

# FANATICAL SUPPORT FOR AWS



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## OVERVIEW

Many businesses want to realize the power of AWS without having to incur the challenge and expense of managing it themselves. Some businesses lack the technical expertise or capacity to operate cloud infrastructure, tools and applications while others may have the ability but choose to maintain focus on their core business. Many larger businesses are on a multi-phased journey to the cloud, requiring transition and management services that can adapt to an evolving set of needs.

Fanatical Support® for AWS is the answer for businesses facing these challenges. As a Premier Consulting Partner, Rackspace blends technology and automation plus human expertise to deliver ongoing architecture, security and 24x7x365 operations backed by AWS certified engineers and architects.

## OUR SERVICE LEVELS

Fanatical Support for AWS has been crafted to address the core challenges businesses face in implementing and operating AWS environments. We offer our customers a choice of two service levels – **Navigator** and **Aviator**.

### NAVIGATOR

Access to the tools, automation and best practices that capture the expertise of certified AWS architects along with access to our certified AWS experts when you need it. Rackspace is your navigator along your AWS journey.

### AVIATOR

Aviator extends the benefits of Navigator through additional tooling and increased application of human expertise, incorporating best practices and 24x7 operational support for your AWS environment. With Aviator, Rackspace is your co-pilot on your AWS journey.

TOOLING & AUTOMATION	NAVIGATOR	AVIATOR
<b>AWS Account Management</b> <ul style="list-style-type: none"> <li>· Simplified management of per environment (e.g., dev, prod) AWS accounts</li> <li>· CloudTrail and AWS Config preconfigured for comprehensive tracking and auditability</li> <li>· AWS root account password &amp; MFA storage in secure credential vault</li> </ul>	✓	✓
<b>Identity &amp; Permissions Management (via the Rackspace console)</b> <ul style="list-style-type: none"> <li>· AWS IAM and STS security best practices implemented by default</li> <li>· Simplified cross-AWS account access</li> <li>· Seamless experience including AWS Console federation</li> </ul>	✓	✓
<b>Logbook – Unified record of AWS cloud activity</b> <ul style="list-style-type: none"> <li>· Blended, time-series view of all Rackspace and AWS CloudTrail activity</li> <li>· Aggregated across all AWS accounts and regions</li> </ul>	✓	✓
<b>Access to best-practice AWS CloudFormation templates</b> <ul style="list-style-type: none"> <li>· Opinionated VPC design including AZs, subnet sizing, public and private subnet layout, resilient HA NAT, etc.</li> </ul>		✓
<b>Compass – Automated auditing for AWS Cloud best practices</b> <ul style="list-style-type: none"> <li>· Best Practices: More than 350 automated best practice checks evaluated against your AWS accounts</li> <li>· Cost Optimization: Billing dashboards, savings reports, cost alerting and Reserved Instance purchase recommendations</li> <li>· Inventory Management: Cross-account and cross-region resource inventory, per service usage details, resource tagging reports and more</li> <li>· Security: CloudTrail, Config, VPC and security group analysis, perimeter assessments, and IAM and permission reporting</li> <li>· Utilization: CPU and network heat maps and CloudWatch historical data retention and analysis</li> </ul>	✓	✓
<b>Waypoint</b> <ul style="list-style-type: none"> <li>· Monthly summaries for spend and operations across all your AWS accounts</li> <li>· Insights into spend and opportunities for savings</li> <li>· Personalized security best practices</li> <li>· Summaries of your tickets, alarms, and AWS resources</li> </ul>	✓	✓
<b>Passport – Simple, secure access management of EC2 instances</b> <ul style="list-style-type: none"> <li>· Secure VPC access: On-demand bastion provisioning with fine grained network permissions</li> <li>· Secure EC2 access: Powerful, automated SSH key management across your entire fleet of EC2 instances</li> <li>· Brought together and made simple via a single access request</li> <li>· Full logging to Rackspace Logbook</li> </ul>		✓

HUMAN EXPERTISE	NAVIGATOR	AVIATOR
Support of the AWS Platform · Fanatical Support for AWS issues from certified AWS engineers 24x7x365	✓	✓
Technical Account Manager (TAM) · Personal contact for ongoing business and technical assistance	✓	✓
Technical Onboarding Manager (TOM) · Personal contact to assist with onboarding · Coordinates the process of getting your environment up and running on AWS		✓
Best Practices and Architecture · A combined set of AWS and Rackspace recommendations from certified AWS architects	Guidance for standard use cases	Hands-on design customized to your specific application
EC2 Operating System Management · Support for: Amazon Linux 2 & Amazon Linux (legacy), RedHat Enterprise Linux: 6 & 7, CentOS: 6 & 7, Ubuntu LTS Versions: 14.04 & 16.04, Windows Server 2008 R2*, Windows Server 2012 R2, Windows Server 2016 · Configuration, patching, upgrades		✓
Database Management · Support for key AWS database services -- e.g. RDS (Aurora), Redshift, DynamoDB · Expertise in AWS-tooling applies exclusively to Professional Services, DBA Services, and BI & ETL Services.		✓
PCI and HIPAA Compliance · Certified Level 1 Payment Card Industry (PCI) Service Provider on AWS · We can act as a business associate to support customers with HIPAA workloads on AWS	✓	✓
CloudWatch Management and Incident Response · Setup of CloudWatch monitors and response to CloudWatch alarms 24x7x365 by AWS certified engineers		✓
Account Review · Review Rackspace Waypoint and Compass recommendations · Identify and prioritize recommendations that address costs, Reserved Instance management, security, utilization, inventory management and best practices		✓
Response Times · Ownership of incidents and issues relating to AWS, to include the use of AWS Enterprise Support on customer's behalf	Urgent < 60 minute High < 4 hour Normal < 12 hour Low < 24 hour	Emergency < 15 minute Urgent < 60 minute High < 4 hour Normal < 12 hour Low < 24 hour
<b>ADD-ON SERVICES</b>		
Detailed Solution Design · Detailed AWS design based on application and requirements analysis	Additional services available	✓
Migration Assistance · Assistance getting your app and data migrated to AWS · Depending on requirements, available from Rackspace and/or Rackspace-approved partners	Additional services available	Additional services available
Custom DevOps Professional Services	Additional services available	Additional services available
Database Administration Services	Additional services available	Additional services available

