

 데이터솔루션



Azure SQL Data Warehouse

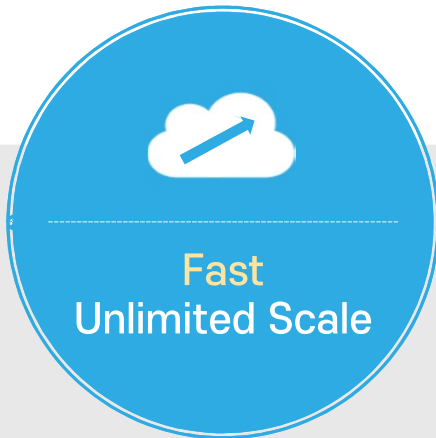
2019년 11월

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Chapter

Azure SQL Data Warehouse

01 | The Fast, Flexible & Secure hub for all your data



MPP to quickly run
complex queries on
any scale



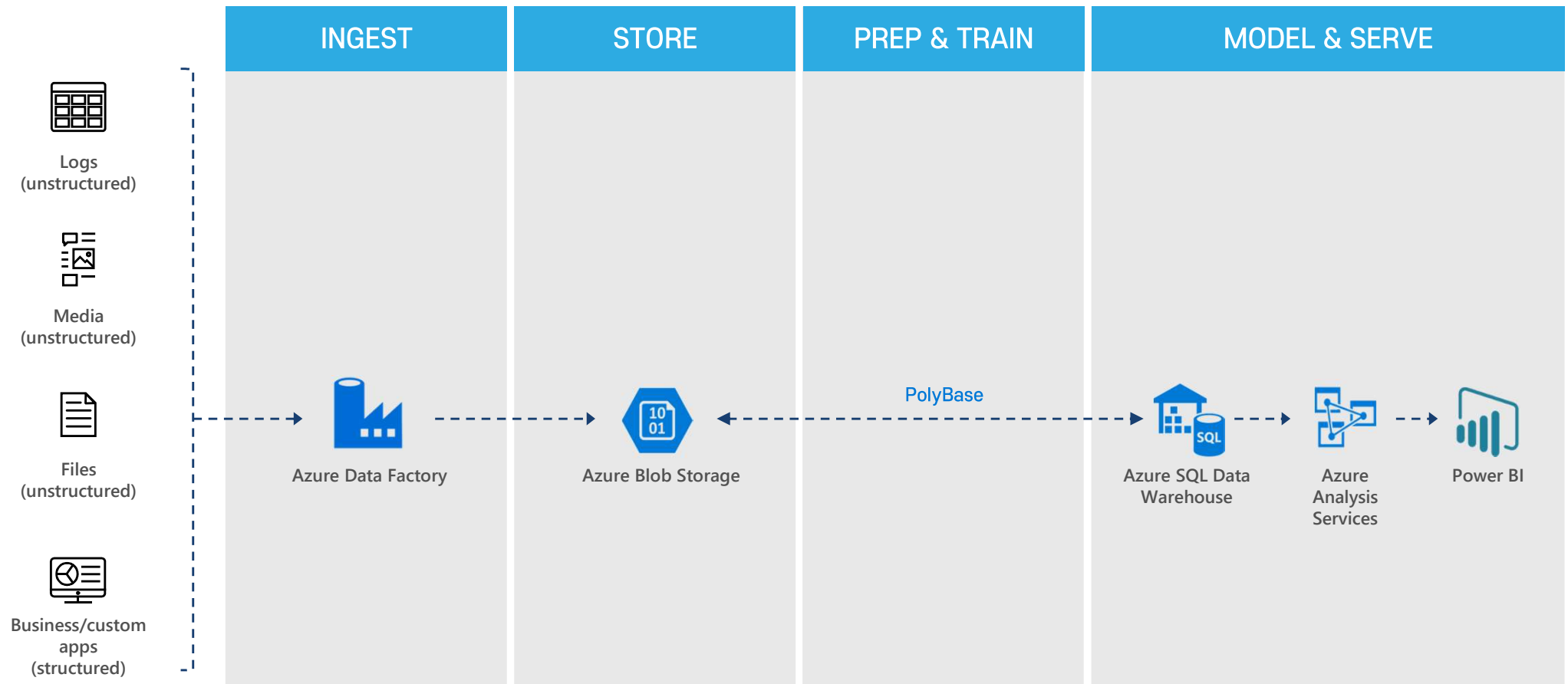
Optimize cost by scaling
compute and storage
independently



