The Challenge

As the NGAP program expands, traditional IT governance approaches fail to scale in a cloud model. This makes it difficult to overcome key challenges including:

- How does NGAP provide users with a robust experience and manage their access to cloud resources across the environment?
- How does NGAP ensure projects adhere to IT budgets when all workloads are deployed on public cloud infrastructure?
- How does NGAP ensure projects are compliant with relevant NASA policies and security standards?
The Solution

cloudtamer.io enables organizations to manage their cloud presence at scale.

cloudtamer.io:

• Enforces fiscal and compliance policies with more than notifications

• Provides native access to AWS capabilities. It's not a cloud broker

• Easy access for technical staff to create the resources they need

• Easy for senior leadership to enact financial and compliance oversight as adoption scales
How It Works: Cloud Account Management

- AWS accounts aligned to NGAP organizational structure
- Workload isolation by project lifecycle environment using separate AWS accounts
- Visibility and access limited based on Project / OU-level permissions and Cloud Access Roles
How It Works: Cloud Account Access

- Federated, single sign-on for secure access to AWS console
- Multi-factor authentication support (ex: YubiKey, Google Authenticator)
- Ability to request AWS API Keys based on Cloud Access Role

Credentials

User Name: jdoe
Password: **********

MFA Token

OR

sysadminjdoe
readonlyjdoe
developerjdoe
How It Works: Financial Visibility and Control

- Hierarchical budget management at defined corporate levels
- Real-time cloud spend tracking
- Project-level budget enforcement actions via automated financial triggers
  - Notify
  - Freeze New Spending
  - Terminate Project
Cloud Compliance Automation

- Hierarchical enforcement of legal, regulatory, and/or contractual compliance
- Easily establish compliance boundaries across the organization
- Consistently apply and update Cloud Rules (AWS IAM Policies, CloudFormation Templates, AMIs and Service Catalog Portfolios)

Example of compliance enforcement via hierarchical inheritance policies.

NASA/NGAP Compliance

DAAC / Program Compliance

Project Compliance

Env. Compliance
How It Works: Establishing Cloud Usage Boundaries

**COMPANY**
- Company Policy to Restrict Non-US AWS Regions

**DEPARTMENT**
- Department Policy to Use Specific EC2 Instance Types

**PROGRAM**
- Program Policy to Use FedRAMP High AWS Services

**PROJECT**
- Organizational
- Budgeting
- FedRAMP

User Action: Create M4.XLARGE EC2 Instance in GovCloud
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Launch Status

Your instances are now launching

How to connect to your instances

Your instances are launching, and it may take a few minutes until they are in the running state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.

How to connect to your instances

When your instances are launching you can also

Create status check alarms to be notified when these instances fail status checks. (Additional charges may apply)
Create and attach additional EBS volumes. (Additional charges may apply)
Manage security groups

Organization:

Budgeting

FedRAMP
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Cloudtamer.io

AWS

Organizational

Budgeting

FedRAMP
Thank You

For more information, visit www.cloudtamer.io

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