\* Support for Windows Server 2008 R2 is contingent on enabling an alternative means of access (beyond ScaleFT) for Rackspace to manage your instances. Please work with your Support team prior to deploying new instances running Windows Server 2008 R2.

## TOOLING & AUTOMATION

### Logbook™ (Navigator & Aviator)

AWS and Rackspace generate detailed control plane logs for the vast majority of activities that occur on your Fanatical Support for AWS account(s). This data is aggregated from a number of different sources:

**AWS CloudTrail** - Detailed logs of AWS API requests made on your account(s) to supported AWS services

**Fanatical Support for AWS shared management system and user interfaces** - View control panel logins and other actions (e.g., creating a new linked AWS account or modifying control panel user permissions)

**Fanatical Support for AWS environment access** - Any time a Rackspace employee or one of your employees creates an access request to provision a temporary bastion for access to your AWS environment, view the specific resources they had access to, the source of their access request and other associated details

The Logbook section of the Fanatical Support for AWS Control Panel provides insight into all of the activities noted above. You can view the activities for a specific AWS account or a combination of accounts and filter the results to find the specific activities you are interested in reviewing. This consolidated view is extremely valuable for managing and auditing access and activities across multiple AWS accounts.

## Compass™ (Navigator & Aviator)

Compass provides direction for managing your AWS environments across a number of dimensions including automated best practice checks, cost optimization, security and inventory management and utilization reporting.

**Cost Optimization** – The Compass cost feature gives your finance, engineering and management teams the visibility, predictability and accountability they need into all of your cloud costs and usage. Gain clarity around your spending and usage across AWS services including EC2, S3, RDS, ElastiCache, CloudFront, RedShift, DynamoDB, Glacier, etc. and take advantage of cost-cutting Reserved Instance purchasing recommendations.

**Inventory Management** – The Compass inventory feature provides a snapshot of all your assets, resources, services and instances and keeps an audit trail in case it is needed. With simple drill-down inspections you can quickly identify running and unused instances, estimated costs, average CPU usage and much more.

**Security** – The Compass security feature unites AWS CloudTrail, Virtual Private Cloud (VPC) and AWS Config log intelligence, AWS permission & access monitoring, perimeter assessments, change monitoring and more than 100 best practice checks for security and configuration vulnerabilities.

**Utilization** – The Compass utilization feature provides both summary and detailed CPU, Network and usage data for EC2, RDS, ElastiCache, DynamoDB and other services. This delivers the clarity needed to effectively manage your complex AWS environment, enables your team to efficiently identify and address areas of concern and makes you dramatically more operationally efficient.

**Best Practices** – Compass evaluates over 350 best practices against your environment at all times. You can drill into specific best practices to get additional details, and are able to customize the thresholds used for certain checks to meet your specific needs. The best practices report allows you to review your environment across four domains (security, cost, availability and usage) in addition to the recommendations coming from Trusted Advisor.

## Waypoint (Navigator & Aviator)

Waypoint provides a high-level overview of spend, risks, and operations for all your AWS accounts. Waypoint consolidates details for both Navigator and Aviator accounts, and it is available only to users who have access to all AWS accounts within your Fanatical Support for AWS account.

The goals of Waypoint are to keep you informed, to provide recommendations, and to ensure that we work together to improve your experience.

Waypoint collects information by using both AWS APIs and custom Rackspace APIs, to provide a consolidated view across all your environments. It is like an executive summary for a Rackspace account review.

Waypoint is both a near-real-time dashboard (for the current month) and an end-of-month snapshot (for past months) for details such as spend, usage, ticketing, and alarms. Waypoint stores up to 12 months of past reports.

Users with access to all AWS accounts within a Fanatical Support for AWS account can access Waypoint in the Fanatical Support for AWS Control Panel.

## Watchman (Aviator only)

AWS CloudWatch is the primary monitoring system used by our Fanatical Support for AWS support teams. While CloudWatch is available to Fanatical Support for AWS accounts at all service levels, customers using our Aviator service level can opt to have Rackspace respond to alarms generated by CloudWatch. Rackspace Watchman is a combination of the systems responsible for creating Rackspace support tickets from these alarms and the certified AWS experts that take the actions necessary to mitigate the indicated alarm conditions 24x7x365.

CloudWatch alarms are configured to trigger when the value of a specified metric deviates from its expected value for a specified period of time. For example, if CPU utilization on an EC2 instance exceeds 80% for a period of five minutes or more, the CloudWatch alarm is configured to send an alert to a Rackspace-managed SNS (Simple Notification Service) topic which is consumed by Rackspace Watchman to generate a ticket for further investigation by a Racker.