Built-in advanced security
features including Encryption,
Audit, Threat Detection,
AAD and VNet

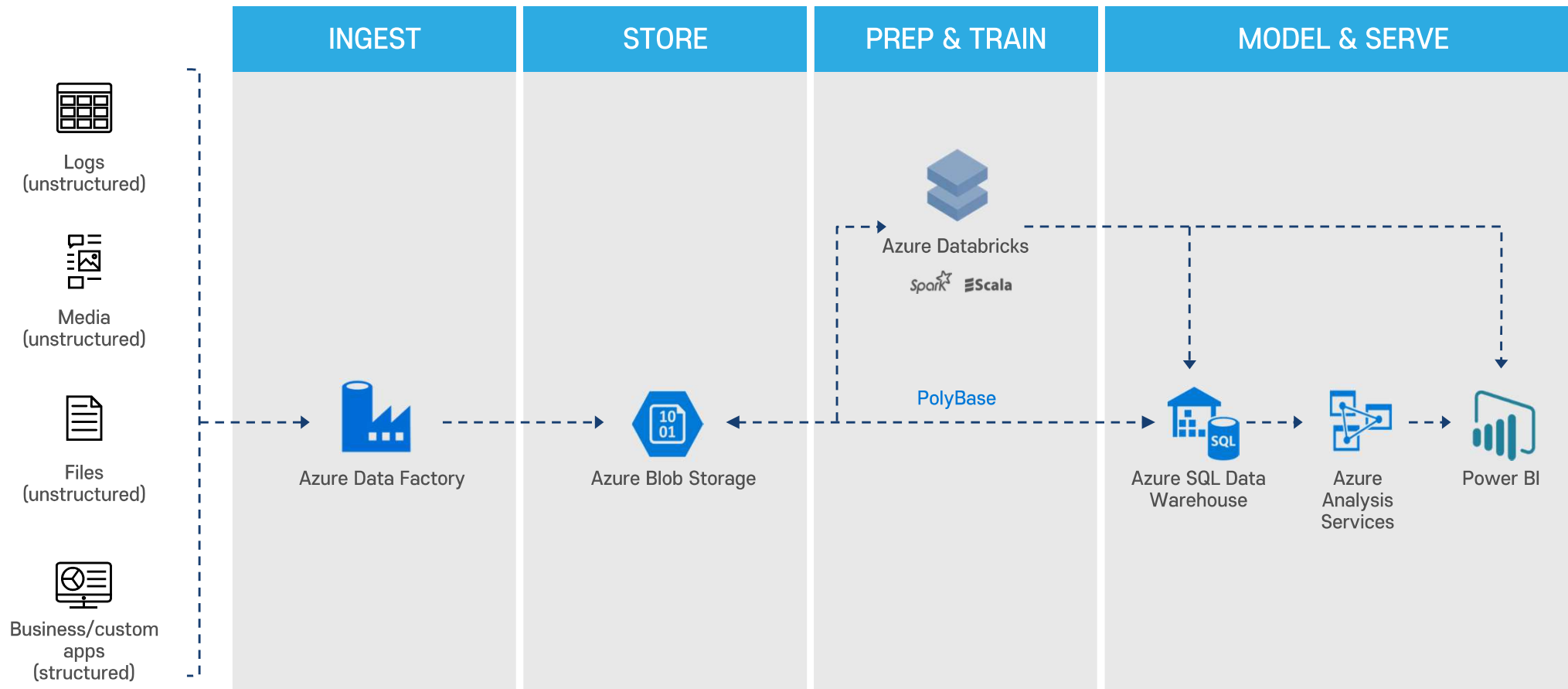
Seamlessly compatible across Microsoft and 3rd party services

