

FANATICAL SUPPORT FOR MICROSOFT AZURE

With **Rackspace Service Blocks**



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SERVICE 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-phase 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. As an Azure Expert Managed Services Partner, Rackspace provides customized cloud service offerings to meet specific needs. These offerings provide the flexibility to change or grow your cloud services as your Azure needs change and to increase value by delivering essential services and support. This includes architecture help, access to experts you need to solve your problems, security assistance, 24x7 management, cost governance and many other value-added services – all backed by Azure-certified engineers and architects.

AZURE REGION AVAILABILITY

Fanatical Support for Microsoft Azure is available to Rackspace customers deploying infrastructure into all Azure public global regions existing as of the publication date of this document. This excludes some of the Microsoft Azure Sovereign Regions (e.g., Azure Gov and Azure China). Some Azure regions are available only to customers with specific billing addresses in that region. Contact a Rackspace representative if you have questions about a specific region.

SERVICE OFFERS

Fanatical Support for Microsoft Azure addresses the core challenges that businesses face in implementing and operating Azure environments. Our various offers allow customers to customize their service experience.

Cloud Foundation (Required for all Fanatical Support for Azure customers)

Cloud Foundation is the basis for Rackspace Managed Public Cloud services upon which all other services are built. **Cloud Foundation** includes troubleshooting Azure service issues (including escalation to Microsoft Engineers, if required), unified billing for all your Rackspace platforms and other Managed Public Cloud environments, and access to the Fanatical Support for Azure Control Panel to manage your Azure subscriptions and users.

Architect & Deploy

To expedite the move to Azure, Rackspace provides best-practice design principles, automation and deployment methodologies – all executed by Rackspace Solution Architects, Azure-certified Build Engineers and Technical Onboarding Managers who have collectively deployed more than a million applications to the cloud. **Architect & Deploy** is required for customers utilizing the **Manage & Operate** offer.

Manage & Operate

With tooling, automation, monitoring and 24x7 access to certified cloud specialists for day-to-day operational support and management, **Manage & Operate** allows you and your team to rest easy knowing Rackspace has your back. **Manage & Operate** includes access to additional tooling like Passport (access request control tool) and Watchman (turns monitoring alerts to tickets for Rackspace specialists to address). Your Rackspace technical support professionals will help you resolve issues quickly and effectively any day of the year, any time of the day.

Complex Cloud Operations

As a business matures or their cloud spend increases, operating Azure can become more complex. **Complex Cloud Operations** helps you manage this complexity with Rackspace experts that have worked with other similarly complex cloud environments. Whether you desire a deeper technical relationship to drive outcomes or need assistance handling your architecture's complexity, **Complex Cloud Operations** can assist.

COMBINING SERVICE OFFERS

The **Manage & Operate** service offering can be uniquely applied for individual Azure subscriptions, allowing you to choose to have our Fanatical Support Teams 24x7 standing watch over your mission-critical production workloads while avoiding unnecessary costs with development and test environments.

SERVICE MATRIX

SERVICES	CLOUD FOUNDATION	ARCHITECT & DEPLOY	MANAGE & OPERATE
Support of Azure Platform Issues Ownership of incidents and issues relating to Azure, including Microsoft Premier Support escalations	✓		
PCI Compliant Platform Rackspace's Azure management systems have been audited and certified as PCI-compliant	✓		
Fanatical Support for Azure Control Panel Access to the Fanatical Support for Azure Control Panel with cloud billing details, Azure subscription details, service management, ticketing system, etc.	✓		
Rackspace Ticketing System Access to Rackspace ticketing system to submit requests for information and change as well as to submit and track service management requests	✓		
Deployment Patterns Access to opinionated, best-practice ARM templates for self-service deployment		✓	
Architecture Guidance Based on Microsoft and Rackspace best-practices from Azure-certified Solutions Architects		✓	
Detailed Design Documentation Azure-certified Solutions Architects prepare a detailed design document based on an analysis of your specific application and business requirements		✓	
Technical Onboarding Manager Rackspace single point of contact to efficiently coordinate the process of getting your workloads up and running on Azure		✓	
Cloud Deployment Comprehensive environment deployments managed by Azure-certified Rackspace Deployment Engineers		✓	
Service Delivery Manager Personal account contact for day-to-day management of business and technical requests and incidents			✓
Operating System Support 24x7x365 access to Windows and Linux operating system support services from Rackspace Fanatical Support teams			✓
Database Support 24x7x365 access to operational support for Microsoft SQL Server and Azure SQL Server instances, including installation, basic configuration, monitoring, troubleshooting and backups from Rackspace Fanatical Support teams			✓

SERVICES	CLOUD FOUNDATION	ARCHITECT & DEPLOY	MANAGE & OPERATE
Cloud Services Support 24x7x365 access to operational support for Azure services listed in the Supported Services appendix including basic configuration, monitoring, troubleshooting and backups from Azure-certified Rackspace Support Engineers			✓
Change Management Support 24x7x365 access to Azure-certified Rackspace Support Engineers who can assist with configuration changes for your Azure environments			✓
Incident Management 24x7x365 access to Azure-certified Rackspace Support Engineers who can assist with resolving service-impacting issues for your Azure environments			✓
Rackspace Watchman Service (Monitoring and Incident Response) Leverage Rackspace's innovative Azure monitoring platform to help drive deep awareness of the health of your Azure workloads and benefit from a rapid incident response from Rackspace Support teams should a problem ever arise			✓
Regular Service Review Regular governance sessions to review Azure resources usage reports, environment data (alerts, tickets, performance, backups, etc.) and to review Microsoft/Rackspace best-practice recommendations about your Azure environment			✓
Response Time Guarantees Rackspace offers industry-leading ticket response time guarantees, allowing you to sleep soundly knowing that your Rackspace Support team is always on the job	As fast as 60 minutes		As fast as 15 minutes
ADD-ON SERVICES			
Migration Assistance – Professional Services	Additional services available		
Custom DevOps Automation – Professional Services			
Advanced Database Administration Services (DBA)			
Rackspace Application Services (RAS)			
Rackspace Managed Security (RMS)			

