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# OVERVIEW

Many businesses want to leverage the power of Microsoft® Azure™ 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 Microsoft Azure is the answer for businesses facing these challenges. Rackspace blends technology and automation plus human expertise to deliver ongoing architecture, security, and 24x7x365 operations backed by Azure certified engineers and architects.

# REGION AVAILABILITY

Fanatical Support for Microsoft Azure is available to Rackspace customers deploying infrastructure into all Azure regions existing as at the publication date of this document, with the exception of Microsoft Azure Government regions (*e.g. US Gov Iowa*) and China.

Some Azure regions are available only to customers with specific billing addresses in that region. Certain Azure services are designed to operate globally and do not require customers to specify a particular region when using the service.

# OUR SERVICE LEVELS

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

**Navigator™:** Navigator is our offering for customers who are interested in Fanatical Support at the Azure platform layer only.\* This service offering is designed for customers who will maintain resource deployment responsibilities (*i.e. VMs, networks, storage*) but are looking to leverage the expertise and tooling provided by Rackspace's 24x7x365 team of Azure experts.

At this level, customers will have access to people and resources relating to architecture guidance, best practices documentation, configuration assistance, and platform level monitoring. In addition, Rackspace will serve as an escalation point for any Azure platform related incidents.\*\* Although Rackspace does not provide support of guest VM instances at this level, our expert support team can provide build recommendations based on established best practices.

\* Rackspace generally defines platform-level support as those activities that can be performed in the Azure management portal user interface or through Powershell/API. Rackspace can review and reconfigure platform resources, but will not perform deployment activities at this service level.

\*\* Please see Supported Services appendix for a list of Azure features currently covered under the Fanatical Support for Microsoft Azure offering.

**Aviator™:** Aviator extends the benefits of Navigator through additional tooling and access to increased human expertise, incorporating best practices and 24x7x365 operational support for your Azure environment. Aviator is our offering for customers who want a more comprehensive support experience, including guest virtual machine management. At the Aviator level, Rackspace will perform environment build and deployment activities in addition to ongoing management of IaaS VM assets (monitoring, patching, and antivirus). To receive Aviator support, resources must be deployed in Azure Resource Manager (v2).

## SERVICE MATRIX

SERVICES	NAVIGATOR	AVIATOR
<b>Access to best practice document repository</b> <ul style="list-style-type: none"> <li>· FAQs</li> <li>· Reference architectures</li> <li>· Deployment recommendations</li> </ul>	✓	✓
<b>Access to Rackspace Opinionated Azure Resource Manager (ARM) templates</b> <ul style="list-style-type: none"> <li>· Ability to deploy opinionated resource templates employing Rackspace best practices</li> </ul>	Base templates only - customer must deploy	Access to complete template library and up to 5 custom templates - Rackspace will deploy
<b>Architecture guidance</b> <ul style="list-style-type: none"> <li>· Based on Microsoft and Rackspace practices from certified Azure architects</li> <li>· Scheduled scoping calls</li> </ul>	Guidance for standard use cases	Rackspace shall customize architecture to your specific application
<b>Azure monitoring</b> <ul style="list-style-type: none"> <li>· Automated alert generation from predefined monitors</li> <li>· Integration with Rackspace incident management systems</li> </ul>	Platform monitoring only	Platform + IaaS VM monitoring. Up to 5 custom monitors
<b>Configuration assistance</b> <ul style="list-style-type: none"> <li>· 24x7x365 access to a Rackspace team that's experienced in AZURE that will assist with configuration changes</li> </ul>	Platform only	Platform + IaaS VM
<b>Deployment activities</b> <ul style="list-style-type: none"> <li>· Resource deployments performed by Rackspace engineers</li> </ul>		✓
<b>Operating System Support - IaaS VMS</b> <ul style="list-style-type: none"> <li>· Server deployment</li> <li>· Managed OS patching</li> <li>· Managed antivirus</li> <li>· Managed backup</li> <li>· Remote management and troubleshooting (Windows &amp; Linux)</li> </ul>		✓
<b>Change Management</b> <ul style="list-style-type: none"> <li>· Lifecycle tracking and management of environment changes managed through Rackspace ticketing system</li> </ul>	✓	✓
<b>Escalation Support</b> <ul style="list-style-type: none"> <li>· Ownership of incidents and issues relating to Azure, to include the use of Microsoft Premier Support on customer's behalf</li> </ul>	✓	✓
<b>Escalation/Remediation Runbook</b> <ul style="list-style-type: none"> <li>· Rackspace coordinated custom Runbook design and execution</li> </ul>	✓	✓
<b>Technical Account Manager (TAM)</b> <ul style="list-style-type: none"> <li>· Personal contact for ongoing business and technical assistance</li> </ul>	✓	✓

\* Please see Supported Services appendix for a list of Azure features currently covered under this offering.

# HYBRID SERVICE LEVELS

For customers desiring different service levels for different environments (*e.g., development, testing, production*), Rackspace can accommodate this on a per-subscription basis. So, you would need a minimum of two subscriptions, one for each service level. For example, if you want Aviator for development and testing, then you could combine both of those environments into a single subscription and have a second subscription for production under Navigator

## SERVICE MATRIX (CONT.)

SERVICES (CONT.)	NAVIGATOR	AVIATOR
<b>Technical Onboarding Manager (TOM)</b> · Personal contact to assist with onboarding	Initial guidance only	Coordinate the process of getting your workloads up and running on Azure
<b>Monthly Account Review</b> · Review Microsoft best practices and Rackspace recommendations · Review resource usage and cost optimization opportunities · Technical environment review (alerts, performance) · Runbook evaluation		✓
<b>Incident Response</b>	Urgent: < 4 Hours Standard: < 24 Hours	Emergency: < 15 min Urgent: < 1 hour Standard: < 4 Hours
<b>Fanatical Support for Microsoft Azure Control Panel</b> · Access to the Fanatical Support for Microsoft Azure customer portal	✓	✓
<b>ADD-ON SERVICES</b>		
<b>Detailed Solution Design</b> · Detailed Azure design based on application and requirements analysis	Additional services available	✓
<b>Migration Assistance</b> · Assistance getting your app and data migrated to Azure · Depending on requirements, available from Rackspace and/or Rackspace-approved partners	Additional services available	Additional services available
<b>Custom DevOps Professional Services</b>	Additional services available	Additional services available

# EXPANDED SERVICES DESCRIPTION

## BEST PRACTICE DOCUMENT REPOSITORY

Fanatical Support for Microsoft Azure customers will have access to Rackspace document repositories inside our customer portal. These documents include Rackspace standard deployment practices, Microsoft® best practice recommendations, frequently asked questions and code samples.

