

# Service Bus Usage Scenarios, Limits & Pricing

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**Alan Smith**

ACTIVE SOLUTION

@alansmith [www.cloudcasts.net](http://www.cloudcasts.net)

# Overview



## **Service Bus Usage Scenarios**

- Global Azure Racing Game
- Asynchronous website content update

## **Demo: Global Azure Racing Game**

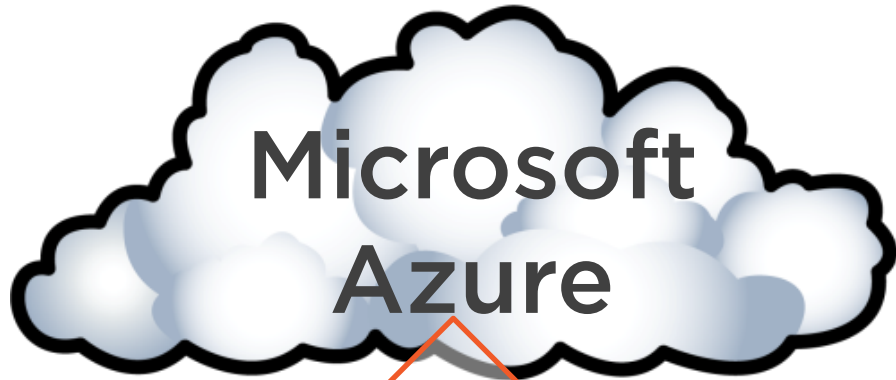
## **Service Bus Limits**

## **Service Bus Tiers & Pricing**

# Service Bus Usage Scenarios

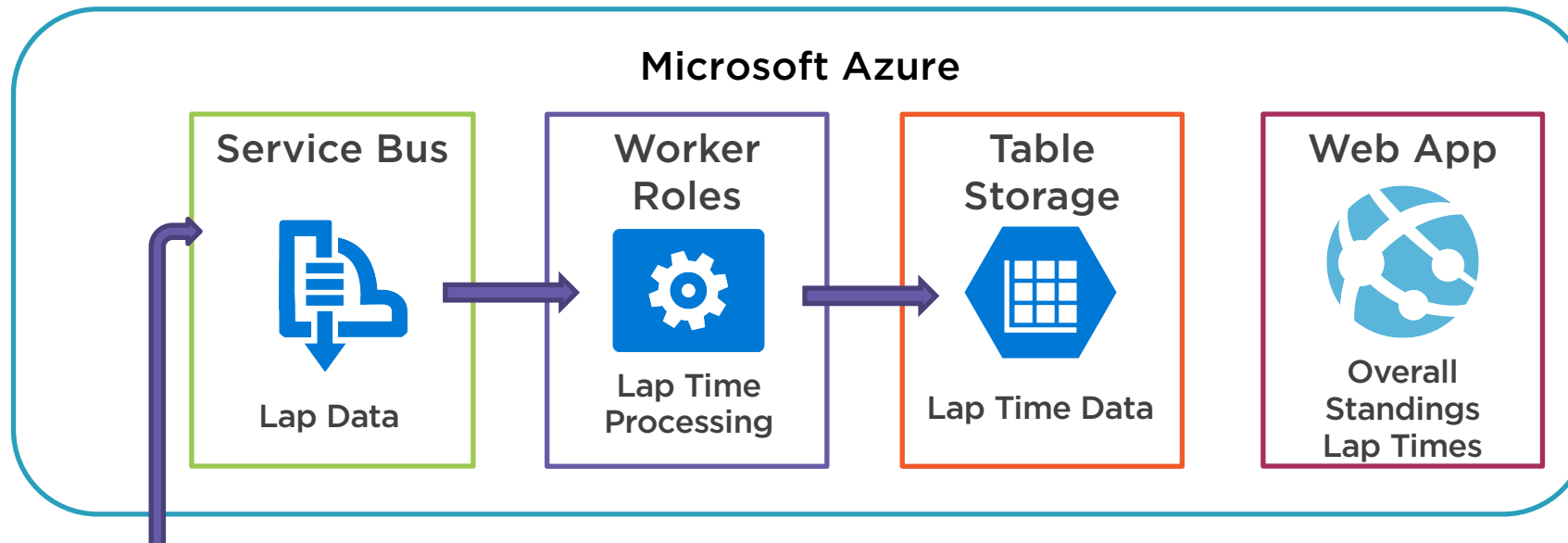
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# Global Azure Racing Game



- Used as a Global Lab for the Global Azure Bootcamp events
- Microsoft XNA Racing Game integrated with Azure Services
- Azure Service Bus used for
  - Lap time data
  - Driver telemetry data
  - Push notification service

# Lap Time Data



**2015 Global Azure BOOTCAMP**

Global Azure Bootcamp Racing  
Questions on the GAB Racing Lab: Email Alan Smith at [cloudcasts.net@gmail.com](mailto:cloudcasts.net@gmail.com)  
Follow Alan on twitter: @alansmith

Videos  
[Global Azure Bootcamp Racing Lab - Behind the Scenes](#)

GAME OVER  
Thanks for taking part in the Global Azure Bootcamp Racing Game Lab!