HUMAN EXPERTISE

Your Fanatical Support for Azure Team

Fanatical Support for Azure provides specialized resources to deliver ongoing service and support for your business. Rackspace provides you with Azure-certified Solutions Architects and Engineers who are ready to deliver Fanatical Support to your business 24x7x365.

TECHNICAL ONBOARDING MANAGER (TOM)

When you purchase **Architect & Deploy**, 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 resources and project management associated with the deployment of your Azure environment.

SERVICE DELIVERY MANAGER (SDM)

Manage & Operate customers will be assigned an SDM to help guide you through the Rackspace support process and oversee the day-to-day management of your account including service, change and incident management.

AZURE-CERTIFIED CLOUD ENGINEERS

Each Service Delivery Manager is backed by a team of Azure-certified engineers, responsible for 24x7x365 monitoring and operational support for Azure subscriptions covered by **Manage & Operate**.

How to Contact Support

TICKETS

One of the primary ways that you can interact with Rackspace is by creating a ticket in the Fanatical Support for Azure Control Panel (<https://my.rackspace.com>). Once logged in, click the "Tickets" button from the menu to create a new ticket or view an existing ticket.

Our automated systems will also create tickets for events on your Azure account that require either your attention or the attention of a Rackspace team member. For example, our Watchman Monitoring service will create a ticket when an alarm is raised and a Rackspace team member will triage the alarm and take appropriate action. Any time a ticket is updated, you will receive an email directing you back to the Rackspace Customer Portal to view the latest comments.

PHONE

You can also call your Fanatical Support Teams 24x7x365 to speak to a human who will be more than happy to assist.

Microsoft Premier Support Escalations

Regardless of whether you purchase your Azure infrastructure directly from Microsoft (EA/Direct) or through Rackspace's Cloud Solution Provider (CSP) agreement, Rackspace serves as your sole point of contact for supporting your Azure environments. As a part of the Cloud Foundation service, if Microsoft ever needs to be contacted for technical escalations, Rackspace will do so on your behalf by leveraging our Microsoft Partner Premier Support agreement.

Escalations may occur for the following scenarios:

- An Azure subscription service limit increase is required (e.g., number of CPU cores, etc.).
- An issue that requires the involvement of a specific Azure Product and/or Engineering team to resolve.
- An issue where multiple customers are impacted (Azure service outages).
- Azure infrastructure SLA credit requests (when infrastructure is purchased through Rackspace CSP).

As a Microsoft-certified Azure Expert MSP with a partner-grade Premier Support agreement, Rackspace provides direct access to Azure Support, Product and Engineering teams as a part of our **Cloud Foundation** service.

SERVICE OPERATIONS

With **Architect & Deploy**, Rackspace will create your Azure environments. If you also elect to purchase **Manage & Operate**, Rackspace Support Operations will also work with you to create a customized runbook to help manage the day-to-day support of your Azure environment, addressing incident and change management policies that we can safely implement for your business.

Customer Runbooks

When **Manage & Operate** is purchased, your Technical Onboarding Manager and Service Delivery Manager will work with you during the **Architect & Deploy** process to create a customized monitoring response runbook. This runbook defines the immediate responses (IRs) the Rackspace support team will use as our standard operating procedures for your environment(s). Our IRs include custom escalation procedures in accordance with your business needs and best practices. These customer

runbooks are designed to present the right information at the right time to our support teams to enable a world-class support experience. Providing relevant and focused guidelines to our support teams increases availability of customer solutions.

Monitoring (Watchman)

Rackspace utilizes a combination of Azure-native monitoring services and Rackspace services, called Rackspace Watchman, as the primary monitoring and reporting platform for Azure workloads covered by the **Manage & Operate** service. Watchman is composed of nine discrete components that serve to deliver valuable insights about the health of an Azure environment and to provide our customers a reliable, scalable and intelligent monitoring service.

MONITORING COMPONENTS

1. **OMS Log Analytics** – an Azure-native log aggregation and analytics service that provides a powerful and scalable alerting platform.
2. **Rackspace Event Horizon** (Alert Processing) – Rackspace event processing system that parses alert data from OMS and provides integration into the Rackspace ticketing system.
3. **Rackspace Ticketing** – Rackspace ticketing system that is embedded in the Rackspace Customer portal (my.rackspace.com).
4. **Rackspace Smart Tickets** (Auto Remediation & Enrichment) – Proprietary Rackspace automation framework that enables the delivery of real-time incident enrichment and remediation of incidents by running automation services (PowerShell/Bash for VMs, APL/CLI for Azure platform and PaaS services) in response to defined alerts.
5. **Rackspace Alert Suppression** (Noise Reduction) – Rackspace-proprietary service that allows for the suppression of alert tickets (and automated remediation activities) during planned events.
6. **Rackspace Alert Synchronization** (Alert Governance) – Proprietary Rackspace automation service that performs ongoing synchronization and enforcement of the production Rackspace alert definitions to all environments within our managed service fleet to ensure our customers have the latest and most up-to-date alert definitions.
7. **Rackspace OMS Workspace Synchronization** (Alert Governance) – Rackspace-proprietary automation service that performs ongoing synchronization and enforcement of the configuration of all standard Rackspace definitions (data sources and solutions) in each of the Azure Workspaces within our managed service fleet.
8. **Rackspace PaaS Monitoring Synchronization** (Alert Governance) – Proprietary Rackspace automation platform that enables the configuration and reporting of key resource monitors for PaaS components of the Azure platform.

