Rocket software

Rocket® Mobius Deployed on Microsoft Azure Cloud Computing Platform and Services

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Introduction

Cloud, hybrid, and multi cloud-based infrastructures are quickly becoming standard computing models. Rocket® Software has worked with public cloud platform service providers for several years, gaining tremendous knowledge and experience delivering its solutions to run on cloud platforms, like Microsoft Azure Cloud Computing Platform and Services (Azure), Microsoft Azure (AWS), and Google Cloud Platform (GCP).

This document describes the architecture, functionality and capabilities that are available to deploy and run Rocket Mobius on Azure.
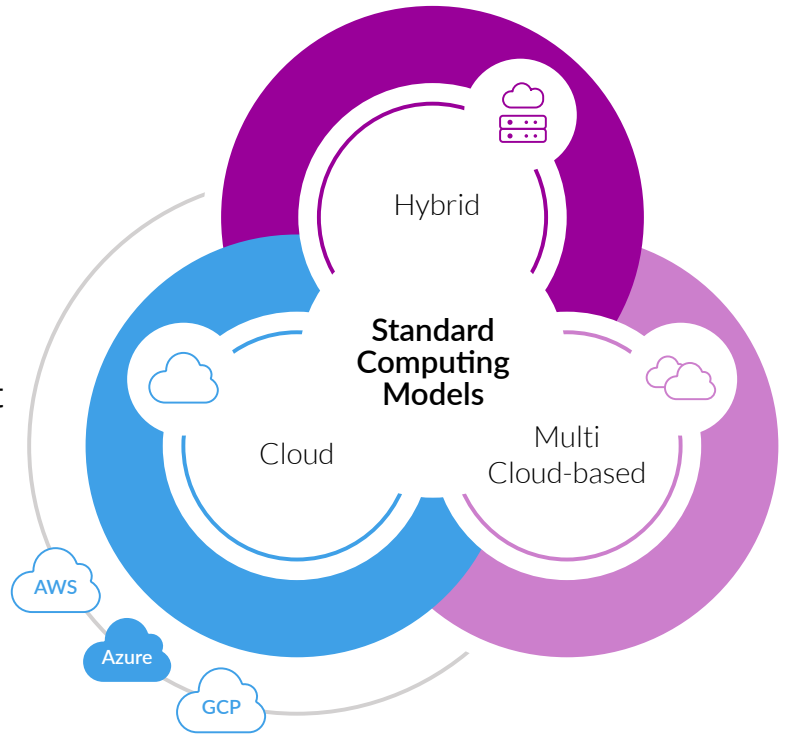
Microsoft Azure

Azure, through its ready-to-use platform, offers organizations the ability to forgo expensive upfront infrastructure costs and adopt monthly variable computing costs that scale based on need and demand. With Azure, organizations do not need to plan for and procure racks of servers, spend countless hours choosing and deploying operating systems, or become mired in software configurations, custom-scripting and roll-out procedures. Instead, they can instantly spin up hundreds or thousands of software-ready servers and deliver results faster without interrupting business operations.

Businesses that move to Azure can:

• Consolidate and reduce IT infrastructure

• Shift capital expenditures to operating expenses

• Decrease IT operational costs

• Roll out new solutions across geographies and languages faster

• Streamline business processes and workflows

• Acquire inherent multi-location and disaster recovery facilities

• Enhance security and compliance activities to reduce complexity across a distributed infrastructure

• Accelerate digital transformation efforts to meet changing business and market requirements

Cloud Computing Model

There are three primary cloud computing models: Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). Rocket® Mobius can be deployed to utilize each model, with SaaS involving the delivery of Rocket Mobius as a managed service. Each cloud deployment model provides full access to all Rocket Mobius services deployed on Azure. Rocket Mobius is licensed by Rocket Software on term and subscription basis to be deployed and used on Azure, on-premises, or both. Rocket partners offer hosted, managed services, through which Rocket Mobius is licensed.