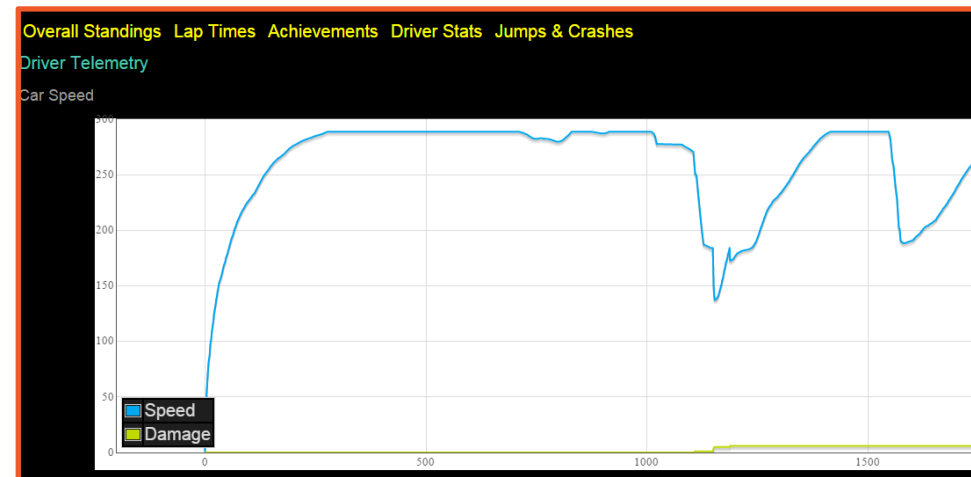
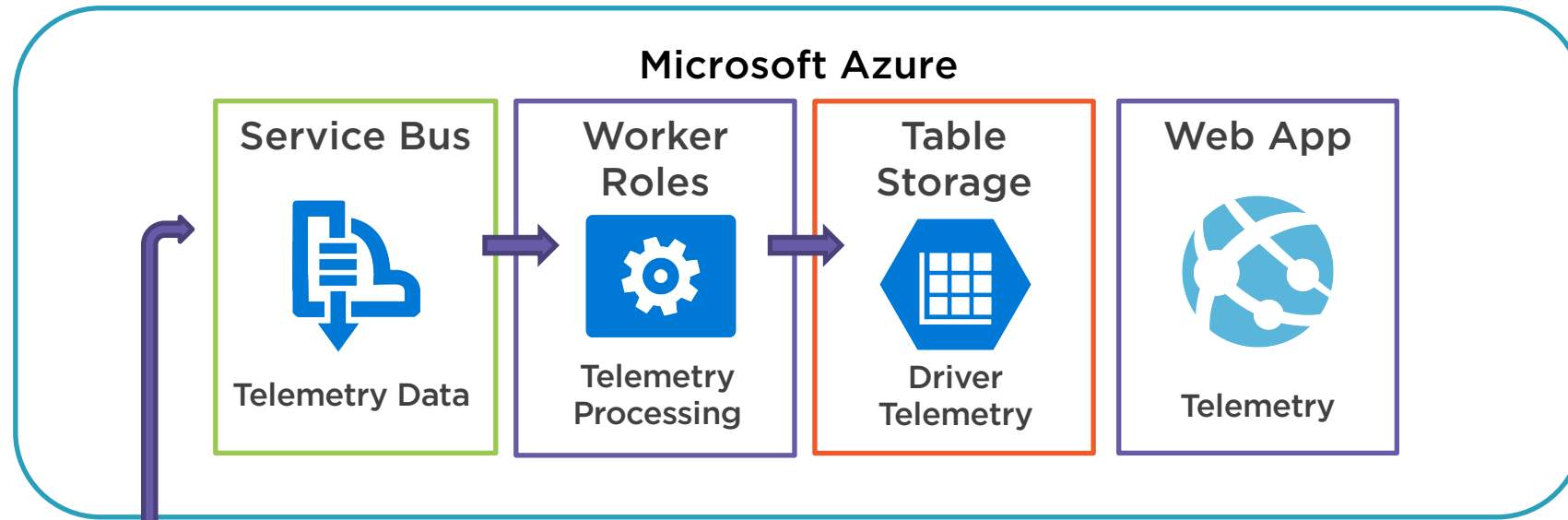
**Overall Standings** [Lap Times](#) [Achievements](#) [Driver Stats](#) [Jumps & Crashes](#)