CloudWatch allows for the creation of custom metrics to allow monitoring of the resources that are most critical to the uptime of your applications. As an Aviator customer, you are able to collaborate with your Fanatical Support team to create the customized monitoring solution that best fits your needs.

## Passport™ (Aviator Only)

The Fanatical Support for AWS offering includes access to our Passport service at the Aviator service level. This is the same capability that Racker's use to access your environment. Passport manages the provisioning of short-lived, access-limited, fully audited bastion servers within your AWS account(s). Passport solves for both network connectivity and authentication into your environments.

Passport's primary concept is an Access Request. Each Access Request defines and tracks which user is accessing your account, which specific EC2 instances they are accessing, the duration of the Access Request, and the reason for the access. Access Requests default to expiring after 55 minutes (in order to optimize for the hourly billing of the bastion instances) but can be extended in one hour increments up to 11 hours and 55 minutes. A bastion instance will only ever be used by a single user, helping to ensure the integrity of the bastion operating system for each subsequent access request.

## HUMAN EXPERTISE

### Your Fanatical Support for AWS Team

Fanatical Support for AWS provides dedicated resources to deliver ongoing service and support for your applications. Rackspace provides you with certified AWS solutions architects and engineers ready to deliver Fanatical Support to your business 24x7x365.

#### DEDICATED TECHNICAL ONBOARDING MANAGER (TOM)

With the Aviator service level, the TOM is your personal contact for assistance with the Rackspace onboarding process. As your dedicated guide, your TOM will work with you to coordinate the deployment of your AWS environment.

#### DEDICATED TECHNICAL ACCOUNT MANAGER (TAM)

The TAM is your primary point of contact for all account issues and will own the management of day-to-day operations for your AWS environments.

#### AWS CERTIFIED CLOUD ENGINEERS

Each TAM is backed by a team of AWS Certified engineers responsible for 24x7x365 monitoring and operational support of your AWS environments.

## How to Contact Support

### TICKETS

One of the primary ways that you can interact with a Racker is by creating a ticket in the Fanatical Support for AWS Control Panel. Once logged in, click the Support button in the black bar at the top of the screen and follow the links to create a new ticket or view an existing ticket. Our automated systems will also create tickets for events on your AWS account(s) that require either your attention or the attention of a Racker. For example, our Rackspace Watchman tool will create a ticket when an alarm is raised, allowing a Racker to triage the alarm and take appropriate action. Any time a ticket is updated, you will receive an email directing you back to the Control Panel to view the latest comments.

### PHONE

You can call the 24x7x365 Support Team to speak live to a Racker, or access the Rackspace Mobile Application, and we'll be happy to assist.

## AWS Escalations

Rackspace is the sole point of contact for supporting your AWS environments. If AWS ever needs to be contacted, Rackspace will do so on your behalf.

#### Escalations may occur for the following scenarios:

- A service limit increase (e.g. c1.xlarge EC2 instances in US West)
- An issue that requires the involvement of a specific AWS product team to resolve
- An issue where multiple customers are impacted (AWS service outages)
- AWS SLA credit requests

Rackspace has direct access to AWS Support Teams and AWS Technical Account Managers for emergency or critical escalations.

## Fanatical Support for AWS Control Panel

As a Rackspace customer, you can access everything related to your Rackspace-managed AWS account(s) via the Fanatical Support for AWS Control Panel at: <https://manage.rackspace.com/aws>.

### The Fanatical Support for AWS Control Panel provides:

- Federated access to the AWS console
- Ability to create and manage linked AWS accounts
- Access to Rackspace Passport (Aviator-only), Compass and Logbook
- The ability to raise Support Tickets to quickly resolve any service issues
- Manage users, view invoices and see payment history

## SERVICE OPERATIONS

With the Aviator service level, Rackspace will build and deploy your AWS environments. Once we have completed the environment build as per the configuration agreed during the implementation process, the Service Operations phase deals with the day-to-day support of your AWS environments, addressing incident and change management as well as day-to-day management via a customized runbook.

## Customer Runbooks

During the implementation process, Rackspace will configure default monitoring and alerts along with a ticket notifying you to discuss a custom runbook with your Technical Account Manager (TAM). These customer runbooks are designed to present the right information, at the right time to our support teams. It's important to be able to respond quickly and effectively to service disruptions. Providing relevant and focused guidelines to our support teams increases the availability of customer solutions.

## Monitoring

As a part of Rackspace Watchman, AWS CloudWatch is the primary monitoring system used by our Fanatical Support for AWS support teams. During the Implementation process for Aviator customers, Rackspace will confirm any monitoring requirements in addition to our default configuration. Your TAM will provide guidance and consultation around best practices.

## Incident Management

Incident management refers to the management of incidents where restoration of the Services is the primary objective. Rackspace endeavors to restore normal service as quickly as possible when a problem or incident occurs.

Rackspace will apply a consistent approach to all incidents.

- Incidents can be initiated by either:
  - Named customer contacts
  - Rackspace
  - Event management tools (e.g., Rackspace Watchman or AWS CloudWatch)
- All incidents are logged in tickets accessible via the Fanatical Support for AWS Control Panel. Rackspace Support teams will investigate the incident in accordance with the agreed service level once logged.
- Priority for tickets entered manually via the Fanatical Support for AWS Control Panel are initially set to "Standard." Should you encounter a performance impacting incident and need to escalate, please set your ticket priority to "Urgent." Incidents logged with a specific priority will not be changed to another priority without the agreement of all parties involved.
- Prior to investigation, Rackspace support will carefully review instructions on your account (documented via the Custom Runbook & Account Management guidelines).
- Rackspace will collaborate with you as well as with any third parties you nominate as technical contacts through the Fanatical Support for AWS Control Panel to resolve the incident.
- The Rackspace Support teams will communicate regularly with you throughout the incident, detailing their findings and any actions taken.
- If a support engineer is unable resolve an incident, they may escalate the incident at any time until resolution is achieved. This escalation may be hierarchical (to a more senior engineer or the Technical Account Manager) or functional (involving specialist technical expertise from other functional groups or AWS themselves).