Infrastructure as a Service (IaaS)

Presents the basic building blocks for cloud IT and provides access to networking features, servers (virtual or on dedicated hardware) and data storage space. IaaS delivers the highest level of flexibility and management control over IT resources in a cloud computing environment.

Platform as a Service (PaaS)

Removes the need to manage underlying infrastructure including hardware and operating systems. The focus is on deployment and management of business applications. IT doesn't have to manage resource procurement, capacity planning, software maintenance, patching or any of the other heavy lifting involved in running business applications.

Software as a Service (SaaS)

Is a completed product, usually end-user software applications. Service providers run, manage, and maintain the application and deliver it via the Internet. The subscriber of the service usually pays a subscription fee to access and use the software application.

Managed Services

Are also complete products, usually end-user software applications, that service providers run, manage and maintain. They are accessed via the Internet. In this model, the service provider is responsible for the installation, configuration, and execution of the software application but the subscriber retains the software application licenses.

Cloud Computing Deployment Model

Rocket Mobius is designed to excel in performance and dependability on Azure. The cloud computing model depends on the use case(s) and business requirements of each organization.

Public Cloud

Software applications are fully deployed and run only in the cloud without any resources or software installed on-premises. These applications have been created to run in the cloud or have been migrated from an existing on-premises infrastructure to take advantage of cloud computing benefits. Cloud-based applications provide abstraction from managing, architecting, and scaling requirements of hardware and software components required for cloud computing.

Private Cloud

Resources on-premises using virtualization and resource management like public clouds are used to deploy and run software applications. It is offered over the Internet or a private network to a single organization and only to select users, e.g., SAP Hana, Salesforce, and Box. This deployment model is the same as on-premises IT infrastructurewhile using application management and virtualization technologies to increase resource utilization.

Hybrid Cloud

Combines on-premises IT infrastructure and applications with cloud-based resources to deploy and run software applications. In a hybrid cloud, data and applications can move between on-premises infrastructure, private clouds, and public clouds for greater flexibility, with more deployment options and a faster path to IT rationalization.

Multi-Cloud

Recognizes that organizations will consume resources from more than one cloud platform. This includes public clouds (Azure, AWS, Google Cloud), private clouds and on-premises IT. This may create new management requirements but provides the ability to mix and match cloud services to optimize application capabilities and delivery.

Rocket Mobius Operating in a Hybrid Cloud Environment, Deployed On-Premises and on Microsoft Azure Cloud Computing Platform
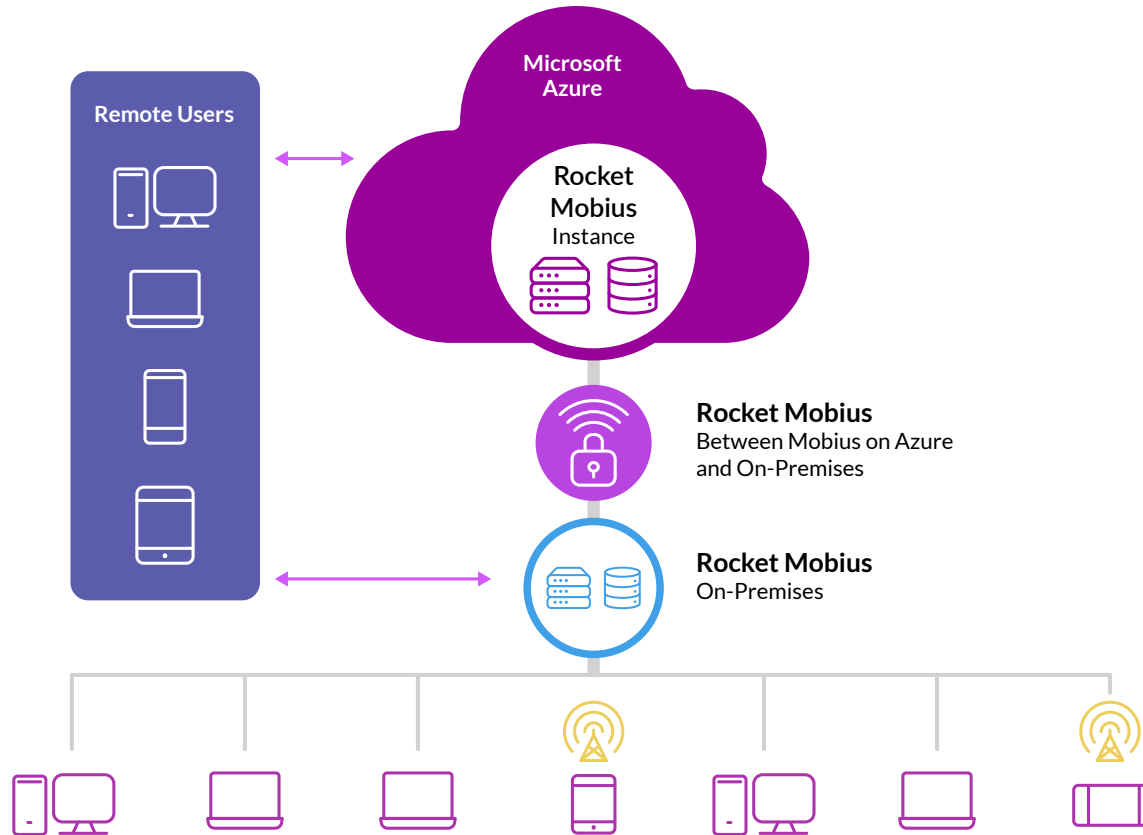
Rocket Mobius Capabilities on Microsoft Azure

