

Service Bus Usage Scenarios, Limits & Pricing



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ACTIVE SOLUTION

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Overview



Service Bus Usage Scenarios

- Global Azure Racing Game
- Asynchronous website content update

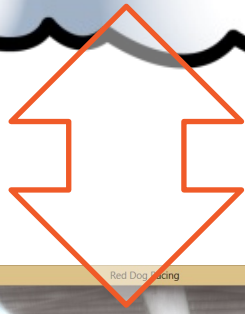
Demo: Global Azure Racing Game

Service Bus Limits

Service Bus Tiers & Pricing

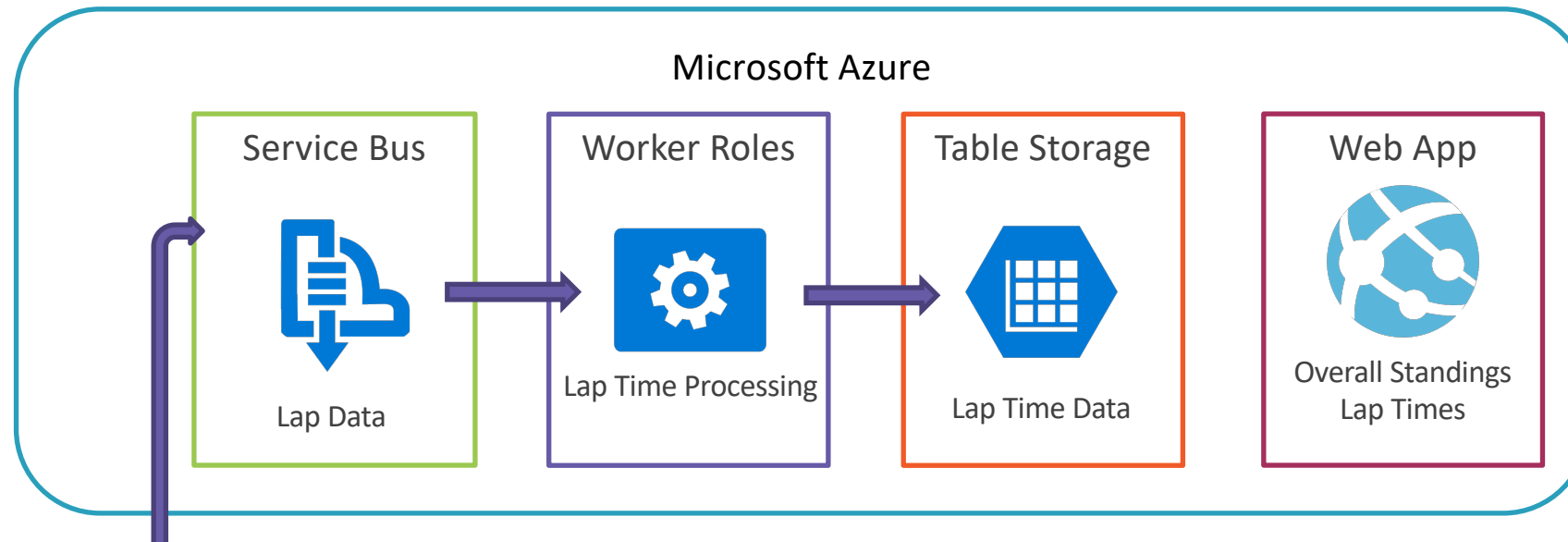
Service Bus Usage Scenarios

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
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!