02 | Cloud Data Warehouse



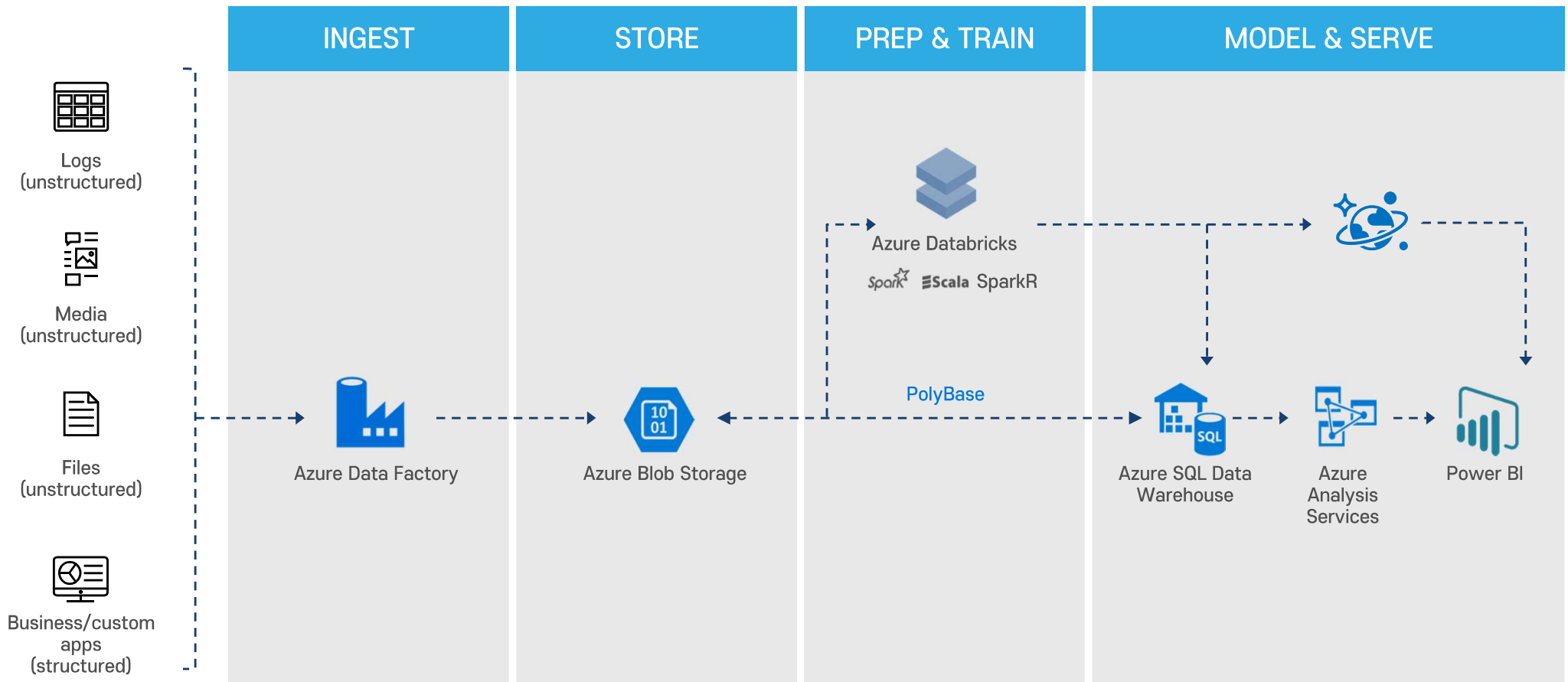
Microsoft Azure also supports other Big Data services like Azure HDInsight and Azure Data Lake to allow customers to tailor the above architecture to meet their unique needs.

03 | Modern Data Warehouse



Microsoft Azure also supports other Big Data services like Azure HDInsight and Azure Data Lake to allow customers to tailor the above architecture to meet their unique needs.