ALERT DEFINITIONS

Manage & Operate customers will receive Rackspace's complete set of Watchman alerts including coverage for issues associated with antimalware, Windows Active Directory, MSSQL, IIS, Azure Activity logs, general system health and availability, Platform-as-a-Service metrics and numerous Linux and Windows VM performance counters. Please reach out to your Service Delivery Manager to receive a copy of the most current list of the Rackspace Watchman alert definitions.

URL AVAILABILITY MONITORS

In addition to the Watchman alert definitions, **Manage & Operate** customers are eligible to request the configuration of up to three web test availability monitors based out of the OMS Application Insights service to help provide stronger service availability monitoring and IR management.

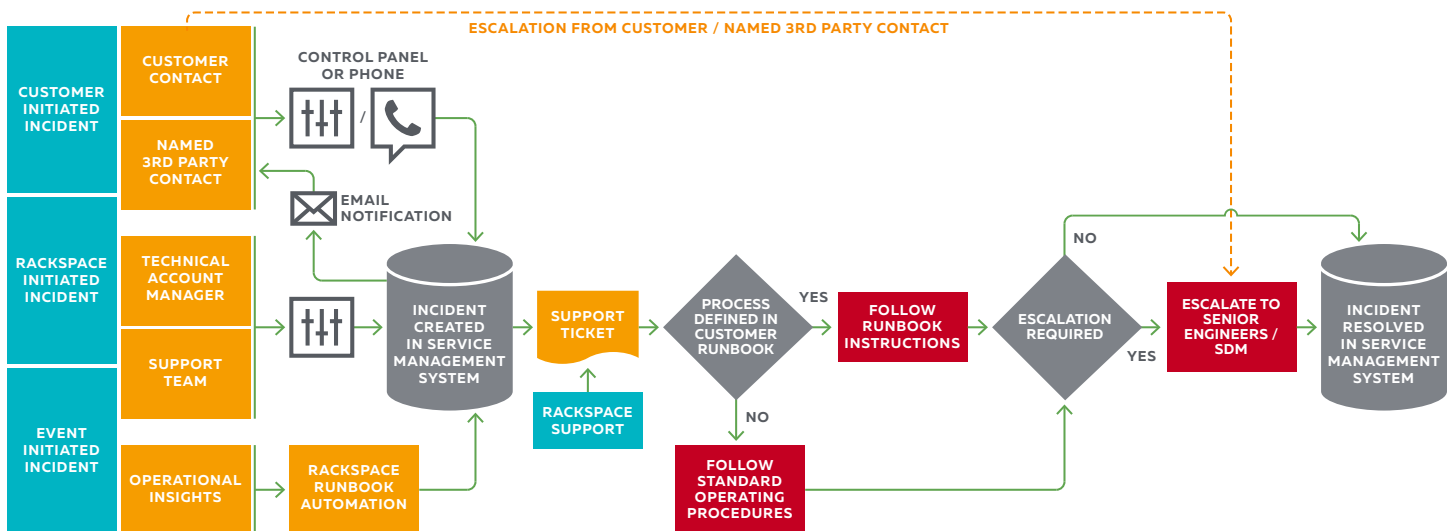
Incident Management

Incident management refers to the management of incidents where restoration of the services is the primary objective. For workloads covered by **Manage & Operate**, Rackspace endeavors to restore normal service as quickly as possible when a problem or an incident occurs. Rackspace will endeavor to apply a consistent approach to all incidents, except where a specific

approach has been previously agreed upon with you in accordance with your incident runbook. You can expect the following from the Rackspace incident management process:

- Incident events can only be initiated by:
 - Authorized customer contacts
 - Rackspace
 - Event management tools (e.g., Watchman)
- All incidents are logged in tickets accessible via the Rackspace Customer Portal. Rackspace support teams will investigate the incident in accordance with your service level once it is logged.
- Priority for tickets entered manually via the Customer Portal is initially set to "Standard." If required, please phone your Rackspace Support team or your assigned Service Delivery Manager to request a priority escalation of your request. 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 as documented via your incident runbook.
- Rackspace will collaborate with you and with any third parties that you nominate as technical contacts on your account to help resolve the incident.
- Rackspace Support teams will communicate regularly with you throughout the incident, detailing their findings and any actions taken.
- If a Rackspace Support Engineer is unable to resolve an incident, they will escalate the incident until resolution is achieved. This escalation may be hierarchical (to a more senior Rackspace Engineer or the Service Delivery Manager / Lead Engineer – if applicable) 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 act to resolve the incident, which will be communicated should such a need occur.
- An incident is deemed closed when you confirm that it is resolved. This is achieved through the incident ticket being set to a "Solved" status.

