Agile Operations

Service Specification

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Service Name:	Agile Operations
Service Level Hours:	Business Hours (9x6) means the local standard business hours of 9am - 6pm for the applicable time zone(s) in the country(ies) in which the Services are being performed, from Monday to Friday excluding customer observed public holidays in the applicable country.
Unit of Charge:	Fixed Cost per Month
Prerequisites:	None
Supported Cloud Platforms:	AWS and Azure
Service Code	CO-AGILE-SHARED-TIER1 CO-AGILE-SHARED-TIER2 CO-AGILE-DEDICATED-TIER1 CO-AGILE-DEDICATED-TIER2
Version Number:	2.5.1
Status:	Published
Published Date:	May 2018

The Small Print

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Definitions

The definitions for all capitalised terms used throughout this Service Specification are set out in the Cloudreach Cloud Operations Product Definitions and Interpretations document which forms a part of this Service Specification and the Cloudreach Order Form to which this Service Specification relates.

1. Service Overview

Cloudreach Agile Operations is focused on: (i) enabling rapid application development; (ii) consistent and maintainable testing and delivery systems; and (iii) reliable and performant production environments.

Cloudreach provides access to shared and dedicated teams of highly skilled and experienced DevOps Engineers who work closely with internal development, infrastructure, application, and operations teams. Using our engineers as a bridge across typically disparate teams, equips customers with expertise in their chosen application space, cloud platform services, and DevOps technologies, offering elasticity and increased agility with the primary goal of meeting business objectives and modernizing core business applications.

Agile Operations may be used to execute tasks to support the delivery of change within the Customer's Public Cloud Environment and align with their sprint planning.

Common Agile Operations activities are geared towards application modernization and include, but are not limited to:

- Deploying a new release of an application (packaged deployment);
- Updating the configuration of an application service (e.g. Apache) or database engine;
- Refactoring and rebuilding monolithic applications by taking advantage of serverless architectures (e.g. AWS Lambda, Azure Functions) and Container services (e.g. Docker, ECS, Kubernetes...)
- Creating or updating Infrastructure as Code templates, for example AWS Cloudformation or Azure resource manager templates;
- Implementing or managing configuration management tooling, such as Chef or Ansible;
- Implementing financial and security optimisation recommendations / actions.
- Deployment cycle auditing
- Operational task automation
- Implementing and managing an end-to-end development and deployment pipeline using Continuous Integration, Continuous Delivery or Continuous Deployment techniques.

Activities other than application modernization can be performed by Cloudreach Agile Operations on a case-by-case basis after review and approval between the Customer and Cloudreach.

2. Role Descriptions

Experience Level	Description
DevOps Engineer	The DevOps Engineer participates in the Customer's agile process which includes joining sprint planning, estimating, and retrospectives. The backlog is prioritised using the Customer's existing prioritisation activity. The DevOps Engineer:

	• Works under general supervision • Influences immediate colleagues • Performs a range of varied work • Understands and uses appropriate methods, tools, and applications.
Service Delivery Lead	The Service Delivery Lead is dedicated to providing "Ensure and Advise" level guidance in an engagement to improve Customer satisfaction and enable Customer to gain the maximum business advantage from Cloudreach's services; championing the delivery of an end to end customer experience. • Works under general guidance • Influences teams and specialist peers • Reports on service delivery levels including adherence to availability levels in accordance with section 5. Service Levels for Agile Ops

The following Cloudreach personnel will support the DevOps Engineer(s) and Service Delivery Lead where possible in the provisioning of Agile Operations.

Experience Level	Description
DevOps Engineering Lead	The role of the DevOps Engineering Lead is to support the DevOps Engineer in the delivery and technical design of Agile Operations from time to time, to ensure that knowledge is shared among team members, and to be a trusted advisor suggesting improvements and reviewing technical and process design. The DevOps Engineering Lead: • May perform delivery related tasks • Works under general guidance • Influences teams and specialist peers • Performs a range of complex technical or professional work • Advises on the available standards, methods, tools and applications based on knowledge in specialist areas.
DevOps Leader	The DevOps Leader generally assists in planning and managing DevOps team assignments to meet the service level for availability and engagement assignment of DevOps Engineers as set out in section 5. Service Levels for Agile Ops. The DevOps Leader will not perform any delivery related tasks. In addition, the DevOps Leader shall, from time to time, use reasonable endeavours to: • Influence the Customer's cloud operations strategy from a technical, management, and quality standpoint. • Collaborate with relevant Customer stakeholders and the Cloudreach Service Delivery Lead to manage resourcing, workloads and the Customer's expectations. • Collaborate with the Service Delivery Lead in the development of service improvement plans.

3. Service Elements

Agile Operations provides the Customer with the ability to leverage experienced Cloudreach DevOps Engineers and DevOps Engineering Leads who can enable rapid application development, and reliable and performant production environments.

3.1 Shared & Dedicated DevOps Team

Service Elements	Description
Engineer Certification Level	Certified to at least AWS Solutions Architect Associate or Architecting Microsoft Azure Solutions [70-534] level
Tasks	Tasks are created as part of the agile planning process led by the Customer. The Customer will prioritise which tasks are actioned in a given period. Customer acknowledges that: ● The implementation of tasks is not subject to an SLA as the Cloudreach DevOps team's workload is managed by the Customer during sprint planning. ● The Cloudreach DevOps Engineer may not be able to act on every task assigned. Where Cloudreach is not able to act on the task, the Cloudreach DevOps Engineer or Lead will notify the Customer. ● Examples of requests where Cloudreach may not be able to act include but are not limited to: 1) Tasks which negatively impact the security of the Customer environment, 2) Application related changes where Cloudreach does not have the skills to implement change.
Monitoring	Cloudreach may utilize Customer monitoring tooling to provide this service. Where the Customer has purchased Cloud Core from Cloudreach, it may utilize Cloudreach monitoring tooling and additional support capabilities. For example: the Customer may utilise the Cloudreach Event Management, Performance Management, System Orchestration, Backup Management, Patch Management and Log Indexing tooling to create standard and custom service checks and operational management events. Where Customer monitoring tooling is used, the integration of Customer systems to Cloudreach event management systems is either scheduled within the work of the Shared/Dedicated DevOps team (as defined below), or subject to a separate order form.