## ACCESS TO RACKSPACE OPINIONATED AZURE RESOURCE MANAGER (ARM) TEMPLATES

Rackspace has a number of proprietary and best practice templates that will be available to both Navigator and Aviator customers.

### Navigator:

- Access to basic template library only
- Customer is responsible for all template deployment and troubleshooting
- Customer will not have access to Rackspace add-on services templates

### Aviator:

- Access to complete template library
- Rackspace will deploy templates on the customer's behalf
- Rackspace will troubleshoot deployment failures
- Customer will have access to templates that relate to add-on Rackspace offerings (Rackspace Managed Security, SharePoint, etc.)
- Custom template creation – ARM template creation will be limited to basic infrastructure and services (VM, storage, network, App Service, Azure SQL Database, etc.) and existing gallery software items. More complex templates can be provided through a professional services engagement.

## ARCHITECTURE GUIDANCE

Fanatical Support for Microsoft Azure customers will have access to experienced Rackspace personnel who can assist with environment planning. This assistance is available through scheduled guidance calls or standard ticket correspondence. Navigator customers will be limited to standardized deployment scenarios while Aviator customers can engage Rackspace for comprehensive application architecture review.

## AZURE MONITORING

Rackspace offers monitoring of the Azure platform as well as individual IaaS VM instances.

## PLATFORM MONITORING

Rackspace will generate notifications for platform-related events such as service/region failures and upcoming maintenance activities

## ENVIRONMENT MONITORING – IAAS VM (AVIATOR ONLY)

Azure Operational Insights is the primary monitoring system used by our Fanatical Support for Microsoft Azure support teams for environment monitoring. While Azure Operational Insights is available to all Azure subscribers, customers using our Aviator service level can opt to have Rackspace respond to alarms generated by Azure Operational Insights. Rackspace monitoring for the Microsoft Azure Services is a combination of the systems responsible for creating Rackspace support tickets from monitoring alarms and the certified Azure experts that take the actions necessary to mitigate the indicated alarm conditions 24x7x365.

Azure Operational Insights 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 work with your Fanatical Support team to create the customized monitoring solution that best fits your needs.

## DEFAULT ALERTING THRESHOLDS

COUNTER	DESCRIPTION
Monitoring Agent	Monitoring agent has not updated in the last hour
Malware	Devices with signatures out-of-date
Malware	No real-time protection enabled
Malware	Active threat
Malware	Virus quarantined
Malware	Malware process was terminated
System	Unexpected shutdown
System	Service terminated unexpectedly
Performance	CPU average greater than 95% over 5 minutes (10 second captures)
Performance	Average available memory less than 24MB over 5 minutes (10 second captures)

In addition, Rackspace offers URL monitoring for public web assets.

## CONFIGURATION ASSISTANCE

Rackspace's experienced personnel will assist in the configuration and modification of Azure resources. Common activities may include: updating of network security groups; resizing of instances; and establishing of site-to-site VPN tunnels. At the Navigator level, configuration assistance will be limited to platform-related items. At the Aviator level, configuration assistance will extend into the VM operating system.

## DEPLOYMENT ACTIVITIES (AVIATOR ONLY) (RESOURCE MANAGER ONLY)

At the Aviator level, Rackspace will perform resource deployment activities including modification of existing environments and deployment of new configurations. Deployment activities may include the use of standard or customized ARM templates. Rackspace will work with customers that have subscribed to the Aviator service level to develop up to five custom templates.

## OPERATING SYSTEM SUPPORT - IAAS VMS (AVIATOR ONLY)

Aviator customers will receive operating system support for their IaaS VM instances. Support services

are categorized as managed patching, managed antivirus (*Windows only*), managed backup, and remote configuration and troubleshooting.

## PATCHING

Rackspace supports two types of managed patching services:

**Scheduled:** If the customer would like recurring patching at a set interval, Rackspace can configure the VM hosts with the desired patch settings. A ticket must be submitted by the customer outlining the specific patch settings.

**Manual:** If the customer requires non-standard (*recurring*) patching, a ticket can be opened for your Rackspace support team to manually patch the servers at the desired date/time. Manual patching is subject to availability on the Rackspace support maintenance calendar.

Rackspace will not patch middleware or customer applications due to the potential of harming customer's environments.



## ANTIVIRUS

Customers can elect to participate in Rackspace managed antivirus service. The Microsoft Antimalware Agent (*System Center Endpoint Protection*) will be installed by Rackspace on the hosts with a predefined set of exclusions. Customers can leverage the standard Rackspace configuration or create their own. Once the agent is installed, customers will receive notifications for malware events as outlined in the monitoring chart.

## Backups

Rackspace supports the configuration and management of two Azure backup methods: file backup agent (*Windows only*) and image-level backup. Rackspace backup support services leverages the native Azure recovery services which offer the following capabilities:

**Azure File Backup:** Rackspace will install the file backup agent on selected hosts and configure the desired scheduling. Customers will need to indicate the desired frequency and the files/folders that are in scope for the backup.

**Image Backup:** Upon customer's request, Rackspace will configure image-level backups for IaaS VMs. Image level backups are non-intrusive and provide customers with the ability to restore an entire virtual machine. Currently Azure supports application consistent backups for Windows and file consistent backups on Linux.

If data needs to be restored from a backup vault, you may log a ticket in the Fanatical Support for Microsoft Azure control panel.

Rackspace is not liable for the integrity of restored data. We recommend that customers regularly test restoration as part of normal business continuity planning.