RACKSPACE DEFAULT INCIDENT MANAGEMENT PROCESS



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.
- Your Rackspace Service Delivery 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 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 Azure Customer Portal for changes that are owned or initiated by Rackspace. Conversely, you can raise a ticket for situations where Rackspace support is required for any changes owned and initiated by your business. You may also call the 24x7x365 support line to discuss a change and request that a ticket be created.
- Rackspace will organize support engineers with specific domain expertise to manage the change as scheduled and keep you fully informed on progress.
- For changes or upgrades to your own internal infrastructure, you are responsible for coordinating with your internal resources and third-party contacts to manage the change as scheduled and to keep Rackspace informed of the progress via a Rackspace support ticket.

Ongoing Management Services with Manage & Operate

PATCHING

Rackspace can enable automatic patching within the operating system for Fanatical Support for Azure customers who subscribe to the **Manage & Operate** service. This includes all operating system-related patches of any supported VM instances within your Azure subscriptions covered by the **Manage & Operate** service. 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 to ensure that we help meet your compliance and availability requirements. Note: Rackspace will not patch middleware or customer applications due to the potential for harming customers' environments when changes have not been thoroughly tested in the specific environment.

BACKUPS

Manage & Operate customers are entitled to have Rackspace Support teams configure image-level backups for their Azure 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.

Should a backup job fail to complete, **Manage & Operate** customers will benefit from Rackspace automation services that will automatically attempt to resolve the issue and will attempt to re-run the backup job. If a subsequent failure is detected, the issue will be escalated to the Fanatical Support teams to investigate further and to escalate to Microsoft as required.

In the unlikely event that you require data restored from an image-level backup, phone in or log a ticket in the Fanatical Support for Azure Control Panel. Please provide detailed information regarding the VM instance and Azure Storage Account you need restored and to what VM that snapshot should be attached. Rackspace will only restore an image-based backup to a new volume and you will be responsible for validating any restored data and moving it into your application.

ANTIVIRUS

The **Manage & Operate** service also enables the Rackspace Managed Antivirus solution for Windows operating systems running on the Azure platform to help solve for increasingly complex challenges associated with security and compliance. Leverage our Managed Antivirus service to help ensure that all your VMs within your Windows Server solutions are protected by the enterprise-grade Windows Defender service and are backed by our 24x7x365 Fanatical Support teams. Our Managed Antivirus

service helps reduce your attack surface of new security threats by ensuring that the following is true for every Windows VM deployed into your subscription:

- Windows Defender Antimalware extension properly installed.
- Antimalware extension properly configured.
- Windows Defender service runs the most up-to-date virus definitions.
- If an antimalware event is detected, the Watchman service is leveraged to alert a Rackspace Engineer to investigate further.

OPERATING SYSTEMS SUPPORT

Customers with Azure subscriptions covered under the **Manage & Operate** service are entitled to operating system support for their Azure VM instances running supported operating systems versions/distributions. For in-depth information on Rackspace operating system support, please visit the following Rackspace Support articles:

- **Linux:** <https://support.rackspace.com/how-to/linux-spheres-of-support-for-dedicated-and-managed-ops/>
- **Windows:** <https://support.rackspace.com/how-to/cloud-servers-with-managed-operations-support-for-windows/>

PASSPORT (SECURE AZURE VM ACCESS)

Rackspace Support Engineers servicing customer subscriptions under the **Manage & Operate** service will leverage a proprietary tool used to provide a highly secure, named-employee, time-bound, audited and MFA-authenticated access service for Rackspace Engineers to access your Azure VMs. In addition, Rackspace has established a bastion server management standard, which must be present in the customer environment and which must meet stringent security requirements.