- The action required to resolve an incident will vary depending on investigative findings. In some cases, a proposed solution may be complex or cause additional disruptive impact to your AWS environments. In these cases, the incident will be handled as a change through the Rackspace change management process, and you will be consulted to determine the time window during which the solution or change may be implemented. Alternately, you may be required to take action to resolve the incident, which will be communicated should such need occur.
- An incident is deemed closed when you confirm that it is resolved. This is achieved through the incident ticket being set to "Solved" status. At this point you may close the ticket or respond with feedback if you believe that further work is required.

## Change Management

Change management includes a standardized set of procedures that enables Rackspace to deliver efficient and prompt handling of all changes in an organized manner to ensure minimum impact on the Services.

- The Rackspace Technical Account Manager will be available to work with you on all changes, be they operational, technical or commercial in nature.
- All changes will be managed through the Rackspace ticketing and change management systems. This supports long-term tracking of all information and the optimum delivery of services through the various lifecycle processes of deployment, change management, incident management, etc.
- Rackspace will raise a ticket accessible via the Fanatical Support for AWS Control Panel for changes that are owned or initiated by Rackspace. Conversely, you should raise a ticket for situations where Rackspace support is required for any changes owned and initiated by your business. You may also phone into the 24x7x365 support line to discuss a change and request a ticket be created.
- Rackspace will organize the support engineers with the specific domain expertise to manage the change as scheduled, keeping you fully informed on progress.
- You are responsible for changes or upgrades to your own internal infrastructure and will coordinate with your internal resources and third-party contacts to manage the change as scheduled, keeping Rackspace informed of the progress via a ticket documented in the Fanatical Support for AWS Control Panel, should it affect delivery of services.

## Ongoing Management

### OPERATING SYSTEM PATCHING

Rackspace can enable automatic patching within the operating system for Fanatical Support for AWS customers. This includes all operating system related patches of any supported EC2 instances within your AWS Account(s). Customers can request specific hotfixes or service packs to be installed on their behalf via a support ticket; alternatively, customers have the control to install these patches themselves. During the implementation process, Rackspace will consult with you on your patching needs. NOTE: Rackspace will not patch middleware or customer applications due to the potential of harming customers' environments when not thoroughly tested in their specific environment.

### BACKUPS

The primary backup solution for EC2 instance data on the AWS platform is currently the snapshot feature of AWS Elastic Block Storage (EBS). During the planning and implementation stages, Rackspace will work with you on scheduling EBS snapshots and defining a snapshot retention policy for your account.

Should an EBS snapshot job fail to run, or a snapshot action fail, Rackspace Watchman will create a ticket for your Rackspace Support team to investigate further.

Should you ever need data restored from an EBS snapshot, you may log a ticket in the Fanatical Support for AWS control panel. Please include information regarding the EC2 instance and EBS volume you need restored and to what EC2 instance that snapshot should be attached. Rackspace will only restore an EBS snapshot to a new volume, and you will be responsible for validating any restored data and moving it into your application. Backup options for AWS Elastic File system (EFS) are also available.

## Account Reviews

Your Technical Account Manager will provide reoccurring reviews in order to analyze the performance of a customer's AWS environment and provide recommendations for cost optimizations. This includes recommendations around the use of reserved instances, root causes of alerts and investigation for performance improvements coupled with reporting data from AWS Trusted Advisor and Rackspace Compass. The review may include items such as:

- Support Tickets
- Monitoring Alerts
- Upcoming Maintenance Events



- Product Roadmap Updates
- Potential Cost-Optimization
- Rackspace / AWS Best-Practice Recommendations
- Recent Environment Changes
- Upcoming Customer Events
- AWS Announcements

## RESPONSE TIME SLA

In order to better serve you, we have modified our Service Level Response Time Guarantees. This change will provide more granularity and ability for you to set the appropriate severity level in the Rackspace Ticketing Portal.

You now have the ability to set the following severity levels for both Navigator and Aviator accounts:

**Urgent:** Production System Outage / Significant Business Impact [60 Minute Response Time]

**High:** Production System Impaired / Moderate Business Impact [4 Hour Response Time]

**Normal:** Issues and Requests / Minimal Business Impact [12 Hour Response Time]

**Low:** General Information, Questions, and Guidance [24 Hour Response Time]

Via monitoring alerts, Aviator customers also have access to:

**Emergency:** Business-Critical System Outage / Extreme Business Impact [15 Minute Response Time]

These response times better reflect the various types of work Rackers perform for you and will help us identify your most critical tickets to address first.