## REMOTE CONFIGURATION AND TROUBLESHOOTING

Aviator customers are eligible for Operating System support, to include configuration, monitoring and troubleshooting within the established Rackspace spheres of support.

<https://support.rackspace.com/how-to/cloud-servers-with-managed-operations-support-for-linux/>

<https://support.rackspace.com/how-to/cloud-servers-with-managed-operations-support-for-windows/>

Rackspace has created a proprietary tool that is used to provide managed access to your IaaS VM resources. This tool helps to ensure that all Rackspace access to your IaaS VM resources is secure, time-limited and audited. In addition, Rackspace has established a bastion server management standard, which must be present in the customer environment.

## Bastion Detail

Rackspace support engineers will connect to the bastion server from known and controlled networks in various Rackspace datacenters using the Remote Desktop Protocol (RDP) or SSH. Once access has been established, support engineers will access your environment using RDP and/or WinRM and/or SSH from the bastion host. Traffic from the bastion host will pass across the Azure bastion virtual subnet to the various subnets within your Azure Virtual Network.

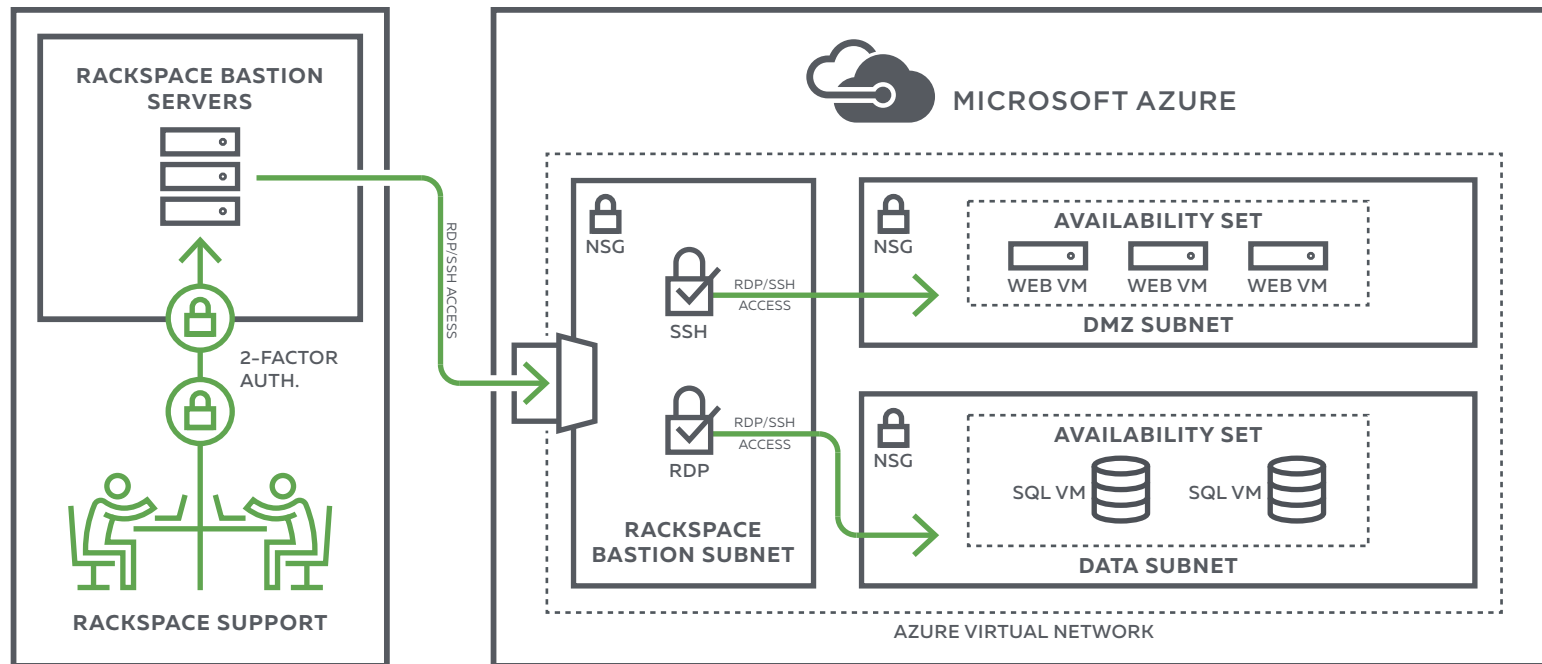
Rackspace will create the bastion server within a specific subnet and will create one bastion server per



OS flavor per virtual network (VNET). The preferred virtual machine for the Bastion Host is:

INSTANCE	CORES	RAM	DISK SIZE	OPERATING SYSTEM
A1	1	1.75	40GB	Windows Server 2012 R2 or Linux

Please see the following diagram for an example bastion server deployment:



## AZURE SITE RECOVERY (ASR)

Rackspace can assist with the configuration and set up ASR in Aviator customers' Azure subscription. This includes the installation of agents on any Rackspace managed operating system and instance creation within ASR. We can assist with basic failover scripts where required. More complex failover scripts and procedures can be provided through a professional services engagement.

Rackspace can assist with test failovers; however, the integrity and availability will need to be confirmed by the customer. Rackspace will not initiate an actual failover for a customer as this will be the customer's responsibility.

## 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 help ensure minimum impact on the services.

- The Rackspace Technical Account Manager will be available to work with you on all operational, technical, and commercial changes to the environment.
- 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 Microsoft Azure Control Panel for changes that are owned or initiated by Rackspace. Customers can raise a ticket for situations where Rackspace support is required for any changes owned and initiated by such customer. 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 experience in the specific domain 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 you 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 Microsoft Azure Control Panel, should it affect delivery of services.