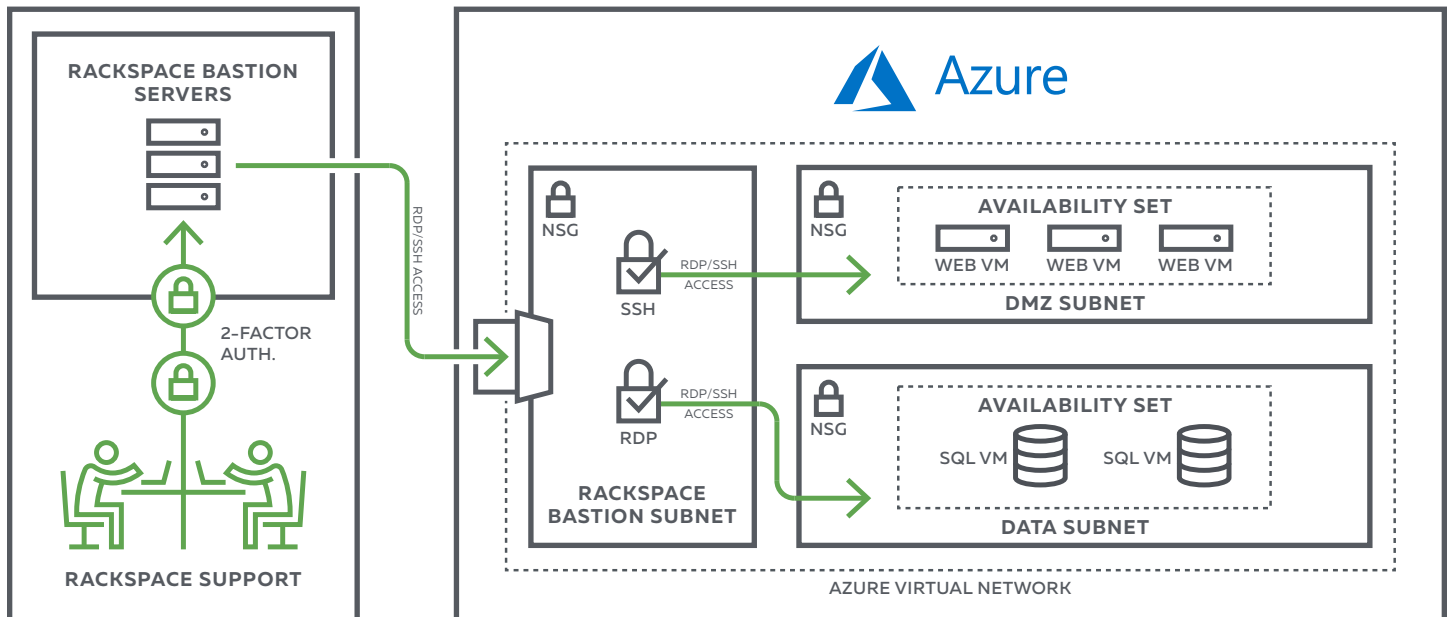
PASSPORT BASTION DETAILS

Rackspace Support Engineers will leverage a secure bastion server from known and controlled networks in Rackspace data centers using the remote desktop protocol (RDP) or secure shell (SSH). Once access has been established, Rackspace 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 per virtual network (VNET). The preferred virtual machine for the bastion host is:

INSTANCE	CORES	RAM	DISK SIZE	OPERATING SYSTEM
a1v2	1	2GB	30GB	CentOS 7

BASTION SERVER EXAMPLE TOPOLOGY:



BOARDING PASS (SECURE AZURE PORTAL ACCESS)

Customers with Azure subscriptions covered under the **Manage & Operate** service are entitled to leverage Rackspace's Boarding Pass tool which provides a scalable, auditable and secure access management service for the Azure portal. The Boarding Pass service is leveraged by Rackspace Support Engineers to access your Azure environment to facilitate a requested change or respond to an emergency alert while doing. It provides a compliance and security-focused approach to access management by delivering a named-employee, on-demand, time-bound, documented (auditable) and MFA-secured Azure subscription management service.

The system leverages the Azure Active Directory (AAD) B2B invitation service/API to import users from the Rackspace Azure Active Directory (AAD) tenant and takes advantage of existing corporate identities with dual-factor authentication.

Service Reviews

Service Reviews are available upon request for **Manage & Operate** customers and provide an opportunity for regular governance sessions of your environment's performance and to review operational information such as the status of backups, patching and antivirus. The review may include items such as:

- Support tickets
- Monitoring alerts
- Upcoming change or maintenance events
- Product roadmap updates
- Microsoft Azure announcements

Response Time Guarantees

Support Tickets fall into one of the following severity levels:

- **Emergency:** Business-Critical System Outage / Extreme Business Impact – 15 Minute SLA (**Manage & Operate ONLY**)
- **Urgent:** Production System Impaired / Moderate Business Impact – 1 Hour SLA (**Manage & Operate ONLY**)
- **Standard:** Issues and Requests / Minimal Business Impact – 4 Hour SLA for **Manage & Operate** / 24 Hour SLA for Cloud Foundation

Note: All customer-submitted requests via the Control Panel are automatically categorized as Standard requests by the Rackspace Ticketing system. Please call the Fanatical Support team 24x7x365 to escalate the issue to an urgent or emergency classification.

ADDITIONAL SERVICES

Application Migration Assistance

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

Advanced Database Support

Rackspace has extensive experience and comprehensive support expertise to provide database support for MS SQL. We operate teams of highly trained and certified database 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 **Manage & Operate** offer, Rackspace will provide support for Microsoft SQL Server and Azure SQL Server instances, including installation, basic configuration, monitoring, troubleshooting and backups, as illustrated below. Additionally, Rackspace can provide advanced DBA services tailored to your specific needs for an additional fee.

INCLUDED IN MANAGE & OPERATE	ADVANCED DBA ADD-ON SERVICES
<ul style="list-style-type: none">· Best-practice guidance· Knowledge base· Community support	<ul style="list-style-type: none">· General consultation· Advanced architecture design· Partner engagement
<ul style="list-style-type: none">· Database setup and configuration· MSSQL Server cluster initial setup· User administration· Security administration· Database health monitoring	<ul style="list-style-type: none">· Performance tuning and diagnostics· Data import and export· MSSQL Server mirroring and log shipping· MSSQL Server cluster maintenance/change
<ul style="list-style-type: none">· Backup and recovery (limited to full Db restores)· Configuration of MSSQL Server backups (Db and transaction log)· Monitoring/troubleshooting MSSQL backup job failures	<ul style="list-style-type: none">· Customized maintenance plans· Refresh and migrate data between instances and data centers· Advanced restore requests (point-in-time recovery)
<ul style="list-style-type: none">· Availability issues in production	<ul style="list-style-type: none">· In-Depth incident retrospective

Rackspace Application Services (RAS)

Available as an add-on service for **Manage & Operate** customers, Rackspace Application Services (RAS) extends Fanatical Support up the stack to the application layer. RAS provides application expertise, performance monitoring and proactive support for your mission-critical websites and applications. RAS enables end-to-end transaction visibility and real-time end-user experience monitoring using industry-leading tools to help you meet uptime requirements for mission-critical applications with a cost-effective model. RAS is available in blocks of 10, 20 or 40 hours per month. Benefits include:

- The ultimate application services experience (set up, monitoring and proactive optimization).
- 100% Production Platform Uptime Guarantee with approved HA environments.
- Proactive guidance to ensure stable application environments.
- Proactive application and infrastructure monitoring and tuning for maximum application performance.
- Constant analysis of performance metrics and trending reports.
- Highly customized solutions delivering a complete view of your environment.
- End-user experience analysis and incident detection.
- Real-time transaction-level monitoring.
- Diagnostic performance reporting.