**Overall Standings - Players**

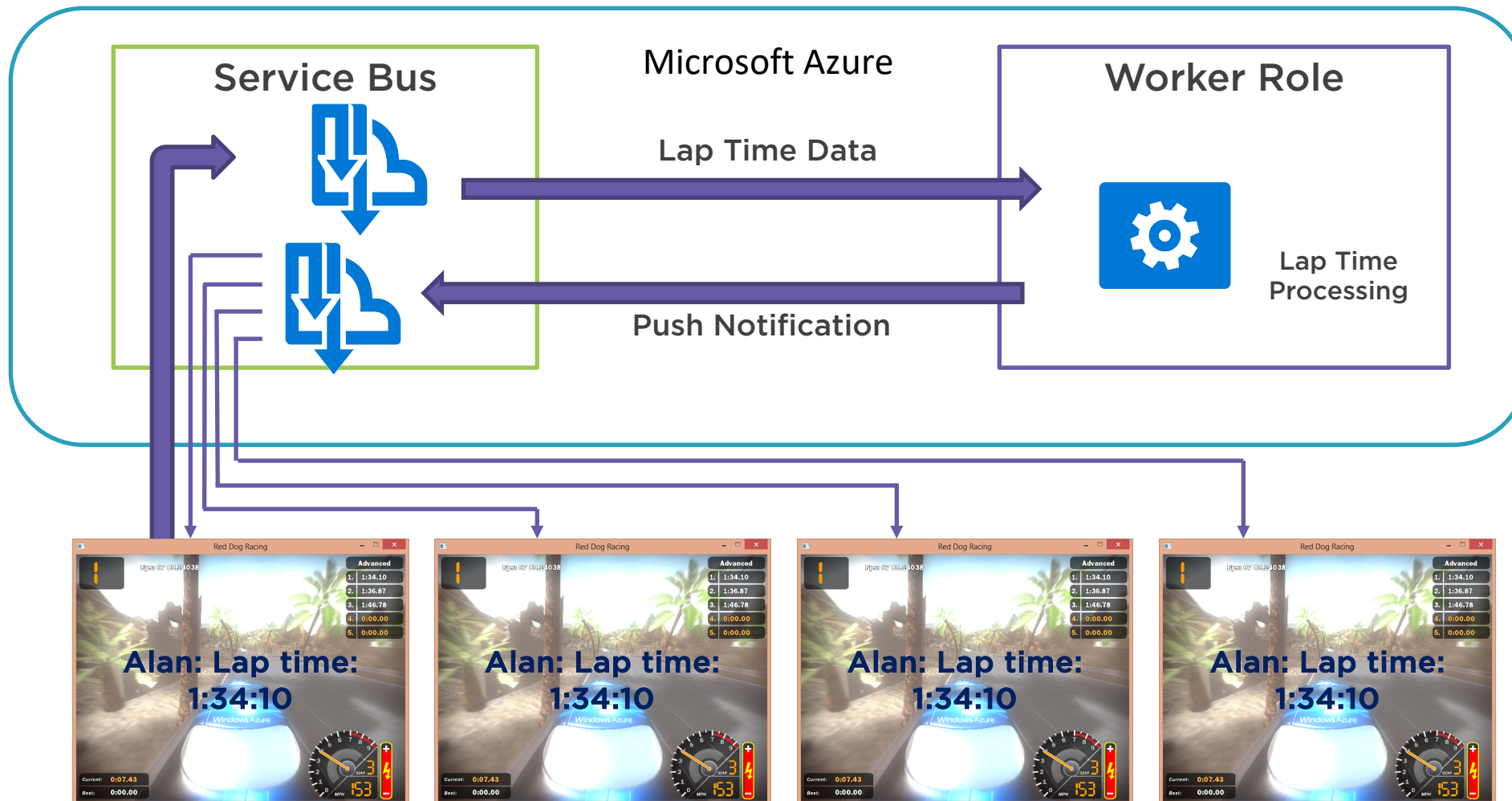
[Player Standings](#) [Location Standings](#) [Country Standings](#)

Position	Name	Country	GAB Event	Points	Beginner	Advanced	Expert
1	@ruisilva450	Portugal	Microsoft Portugal	29916	01:00.563	01:44.258	03:47.516
2	@vintharas	Sweden	SWAG - Stockholm	29748	01:03.487	01:45.325	03:52.420
3	@FineWolf	Canada	Microsoft Canada	29721	01:01.636	01:42.749	03:59.839
4	The Stig	Norway	Oslo	29720	01:05.681	01:46.775	03:47.374
5	JoaobeloSafira	Portugal	Microsoft Portugal	29582	01:06.019	01:50.964	03:36.384
6	@loabn	Sweden	SWAG - Stockholm	29414	01:06.035	01:50.140	03:57.064
7	@maartenballauw	Belgium	Info Support	29304	01:07.717	01:49.477	03:59.312
8	@asvinboy	Malaysia	Malaysia	28978	01:07.902	01:57.171	03:49.414
9	@pterevinto	Uruguay	Infocorp	28837	01:08.066	01:54.959	04:08.754
10	@lukaszgastor	Poland	Radisson Blu Hotel	28620	01:08.359	01:55.465	04:16.092