Rocket Mobius deployed on Azure is a policy-based and rules-driven content solution to capture, manage and govern large and varied volumes of enterprise content and unstructured data. It can be deployed in cloud-only and hybrid cloud environments using Kubernetes anywhere Azure is located.

Scalability and Elasticity

Rocket Mobius is deployed in configurable pools using Azure Virtual Machine Scale Sets (VMSS) and Application Gateways.

Availability

Containerization technologies like Docker provide Rocket Mobius with the flexibility to place instances and store data within multiple geographic regions as well as across multiple availability zones within each Azure Region. If one instance fails, then an instance in another availability zone can handle the request.

Security

All data in Rocket Mobius is securely encrypted both at rest and in-transit. Communications within the different components of Rocket Mobius and the Azure Relational Database are encrypted using HTTPS while any data stored in Rocket Mobius is encrypted with FIPS compliant AES-256 bit encryption.

Integrated Configuration

Using the Azure Resource Manager (ARM), Rocket Mobius products are deployed, preconfigured and ready to use.

Rocket Components Available on Azure

Rocket Mobius deployed on Azure consists of one or more server instances behind load balancers and driven by an autoscaling group. It also includes a managed relational database and one or more indexing and web application servers.

Rocket Mobius servers are deployed within an Azure Virtual Network (VN) to run instances of Rocket Mobius server software. Each Rocket Mobius server instance contains one instance of the Mobius Repository for managing and storing content, one instance of Mobius View for viewing content, and the ability to deploy additional components including:

- REST API and CMIS (content federation) for connectivity and interoperability

- Workflow for business process automation

- Records Management, Redaction and Audit & Analytics Services for information governance and compliance

- Full Text Search that combines metadata and full text information to precisely locate relevant content

The Azure Application Gateway is a web traffic load balancer that automatically distributes incoming client requests across the Rocket Mobius servers. Incoming administration requests connect directly to Rocket Mobius server instances. Autoscaling is supported, removing the requirement to choose a deployment size or instance count during provisioning.

The glossary table provides a complete list of Azure features that are significant for Rocket Mobius deployed on Azure (see end of document).