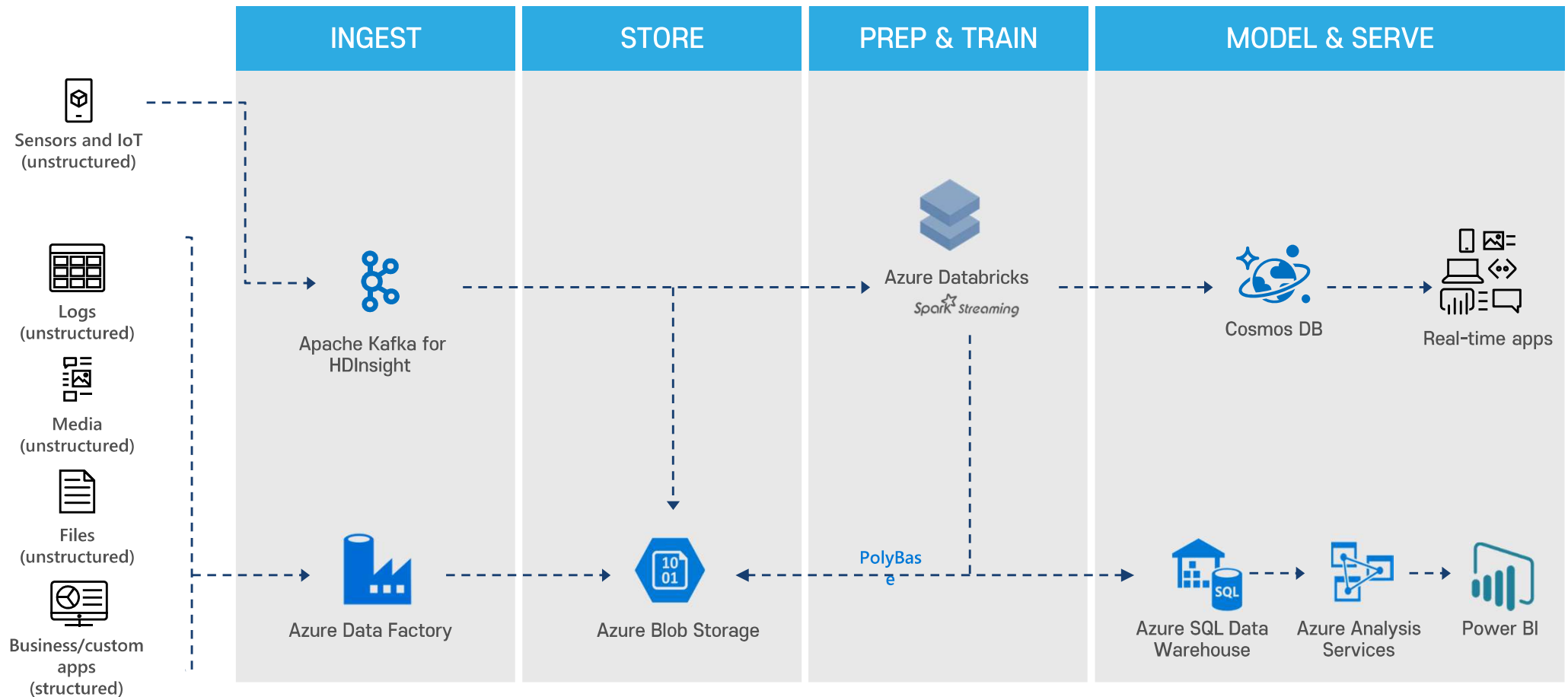
04 | Advanced Analytics On Big Data



Microsoft Azure also supports other Big Data services like Azure HDInsight, Azure Machine Learning and Azure Data Lake to allow customers to tailor the above architecture to meet their unique needs.

1. Azure SQL Data Warehouse

05 | Real Time Analytics



Microsoft Azure also supports other Big Data services like Azure IoT Hub, Azure Event Hubs, Azure Machine Learning and Azure Data Lake to allow customers to tailor the above architecture to meet their unique needs.