## ESCALATION SUPPORT

Rackspace is the primary point of contact for supporting your Azure environments. If Microsoft ever needs to be contacted, Rackspace will do so on

your behalf. Escalations may occur for the following scenarios:

- An issue where Rackspace lacks access to complete the request (e.g., a service limit increase request)
- An issue where Rackspace has exhausted all internal knowledge regarding a specific service
- An issue where multiple customers are impacted (e.g., Azure service outages)
- Azure SLA credit requests

There are two primary methods for engaging Rackspace support:

### Tickets

One of the primary ways that you can interact with Rackspace is by creating a ticket in the Fanatical Support for Microsoft Azure Control Panel. Our automated systems will also create tickets for events on your Azure subscription(s) that require either your attention or the attention of a Rackspace employee. For example, our Rackspace tool for monitoring the Microsoft Azure Services will create a ticket when an alarm is raised, allowing a Rackspace employee 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 Rackspace employee, and we'll be happy to assist.

## ESCALATION/REMEDATION RUNBOOK

During the implementation process, Rackspace will work with you to create a customized monitoring response runbook. This runbook defines the Rackspace Support team's standard operating procedures for working with you on monitoring alerts and includes custom escalation procedures in accordance with best practices. 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 helps to maintain the availability of customer solutions.

## 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 Azure environments.

## TECHNICAL ONBOARDING MANAGER (TOM)

The TOM is your personal contact for assistance with the Rackspace onboarding process. With the Navigator service level, the TOM provides initial guidance on using your account. With the Aviator service level, the TOM coordinates the process of getting your environments up and running on Azure.

## MONTHLY ACCOUNT REVIEW

The TAM will provide monthly reviews in order to analyze the performance of a customer's Azure environment and provide recommendations for cost optimizations. This includes recommendations around the use of various types of Azure resources, root causes of alerts and investigation for performance improvements. The review will be based on the following agenda:

- Support Tickets
- Monitoring Alerts

- Upcoming Maintenance Events
- SLA Measurement
- Potential Cost-Optimization
- Rackspace / Microsoft Best-Practice Recommendations
- Recent Environment Changes
- Upcoming Customer Events
- Microsoft Azure Announcements

## INCIDENT RESPONSE

Rackspace will respond to your support requests submitted to us via ticket in the following timeframes:

**Standard:** If your Azure resources are functioning normally but you require information or assistance, wish to schedule maintenance, or require the completion of any other nonimmediate tasks, we will respond to your support request within four hours at the Aviator service level and twenty-four hours at the Navigator service level.

**Urgent:** If your Azure resources are functioning improperly or at less-than-optimal performance, but the failure is not impacting business transactions,

we will respond to your Support request within one hour at the Aviator service level and four hours at the Navigator service level. Please call your Rackspace Support team or TAM should you need Urgent priority assigned to a ticket.

**Emergency:** If you cannot access your Azure resources from the public Internet, resulting in the inability to complete business transactions, we will respond to emergency monitoring alarms within fifteen minutes (*Qualifying Aviator services only*).

## FANATICAL SUPPORT FOR MICROSOFT AZURE CONTROL PANEL

As a Rackspace customer, you can access everything related to your Rackspace-managed Azure subscription(s) via the Fanatical Support for Microsoft Azure Control Panel at:

<https://mscloud.rackspace.com>

The Fanatical Support for Microsoft Azure Control Panel provides:

- Access to manage linked Azure subscription(s)
- The ability to raise Support Tickets to quickly resolve any issues with the service
- Manage users and view invoices and payment history

## ADDITIONAL SERVICES

### MIGRATION ASSISTANCE

Transitioning from an existing environment to Azure requires specific expertise and resources skilled in technology transformation, migration planning, and risk mitigation. Rackspace, for an additional fee and with assistance from other businesses with which we work where needed, will own the process of migrating your applications to Azure. Please engage your sales representative for further information regarding pricing and timelines.

### DATABASE SUPPORT

Rackspace has extensive experience and comprehensive support expertise to provide database support for SQL and MySQL. We operate teams of highly trained and certified DB experts focused on delivering an exceptional experience 24x7x365.

Our experts are available through every stage of your project, from architecture and design, to administration and monitoring.

As part of our Aviator offer, Rackspace will provide support for Azure SQL database instances including installation, configuration, monitoring, troubleshooting, and limited resolution when issues arise.

Rackspace will also perform these services for databases installed in virtual machine instances upon customer request.

In addition to the database support offered within Aviator, and for an additional fee, Rackspace can provide advanced DBA services tailored to your specific needs.

INCLUDED IN AVIATOR	ADVANCED DBA ADD-ON SERVICE
<ul style="list-style-type: none"> <li>• Best-Practice Guidelines</li> <li>• Knowledgebase</li> <li>• Community Support</li> </ul>	<ul style="list-style-type: none"> <li>• General Consultations</li> <li>• Advanced Architecture Design</li> <li>• Partner Engagement</li> </ul>
<ul style="list-style-type: none"> <li>• Database Setup and Configuration</li> <li>• SQL Server Cluster Setup and Configuration (VM)</li> <li>• User Administration</li> <li>• Security Administration</li> <li>• Database Health Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Performance Tuning and Diagnostics</li> <li>• SQL Server Cluster Setup and Configuration (VM)</li> <li>• Data Import and Export</li> <li>• SQL Server Mirroring and Log Shipping (VM)</li> </ul>
<ul style="list-style-type: none"> <li>• Backup and Recovery Assistance</li> </ul>	<ul style="list-style-type: none"> <li>• Customized Maintenance Plans</li> <li>• Backup and Recovery (VM)</li> <li>• Refresh and Migrate data between instances and Data Centers</li> <li>• Point-in-Time Recovery</li> </ul>
<ul style="list-style-type: none"> <li>• Availability Issues in Production</li> </ul>	<ul style="list-style-type: none"> <li>• In-Depth Incident Retrospective</li> </ul>

### Benefits of our DBA Add-On Services include:

- **Help designing the right database architecture:** Our DBAs will help you across your project lifecycle, including during the critical early decisions of application architecture, business continuity, replication, data model, and key query optimization.
- **Improve uptime and reduce incidents in production:** Our administration and troubleshooting services include migration, backup, restore, and advanced monitoring of your application in production to help reduce downtime and incidents that may impact your business.