# Telemetry Data



# Push Notifications

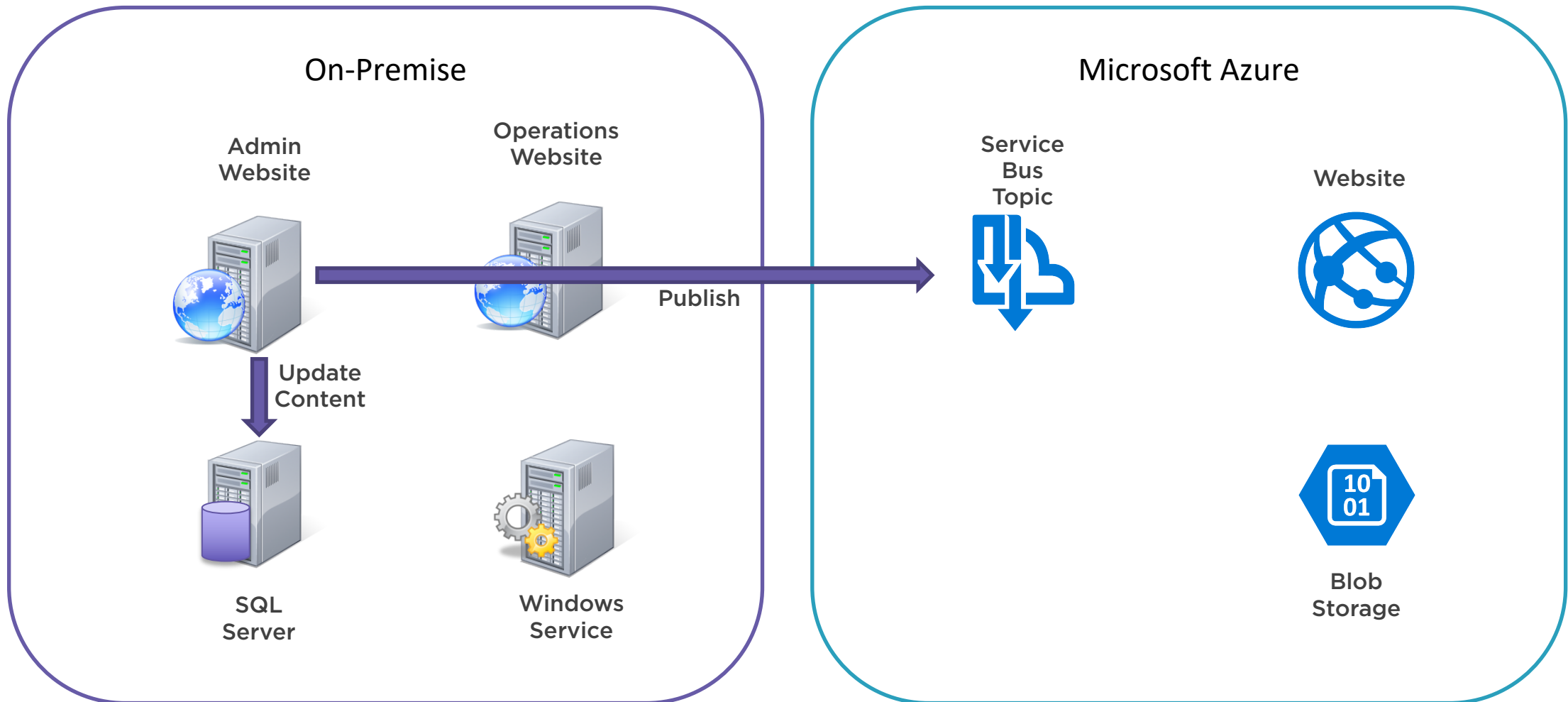


# Web Site Read Model Implementation

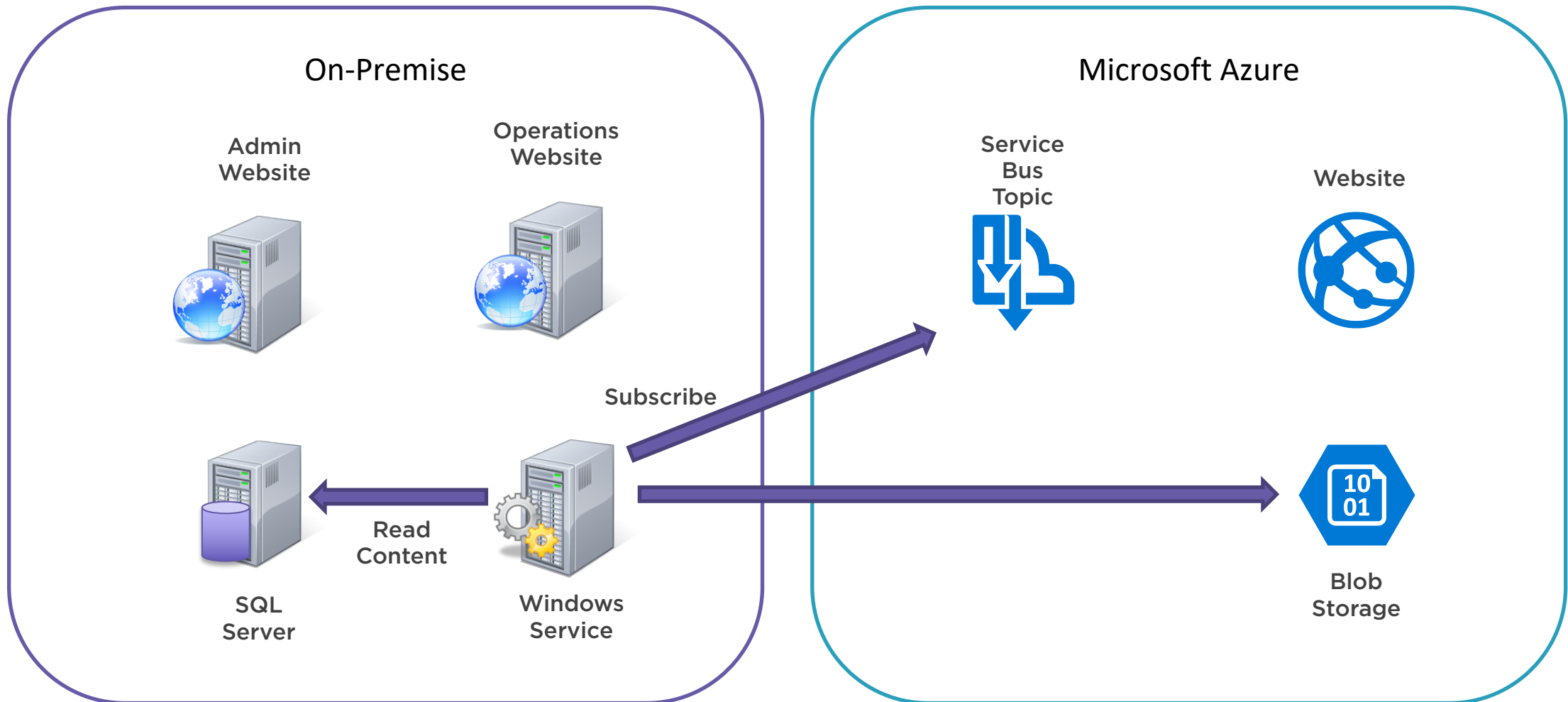
- **Customer solution using Azure Service Bus**
- **Azure hosted website**
  - Up to 250,000 concurrent users
  - Content stored as JSON in Azure blob storage
- **On-premise SQL database and management website**
- **Content needs to be updated asynchronously for hundreds of thousands of users**