2 Chapter

Azure SQL DW Architecture

01 | Logical Overview



Control Node (1)



Compute Node (1 ~ 60)



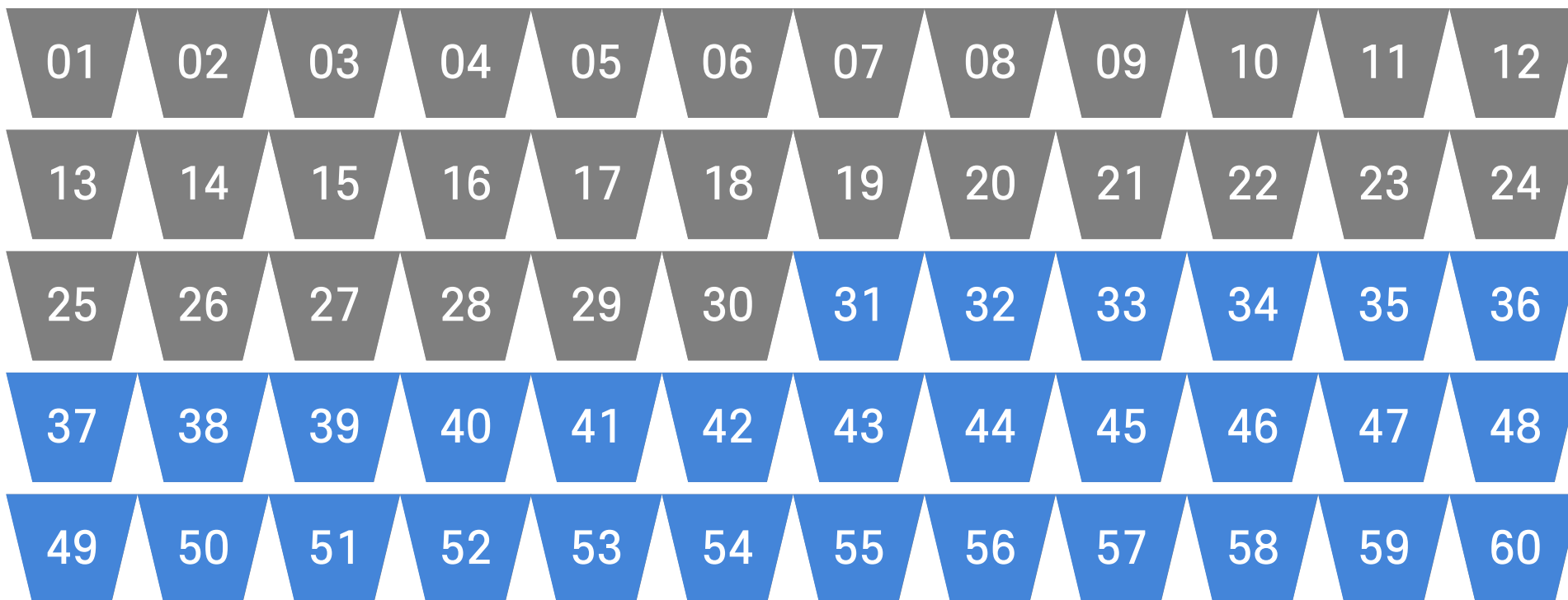
Storage



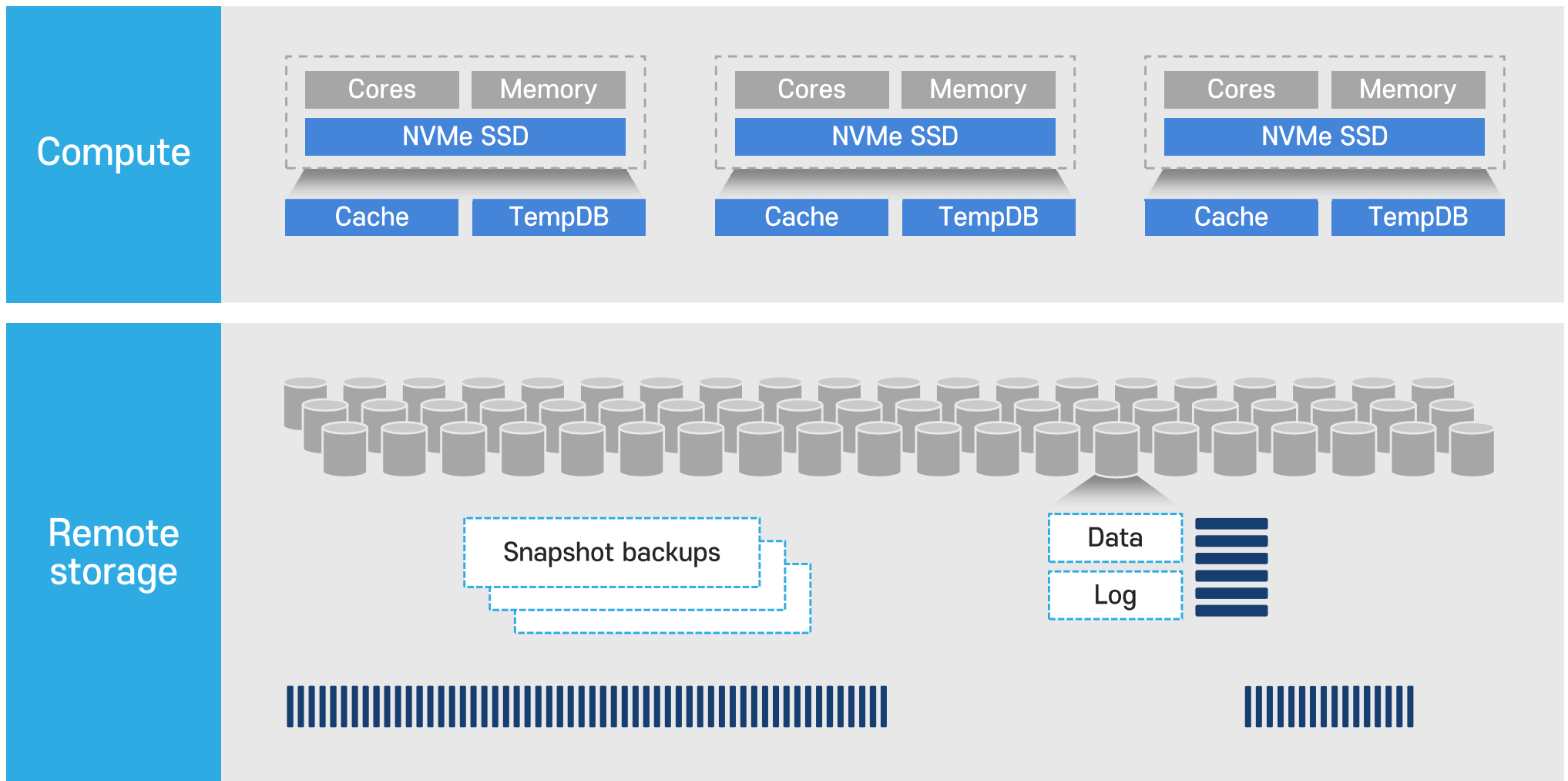
(60)