AWS Architecture
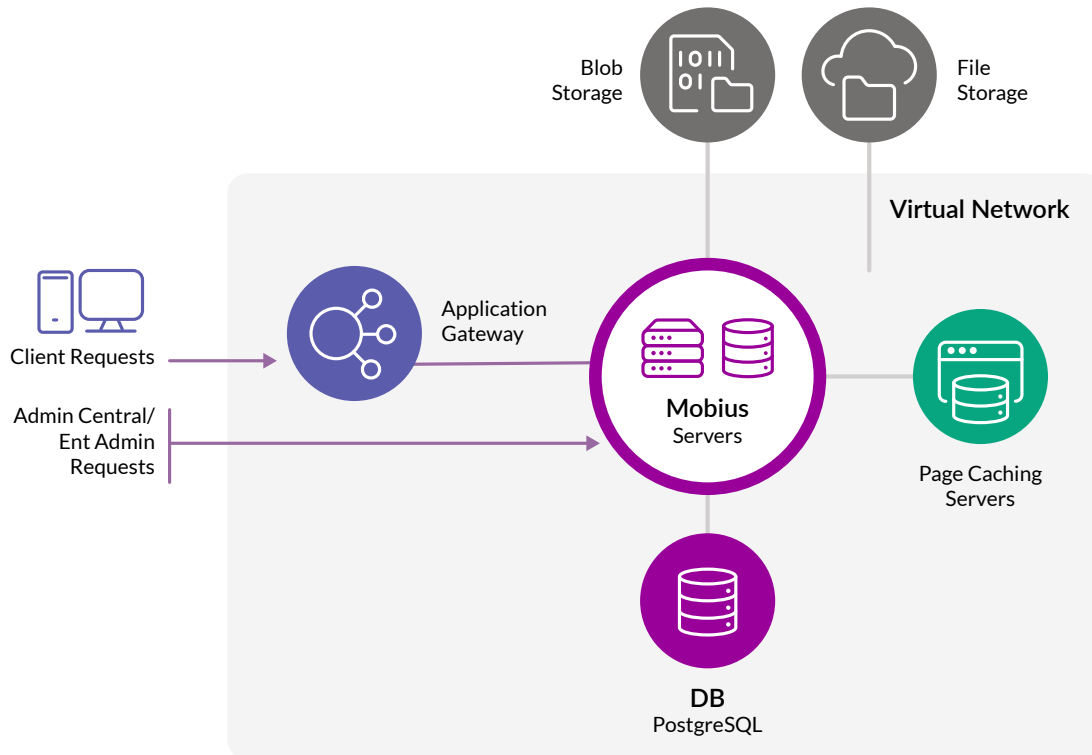
Rocket Mobius servers store data in Azure Blob Storage, which provides low-cost, high-reliability storage for very large data volumes. Rocket Mobius-Azure manages user, report, content, metadata, security, and other information using a managed Azure PostgreSQL database.

A Hazelcast in-memory caching server with Azure support is used for page caching. The page caching server is optional and can be omitted from the Rocket Mobius-Azure server stack creation.

The Rocket Mobius Advantage on Azure

Extreme Flexibility

- Organizations benefit from one set of content services to manage enterprise content an applications on Azure and hybrid cloud deployments
- Business users can use PC, tablet and smartphone to access their work regardless of content type or platform

IT Friendly

- Deploys instantly with Docker Kubernetes with high-scalability in the cloud
- Helps rationalize and reduce the management of legacy content systems and repositories
- Load-scales automatically with using Azure scales set to meet increase or decrease in computing demand
- Deploys at the pace of business

Reduces IT Infrastructure Costs

- Using cloud native resources like Azure Virtual Machines, Azure Blobs and Azure SQL Database, reduces data center hosting, infrastructure and IT staffing costs by 1/2 or more
- Reduces costs of unplanned downtime on productivity by 80%

Maintains Business Continuity

- Uses existing workflows and content deployed on-premises
- Federates and moves content seamlessly between Azure, Rocket Mobius on-premises deployments and 3rd party applications

Administers Compliance in the Cloud

- Manages content at web-scale volumes and high-performance levels on demand
- Applies policies to content to automate compliance from capture to destruction
- Governs what user can access, modify and manage securely

Summary

Rocket Mobius deployed on Azure provides building blocks needed to rollout unique and varied content solutions to employees, partners, and customers. Rocket Mobius delivers a complete set of highly available content services that are designed to work together on Azure and on-premises to build sophisticated and scalable content management solutions.

