



Features and Capabilities

Cloudamize Platform

Enterprise Service Specification

June 2019

Service Specification

Service Name:	Cloudamize Platform - Enterprise Edition
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The Small Print

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Definitions

The definitions and rules of interpretation in this clause and as set out in the [Service Definition Document](#) shall apply. Any capitalised terms used but not defined shall have the meaning prescribed to them in the Service Definition Document.

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Executive Summary

The Cloudamize Cloud Management Platform reduces complexity in cloud migration, transformation and application modernization through supporting customers to make the right data-driven decisions using high precision analytics and app-centric strategies to optimize their application portfolio.

The Cloudamize Cloud Management Platform functionality can be grouped into three major areas, described below:

- **Plan** - Build an accurate assessment of your cloud costs and application dependencies.
- **Build** - Accelerate the cloud transformation by harvesting, orchestrating, and automatically deploying your own library of application and Infrastructure-as-Code Blueprints directly into cloud accounts.
- **Manage** - Analyzes and manages cloud application spend in real-time with app-centric visibility, flexible grouping and usage pattern analytics.

A Cloudamize Platform subscription by default comes with access to all functionality, with fixed-price packages set based on platform usage.

Plan

Summary

Plan calculates and compares precise TCO calculations across Amazon Web Services (AWS), Azure, and Google Cloud Platform (GCP) based on a detailed infrastructure performance analysis, so you can identify your best-fit cloud vendor and accurately forecast cloud costs.

Plan also provides a visualization of the on-premises server environment from which data has been collected and automates the discovery of applications across physical, virtual, and cloud environments and assesses dependencies and cloud suitability for each, so you can prioritize applications for migration to build a roadmap to the cloud.

Features

Cloud Cost Calculator and Comparison: Calculate and compare the TCO of moving to AWS, Azure, and Google Cloud Platform based on your current infrastructure performance profile, so you can identify which cloud will give you the best cost for your performance requirements and make the business case for moving to the cloud.

Cloud Configuration Mapping: Receive your recommended best-fit cloud configuration – including your optimal virtual machines, storage options, network settings, and pricing plan – within AWS, Azure, and GCP to accurately calculate your TCO based on your right-sized cloud.

Performance Projection Analysis: Receive a projected performance analysis on compute, storage, and network resources based on observed peak CPU utilization, allocated and peak RAM usage, storage capacity, occupancy, IOPS, and more. View a graphic, which can be drilled down to the machine level, that shows your current performance versus your performance with your recommended right-sized cloud configuration.

Hybrid Performance Benchmarking: Understand the performance profile of your compute, storage, and network resources in your on-premise and private clouds, and compare that to their projected performance and cost in the public cloud to inform your hybrid cloud decision-making.

Custom Reporting: Run “what if” scenarios by changing regions, pricing plans, discounting levels, instance types, instance families, and performance thresholds so that you can right-size your infrastructure based on your performance target.

Application Dependency Mapping: Map all compute, storage, and network dependencies across your on-premises and cloud environments, including 3-tier/n-tier dependencies, and zoom in on individual dependencies to view details on all processes, such as executable names, application names and descriptions, vendor information wikis, and more to ensure a seamless migration.

Cloud Suitability Analysis: Capture an application’s cloud compatibility and efficiency gain based on its performance profile, usage patterns, and available cloud options to prioritize applications for migration and determine which should stay on-premises.

Custom Migration Roadmap Planner: Run “what if” scenarios for each move group by changing regions, pricing plans, discounting levels, instance types, instance families, and performance thresholds to decide migration priority of the move group. Manually group applications based on their dependencies, business uses, migration phases, tags, and more.

Migration Integration: Cloudamize installs your migration tool to speed the process of moving workloads to the cloud, including visualization of migration statuses by machine.

Migration Plan Import: Import the migration plan built in Cloudamize into existing migration tools and for each move group view its host name and its compute, network, and storage settings for the cloud.

Post-Migration Validation: Validate that migrated applications are operating in the cloud as they were in their historical on-premises or private cloud environment.