## ADDITIONAL SERVICES

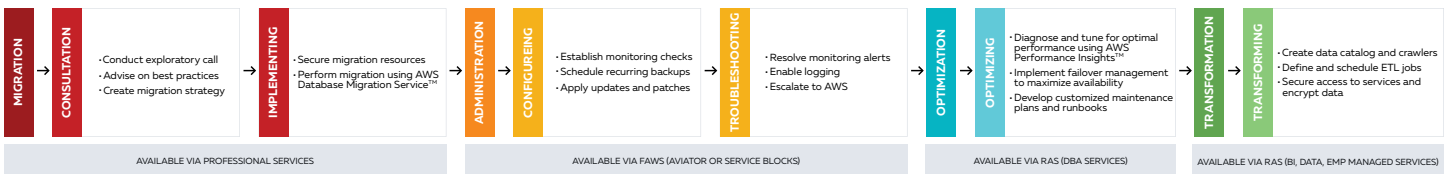
### Application Migration Assistance

Transitioning from an existing environment to AWS requires specific expertise and resources skilled in technology transformation, migration planning, and risk mitigation. Rackspace, for an additional fee and with assistance from our trusted partners where needed, will own the

process of migrating your applications to AWS. Please engage your sales representative for further information regarding pricing and timelines.

### Amazon Data Services Managed by Rackspace

Amazon Data Services Managed by Rackspace is a suite of services designed to streamline and accelerate your ability to leverage Amazon Aurora, Redshift, Glue, and Athena. Managing the volume and variety of today's ever-expanding datasets requires purpose-built services and deep expertise. As an AWS Premier Consulting Partner with nearly 20 years of experience managing complex database environments, Rackspace is uniquely positioned to help customers manage and optimize AWS' leading RDBMS and data warehouse services along with serverless services like Amazon Glue and Athena to prepare, load and query vast sets of data more efficiently and effectively than ever before.



Built to be modular, our end-to-end solution allows customers to pick and choose what services they'd like to leverage and when.

Whether you need to:

- Plan and execute complex migrations
- Manage operational tasks to ensure full functionality
- Optimize for performance and availability
- Streamline the complex task of managing the volume, variety, velocity, veracity, validity, and volatility of their datasets

Rackspace's team of qualified Engineers and DBAs are ready to help.

## Custom DevOps Professional Services

Rackspace has extensive experience working with DevOps methodologies, practices and tool chains and can assist customers in adopting DevOps methodologies and practices inside their own organizations.

As part of our Aviator offer, Rackspace will provide standard, platform-level DevOps support using the native AWS DevOps toolchain including installation, configuration, monitoring, troubleshooting and resolution when issues arise. **NOTE:** Please see Appendices 1 and 2 of this document for additional details including roles and responsibilities and the Spheres of Management.

Rackspace Professional Services has two methods of delivering DevOps outcomes for customers:

- Working with you to identify and implement any additional custom tooling necessary to achieve your business goals.
- Assisting you in evaluating and assessing the maturity of DevOps practices within your organization if you are in the early stages of your DevOps journey.

## Custom Professional Services

- Creation of in-depth customization for your application utilizing the native AWS DevOps toolchain (e.g., AWS CodeCommit, AWS CodePipeline, AWS CodeDeploy, AWS OpsWorks, etc.)
- Assistance in the writing of customized configuration management code using third-party tools (e.g., Chef, Ansible, Salt, etc.)
- Implementation and customization of continuous integration and continuous deployment (CI/CD) toolchains using 3rd-party tools (e.g., Jenkins, CircleCI, TeamCity, Octopus Deploy, etc.)
- Custom plugin integration between DevOps and ChatOps tools like Slack

## DevOps Maturity & Strategy Planning

- Learn the principles, benefits and tools behind a successful DevOps culture
- Discover the techniques for building modern applications that are self-healing and self-sustaining
- Review your current build and deployment processes with our experts
- Develop a roadmap that outlines your goals and timelines and defines how to integrate automation into your environment
- Classify applications and identify key stakeholders to help drive the adoption of DevOps practices

As part of a Professional Services engagement, Rackspace will help deliver the outcomes required via internal or trusted partner-led resources. These are one-time engagements carried out within a predetermined amount of time, where we or our partners can help with application-specific engineering requirements. These include, but are not limited to, assistance with configuration management, continuous integration, continuous deployment and release management.

FANATICAL SUPPORT FOR AWS DEVOPS SERVICE CATALOG	FANATICAL SUPPORT FOR AWS (AVIATOR)	ADD ON MANAGED SERVICE	PROFESSIONAL SERVICES	PRICING MODEL
Standard Native AWS DevOps Tools · Platform-level support of standard AWS DevOps Tools	✓			Included (Aviator Fee)
Custom Native AWS DevOps Tools · Application-level customization of AWS DevOps tools (e.g., AWS CodeCommit, AWS CodeDeploy, AWS CodePipeline, AWS OpsWorks)			✓	Pro serv. fees
3rd Party Configuration Management · Custom implementation of 3rd-party tools (e.g., Chef, Ansible, SaltStack, Docker)			✓	Pro serv. fees
ChatOps Integration · Custom plugin integration between DevOps and collaboration tools (e.g. Slack)			✓	Pro serv. fees
DevOps Advisory · Workshops and training to advance customers' DevOps maturity			✓	Pro serv. fees

# APPENDIX 1

## Service Relationships (Roles and Responsibilities)

It is anticipated that there are two parties involved in supporting your AWS environment, specifically:

- You, the customer (including any in-house IT resources)
- Rackspace, our AWS Certified support experts