# Web Site Read Model Content Update



# Web Site Read Model Content Publication



# Web Site Read Model Browsing

## On-Premise

Admin Website



Operations Website



SQL Server



Windows Service

## Microsoft Azure

Service Bus Topic



Website

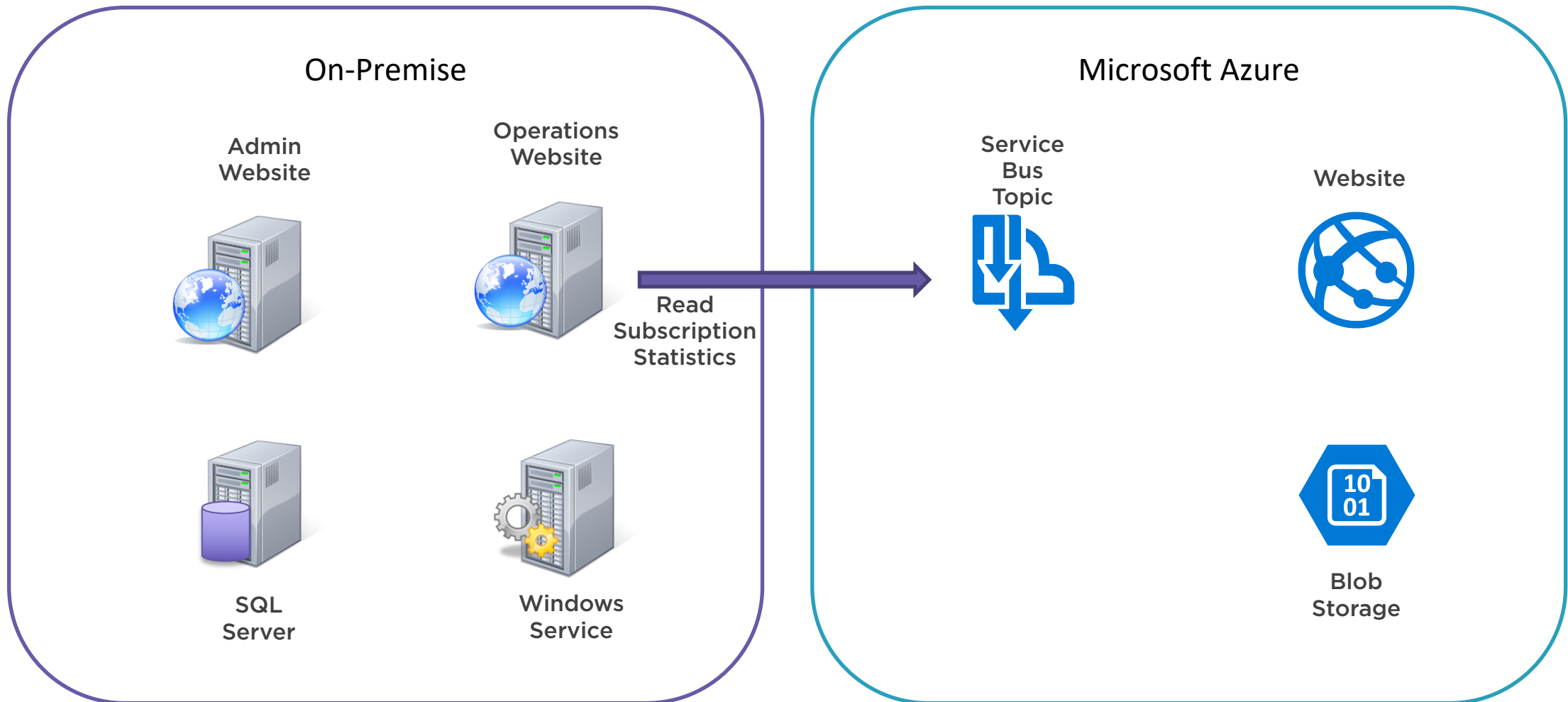


Read Content



Blob Storage

# Web Site Read Model Monitoring



# Demo



## Global Azure Racing Game





- Use of Azure Service Bus for transmitting and processing lap time data

# Service Bus Tiers & Pricing







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# Service Bus Tiers








**Basic** ★

	<b>Shared capacity</b>
	<b>Max message size</b> 256 KB
	<b>Queues</b>
	<b>Variable pricing</b>