Post-Migration Application Connectivity Testing: Immediately identify and rectify any gaps in application connectivity in the cloud, and run follow-up tests to ensure the connections are working as they should.

Post-Migration Cost Validation: Immediately get cost analysis of the applications that are migrated to the Cloud.

Migration Readiness Analysis: Provides a prebuilt Azure Site Recovery (ASR) readiness report which identifies any limitations or restrictions to migrating the workloads, using our recommendations, to Azure via ASR.

Push-button migration from Cloudamize UI (ASR Integration): Prepare your infrastructure for migration and migrate your workloads to Azure via Cloudamize's ASR integration. Push out ASR software, test data replication, fallback, view status, and finally migrate your data all through the Cloudamize platform.

CloudEndure Integration: Prepare your infrastructure for migration to AWS with CloudEndure and export a migration template for ingestion into CloudEndure blueprint creation. Push out CloudEndure agents, link to your CloudEndure subscription, and export a prebuilt template to easily create a CloudEndure migration blueprint.

Custom Exports for 3rd Party Migration Tools: Generate custom exports of Cloudamize recommendations and user-created migration plans which can be ingested into 3rd party migration tools.

Additional Information

Cloudamize Plan can also be bought in standalone SKUs for customers who are only interested in Cloud Migration Planning & Execution - please refer to the [Cloudamize Plan Service Specification for](#) more information.

Infrastructure	Data Collection Options
Windows Physical Machine	Agent and Agentless
Linux Physical Machine	Agent and Agentless
Cloud Instances	Agent and Agentless

Feature	Agent-Based
Data Collection Method	Light-weight software on each end-point
Security Protection	Traffic is encrypted via SSL between endpoints and the Cloudamize server with mutual endpoint authentication.
Deployment Model	Agents must be installed on each endpoint. The agent can easily be pushed out via Active Directory, chef, puppet, SCCM, etc.
Ease of Deployment	A single outbound port (TCP 443) to a specific IP address is required. Generally this port is already open and no changes are needed.
Resource Consumption	Data collection occurs locally and compressed data is sent over the internet. Data collection is halted if CPU and memory thresholds are crossed.

Accuracy	High frequency collection of performance metrics. Discovers all applications and their dependencies in detail.
Scalability	Agent handles process initiation and stream handling making this very easy to scale.
Robustness	Caching mechanism is available in the event of network disruption for added robustness.

Feature	Agentless
Data Collection Method	SSH, WMI
Security Protection	Ports will be open between the agentless data collector and all endpoints on the subnet. Data is sent from the collector to the Cloudamize servers and is encrypted via SSL.
Deployment Model	WMI services for each Windows endpoint and SSH will need to be configured for each Linux endpoint. One machine/VM will need to have the agentless data collector installed.
Ease of Deployment	Agentless Data collector installed locally on one machine per subnet. Ports 135, 445, and 1024-65535 will need to be open inbound on all Windows endpoints, Port 445 will also need to be open outbound. Port 22 will need to be open inbound on all Linux endpoints.
Resource Consumption	Increases network traffic as the raw performance data is transported over the network to a remote data collector. No throttling mechanism available on the end points.
Accuracy	Lower frequency data collection results in less accuracy and not all application dependencies are captured.
Scalability	Server must handle process initiation and stream handling resulting in a limit to how many connections can be handled concurrently. Agentless Data collector can handle 500 endpoints per collector.
Robustness	Network connectivity issues can impact data collection.

Build

Summary

Build provides a centralized Gallery to harvest, manage, orchestrate, and publish a library of templated, application and Infrastructure-as-Code blueprints IP to accelerate the

implementation of cloud-native applications and infrastructure and reduce the barrier to entry to adopting Cloud.