02 | DataWarehouse Unit

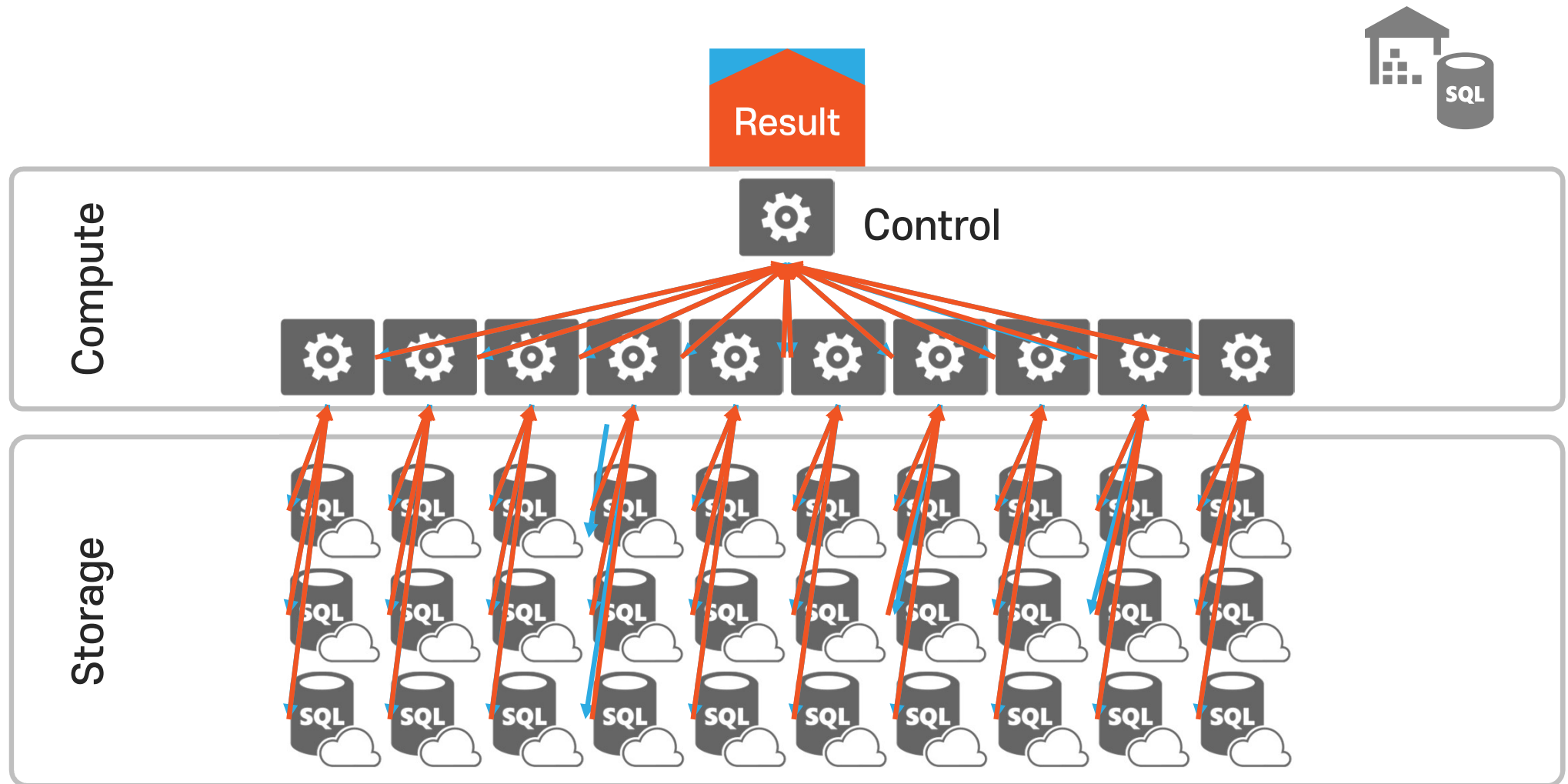
DWu 1000c



03 | Compute optimized Gen2 Architecture

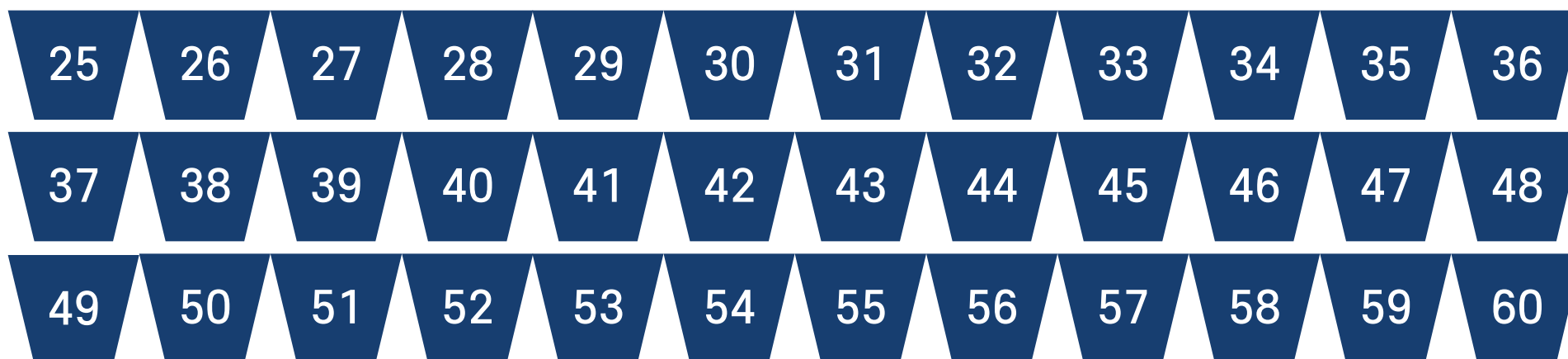


04 | Distributed Queries



05 | Table Distribution Options – Round Robin

- Data Distributed evenly across nodes
- Useful for large tables without a good hash column



