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Azure permissions

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This article lists the permissions for Azure resource providers, which are used in built-in roles. You can use these permissions in your own Azure custom roles to provide granular access control to resources in Azure. The permissions are always evolving. To get the latest permissions, use Get-AzProviderOperation or az provider operation list.

Click the resource provider name in the following list to see the list of permissions.

General

⬚ Expand table

Resource provider	Description	Azure service
Microsoft.Addons		core
Microsoft.Capacity		core
Microsoft.Commerce		core
Microsoft.Marketplace		core
Microsoft.MarketplaceOrdering		core
Microsoft.Quota		Azure Quotas
Microsoft.Subscription		core
Microsoft.Support		core

Compute

⬚ Expand table

Resource provider	Description	Azure service
microsoft.app		Azure Container Apps

Microsoft.AppPlatform	A fully managed Spring Cloud service, built and operated with Pivotal.	Azure Spring Apps
Microsoft.AVS		Azure VMware Solution
Microsoft.Batch	Cloud-scale job scheduling and compute management.	Batch
Microsoft.ClassicCompute		Classic deployment model virtual machine
Microsoft.Compute	Access cloud compute capacity and scale on demand (such as virtual machines) and only pay for the resources you use.	Virtual Machines Virtual Machine Scale Sets
Microsoft.ComputeSchedule		Azure Virtual Desktop
microsoft.connectedvmwarevsphere		Azure Arc-enabled VMware vSphere
Microsoft.DesktopVirtualization	The best virtual desktop experience, delivered on Azure.	Azure Virtual Desktop
Microsoft.ServiceFabric	Develop microservices and orchestrate containers on Windows or Linux.	Service Fabric

Networking

⬚ Expand table

Resource provider	Description	Azure service

Microsoft.Cdn	Ensure secure, reliable content delivery with broad global reach.	Content Delivery Network
Microsoft.ClassicNetwork		Classic deployment model virtual network
Microsoft.MobileNetwork		Azure Private 5G Core
Microsoft.Network	Connect cloud and on-premises infrastructure and services to provide your customers and users the best possible experience.	Application Gateway Azure Bastion Azure DDoS Protection Azure DNS Azure ExpressRoute Azure Firewall Azure Front Door Service Azure Private Link Azure Route Server Load Balancer Network Watcher Traffic Manager Virtual Network Virtual Network NAT Virtual Network Manager Virtual WAN VPN Gateway

Storage

⛶ Expand table

Resource provider	Description	Azure service
Microsoft.ClassicStorage		Classic deployment model storage
Microsoft.DataShare	A simple and safe service for sharing big	Azure Data Share

	data with external organizations.	
Microsoft.ElasticSan		Azure Elastic SAN
Microsoft.NetApp	Enterprise-grade Azure file shares, powered by NetApp.	Azure NetApp Files
Microsoft.Storage	Get secure, massively scalable cloud storage for your data, apps, and workloads.	Storage
Microsoft.StorageCache	File caching and Lustre file system capabilities for high-performance computing (HPC).	Azure HPC Cache Azure Managed Lustre
Microsoft.StorageSync		Storage

Web and Mobile

⌞⌝ Expand table

Resource provider	Description	Azure service
Microsoft.CertificateRegistration	Allow an application to use its own credentials for authentication.	App Service Certificates
Microsoft.DomainRegistration		App Service
Microsoft.Maps	Simple and secure location APIs provide geospatial context to data.	Azure Maps
Microsoft.Media	Encode, store, and stream video and audio at scale.	Media Services

Microsoft.SignalRService	Add real-time web functionalities easily.	Azure SignalR Service
microsoft.web	Quickly create and deploy mission critical web apps at scale.	App Service Azure Functions

Containers

Expand table

Resource provider	Description	Azure service
Microsoft.ContainerInstance	Easily run containers on Azure without managing servers.	Container Instances
Microsoft.ContainerRegistry	Store and manage container images across all types of Azure deployments.	Container Registry
Microsoft.ContainerService	Accelerate your containerized application development without compromising security.	Azure Kubernetes Service (AKS)
Microsoft.RedHatOpenShift		Azure Red Hat OpenShift

Databases

Expand table

Resource provider	Description	Azure service
Microsoft.Cache	Power applications with high-throughput, low-	Azure Cache for Redis

	latency data access.	
Microsoft.DBforMariaDB	Managed MariaDB database service for app developers.	Azure Database for MariaDB
Microsoft.DBforMySQL	Managed MySQL database service for app developers.	Azure Database for MySQL
Microsoft.DBforPostgreSQL	Managed PostgreSQL database service for app developers.	Azure Database for PostgreSQL
Microsoft.DocumentDB	A NoSQL document database-as-a-service.	Azure Cosmos DB
Microsoft.Sql	Managed, intelligent SQL in the cloud.	Azure SQL Database Azure SQL Managed Instance Azure Synapse Analytics
Microsoft.SqlVirtualMachine	Host enterprise SQL Server apps in the cloud.	SQL Server on Azure Virtual Machines