Rackspace Managed Security (RMS)

Available as an add-on service for **Manage & Operate** customers, Rackspace Managed Security (RMS) protects your IT environment against advanced persistent threats (APTs) and other cyberattacks. RMS provides deep expertise, leading technology and advanced threat intelligence, tailored to your business needs, for a 24x7x365 defense – often at a significantly lower total cost of ownership (TCO) than internally developed security operations centers and comparable managed security service offerings.



REASONS TO CHOOSE RACKSPACE MANAGED SECURITY

- **24x7x365 detection and response:** Our experienced Rackspace security team monitors and manages your environment around the clock, responding to threats based on your specific business needs and IT requirements.
- **Leverage security experts:** Use Rackspace Managed Security service as a security force multiplier. We tailor support to meet your security goals, whether it's strategic planning for best-practice cloud security or tactical day-to-day security monitoring and threat analysis.
- **Employ industry best practices and advanced security solutions:** Rackspace works closely with a select list of security providers to provide access to collective expertise from across the industry and advanced technology to protect your managed cloud.
- **Meet security goals while lowering TCO:** The advanced security protection of Rackspace Managed Security can significantly lower TCO over internally developed security operations centers and comparable managed security service offerings.

FEATURE	BENEFITS
HOST AND NETWORK PROTECTION	Get advanced host and network protection platforms targeted at zero-day and non-malware attacks and traditional compromise tactics.
SECURITY ANALYTICS	Leverage a leading security information and event management (SIEM) platform, paired with big data analytics platforms, to collect and analyze data from your environment.
VULNERABILITY MANAGEMENT	Get advanced scanning and agent technologies to understand environment specifics and respond to threats and attacks based on your needs.
LOG MANAGEMENT	Use Rackspace to collect standard operating system logs and assist in identifying additional data that may be collected.

Custom DevOps Professional Services

Rackspace has extensive experience working with DevOps methodologies, practices and toolchains and can assist customers, via a Professional Services engagement, in adopting DevOps methodologies and practices inside their own organizations. 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

You can expect the following from our Professional Services engagement:

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

DevOps Maturity and Strategy Planning

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 that we work with, 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. During the engagement, you'll:

- 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.

APPENDIX 1:

Service Relationships (Roles and Responsibilities)

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

- You, the customer (including any in-house IT resources or contractors)
- Rackspace, our Azure-certified support experts

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

SERVICE LEVEL ACTIVITIES (FOR ARCHITECT & DEPLOY + MANAGE & OPERATE CUSTOMERS)	RACKSPACE	CUSTOMER
ACCOUNT MANAGEMENT AND TOOLING		
Provide named Service Delivery Manager (SDM) resource	R, A	C, I
Standard account reporting	R, A	C, I
Identify opportunities for cost and performance optimization	R, A	C, I
Provide opinions and best practices around account architecture, security and resiliency	R, A	C, I
Create a Rackspace account with an owner/contributor role within the customer's subscription to enable Rackspace automation	C, I	R, A
DISCOVERY		
Understand business objectives and current challenges (e.g., migration to Azure, refactoring current Azure footprint)	R, A	C, I
Schedule and conduct deep-dive discovery session	R, A	C, I
Understand systems SLAs, RTO, PPO requirements	R, A	C, I
DESIGN/ARCHITECTURE		
Define architecture options to be considered (e.g., lift & shift vs. refactoring)	R, A	C, I
Agree on high-level design (HLD) architecture	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
Create 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
INFRASTRUCTURE IMPLEMENTATION		
Deployment of Azure infrastructure (networking, storage and compute) using Rackspace's opinionated ARM template library	R, A	C, I
Configure IaaS components with VM extensions (antimalware, monitoring and diagnostics)	R, A	C, I
Deployment of images outside of Rackspace Operating Systems Spheres of Support (SoS)	C, I	R, A
User acceptance testing (UAT) and sign off environment deployment	C, I	R, A
Configure and test WAN connectivity for ExpressRoute and site-to-site VPN (Rackspace data centers and managed subscriptions)	R, A	C, I
Configure and test WAN connectivity for ExpressRoute and site-to-site VPN (customer data centers and unmanaged subscriptions)	C, I	R, A