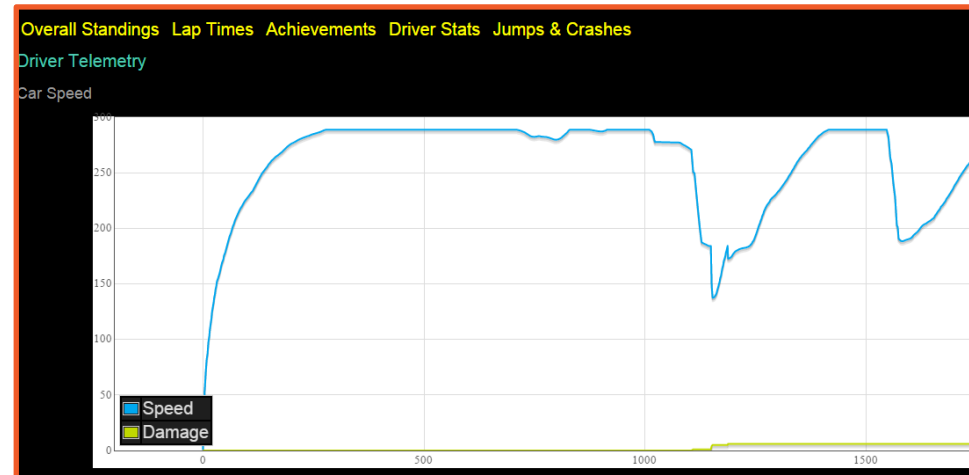
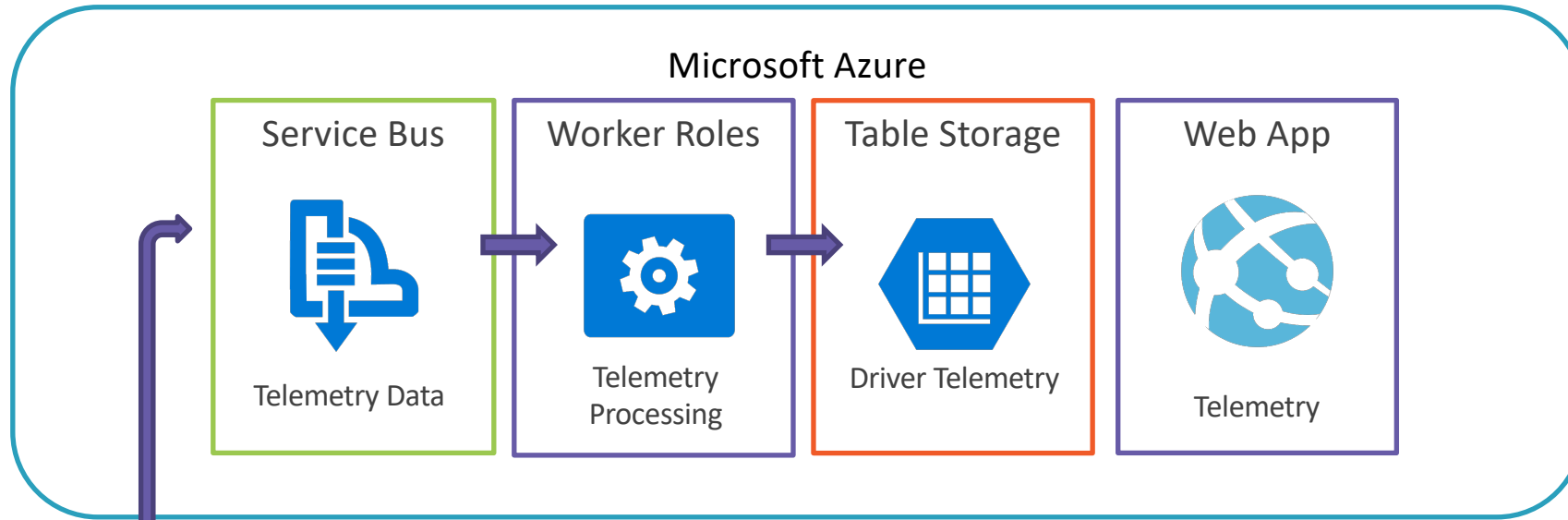
[Overall Standings](#) [Lap Times](#) [Achievements](#) [Driver Stats](#) [Jumps & Crashes](#)

[Overall Standings - Players](#)

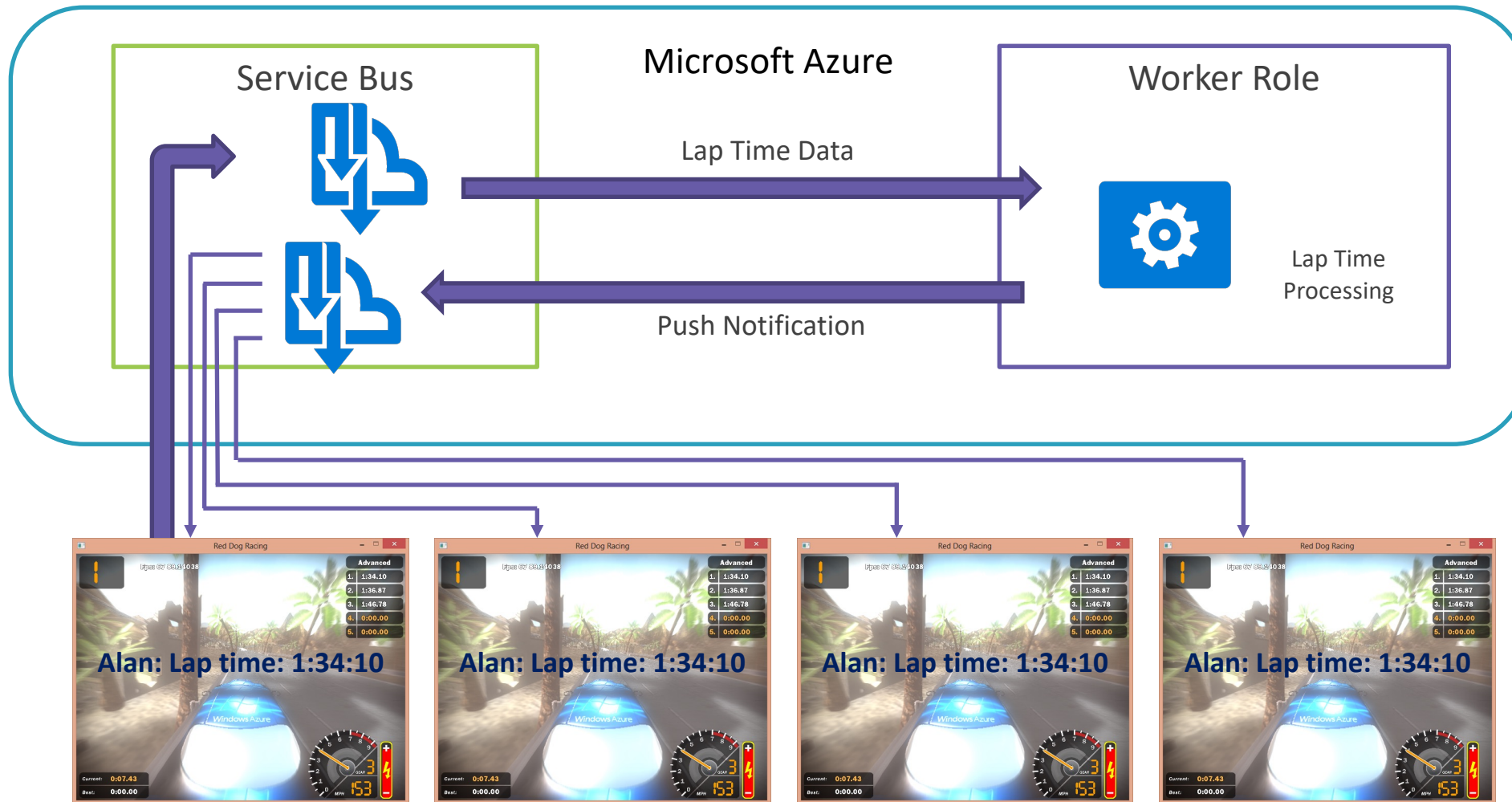
[Player Standings](#) [Location Standings](#) [Country Standings](#)