**Standard** ★

	<b>Shared capacity</b>
	<b>Max message size</b> 256 KB
	<b>Queues</b>
	<b>Topics</b>
	<b>Messaging operations</b> 12.5M Ops/Month
	<b>Variable pricing</b>

**Premium** ★

	<b>Dedicated capacity</b>
	<b>Max message size</b> 1024 KB
	<b>Queues</b>
	<b>Topics</b>
	<b>Messaging operations</b> Free
	<b>Fixed pricing</b>
	<b>Recommended</b> For Production Workloads

# Limitations

Description	Standard	Premium
Maximum number of namespaces per subscription	100	100
Maximum number of queues and topics per namespace	10,000	1,000 per MU, 4,000 max
Maximum message size	256 KB	1024 KB
Maximum message header size	64 KB	64 KB
Maximum Queue or Topic Size	5 / 80 GB	5 / 80 GB
Maximum number of subscriptions on a topic	2000	2000



# Scalability Targets

Description	Limitation
Message throughput	2000 message operations / second

# Usage Quotas (Not Used)

Description	Limitation
Message throughput	5 billion per month
Relay hours	2 million per month

# Messaging Operations

**40KB** 1

**64KB**

**64KB**

**64KB**

**64KB**

# Messaging Operations

40KB

1

120KB

2

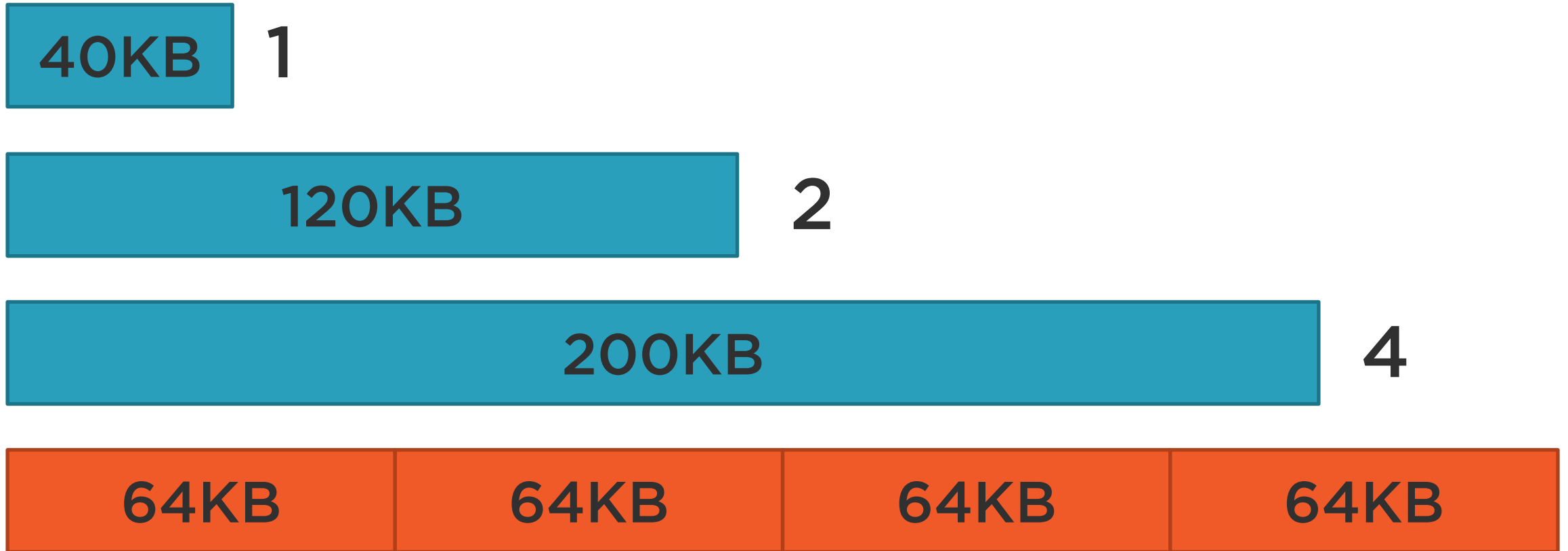
64KB

64KB

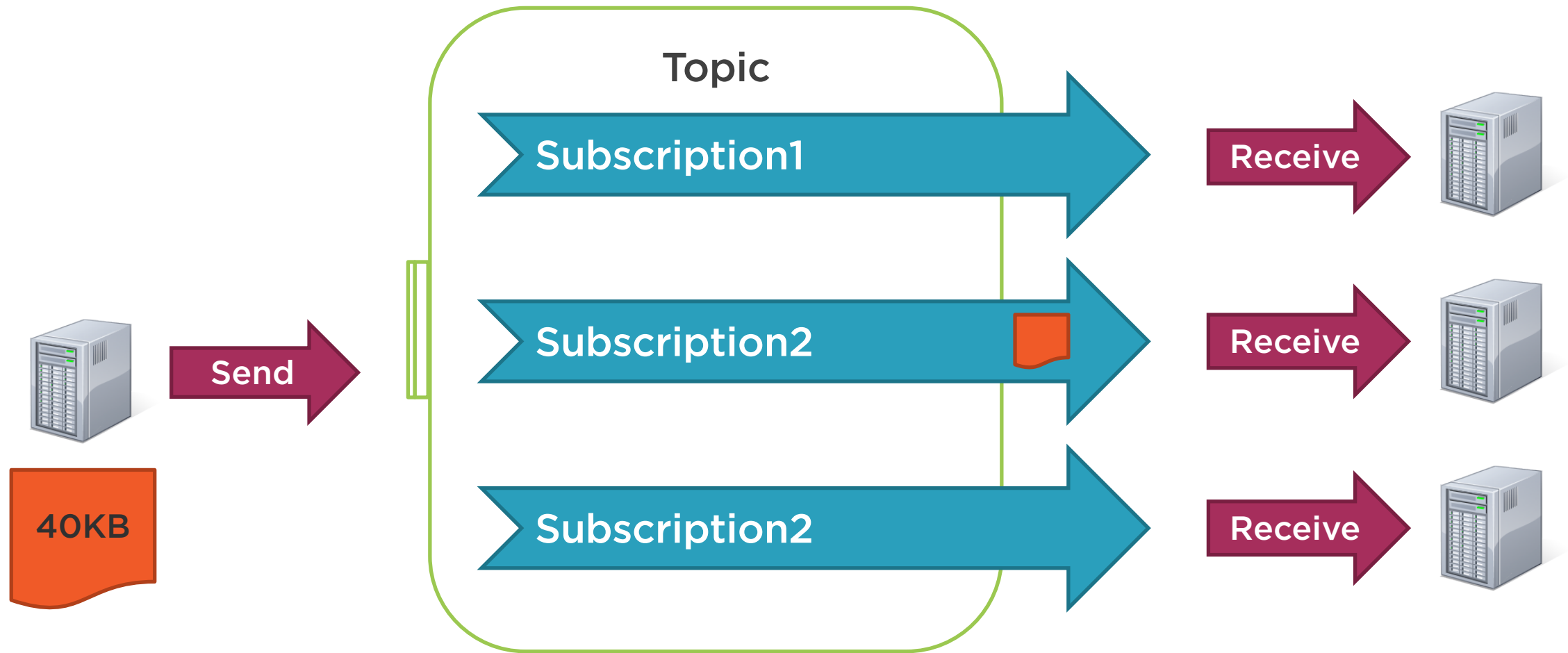
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# Messaging Operations