- **Focus your resources on your business requirements:** Database administrators are a scarce and expensive resource. By relying on Rackspace DBA Services for your SQL Server and MySQL databases, your current team can focus on implementing those requirements that only you can execute, while letting our team support yours.
- **Reduce the burden on your DBA staff with our Fanatical Support:** Your business does not sleep, and neither do we. Our DBA Services team will look after your application 24x7x365, using our toolset of database health monitoring, replication monitoring, backups, recovery and customized maintenance plans, among others.

Please engage your sales representative for further information regarding DBA services pricing.

## 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 Azure DevTest environment offering including installation, configuration, monitoring, troubleshooting, and resolution when issues arise. Please see Appendices 1 and 2 of this document for additional details including spheres of support and responsibilities. Application performance monitoring will be available as an add-on managed service in the second half of 2016.

Rackspace DevOps 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.

FANATICAL SUPPORT FOR MICROSOFT AZURE DEVOPS SERVICE CATALOG	AVIATOR	ADD-ON MANAGED SERVICE	PROF. SERVICES	PRICING MODEL
<b>Standard Native Azure DevTest Environments</b> · Installation, configuration, monitoring, problem resolution	✓			Included (Aviator Fee)
<b>Application Performance Management (APM)</b> · Installation, configuration and alert response of APM tools (e.g., New Relic)		✓		Monthly Fee
<b>3rd Party Configuration Management</b> · Custom implementation of 3rd party tools (e.g., Chef)			✓	Pro Serv Fees
<b>ChatOps Integration</b> · Custom plugin integration between DevOps and collaboration tools (e.g. Slack)			✓	Pro Serv Fees
<b>DevOps Advisory</b> · Workshops and training to advance customers' DevOps maturity			✓	Pro Serv Fees

## CUSTOM PROFESSIONAL SERVICES

- Creation of in-depth customization for your application utilizing the Microsoft DevOps toolchain
- Assistance in the writing of customized configuration management code using 3rd party tools
- Implementation and customization of continuous integration and continuous deployment (CI/CD) toolchains using 3rd party tools
- Custom plugin integration between DevOps and ChatOps tools like Slack

## DEVOPS MATURITY AND 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 DevOps automation into your environment
- Classify applications and identify key stakeholders to help drive the adoption of DevOps practices

As part of a DevOps Professional Services engagement, Rackspace will help deliver the outcomes required via internal or trusted partner-led resources. These are one-time engagements using an agreed-upon fixed time box, where we, or third parties with which we work, 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.

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## APPENDIX 1:

# ROLES AND RESPONSIBILITIES

There are two parties involved in supporting your Azure environment, specifically:

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

For Aviator service level customers, the table below outlines the responsibilities of these parties during your Azure platform deployment. For Navigator customers, Rackspace will provide a Technical Account Manager (TAM), consolidated billing across accounts, and access to the Azure console user management tools.

SERVICE LEVEL ACTIVITIES	RACKSPACE	CUSTOMER
<b>SERVICE LEVEL ACTIVITIES</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 monthly account reviews	R, A	C, I
Regularly identify opportunities for cost and performance optimization	R, A	C, I
Consolidate billing across Azure subscriptions for CSP	R, A	C, I
Enrol Azure subscription into the Rackspace Azure Control Panel	R, A	R, C, I
Create a Rackspace co-admin account within the customer's subscription	C, I	R, A
Decide on remote access methods (RDP / SSH) to IaaS VMs	R, C, I	R, A
Provide opinions and best-practices around account architecture, security, and resiliency	R, A	C, I
Select and Enrol IaaS VMs for guest OS support	C, I	R, A
Provide prioritized escalation to our own named Azure engineers if needed	R, A	C, I
<b>DISCOVERY</b>		
Understand business objectives and current challenges (e.g. migration to Azure, refactoring current Azure footprint)	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. VNet, subnets and network security group design, etc.)	R, A	C, I
Author solution design document	R, A	C, I
Design for High Availability and security first approach	R, A	C, I
Design for sizing / scalability and performance	R, A	C, I



SERVICE LEVEL ACTIVITIES	RACKSPACE	CUSTOMER
<b>INFRASTRUCTURE IMPLEMENTATION</b>		
Create, test and deploy infrastructure (Networking, Storage, Compute and AD)	R, A	C, I
Configure IaaS components with VM extensions (antimalware, monitoring and diagnostics)(supported VMs only)	R, A	C, I
Deploying unsupported VMs	R, C, I	R, A, I
User acceptance testing	C, I	R, A
Configure & test WAN connectivity (Express Route, Site to site VPN) (RS Controlled side)	R, A, I	R, C, I
Ensure proper management of resources using resource groups and tagging	R, A	C, I
<b>NETWORK AND ACCESS SECURITY IMPLEMENTATION*</b>		
Create, test, and apply IAM roles and policies	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	C, I	R, A
Antivirus installation	R, I	A, C, I
<b>APPLICATION IMPLEMENTATION</b>		
Deployment of application code / source control (Git / VSTS, etc.)	C, I	R, A
Migration of application data	C, I	R, A
Database schema creation, migration, and import	C, I	R, A
Development and deployment of configuration management artefacts (Chef, Salt, Ansible, etc.)	C, I	R, A
Creation and management of continuous integration and continuous deployment pipelines	C, I	R, A
<b>ACTIVE DIRECTORY</b>		
Configure Azure Active Directory	R, A, I	R, C, I
Promote new domain controllers in Azure	R, A, C, I	R, C, I
Extend Domain controller to new IaaS VM in Azure	R, A, C, I	R, C, I
Extending on-prem domains to Azure Active Directory	C, I	R, A, C, I
Procure Azure Active Directory accounts for AAD premium	I	R, A, C, I
Configure DNS for Azure Active Directory	C, I	R, A, C, I
Manage Azure Active Directory users and groups	R, C, I	R, A, C, I
Configuration of Active Directory Domain Services	R, C, I	R, A, C, I