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	@lloabn	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



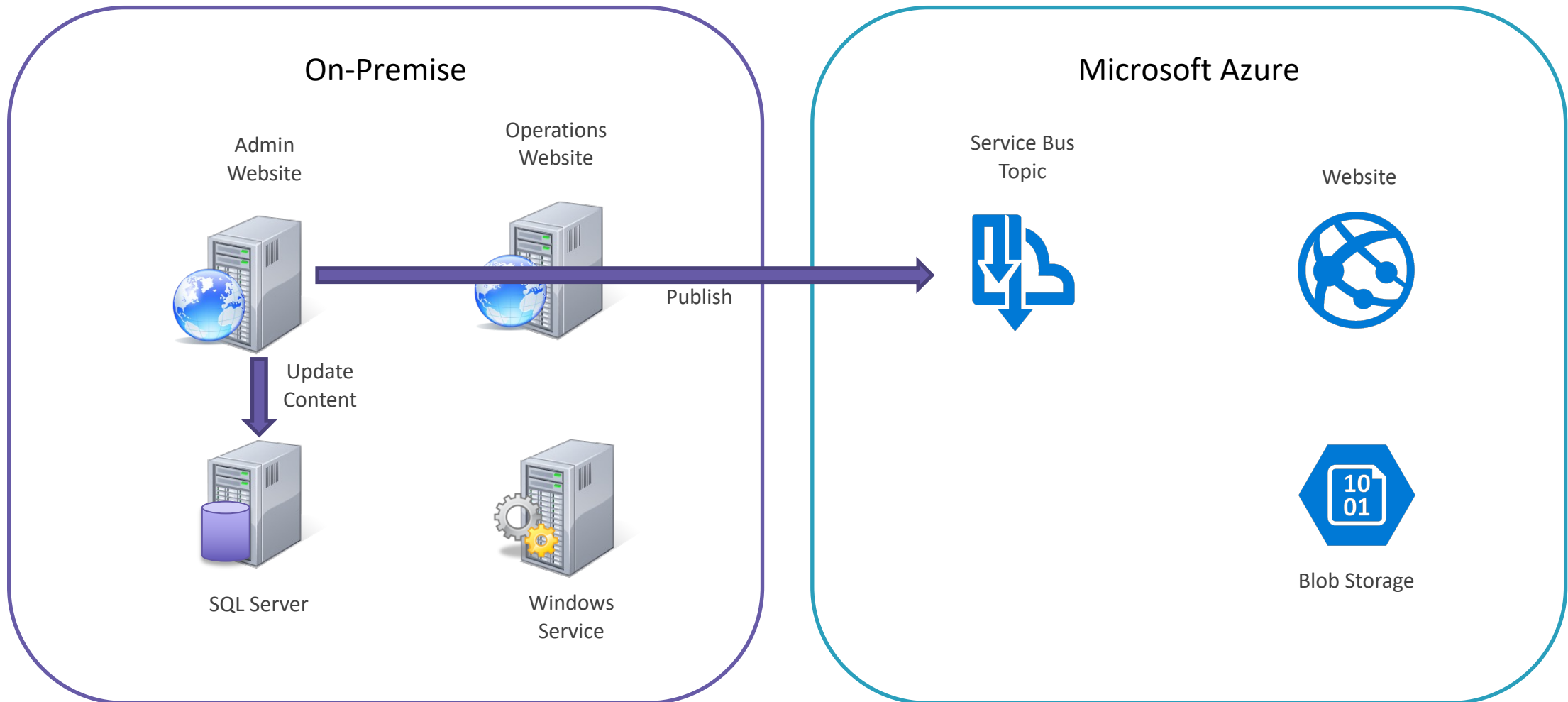
Push Notifications



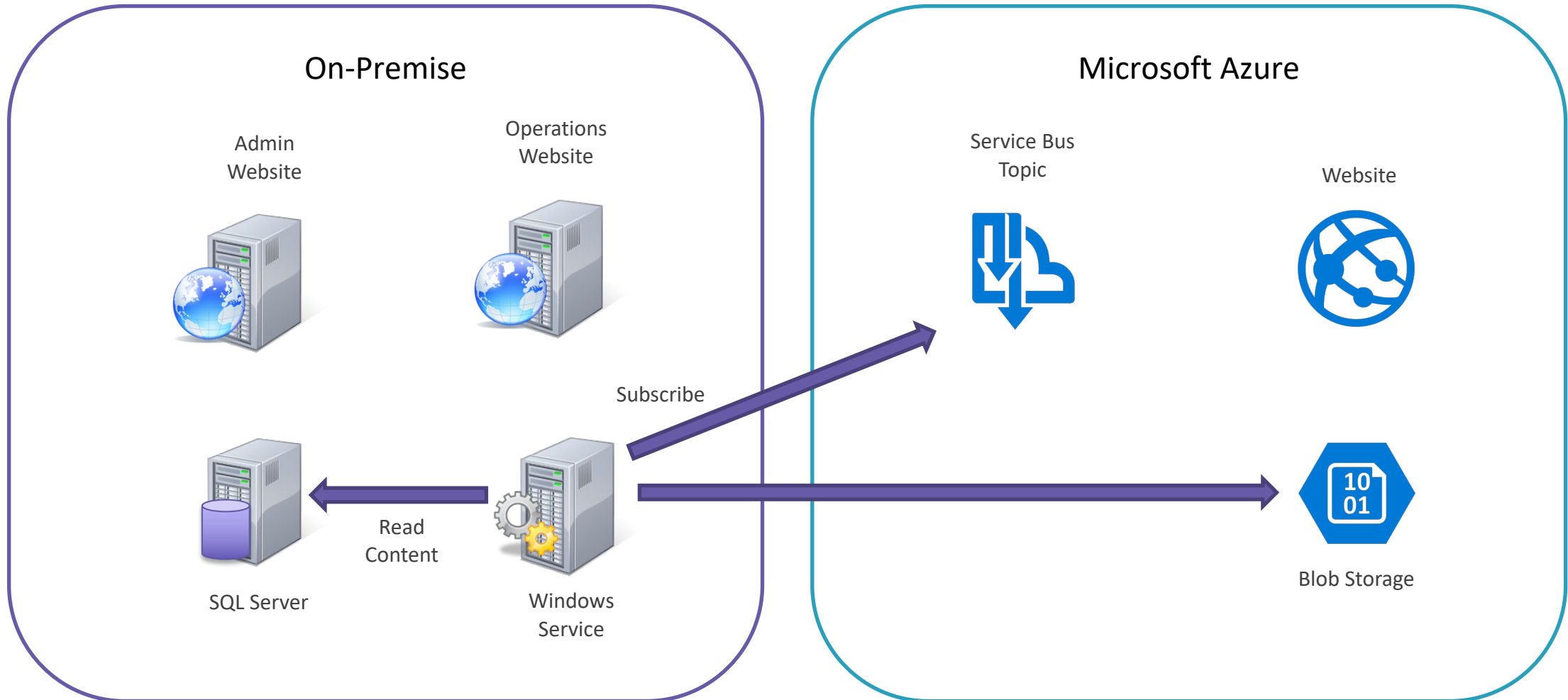
Web Site Read Model Implementation

- 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