Functionalities include:

- Reduced implementation times and failure rates for DevOps teams through Automated deployments of your approved and published blueprints
- Accelerated and simplified adoption timeframes by leveraging lessons learned in the field to create repeatable, validated blueprints
- Reduced need to upskill on new technologies through repeat usage, i.e. promotes tooling familiarity
- Validated software-driven solutions ensure standardization & compliance
- Enables simplified harvesting content from a global development community who can help validate, provide real-world feedback, and contribute

Features

Deploy Gallery Access: Full access to the Deploy platform where you can build, curate, publish, and orchestrate libraries of battle-tested deployable cloud blueprints.

Blueprint Library Management: Create your own enterprise set of validated blueprints and publish them to your users/customers. Manage and organize your blueprints the way you want your users to see them, control who can see them, and control who can utilize the automated deployment capabilities.

Automated Blueprint Deployment: Ability to automatically deploy a blueprint directly into your enterprise cloud account.

Blueprint Validation Engine: Ability to validate your custom blueprints using Deploy's automated testing and validation engine.

Deployment Repeatability: Ability to deploy a single solution multiple times to a single cloud account

Blueprint Monitoring & Metering: Ability to meter/monitor number of deployments, linked account spend, etc.

Cloud Landing Zone Blueprints: A blueprint library developed by Cloudreach which automates the creation of your enterprise Cloud Landing Zone in AWS, GCP, or Azure.

Cloudamize Build Library: A blueprint library built and maintained by Cloudreach's global Cloud Enablement team, leveraging lessons learned through real-world cloud engagements.

Cloudamize Operations Blueprints: A blueprint library containing solutions developed by Cloudreach's global Operations and Managed Services teams that focus on automating daily operations such as patch management, security/policy validation, etc.

AWS Quickstart Solutions Library Integration: Ability to deploy a set of AWS Quick Start solutions in the AWS Cloud using the Cloudamize Deploy platform.

Support for customer maintained Blueprint Libraries: Ability to deploy a set of AWS Quick Start solutions in the AWS Cloud using the Cloudamize Deploy platform.

Additional Information - Blueprints

Depending on your subscription level, the Cloudreach can pre-populate Customer Platforms with a set of Generally Available Blueprints. These Blueprints are of a higher quality, developed over years of Enterprise delivery of these assets.

Generally Available Blueprints

Name	Description
Cloud Landing Zone	<i>Cloud Landing Zone, applicable for AWS, AZURE, or GCP</i>

Support for Generally Available Blueprints

Blueprints within the Gallery are meant to be the foundation for implementing a specific application or infrastructure environment.

Most, if not all, will require some level of customization for each particular customer implementation. Due to the nature of these Blueprints, including the ability to be customized per customer requirements, there are no specific Support terms or SLAs attached to individual Blueprints.

Blueprint: Cloud Landing Zone

Key Features & Functionality

Features	Cloudreach AWS Landing Zone (Sceptre & Cloudformation)	Cloudreach AWS Landing Zone (Terraform)	Cloudreach Azure Landing Zone (Terraform)	Cloudreach GCP Landing Zone (Terraform)
Account/Subscription/Project Structure	✓	✓	✓	✓
Auditing & Tagging/Label	✓	✓	✓	✓
Roles & Permissions	✓	✓	✓	✓

Networking & VPCs	✓	✓	✓	✓
Firewall & Connectivity	✓	✓	✓ (NSGs, rather than Azure Firewall)	✓
Bastion	✓	✓	✓ (P2S VPN rather than Bastion)	✓
Proxy	✓	✓	Documented	Documented
Data Center / Cloud Connectivity	Documented	Documented	Documented	Documented
DNS	✓	✓	Documented	Documented
Active Directory	✓	✓	Documented (Required Prerequisite prior to CLZ deployment)	N/A - GSuite or Cloud Identity Used
Logging & Alerting	✓	✓	Documented	✓ (Alerting Documented)
Infrastructure Monitoring	✓ (Cloudwatch)	✓	Documented	Documented (Manual process - APIs for automation currently unavailable)
Backup & Restore	Documented	Documented	Documented	Documented - Cloud Operations support Coming soon
Configuration Management	Documented and can be managed by Cloud Operations	Documented and can be managed by Cloud Operations	Documented and can be managed by Cloud Operations	Documented - Cloud Operations support Coming soon
Patching	Documented and can be managed by Cloud Operations	Documented and can be managed by Cloud Operations	Documented and can be managed by Cloud Operations	Documented - Cloud Operations support Coming soon
Cost Management	Documented and can be managed by Cloud Operations	Documented and can be managed by Cloud Operations	Documented and can be managed by Cloud Operations	Documented - Cloud Operations support Coming soon
IDS & threat management	Documented and can be managed by Cloud Operations	Documented and can be managed by Cloud Operations	Documented and can be managed by Cloud Operations	Documented - Cloud Operations support Coming soon
Vulnerability Scan	Documented and can be managed by Cloud Operations	Documented and can be managed by Cloud Operations	Documented and can be managed by Cloud Operations	Documented - Cloud Operations support Coming soon