SERVICE LEVEL ACTIVITIES (FOR ARCHITECT & DEPLOY + MANAGE & OPERATE CUSTOMERS)	RACKSPACE	CUSTOMER
INFRASTRUCTURE IMPLEMENTATION		
Initial governance assistance through deployment of resource groups and implementation of Azure tagging for Rackspace-managed deployments	R, A	C, I
Implementation of ongoing change management for Azure infrastructure components	R, A	C, I
NETWORK AND ACCESS SECURITY IMPLEMENTATION		
Consult on identity access management (IAM) roles and polices	C, I	R, A
Define Network Security Groups and rules requirements	C, I	R, A
Implement Network Security Groups and rules	R, A	C, I
Operating system user management per Rackspace Spheres of Support	R, A	C, I
Antivirus installation/configuration/monitoring for Windows VMs	R, A	C, I
APPLICATION IMPLEMENTATION		
Deployment of application code and management of 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 artifacts (Chef, Salt, Ansible, etc.)	C, I	R, A
Creation and management of continuous integration/continuous deployment pipelines	C, I	R, A
ACTIVE DIRECTORY		
Initial deployment of Azure Active Directory (AAD)	R, A	C, I
Configuration, maintenance and administration of Azure Active Directory (AAD) as needed to provide access for Rackspace engineering teams	R, A	C, I
Configuration, maintenance and administration of Azure Active Directory (AAD) as needed to provide access for clients or other third-party vendors	C, I	R, A
Configuration of AD Connect replication service to extend on-premises AD environment to Azure Active Directory (AAD)	C, I	R, A
Configuration of Active Directory Domain Services (ADDS)	C, I	R, A
Promotion of new domain controller on IaaS VM in Azure	R	A, C, I
Extending domain controller to new IaaS VM in Azure	R	A, C, I
Procurement, allocation and management of Azure Active Directory premium licenses and features (Basic, P1, P2)	C, I	R, A
MONITORING		
Deployment and management of Rackspace standard OMS log analytics monitoring platform	R, A	C, I
Initial deployment of Azure Application Insights workspace	R, A	C, I
Configuration of up to three (3) web test availability monitors	R, A	C, I
Configuration and management of Application Insights dashboards and custom event logging/alerting	C, I	R, A
Configuration of Application Insights synthetic transaction URL monitors	C, I	R, A
Configuration of application performance monitoring (APM) services like Application Insights, New Relic, AppDynamics, etc.	C, I	R, A
Configuration of any custom OMS alerts	C, I	R, A

TICKETING/ALERTING		
24x7x365 access to Fanatical Support for Rackspace standard monitoring services, including initial responses, escalations and troubleshooting of incidents within Rackspace response time SLA guarantees	R, A	C, I
Ongoing definition, management and maintenance of Rackspace's standard OMS monitoring platform, including the definition of alert triggers, thresholds and remediation instructions	R, A	C, I
Initial response, escalation and troubleshooting of custom alerts on Azure, including non- standard OMS alerts, APM alerts, etc.	C, I	R, A
SERVICE LEVEL ACTIVITIES (FOR ARCHITECT & DEPLOY + MANAGE & OPERATE CUSTOMERS)	RACKSPACE	CUSTOMER
BACKUPS AND DISASTER RECOVERY		
Creation of an Azure Recovery Service vault (RSV)	R, A	C, I
Creation and management of VM backup policies and schedules to Rackspace standards	R, A	C, I
Monitoring and remediation of backup failures on Rackspace standard backup service	R, A	C, I
Verification of validity of backup data/methodologies	C, I	R, A
Backup restoration testing	C, I	R, A
Backup restoration request	R	A, C, I
Installation/configuration/management of Azure file-level backup agents and service	C, I	R, A
AZURE SITE RECOVERY (ASR)		
Design of DR/BCP strategy, including end-to-end environment failover processes, communication strategy or any related activity for the creation of a disaster recovery or business continuity plan	I	R, A
Design of ASR architecture to Rackspace best-practice standards for approved workloads from one Azure region to another	R, A	C, I
Configuration of simple ASR Recovery Plan using a single failover group (custom scripting excluded)	R, A	C, I
Configuration of custom ASR Recovery Plan using multiple failover groups and/or custom scripting	C, I	R, A
Configuration of Azure-to-Azure ASR replication services	R, A	C, I
Configuration of ASR replication module in Rackspace monitoring platform	R, A	C, I
Emergency failover using pre-configured ASR Recovery Plan	R	A, C, I
Perform ASR "Test Failover" service once every six months, allowing validation of infrastructure failover orchestration as well as data replication services (application failover testing excluded)	R, A	C, I
Application failover testing following ASR "Test Failover"	C, I	R, A
24x7x365 incident response for ASR replication issues	R, A	C, I
PATCHING		
Installation/configuration of automated OS-level patching via the OMS update management service	R	A, C, I
Installation/configuration of automated OS-level patching via automatic updates within OS	R	A, C, I
Deployment/configuration/management of any other patch management service	C, I	R, A

RACI DEFINITIONS:

Responsible: Those who do the work to achieve the task.

Accountable: The one ultimately answerable for the correct and thorough completion of the deliverable or task and the one who delegates the work to those responsible. In other words, an accountable must sign off (approve) work that a responsible provides. There must be only one accountable specified for each task or deliverable.

Consulted: Those whose opinions are sought, typically subject matter experts. Involves two-way communication.

Informed: Those who are kept up to date on progress, often only on completion of the task or deliverable. Involves just one-way communication.

APPENDIX 2:

Spheres of Management

The Cloud Foundation service enables access to the complete Microsoft Azure portfolio of services. For our **Manage & Operate** customers, we have created the following Spheres of Management table highlighting the Azure services that fall under Rackspace Managed or a Reasonable Effort status in our service catalog.

RACKSPACE MANAGED

Rackspace has substantial support expertise and has developed specific support services to facilitate at-scale management of an Azure feature.

REASONABLE EFFORT

Rackspace will undertake reasonable activities to troubleshoot issues (including escalation to Microsoft as needed) but cannot offer a guarantee of resolution, responsiveness or expertise with an Azure feature. Any Azure feature or service not listed below is considered Reasonable Effort.