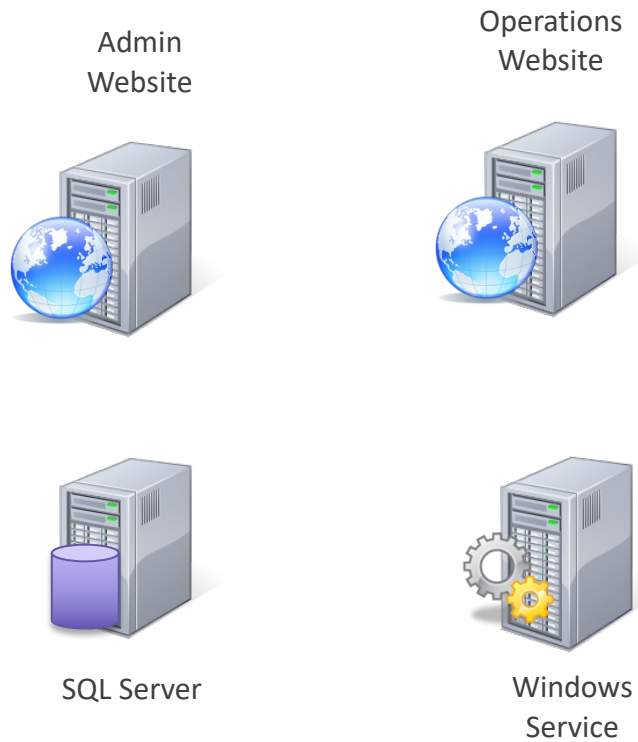


Web Site Read Model Content Publication

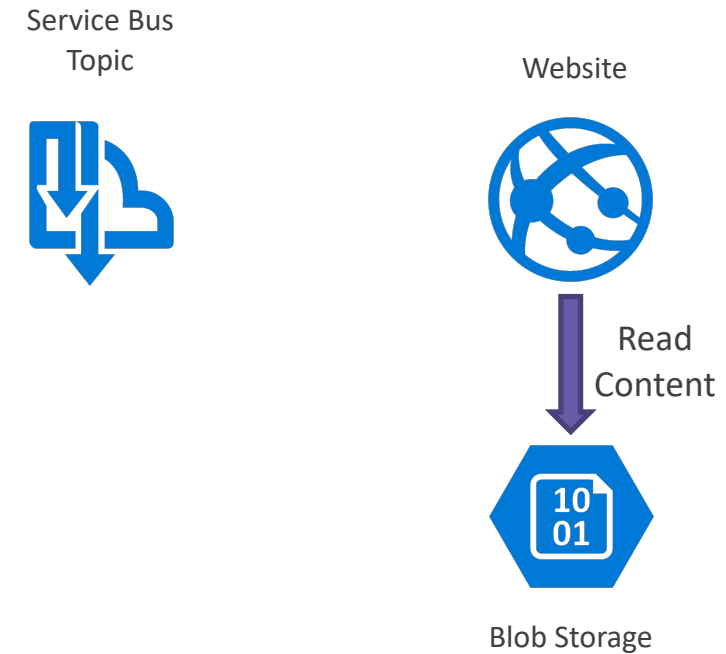


Web Site Read Model Browsing

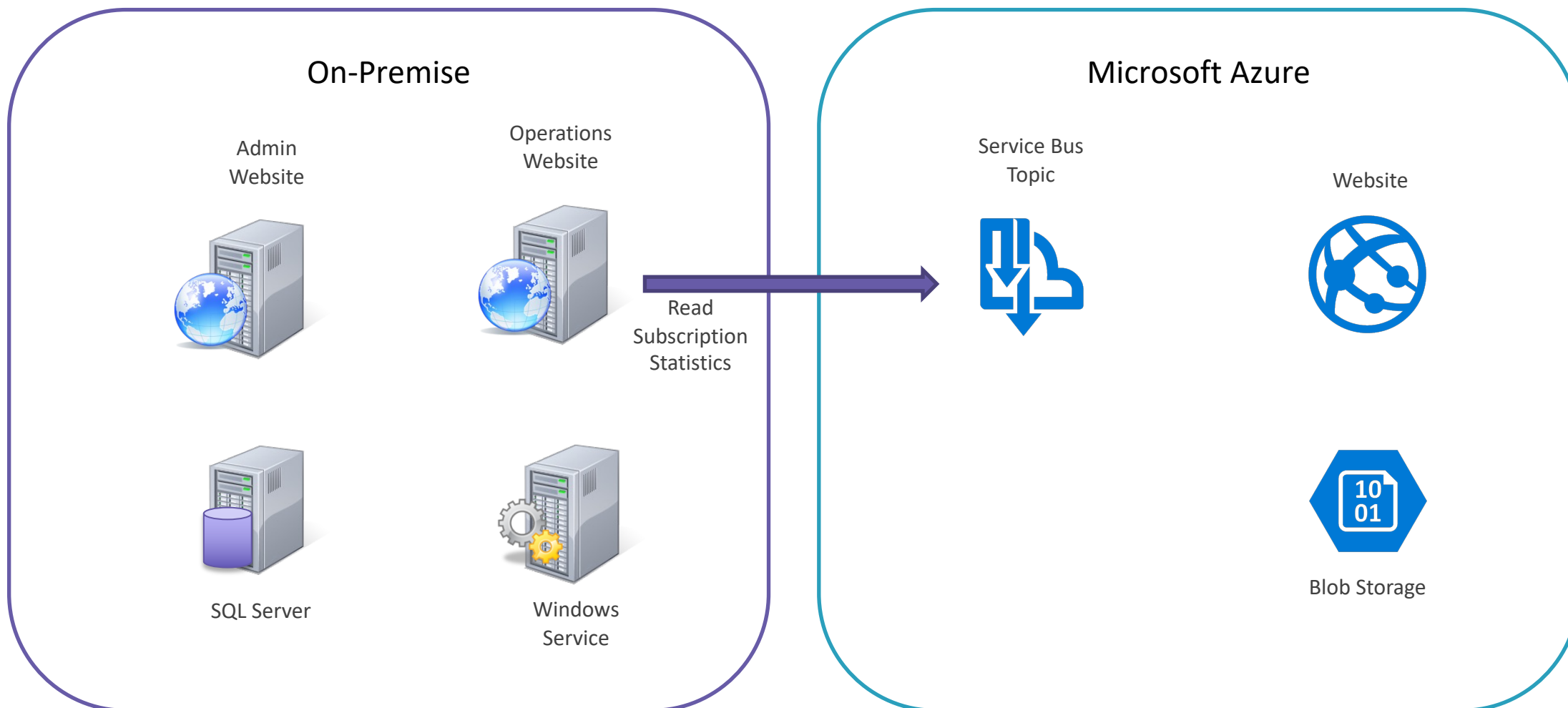
On-Premise



Microsoft Azure



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

Service Bus Tiers








Basic ★

	Shared capacity
	Max message size 256 KB
	Queues
	Variable pricing

Standard ★

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

Premium ★

	Dedicated capacity
	Max message size 1024 KB
	Queues
	Topics
	Messaging operations Free
	Fixed pricing
	Recommended 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)