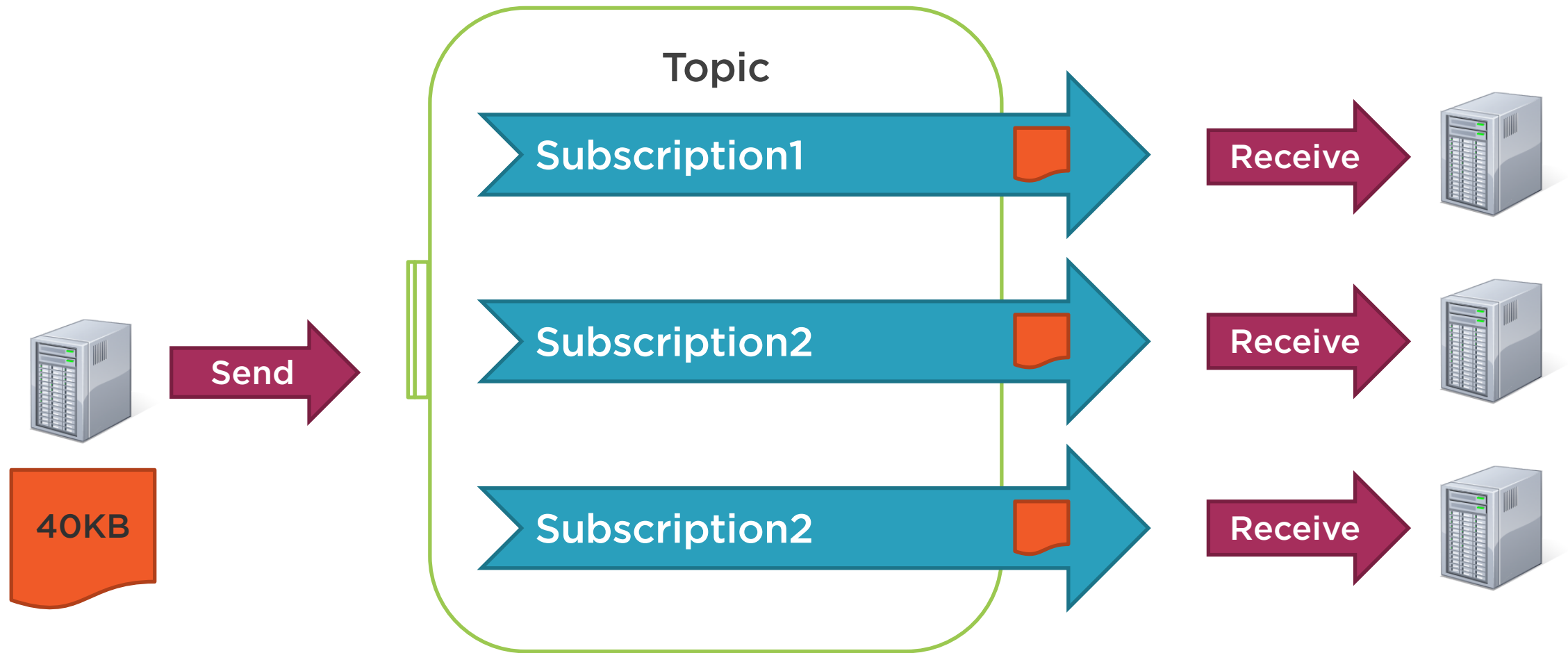


# Messaging Operations



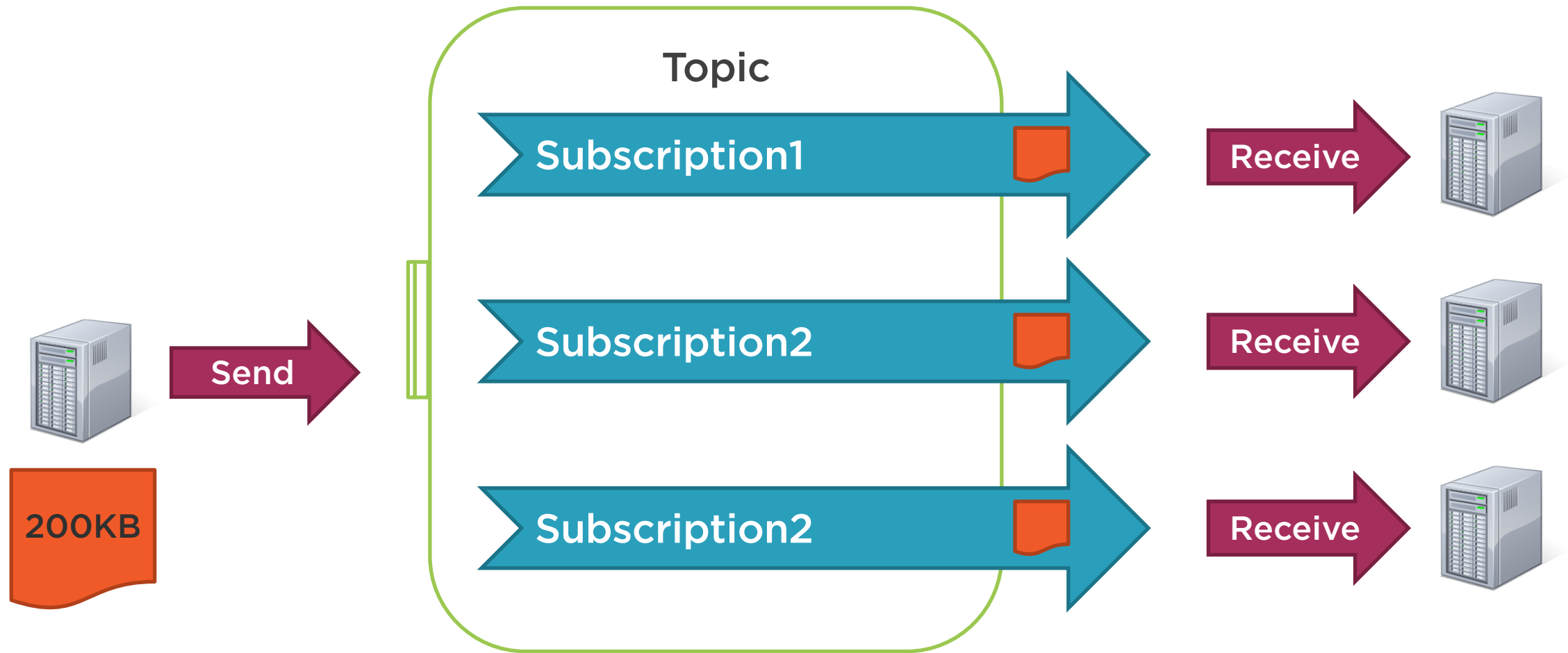
1 Message Operation

# Messaging Operations



**3 Message Operations**

# Messaging Operations



12 Message Operation



# Global Azure Racing Game Pricing

Service	Cost
Data transfer out (GB)	\$4.44
Storage transactions (in 10,000s)	\$0.03
Compute hours	\$2.95
Standard read-access geo redundant	\$0.01
Basic small app service hours	\$2.81
Connections - standard messaging	\$0.05
Operations (in 1,000,000s) - standard messaging	\$0.37

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Description	Cost
Total billing for Azure services consumed in 24 hours	\$10.66
Total cost for Azure Service Bus usage	\$0.42

# Summary



Azure Service Bus is use in a wide range of production scenarios

Standard pricing tier is inexpensive

Basic pricing tier should not be used

Standard pricing tier is used for most scenarios

Premium pricing should be used when performance guarantee is critical

Be aware of quotas and limitations

Consider Event Hub for very high throughput scenarios