**R**=Responsible :: **A**=Accountable :: **C**=Consulted :: **I**=Informed

AVIATOR SERVICE LEVEL ACTIVITIES	RACKSPACE	CUSTOMER
<b>SUPPORT OPERATIONS</b>		
Provide 24x7x365 Support & Monitoring Response via ticketing and phone	R, A	C, I
<b>ACCOUNT MANAGEMENT AND TOOLING</b>		
Provide named Technical Account Manager (TAM) resource	R, A	C, I
Conduct account reviews	R, A	C, I
Regularly identify opportunities for cost and performance optimization	R, A	C, I
Consolidate billing across AWS accounts	R, A	C, I
Consolidate AWS Console user management across AWS accounts	R, A	C, I
Consolidate AWS CloudTrail data across regions and accounts (Logbook)	R, A	C, I
Provide secure network access to environment via short-lived bastion service (Passport)	R, A	C, I
Provide opinionation and best-practices around account architecture, security, and resiliency (Compass)	R, A	C, I
Provide prioritized escalation to our own named AWS resources if needed	R, A	C, I
<b>DISCOVERY</b>		
Understand business objectives and current challenges (e.g., migration to AWS, refactoring current AWS footprint, providing MSP to existing AWS footprint, etc.)	R, A	C
Schedule and conduct deep-dive discovery session	R, A	C
Understand systems SLAs, RTO, RPO requirements	R, A	C
<b>DESIGN / ARCHITECTURE</b>		
Define architecture options to be considered (e.g., Lift & Shift vs. refactoring)	R, A	C
Decide on presented architecture(s)	C, I	R, A
Generate high-level application / logical diagrams for proposed architecture(s)	R, A	C, I
Generate detailed infrastructure schematics for proposed architecture(s) (e.g., VPC and subnet design, etc.)	R, A	C, I
Author solution design document	R, A	C, I
<b>INFRASTRUCTURE IMPLEMENTATION</b>		
Create, test and deploy infrastructure (CloudFormation, EC2, AutoScale, Security Groups, etc.)	R, A	C, I
User acceptance testing	C, I	R, A

AVIATOR SERVICE LEVEL ACTIVITIES	RACKSPACE	CUSTOMER
<b>INFRASTRUCTURE IMPLEMENTATION</b>		
Configure & test WAN connectivity (DirectConnect, site to site VPN) (RS Controlled side)	R, A, I	R, C, I
Create, test, and deploy Elastic Beanstalk configuration	R, A	C, I
Create, test, and deploy Elastic Container Service configuration	R, A	C, I
Ensure proper resource tagging of infrastructure components	R, A	C, I
DNS configuration (Route53)	R, A	C, I
<b>NETWORK AND ACCESS SECURITY IMPLEMENTATION*</b>		
Create, test, and apply IAM roles and polices	R, C, I	R, A, C, I
Create, test, and apply Security Groups and NACLs	R, C, I	R, A, C, I
Operating system user management (outside of Passport tool)	C, I	R, A
AntiVirus installation	C, I	R, A, C, I
<b>APPLICATION IMPLEMENTATION</b>		
Creation of golden AMIs (Aviator only)	C, I	R, A
Configure bootstrapping of supported operating systems using CloudFormation or Autoscale Launch Configuration	R, A	A, C, I
Arrange extended scope application engagement (ProServ, etc.)	R, A, C	C, I
Migration of application data	C, I	R, A
Database schema creation, migration and import	C, I	R, A
Create, test, and deploy Elastic Beanstalk configuration (incl .ebextensions under reasonable endeavor)	R, I	A, C, I
Create, test, and deploy ECS/Docker container configuration (see Note V below)	R, C, I	R, A, C, I
Development and deployment of configuration management artifacts (Chef, Salt, Ansible, etc.)	C, I	R, A
Creation and management of continuous integration and continuous deployment pipelines	C, I	R, A
<b>MONITORING</b>		
Configuration of OS Monitoring (CloudWatch)	R, A, I	C, I
Configuration of AWS Service Monitoring (CloudWatch) incl. VPC, EC2, RDS, SQS, ElastiCache, Dynamo	R, A, C, I	I
Configuration of Base App monitoring (e.g., IIS, MS-SQL) - (CloudWatch) (in collaboration with the customer)	R, A, I	C, I
Configuration of Base App monitoring (e.g., IIS, MS-SQL) - (other) (in collaboration with the customer)	R, A, I	C, I
Configuration and management of log aggregation (e.g., Splunk, CloudWatch, Syslogs)	R, C, I	R, A, C, I
Configuration of Application Synthetic transaction monitors	C, I	R, A, C, I
Configuration of Application Performance Monitoring (e.g., New Relic, AppDynamics, etc.)	C, I	R, A
<b>TICKETING / ALERTING</b>		
Definition of alert triggers, thresholds and remediation	R, A, I	C, I
Configuration of standard alerts	R, A, C, I	I
Configuration of custom alerts	R, C, I	R, A, I
SNS Configuration (for standard CloudWatch Alerts)	R, A, C, I	I
CloudWatch Logs Configuration & Management (Logbook)	R, A, C, I	I
CloudTrail Log Management and Custom Lambda Parsing	C, I	R, A, I

AVIATOR SERVICE LEVEL ACTIVITIES	RACKSPACE	CUSTOMER
<b>TICKETING / ALERTING</b>		
AWS Config Triggers & Rule Management	R, A, C, I	I
Response to Alerts within SLAs & initial troubleshooting	R, A	C, I
<b>BACKUPS &amp; REPLICATION**</b>		
EBS Snapshot backup management	R, C, I	R, A, C, I
EBS Snapshot restores	R, C, I	R, A, C, I
File-level backup and retrieval	C, I	R, A, C, I
S3 lifecycle policy creation and optimization	R, C, I	R, A, C, I
DynamoDB Cross-region Replication	R, C, I	R, A, C, I
RDS Database Backups & Replication	R, C, I	R, A, C, I
<b>PATCHING</b>		
OS Auto Patching	R, C, I	R, A, C, I
3rd-party Patching system	C, I	R, A, I

\* Security responsibilities are shared between Rackspace and customer

\*\* Customer is accountable for validating work Rackspace is performing around Backup and Replication activities. Rackspace is not liable for ensuring integrity of customer data. Regular testing and validation of backed up data should be a part of a customer's ongoing Disaster Recovery and Business Continuity Planning.