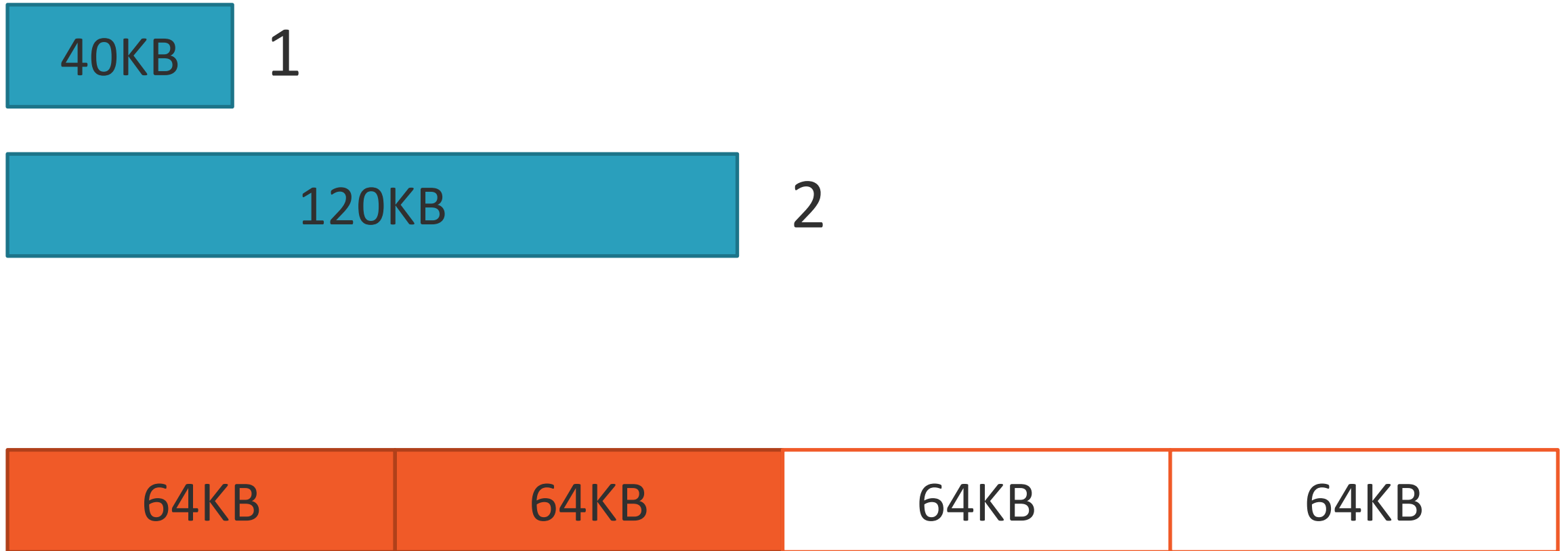
Description	Limitation
Message throughput	5 billion per month
Relay hours	2 million per month