Microsoft Azure provides secure multi-tiered storage, scalable low-cost computing environments, high-performance databases, system management tools and more. Azure is trusted by the largest enterprises to power a wide variety of computing workloads, including web and mobile applications, real-time and batch data processing and warehousing, high-volume content storage, saleable content archive and more.

Glossary

AWS Feature	Description
Azure Feature	Azure is hosted in multiple locations world-wide. These locations are composed of Regions and Availability Zones. Each Region is a separate geographic area. Each Region has a minimum of three isolated locations known as Availability Zones. Azure provides the ability to place resources, such as instances and data in multiple Availability Zones.
Availability Zone (AZ)	Provides a consistent management layer that enables the creation, updating and deleting of resources in an Azure subscription. Access control, auditing and tagging features can be used to secure and organize resources after deployment.
Azure Resource Manager (ARM)	Defines Azure resources needed to deploy and manage solutions.
ARM Template	Microsoft's cross-platform command-line tool to managing Azure resources with an emphasis on automation.
Command Line Interface (CLI)	A managed, private Docker registry service based on the open-source Docker Registry 2.0. Developers can create and maintain Azure container registries to store and manage their private Docker container images.
Azure Container Registry (ACR)	Provides persistent page blob storage, which are a random IO storage object in Azure. Available types of VHD are Ultra Solid State Drives (SSD) (Preview), Premium SSD, Standard SSD and Standard Hard Disk Drives (HDD).
Virtual Hard Disk (VHD)	Virtual Hard Disk or VHD is a disk image file representing a computer's hard drive. These disk images are used by Azure virtual machines (VMs).
Virtual Machine Scale Sets (VMSS)	Azure virtual machine scale sets let developers create and manage a group of identical, load balanced and autoscaling VMs.
Azure Files	Fully managed file shares in the cloud that are accessible via the industry standard Server Message Block (SMB) protocol. They can be mounted concurrently by cloud or on-premises deployments of Windows, Linux and macOS. Azure file shares can also be cached on Windows Servers with Azure File Sync for fast access near where data is being used.
Application Gateway	A web traffic load balancer that enables developers to manage traffic to specific web applications.
Azure Active Directory (AAD)	A multi-tenant, cloud-based identity and access management service which helps employees sign in and access resources.
Azure PostgreSQL	It's a fully managed database as a service offering that can handle mission-critical workloads with predictable performance, security, high availability, and dynamic scalability.
Azure Blob Storage	Microsoft's object storage solution for the cloud. Blob storage is optimized for storing massive amounts of unstructured data, such as text.
Virtual Network (VNet)	Enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the Internet and on-premises networks.
SolrCloud	An open-source enterprise search platform that includes full-text search, hit highlighting, faceted search, real-time indexing, dynamic clustering, database integration, NoSQL features and rich document (e.g., Word, PDF) handling.

About Rocket Software

Rocket Software partners with the largest Fortune 1000 organizations to solve their most complex IT challenges across Applications, Data and Infrastructure. Rocket Software brings customers from where they are in their modernization journey to where they want to be by architecting innovative solutions that deliver next-generation experiences. Over 10 million global IT and business professionals trust Rocket Software to deliver solutions that improve responsiveness to change and optimize workloads. Rocket Software enables organizations to modernize in place with a hybrid cloud strategy to protect investment, decrease risk and reduce time to value. Rocket Software is a privately held U.S. corporation headquartered in the Boston area with centers of excellence strategically located throughout North America, Europe, Asia and Australia. Rocket Software is a portfolio company of Bain Capital Private Equity. Follow Rocket Software on LinkedIn and Twitter.

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