\* Security responsibilities are shared between Rackspace and customer



SERVICE LEVEL ACTIVITIES	RACKSPACE	CUSTOMER
<b>MONITORING</b>		
Configuration of Operational Insights workspace	R, A, C, I	C, I
Deployment of Operational Insights "Intelligent Pack"	R, A, C, I	R, C, I
Adding Azure IaaS VMs to Operational Insights workspace	R, A, C, I	I
Creation of Application Insights workspace	R, C, I	R, A, C, I
Configuration and management of Application Insights	C, I	R, A, C
Custom event logging and alerting	C, I	R, A
Configuration of Application Synthetic transaction monitors	C, I	R, A
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
Operational Insights workspace configuration	R, A, C, I	I
Response to Alerts within SLAs and initial troubleshooting	R, A	C, I
<b>BACKUPS AND DISASTER RECOVERY**</b>		
Creation of Backup Vault	R, A, C, I	C, I
Creation and management of backup policies	R, A, C, I	C, I
Management of backup schedules	R, A, C, I	C, I
Installation of file agent backup	C, I	R, A, C, I
Restoring IaaS VMs	C, I	R, A, C, I
Configuration, management, testing and failover of Azure Site Recovery	C, I	R, A, C, I
<b>PATCHING</b>		
OS Auto Patching	R, A, I	C, I
3rd party patching system	C, I	R, A, I

\*\* 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:

# SUPPORTED AZURE SERVICES

Customers of Fanatical Support for Microsoft Azure are able to select from the Azure product groups listed below to build their hosted infrastructure. Rackspace provides best practice opinions (both developed with Microsoft and through our experience) around the Azure product set.

Below are the supported Azure services:

**NOTE:** Some products listed below may be subject to different Terms, Conditions, Service Level Agreements, and levels of support.

- **Comprehensive Support:** Rackspace has substantial support expertise and has developed specific support services
- **Reasonable Effort:** reasonable activities undertaken to resolve issues but with no guarantee of resolution. Escalation management to Microsoft where required. Over time best effort features may transition into comprehensive support

Customers are able to deploy resources outside the list documented below, however Rackspace does not represent expertise in these areas. Rackspace support can be engaged for special escalation scenarios however feedback and responsiveness may be limited.

FEATURE	COMPREHENSIVE SUPPORT	REASONABLE EFFORT
<b>COMPUTE</b>		
Virtual Machines	●	
Virtual Machine Scale Sets	●	
Cloud Services	●	
RemoteApp		●
Batch		●
<b>WEB &amp; MOBILE</b>		
Web Apps	●	
Logic Apps		●
<b>DATA &amp; STORAGE</b>		
SQL Database	●	
Storage	●	
Import/Export	●	
Redis Cache		●
DocumentDB		●
Search		●
<b>ANALYTICS</b>		
HDInsight		●
<b>NETWORKING</b>		
Virtual Network	●	
Traffic Manager	●	
ExpressRoute	●	
Azure DNS	●	
Load Balancer	●	
VPN Gateway	●	
Application Gateway	●	

FEATURE	COMPREHENSIVE SUPPORT	REASONABLE EFFORT
<b>MEDIA &amp; CDN</b>		
CDN		●
<b>HYBRID INTEGRATION</b>		
Service Bus	●	
Backup	●	
Site Recovery	●	
<b>IDENTITY &amp; ACCESS MANAGEMENT</b>		
Azure Active Directory	●	
Multi-Factor Authentication	●	
Azure Active Directory B2C		●
Azure Active Directory Domain Services		●
<b>DEVELOPER SERVICES</b>		
Visual Studio Application Insights		●
Azure DevTest Labs		●
<b>MANAGEMENT</b>		
Scheduler		●
Automation	●	
Log Analytics	●	
Key Vault	●	
Security Center		●
<b>INTERNET OF THINGS (IOT)</b>		
Notification Hubs		●
Machine Learning		●
Event Hubs		●
Stream Analytics		●
Azure IoT Hub		●

### APPENDIX 3:

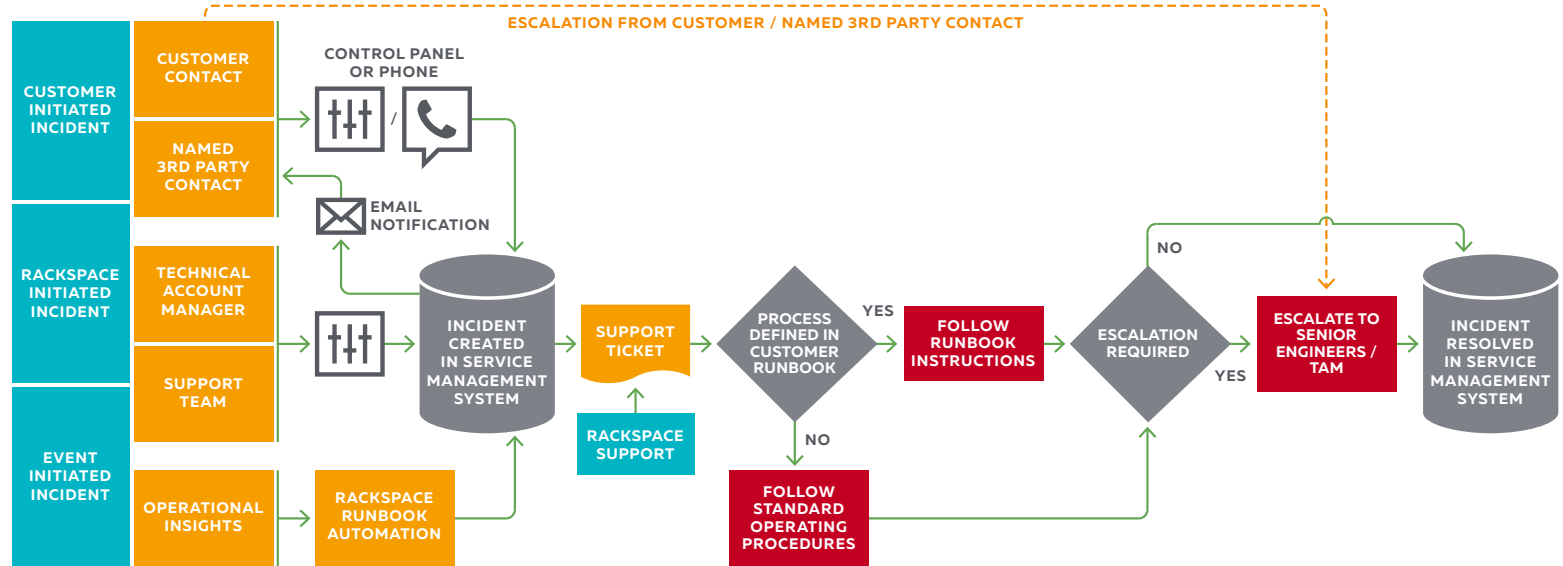
# INCIDENT MANAGEMENT AND RESOLUTION PROCESS

## 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, except where a specific approach is agreed upon with you in accordance with your account's custom runbook.