Analytics

⛶ Expand table

Resource provider	Description	Azure service
Microsoft.AnalysisServices	Enterprise-grade analytics engine as a service.	Azure Analysis Services
Microsoft.Databricks	Fast, easy, and collaborative Apache Spark-based analytics platform.	Azure Databricks
Microsoft.DataFactory	Hybrid data integration at enterprise scale,	Data Factory

	made easy.	
Microsoft.DataLakeAnalytics	Distributed analytics service that makes big data easy.	Data Lake Analytics
Microsoft.DataLakeStore	Highly scalable and cost-effective data lake solution for big data analytics.	Azure Data Lake Storage Gen2
Microsoft.HDInsight	Provision cloud Hadoop, Spark, R Server, HBase, and Storm clusters.	HDInsight
Microsoft.Kusto	Service for storing and running interactive analytics over Big Data.	Azure Data Explorer
Microsoft.PowerBIDedicated	Manage Power BI Premium dedicated capacities for exclusive use by an organization.	Power BI Embedded
Microsoft.Purview		Microsoft Purview
Microsoft.Synapse		Azure Synapse Analytics

AI + machine learning

Expand table

Resource provider	Description	Azure service
Microsoft.AgFoodPlatform		Microsoft Azure Data Manager for Agriculture
Microsoft.BotService	Intelligent, serverless bot service that scales on demand.	Azure Bot Service

Microsoft.CognitiveServices	Add smart API capabilities to enable contextual interactions.	Cognitive Services
Microsoft.HealthBot		Azure AI Health Bot
Microsoft.MachineLearningServices	Enterprise-grade machine learning service to build and deploy models faster.	Machine Learning
Microsoft.Search	Leverage search services and get comprehensive results.	Azure AI Search

Internet of Things

⌞⌝ Expand table

Resource provider	Description	Azure service
Microsoft.AzureSphere		Azure Sphere
Microsoft.Devices	Ensure that your users are accessing your resources from devices that meet your standards for security and compliance.	IoT Hub IoT Hub Device Provisioning Service
Microsoft.DeviceUpdate		Device Update for IoT Hub
Microsoft.DigitalTwins		Azure Digital Twins
Microsoft.IoTCentral	Experience the simplicity of SaaS for IoT, with no cloud expertise required.	IoT Central
Microsoft.IoTFirmwareDefense		Microsoft Defender for IoT

Microsoft.IoTSecurity		IoT security
Microsoft.StreamAnalytics	Real-time data stream processing from millions of IoT devices.	Stream Analytics

Mixed reality

⛶ **Expand table**

Resource provider	Description	Azure service
Microsoft.MixedReality	Blend your physical and digital worlds to create immersive, collaborative experiences.	Azure Spatial Anchors

Integration

⛶ **Expand table**

Resource provider	Description	Azure service
Microsoft.ApiCenter		Azure API Center
Microsoft.ApiManagement	Easily build and consume Cloud APIs.	API Management
Microsoft.AppConfiguration	Fast, scalable parameter storage for app configuration.	Azure App Configuration
Microsoft.Communication		Azure Communication Services
Microsoft.EventGrid	Get reliable event delivery at massive scale.	Event Grid

Microsoft.EventHub	Receive telemetry from millions of devices.	Event Hubs
Microsoft.HealthcareApis		Azure API for FHIR
Microsoft.HealthDataAI Services		Azure Health Data Services
Microsoft.Logic	Automate the access and use of data across clouds without writing code.	Logic Apps
Microsoft.ModSimWork bench		Azure Modeling and Simulation Workbench
Microsoft.NotificationHubs	Send push notifications to any platform from any back end.	Notification Hubs
Microsoft.Relay	Expose services that run in your corporate network to the public cloud.	Azure Relay
Microsoft.ResourceNotif ications		Azure Event Grid
Microsoft.ServiceBus	Connect across private and public cloud environments.	Service Bus
Microsoft.ServicesHub		Services Hub

Identity

⌞⌝ Expand table

Resource provider	Description	Azure service

Microsoft.AAD	Join Azure virtual machines to a domain without domain controllers.	Microsoft Entra Domain Services
microsoft.aadiam		
Microsoft.ADHybridHealthService	Robust monitoring of your on-premises identity infrastructure.	Microsoft Entra ID
Microsoft.AzureActiveDirectory	Synchronize on-premises directories and enable single sign-on.	Azure Active Directory B2C
Microsoft.ManagedIdentity	An automatically managed identity in Microsoft Entra ID that authenticates to any service that supports Microsoft Entra	Managed identities for Azure resources

Security

⌞⌝ **Expand table**

Resource provider	Description	Azure service
Microsoft.AppComplianceAutomation		App Compliance Automation Tool for Microsoft 365
Microsoft.DataProtection		Data Protection
Microsoft.KeyVault	Safeguard and maintain control of keys and other secrets.	Key Vault
Microsoft.Security	Protect your enterprise from advanced threats	Security Center

	across hybrid cloud workloads.	
Microsoft.SecurityGraph		
Microsoft.SecurityInsights		Microsoft Sentinel