Web Application Firewall	Documented	Documented	Documented	Documented
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Licensed Material

- Infrastructure as Code - Software Materials
- Templates for each element of the infrastructure
- Configuration files
- The tool to deploy templates in the target Cloud

Manage

Summary

Manage provides insights to customers to help ensure their cloud estates are continually optimized and in terms of cost and performance, as well as provides application-centric governance and financial accountability across the Enterprise.

Functionalities include:

- Clear understanding of app-level dependencies in-cloud post migration
- Insight and spend recommendations to optimize cost, including cost per application, move group and infrastructure
- Insight and performance recommendations, including Right size instances and disk space per usage patterns and performance requirements

Features

Application Discovery: Automatically identify all applications and machines within the environment.

Application Dependency Map: Automatically map all the application level dependencies across your cloud environments. View details about applications, processes, and executable names to understand what's running where.

Hierarchy Builder: Build your groups based on your business need. Switch between the hierarchies to understand costs through multiple views, application view, infrastructure view, and tag-view just to name a few.

Cost Explorer: Understand your costs at different levels such as applications, business units, tag-based groups, and accounts.

Chargeback and cost allocation: Build chargeback reports by business units, cost tags, or application groups from a consolidated bill. (v2)

Report Builder: Configure custom reports(v1.1) and schedule automated delivery (v2)

Spend Management: Understand cost against budget and manage your spend

Performance Monitoring: Provides 100+ time series performance metrics over different time horizons as granular as 30 seconds. Drill down to node level to see granular data displayed graphically

Right Sizing Advisor: Determines which machines are over-provisioned, under-provisioned, or optimally provisioned based on SLTs / performance thresholds

Instance Right Sizing Planner: Right-size your instances based on system-level data (Peak CPU, Memory, IOPS & Network usage), so you can quickly and accurately identify the cloud configuration that will meet your performance requirements at the lowest possible cost.

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Storage Right-Sizing Planner: Right-size your storage volumes based on your disk usage so you can quickly and accurately identify the storage configuration that will meet your application's performance requirements at the lowest possible cost.

Storage Right-Sizing Planner: Right-size your storage volumes based on your disk usage so you can quickly and accurately identify the storage configuration that will meet your application's performance requirements at the lowest possible cost.

Capacity Planner: Leverage performance and usage pattern analysis to accurately plan current capacity and to project compute, storage, and network resources for the future capacity need.

Platform Support

All Cloudamize functionality is supported according to the below Support Schedule and timeframes.

Support Features	Standard Support (Included for all)
Cost	Free
Hours	M - F (9am to 6pm EST)
Out of Hours Support	Commercial Best Efforts
Channels	Web, Email, Phone
Support Channels	
24x7 Web Portal	support.cloudamize.com
Email	helpdesk@cloudamize.com
Issue Severity	Response Time
Severity 1 (Urgent)	2 Business Hours
Severity 2 (High)	4 Business Hours
Severity 3 (Medium)	1 Business Day
Severity 4 (Low)	2 Business Days

*Cloudamize does not warrant Resolution Times, but endeavors to resolve all issues within commercially reasonable timeframes.