- Incidents can be initiated by either:
  - Named customer contacts
  - Rackspace
  - Event management tools (e.g. Azure Operational Insights)



- All incidents are logged in tickets accessible via the Fanatical Support for Microsoft Azure 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 Microsoft Azure Control Panel are initially set to "Standard." Should you desire an escalation of priority, please phone your Rackspace Support team or your assigned TAM. Incidents logged with a specific priority will not be changed to

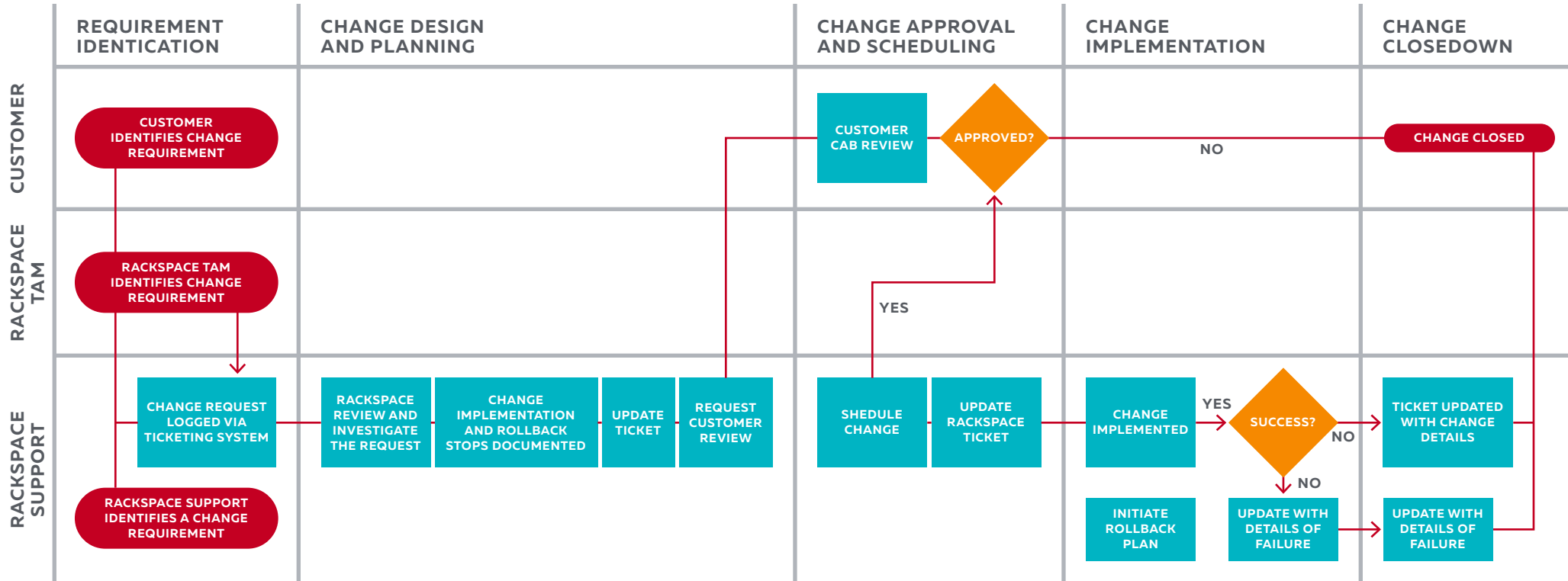
another priority without the agreement of all parties involved.

- 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 Microsoft Azure Control Panel to resolve the incident.

- At all times you will have visibility into which support engineer is working on 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 Microsoft*).
- 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 Azure 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. You may close the ticket or reopen it if you believe that further work is required.

APPENDIX 4:

# CHANGE MANAGEMENT PROCESS





## APPENDIX 5:

# SUBSCRIPTION MANAGEMENT

## CO-ADMINISTRATOR ACCESS

To enable full support for your Azure subscription, Rackspace requires co-administrator access.

Depending on how you acquire your Azure subscription, this may require you to add Rackspace as a co-administrator directly.

Several of our support offerings require that the co-administrator account be an “organizational account” rather than a “Microsoft account.” If you are unable or unwilling to provide an organizational account for co-administration use, some support services may not be available or may be limited in scope.

The co-administration account credentials will be stored within a secure password repository at Rackspace and utilized by our technicians during support, troubleshooting, deployment and other similar activities.

## AZURE ACTIVE DIRECTORY SERVICE PRINCIPAL

Rackspace must deploy an Azure Active Directory Service Principal. Service Principals in Azure AD are used to assign permission levels to securable resources within the scope of a particular Azure subscription. When associated with an Azure AD Application, they can be used to enable programmatic access to Azure resources within that subscription.

When Fanatical Support for Microsoft Azure is enabled for a subscription, a Service Principal is created and granted reader access to the resources within that subscription. This allows Rackspace automation systems to interact with the subscription in order to facilitate management and integration tasks such as portal views and resources tracking.

Service Principals are granted a Role Based Access Control (*RBAC*) security group. This allows a granular assignment of permissions to specific resources and access levels for the service principal. When a code-flow or programmatic access model is used with a Service Principal, a key is used to authenticate against Azure AD. This key is easily expired in case it ever becomes compromised or if access via the Service Principal should be revoked.

## APPENDIX 6:

# AZURE SERVICE MANAGER (ASM) VERSUS AZURE RESOURCE MANAGER (ARM)

Azure allows users to deploy infrastructure using one of two models; either Azure Service Manager mode (also known as ASM, Classic, or "V1") or Azure Resource Manager mode (also known as ARM, Resource Manager, or "V2"). Unless you have already provisioned your platform using ASM, we recommend solutions be deployed using ARM.