DevOps

⛶ Expand table

Resource provider	Description	Azure service
Microsoft.Chaos		Azure Chaos Studio
Microsoft.DevCenter		Azure Deployment Environments
Microsoft.DevTestLab	Quickly create environments using reusable templates and artifacts.	Azure Lab Services
Microsoft.LabServices	Set up labs for classrooms, trials, development and testing, and other scenarios.	Azure Lab Services
Microsoft.LoadTestService		Azure Load Testing
Microsoft.VisualStudio	The powerful and flexible environment for developing applications in the cloud.	Azure DevOps

Migration

⌞⌝ Expand table

Resource provider	Description	Azure service
Microsoft.DataBox	Move stored or in-flight data to Azure quickly and cost-effectively.	Azure Data Box
Microsoft.DataBoxEdge	Appliances and solutions for data transfer to Azure and edge compute.	Azure Stack Edge
Microsoft.DataMigration	Simplify on-premises database migration to the cloud.	Azure Database Migration Service
Microsoft.Migrate	Easily discover, assess, right-size, and migrate your on-premises VMs to Azure.	Azure Migrate
Microsoft.OffAzure		Azure Migrate

Monitor

⌞⌝ Expand table

Resource provider	Description	Azure service
Microsoft.AlertsManagement	Analyze all of the alerts in your Log Analytics repository.	Azure Monitor
Microsoft.Dashboard		Azure Managed Grafana
Microsoft.Insights	Full observability into your applications, infrastructure, and network.	Azure Monitor

microsoft.monitor		Azure Monitor
Microsoft.OperationalInsights		Azure Monitor
Microsoft.OperationsManagement	A simplified management solution for any enterprise.	Azure Monitor

Management and governance

⌐⌐ Expand table

Resource provider	Description	Azure service
Microsoft.Advisor	Your personalized Azure best practices recommendation engine.	Azure Advisor
Microsoft.Authorization		Azure Policy Azure RBAC Azure Resource Manager
Microsoft.Automation	Simplify cloud management with process automation.	Automation
Microsoft.Billing	Manage your subscriptions and see usage and billing.	Cost Management + Billing
Microsoft.BillingBenefits		Azure savings plans
Microsoft.Blueprint	Enabling quick, repeatable creation of governed environments.	Azure Blueprints
Microsoft.Carbon		Azure carbon optimization

Microsoft.Consumption	Programmatic access to cost and usage data for your Azure resources.	Cost Management
Microsoft.CostManagement	Optimize what you spend on the cloud, while maximizing cloud potential.	Cost Management
Microsoft.CustomerLockbox	Interface for customers to review and approve or reject customer data access requests.	Customer Lockbox for Microsoft Azure
Microsoft.Features		Azure Resource Manager
Microsoft.GuestConfiguration	Audit settings inside a machine using Azure Policy.	Azure Policy
Microsoft.Intune	Enable your workforce to be productive on all their devices, while keeping your organization's information protected.	
Microsoft.Maintenance		Azure Maintenance Azure Update Manager
Microsoft.ManagedServices		Azure Lighthouse
Microsoft.Management	Use management groups to efficiently apply governance controls and manage groups of Azure subscriptions.	Management Groups
Microsoft.PolicyInsights	Summarize policy states for the subscription level policy definition.	Azure Policy

Microsoft.Portal	Build, manage, and monitor all Azure products in a single, unified console.	Azure portal
Microsoft.RecoveryServices	Hold and organize backup data for various Azure services such as IaaS VMs (Linux or Windows) and Azure SQL databases.	Site Recovery
Microsoft.ResourceGraph	Powerful tool to query, explore, and analyze your cloud resources at scale.	Azure Resource Graph
Microsoft.ResourceHealth	Diagnose and get support for service problems that affect your Azure resources.	Azure Service Health
Microsoft.Resources	Deployment and management service for Azure that enables you to create, update, and delete resources in your Azure subscription.	Azure Resource Manager
Microsoft.Solutions	Find the solution to meet the needs of your application or business.	Azure Managed Applications
Microsoft.Workloads		SAP on Azure

Hybrid + multicloud

⌞⌝ Expand table

Resource provider	Description	Azure service

Microsoft.AzureStack	Build and run innovative hybrid applications across cloud boundaries.	Azure Stack
Microsoft.AzureStackHCI		Azure Stack HCI
Microsoft.ExtendedLocation		Custom locations
Microsoft.HybridCompute		Azure Arc
Microsoft.HybridConnectivity		
Microsoft.HybridContainerService		
Microsoft.Kubernetes		Azure Arc-enabled Kubernetes
Microsoft.KubernetesConfiguration		Azure Arc-enabled Kubernetes
Microsoft.ResourceConnector		

Next steps

- Match resource provider to service
- Azure built-in roles
- Cloud Adoption Framework: Resource access management in Azure

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