Messaging Operations

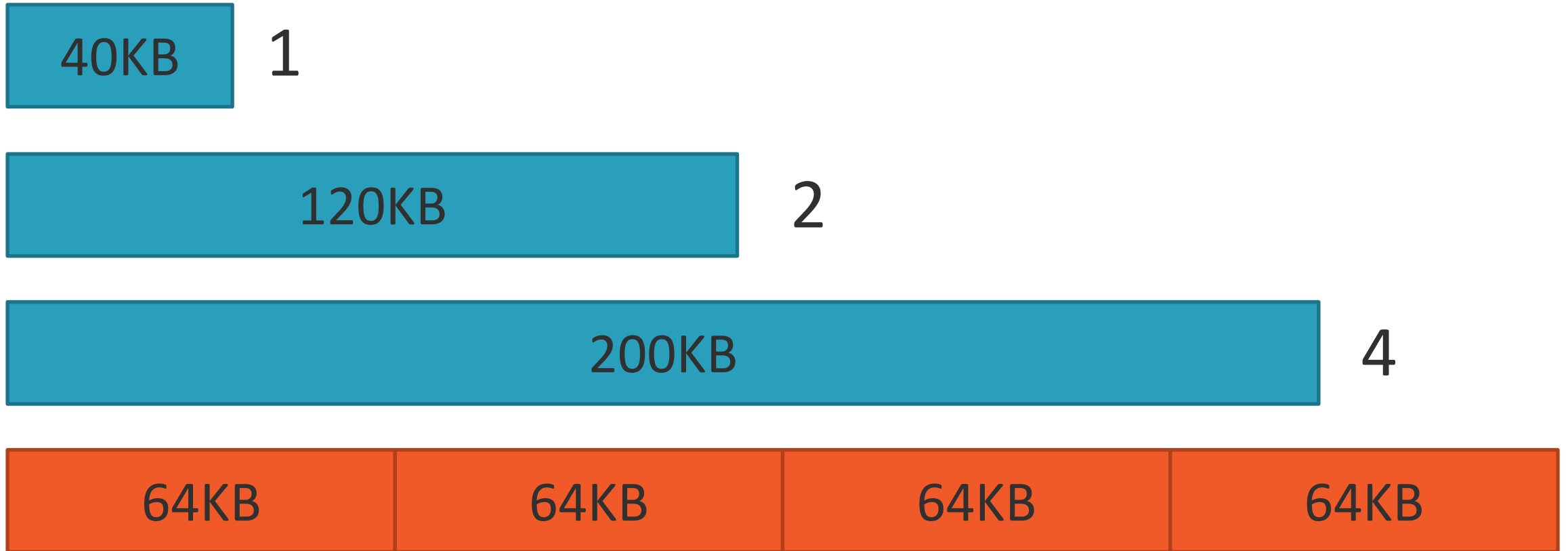
40KB 1

64KB	64KB	64KB	64KB
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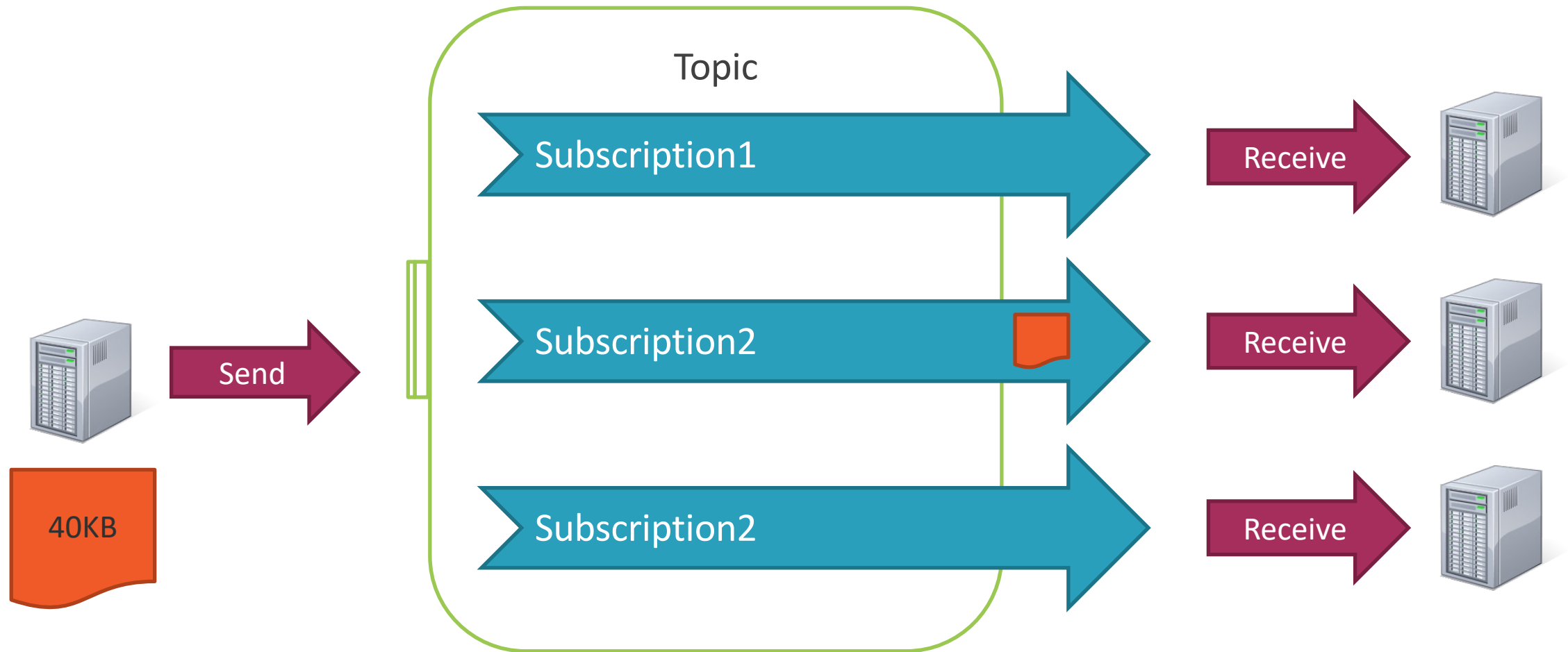
Messaging Operations