Please note that solutions deployed using ARM contain important differences from the ASM deployment model, and the two models are not completely compatible with each other. If your Azure subscription has infrastructure running in both modes, we may recommend that you redeploy existing resources through ARM. This will simplify the deployment and management of resources going forward.

### Deploying services in ARM provides the following advantages:

- Security improvements
- Access to the latest Azure services (either in generally available or available in preview) as Microsoft releases them
- Repeatable deployments using declarative templates
- Access management to Azure resources using Role-Based Access Control (RBAC)
- Faster deployment times using parallel deployments of Virtual Machines (VMs)

*Note that your subscription must use ARM resources in order to qualify for Aviator support. See the FAQs for more information.*

## APPENDIX 7:

# FREQUENTLY ASKED QUESTIONS

### **Q: What is the main difference between Navigator and Aviator?**

A: Navigator support is restricted to the Azure platform itself. Rackspace will provide best practice advice, monitoring, resource analysis, and escalation support for Azure platform components. The customer is still responsible for all deployment activities such as virtual networks, virtual machines, storage accounts, etc. Rackspace does not provide support for guest VM instances at this level.

Aviator is a comprehensive service offering which includes deployment and ongoing management of individual operational components. Please see service matrix for a more detailed view of the support features and activities.

### **Q: What does “Azure platform support” mean?**

A: Azure platform support encompasses those activities that can be accomplished with minimal intervention within the Azure operations portal.

### **Q: I have different environments (development, testing, production) and would like a different service level for each environment. How do I do that?**

A: Service levels are applied to a subscription. So, you would need a minimum of two subscriptions, one for each service level. For example, if you want Aviator for development and testing, then you could combine both of those environments into a single subscription and have a second subscription for production under Navigator.

### **Q: If I have an existing deployment, can I purchase Aviator for it?**

A: Yes. Rackspace will perform an analysis of the environment to ensure supportability at the Aviator level. This evaluation may result in recommended remediation activities that can be handled by the customer or Rackspace (service fees may apply).

### **Q: Can I purchase Aviator if I am using Classic (ASM) resources?**

A: No. Because of the nature of our support tools and automation for Aviator, we only support Azure Resource Manager (ARM) resources. However, Rackspace can assist in migrating Classic resources for a fee.

### **Q: Can I downgrade from Aviator to Navigator?**

A: Yes

### **Q: If I purchase Azure through Rackspace under the Cloud Solution Provider (CSP) agreement, do I have to choose a specific support level?**

A: No. The CSP program offers the convenience of a single purchasing point for both Azure services and Fanatical Support for Microsoft Azure. Both Navigator and Aviator are available for CSP customers.

### **Q: If I am a Navigator customer, will Rackspace deploy my resources?**

A: No. Under the Navigator service level, customers are required to deploy their own resources. Rackspace will provide configuration support for existing resources as specified in the support overview.

**Q: If I am an Aviator customer, am I required to have Rackspace deploy my resources?**

A: No. Rackspace provides established standards for resource deployment in order to ensure supportability. However, failure to abide by these standards may impact support service capabilities.

**Q: If I am a Navigator customer and I have an issue, how does Rackspace determine whether it is supported at the Azure platform level?**

A: If the situation is unclear, we suggest submitting a ticket for Rackspace evaluation. We have common criteria we leverage to help determine which layer may be presenting issues.

For example, you may have a VM this performing poorly but are unsure what the performance issue is.

For Navigator customers, we would check the Azure health and audit logs for indication of platform service issues. We may enable diagnostics for the storage container used by the VM and look for instances of resource starvation. However, Rackspace will not log on to the actual VM or review any operating system performance counters.

**Q: Is there a limit to the number of escalations I can have at each service level?**

A: No. However, Navigator customers with substantial numbers of cases may be encouraged to increase service levels in order to provide a more comprehensive support experience.

**Q: Can I consume additional Rackspace Azure service offerings on Navigator (Rackspace Managed Security (RMS), DBA Services)?**

A: Yes.

**Q: How does Rackspace leverage Azure Resource Manager (ARM) templates?**

A: Rackspace has a number of proprietary and best practice templates that will be made available to both Navigator and Aviator customers.

**Navigator:**

- Access to basic template library only
- Customer is responsible for all template deployment and troubleshooting
- Customer will not have access to Rackspace add on services templates

**Aviator:**

- Access to complete template library
- Rackspace will deploy templates on the customer's behalf
- Rackspace will troubleshoot deployment failures
- Customer will have access to templates that relate to add-on Rackspace offerings (RMS, Sharepoint, etc.)

**Q: Will Rackspace create custom ARM templates for me?**

A: Yes, for Aviator customers. ARM template creation will be limited to basic infrastructure and services (VM, storage, network, App Service, Azure SQL Database, etc.) and existing gallery software items.

**Q: Will we have different SLAs between Navigator and Aviator?**

A: Yes. For Navigator customers, there is no Emergency SLA. For Aviator customers, all SLA types are available.

**Q: What is the minimum service level for Azure Site Recovery?**

A: Azure Site Recovery support is only offered under Aviator.

**Q: What are the typical build timelines for new deployments?**

A: This is dependent upon the size of the environment and the complexity of the configuration.

# ABOUT RACKSPACE

Rackspace (NYSE: RAX), **the #1 managed cloud company**, helps businesses tap the power of cloud computing without the challenge and expense of managing complex IT infrastructure and application platforms on their own. Rackspace engineers deliver specialized expertise on top of leading technologies developed by AWS, Microsoft, OpenStack, VMware and others, through a results-obsessed service known as **Fanatical Support®**. The company has more than 300,000 customers worldwide, including two-thirds of the FORTUNE 100. Rackspace was named a leader in the 2015 Gartner Magic Quadrant for Cloud-Enabled Managed Hosting, and has been honored as one of Fortune's Best Companies to Work For in six of the past eight years.

Learn more at [www.rackspace.com](http://www.rackspace.com).

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