## APPENDIX 2

### Spheres of Management

Regardless of service level, all Fanatical Support for AWS customers have access to the complete portfolio of AWS services. For our Aviator customers specifically, we've created the **Spheres of Management (SOM)** – a series of documents detailing the services we support versus manage.

**Support:** Rackspace offers best practice advice, documentation, troubleshooting assistance, and issue ownership through closure (inclusive of escalation to AWS).

**Manage:** In addition to the support deliverables, Rackspace configures, troubleshoots, patches, monitors, backs up, and optimizes services based on your individual requirements

CATEGORY	RACKSPACE SUPPORTED	RACKSPACE MANAGED
<b>COMPUTE</b>		
EC2	✓	✓
ECS	✓	✓
EKS	✓	✓
Elastic Container Registry	✓	✓
Lightsail	✓	
Batch	✓	
Elastic Beanstalk	✓	✓
Fargate	✓	
Lambda	✓	
Serverless Application Repository	✓	
<b>STORAGE</b>		
S3	✓	✓
EBS	✓	✓
EFS	✓	✓
Glacier	✓	
Storage Gateway	✓	
<b>DATABASE &amp; ANALYTICS</b>		
RDS	✓	✓
DynamoDB	✓	
ElastiCache	✓	✓
Redshift	✓	✓
Athena		✓
Glue		✓
Neptune	✓	
Elastic MapReduce	✓	
<b>NETWORKING &amp; CONTENT DELIVERY</b>		
VPC	✓	✓
CloudFront	✓	✓

CATEGORY	RACKSPACE SUPPORTED	RACKSPACE MANAGED
<b>NETWORKING &amp; CONTENT DELIVERY CONT.</b>		
Route 53	✓	✓
ELB	✓	✓
API Gateway	✓	
Direct Connect	✓	
<b>DEVELOPER TOOLS</b>		
CodeStar	✓	
CodeCommit	✓	
CodeBuild	✓	
CodeDeploy	✓	✓
CodePipeline	✓	
Cloud9	✓	
X-Ray	✓	
<b>MANAGEMENT TOOLS</b>		
CloudWatch	✓	✓
CloudFormation	✓	✓
CloudTrail	✓	✓
Config	✓	
OpsWorks	✓	
Service Catalog	✓	
Systems Manager	✓	✓
Trusted Advisor	✓	
Personal Health Dashboard	✓	
Management Console	✓	
<b>SECURITY, IDENTITY &amp; COMPLIANCE</b>		
IAM	✓	✓
Cloud Directory	✓	
Cognito	✓	
GuardDuty	✓	
Inspector	✓	
Macie	✓	
Certificate Manager	✓	✓
Cloud HSM	✓	

CATEGORY	RACKSPACE SUPPORTED	RACKSPACE MANAGED
<b>SECURITY, IDENTITY &amp; COMPLIANCE CONT.</b>		
Directory Service	✓	
Key Management Service	✓	
Shield	✓	
WAF	✓	
Artifact	✓	
<b>MESSAGING</b>		
SQS	✓	✓
SNS	✓	✓
SES	✓	✓

**Note I:** Although not listed, Rackspace does support services in the following categories: Migration, Media Services, Machine Learning, Mobile Services, AR & VR, Application Integration, Customer Engagement, Business Productivity, Desktop & App Streaming, Internet of Things, and Game Development

**Note II:** Using a number of KPIs, Rackspace is continuously evaluating what services to promote to managed next; if there's a service that you'd like to see managed that isn't today, please let your Technical Account Manager know; they can recommend an interim partner solution and/or provide your feedback to our Product team for consideration

**Note III:**

To expand on the definition of support:

- Best practice advice could range from a Solutions Architect recommending a specific CloudFormation template to a Technical Account Manager advising on security or cost-saving measures according to Compass
- Documentation could range from a Support Engineer supplying a Rackspace-authored knowledge center article to a Build Engineer providing an AWS-authored white paper
- Escalations to AWS could range from Rackspace submitting a request for information to Rackspace raising a case requiring immediate attention for an issue

**Note IV:**

To expand on the definition of manage:

- Each of the 20+ AWS services we managed today is accompanied by extensive internal documentation
- From solutioning, to build, to the ongoing management of your services, Rackspace consults this documentation -- in conjunction with your individual requirements -- to deliver consistent value
- Using a number of KPIs, Rackspace is continuously evaluating what services to promote to managed next; if there's a service that you'd like to see managed that isn't today, please let your Technical Account Manager know; they can recommend an interim partner solution and/or provide your feedback to our Product team for consideration