Messaging Operations

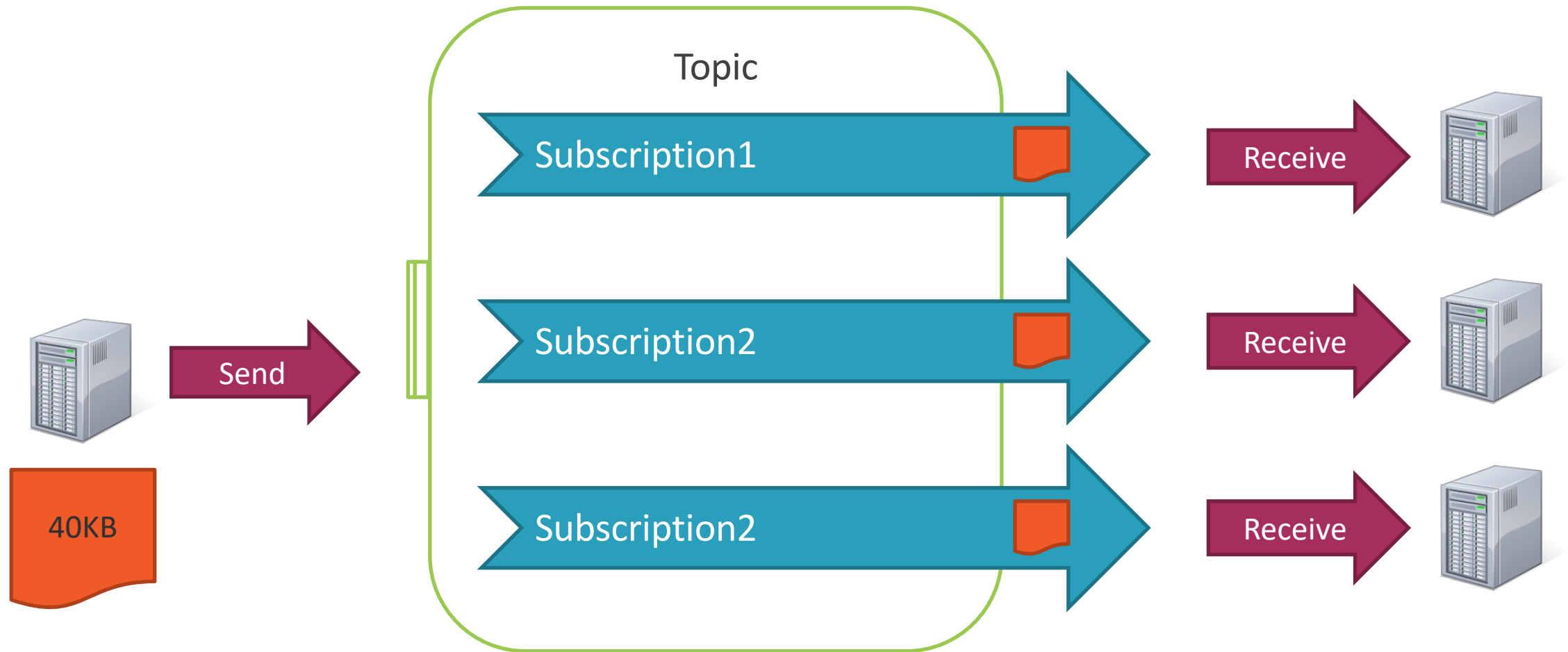


Messaging Operations



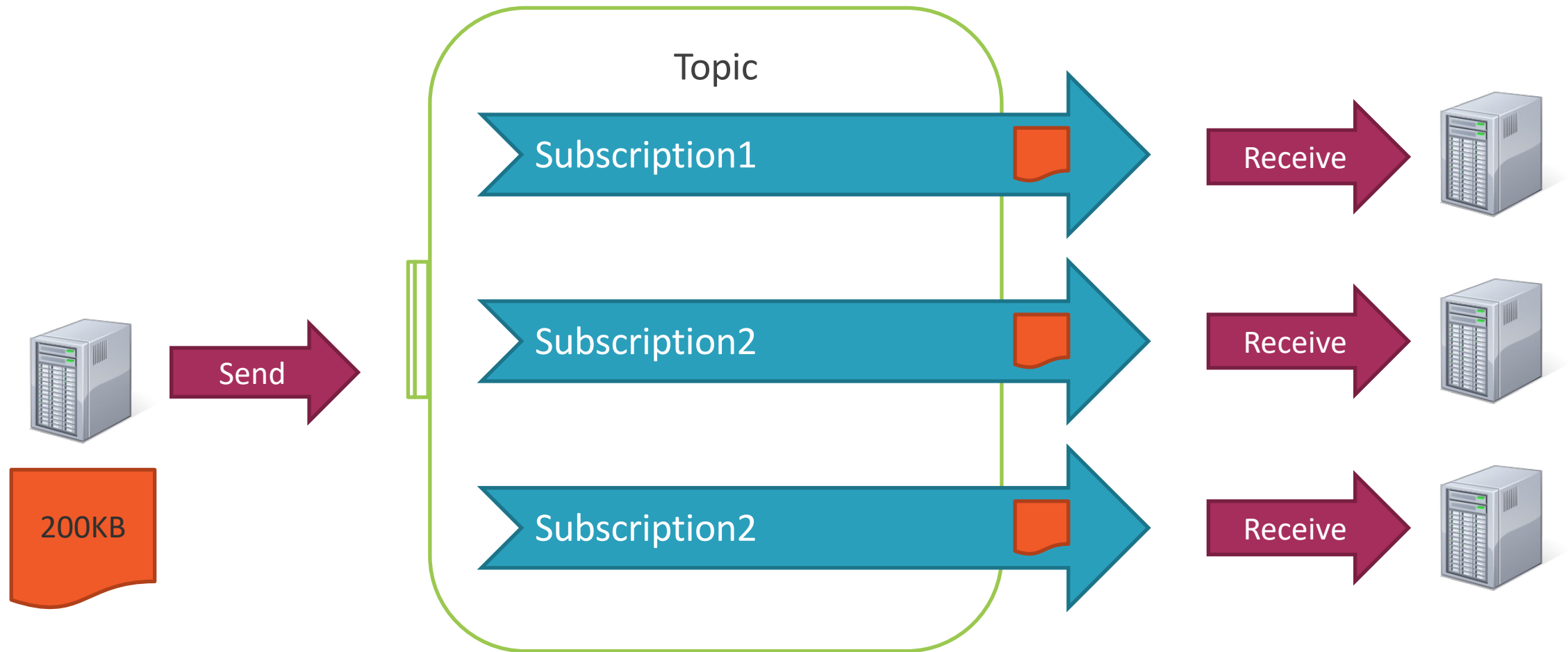
1 Message Operation

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

Global Azure Racing Game Pricing

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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