CATEGORY	REASONABLE EFFORT	RACKSPACE MANAGED
COMPUTE		
Virtual machines		✓
Virtual machine scale sets		✓
Batch	✓	
Reserved instances		✓
WEB & MOBILE		
Web apps		✓
Logic apps	✓	
Functions	✓	
API apps	✓	
DATA & STORAGE		
SQL database		✓
Storage		✓
Import/Export	✓	
Redis cache		✓
Cosmos DB		✓
Search		✓

FEATURE	REASONABLE EFFORT	RACKSPACE MANAGED
ANALYTICS		
HDInsight	✓	
NETWORKING		
Virtual network		✓
Traffic manager		✓
ExpressRoute		✓
Azure DNS		✓
Load balancer		✓
VPN gateway		✓
Application gateway (& WAF)		✓
MEDIA & CDN		
CDN	✓	
HYBRID INTEGRATION		
Service bus	✓	
Backup		✓
IDENTITY & ACCESS MANAGEMENT		
Azure Active Directory		✓
Multi-Factor Authentication	✓	
Azure Active Directory B2C	Unsupported	
Azure Active Directory Domain Services	✓	
DEVELOPER SERVICES		
Visual Studio team services	✓	
Azure DevTest labs	✓	
MANAGEMENT		
Scheduler	✓	
Automation	✓	
Log analytics	✓	
Key vault	✓	
Security center	✓	
Application insights	✓	

FEATURE	REASONABLE EFFORT	RACKSPACE MANAGED
INTERNET OF THINGS (IOT)		
Notification hubs	✓	
Machine learning	✓	
Event hubs	✓	
Stream analytics	✓	
Azure IoT hub	✓	
AZURE SITE RECOVERY (ASR)		
Azure-to-Azure ASR		✓
Hyper V-to-Azure ASR		Service available as an add-on
VMware®-to-Azure ASR	✓	
Bare Metal-to-Azure ASR	Unsupported	

APPENDIX 3:

Subscription Management Requirements

As a part of the Fanatical Support for Azure offering, Rackspace will be required to perform actions in your Azure environment as a trusted partner. Rackspace cannot fulfill our role as your managed service provider without the correct level of access and permissions. Rackspace takes your trust and your security very seriously and has integrated safeguards into our management service to avoid abuse of these services, leveraging Rackspace corporate identities (along with the built-in security features like MFA credentials, password rotation, etc.). If Rackspace is unable to secure the appropriate level of access required to deliver our management services, we are unable to deliver our managed services in an at-scale manner using automation services and consistent tool sets for our global team of Fanatical Support Engineers (helping Rackspace drive cost efficiency into our managed service which we pass along to our clients).

OWNER/CONTRIBUTOR ACCESS

To deliver our Fanatical Support for Azure service, Rackspace requires "Owner" or "Contributor" permissions to all Azure subscriptions under our management. Several of our support offerings and/or tools require that the Owner/Contributor account be configured as an "organizational account" rather than as a "Microsoft account." If you are unable or unwilling to provide Rackspace with an organizational account setup for Owner/Contributor permissions, some support services may not be available or may be limited in scope.

The Owner/Contributor 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 PRINCIPALS

Rackspace requires the configuration of Service Principal Names (SPNs) to enable our management services to access resources that are secured by an Azure AD tenant. During onboarding activities, the user will be presented with an Azure AD application to consent the required permission for Rackspace to access resources within a tenant.

Rackspace SPNs are assigned a "least-permission levels" model, where we have defined the access policy and permissions, authentication and authorization to deliver programmatic access to resources within that subscription, enabling a whole host of automation services to deliver Fanatical Support for Azure. SPN credentials are stored securely in a KeyVault within Rackspace's Managed Azure Subscription. The keys are encrypted at rest and in transit.

BOARDING PASS – AZURE ACTIVE DIRECTORY B2B SPN

Rackspace has developed a set of tools called Boarding Pass that are designed to provide Rackspace Support Engineers with an on-demand, time bound, audited and named access to customer subscriptions. The system leverages the Azure Active Directory (AAD) B2B invitation service/API to import users from the Rackspace Azure Active Directory (AAD) tenant and takes advantage of existing corporate identities with dual factor authentication. The feature is broken into two discrete services, Boarding Pass Enrollment and Boarding Pass Access:

- **Boarding Pass Enrollment** – The on-boarding tool prepares the subscription, by configuring the necessary automation account or Service Principle Name (SPN) and setting up the predefined access groups.
- **Boarding Pass Access** – A secure web application that resides in the Rackspace operations portal that grants time-bound access to the selected subscription.

Boarding Pass is reserved exclusively for Azure-certified members of the Fanatical Support Engineering team. There are several security controls which have been put in place to manage access, including:

- User must have a presence in the Rackspace corporate directory (RSA dual factor enforced).
- User must be a member of an LDAP group for access to the Fanatical Support for Azure Operations Portal (restricted group).
- User must be a member of an LDAP group for access to the Boarding Pass portal (further restricted to either Reader or Contributor roles).

ABOUT RACKSPACE

Rackspace is modernizing IT in today's multi-cloud world. By delivering IT as a service, we help customers of all industries, sizes and locations realize the power of digital transformation without the complexity and expense of managing it on their own. Our comprehensive portfolio of managed services across applications, data, security and infrastructure on the world's leading public and private cloud platforms enables us to provide unbiased expertise. Rackspace has been honored by Fortune, Forbes, Glassdoor and others as one of the best places to work.

Learn more at www.rackspace.com or call us at **1-800-961-2888**.

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