Reporting	The Cloudreach DevOps Engineering Lead or Service Delivery Lead will track effective resource utilisation and performance pursuant to section 5. Service Levels for Agile Ops in a monthly service review report.

3.2 Supported Technologies

Supported Technologies	Description
Cloud Vendor Supported Technologies	AWS EC2, VPC, IAM, S3, RDS, Route53, SES, CloudFront, DynamoDB, SQS, SNS, CodeCommit, CodeDeploy, CodePipeline, CodeBuild, Elasticache, EC2 Container Service, EC2 Container Repository, Elastic Beanstalk, Elastic File System, CloudWatch, API Gateway, WAF, Elasticsearch, Kinesis, DataPipeline, CloudFormation, OpsWorks, Lambda Azure VM, Cloud Services, Docker Virtual Machine Extension, Storage, File Storage, CDN, SQL Database, DocumentDB, Virtual Network, Traffic Manager, Active Directory, Resource Manager, Automation, Scheduler, Azure Functions Other Cloud Vendor technologies can be supported by Cloudreach Agile Operations on a case-by-case basis after review and approval between the Customer and Cloudreach.
Independent Software Vendor (ISV) Supported Technologies	Configuration Management: Chef, Ansible Infrastructure Orchestration: Cloudreach Sceptre, Terraform Continuous Integration/Continuous Delivery: Jenkins Other ISV technologies can be supported by Cloudreach Agile Operations on a case-by-case basis after review and approval between the Customer and Cloudreach.

4. Delivery Model

Cloudreach shall provide Agile Operations using either the Shared or Dedicated delivery model as selected by the Customer in the Order Form.

The 'Shared' model will allow Customer to leverage a pool of Cloudreach DevOps Engineers who can rapidly scope and deliver changes to cloud based infrastructure and make recommendations regarding Customer's desired additional tooling with the primary goal of meeting Customer objectives.

The 'Dedicated' model provides access to dedicated Cloudreach DevOps engineering resources working closely with development, architects, application and operational teams developing

intimate knowledge of the Customer's' Cloud Platform including additional tooling whilst increasing agility with the primary goal of meeting Customer objectives.

Customer shall work together with the DevOps Leader to schedule the days on which Customer requires the DevOps Engineer(s) in a given month. The number of days that Cloudreach DevOps Engineers are required to provide Agile Operations per month is defined in section 5. Service Levels for Agile Ops . Customer may request schedule changes by providing at least one month's prior written notice.

Shared Devops Team	Dedicated DevOps Team
- Access to a shared pool of DevOps Engineers. At any time during the Term, Cloudreach shall select and/or replace the applicable DevOps Engineer(s) to be provided to Customer from an allocated group. - Cloudreach shall use all commercially reasonable endeavors to support additional technologies. - Guidance provided from a DevOps Engineering Lead on the available standards, methods, tools and applications based on knowledge in specialist areas. - Availability compliance, overview of tasks and projects as well as recommendations will be reported during the scheduled monthly service reviews.	- Access to a dedicated number of named DevOps Engineers for the duration of the Term. - Cloudreach will invest in the continuous development of skills required to support additional technologies for dedicated DevOps engagements. - Additional technologies that require support are tracked by the DevOps Engineering Lead and an upskilling plan will be developed for the relevant DevOps Engineers. - Availability compliance, overview of tasks and projects as well as recommendations will be reported during the scheduled monthly service reviews.

5. Service Level for Agile Ops

Shared DevOps Team and Dedicated DevOps Team Services shall be provided according to the following Target Availability:

Service	Target Availability
OPS-AGILE-DEDICATED	90%

In the event that the Measured Availability is less than the Target Availability as measured at the end of the then current term as a result of Cloudreach's acts or omissions, Cloudreach shall credit the Customer by extending the then current term by the number of days which fall under the Target Availability at no additional cost to the Customer (each a **"Term Extension"**). The target availability incorporates the Cloudreach Agile Ops team to continue to upskill as part of their individual development plans.

By way of example the following calculation shall be utilised:

Target Availability = 90%

Working Days = Number of working days during the Term (eg. Tuesday 5th July 2016 to Friday 30th September 2016) = 63

Staff Level = Number of DevOps Engineers assigned as part of the contracted DevOps Services = 2

Maximum Working Days = Staff Level x Working Days = 2 x 63 = 126

Actual Days Worked = the total number of days worked by DevOps Engineers during the Term = 112.1

Measured Availability = Actual Days Worked / Maximum Working Days = 112.1 / 126 = 89.0%

Credit:

Where the Measured Availability falls below the Target Availability, the Term is extended in accordance with the example:

Term Extension = Maximum Working Days x (Target Availability - Measured Availability) = 126 x (90.0% - 89.0%) = 1.26 days, then rounded to the nearest day = 1 day

For the avoidance of doubt the Term Extension is the number of working days added to the then current term, that will be rounded to the nearest full number of days.