service exec api --env production -- /bin/sh
```

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*Related Documents: Getting Started (PRD-CF-001), API Reference (PRD-CF-055), Configuration Guide (PRD-CF-010)*