**Note V:**

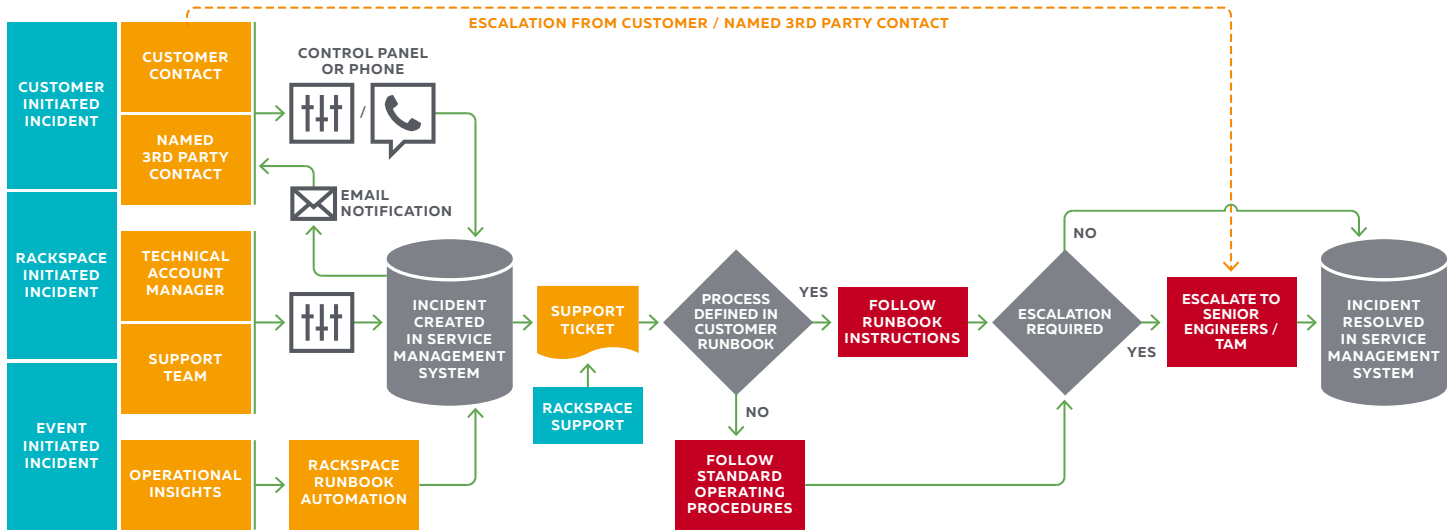
- Rackspace cannot troubleshoot the contents of running containers or provide support for container images.
- The customer is accountable for creating, updating and troubleshooting Docker images.
- The customer is accountable for the task definition (Configuration).

**Note VI:** The services under the managed section may be limited by the native features offered by AWS. In the absence of these native features, Rackspace may provide additional tooling to satisfy the required, but this is not guaranteed to exist for all AWS services.



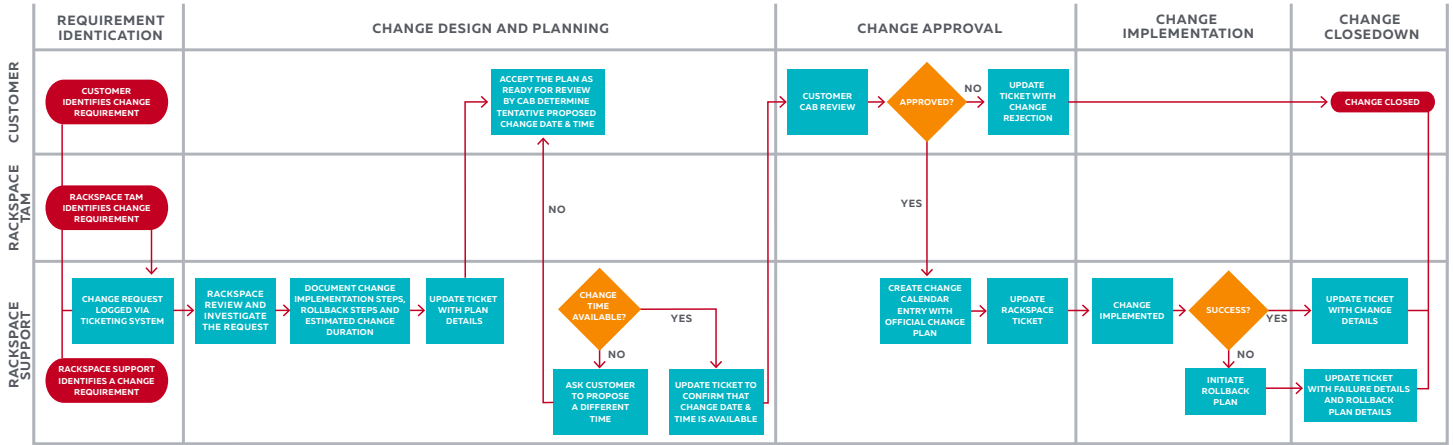
# APPENDIX 3

## Support Request (Incident) Management & Resolution Process



# APPENDIX 4

## Change Request Management Process



## ABOUT RACKSPACE

Rackspace, the #1 managed cloud company, helps businesses tap the power of cloud computing without the complexity and cost of managing it on their own. Rackspace engineers deliver specialized expertise, easy-to-use tools, and Fanatical Support® for leading technologies developed by AWS, Google, Microsoft, OpenStack, VMware and others. The company serves customers in 150 countries, including more than half of the FORTUNE 100. Rackspace is a leader in the 2017 Gartner Magic Quadrant for Public Cloud Infrastructure Managed Service Providers, Worldwide, and has been honored by Fortune, Forbes and others as one of the best companies to work for.

Learn more at [www.rackspace.com](http://www.rackspace.com) or call us at **1-800-961-2888**.

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