06 | Table Distribution Options – Hash

HASH (03)

- Data divided across nodes based on hashing algorithm
- Same value will always hash to same distribution
- Optimal for large fact tables

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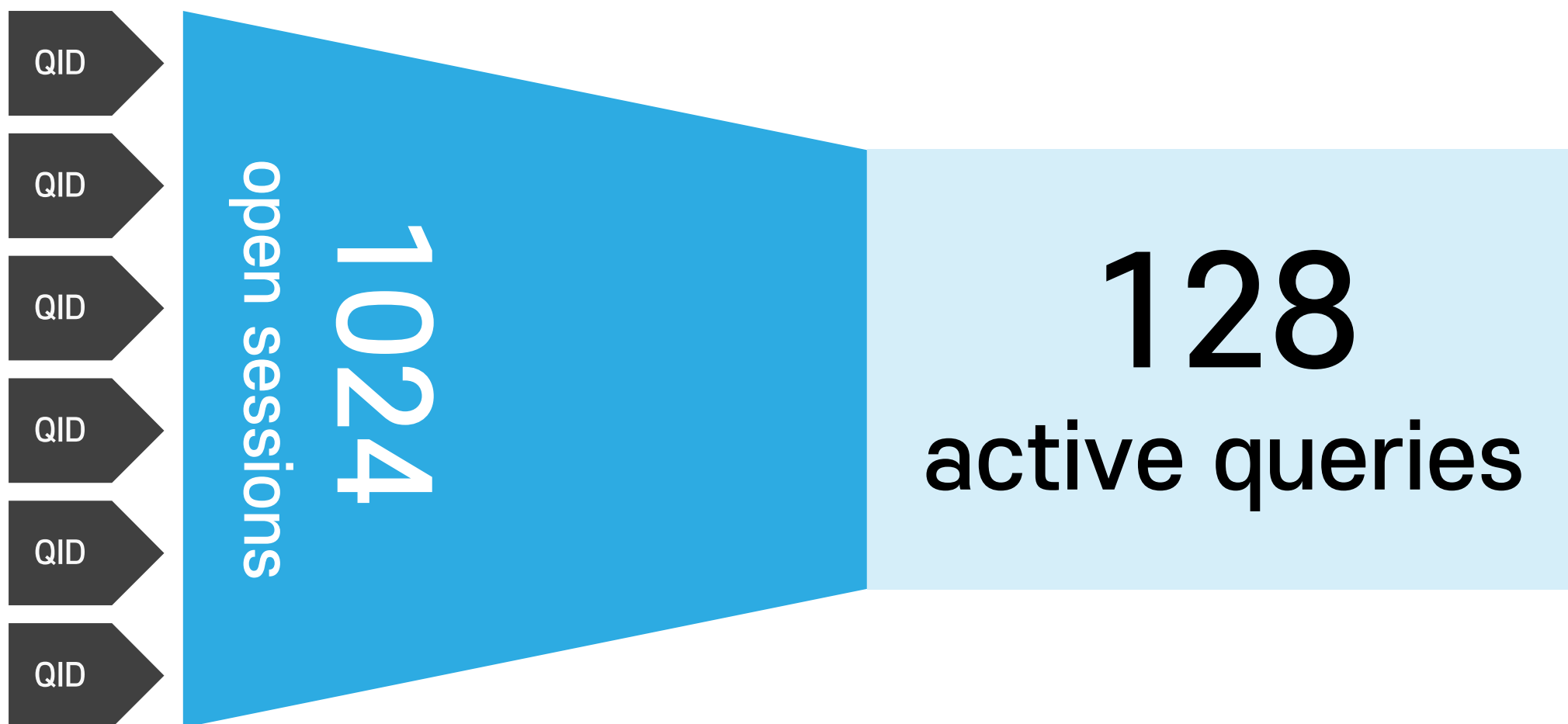
59

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3 Chapter

Azure SQL DW Concurrency

01 | Concurrency : Queries



03 Resource Classes

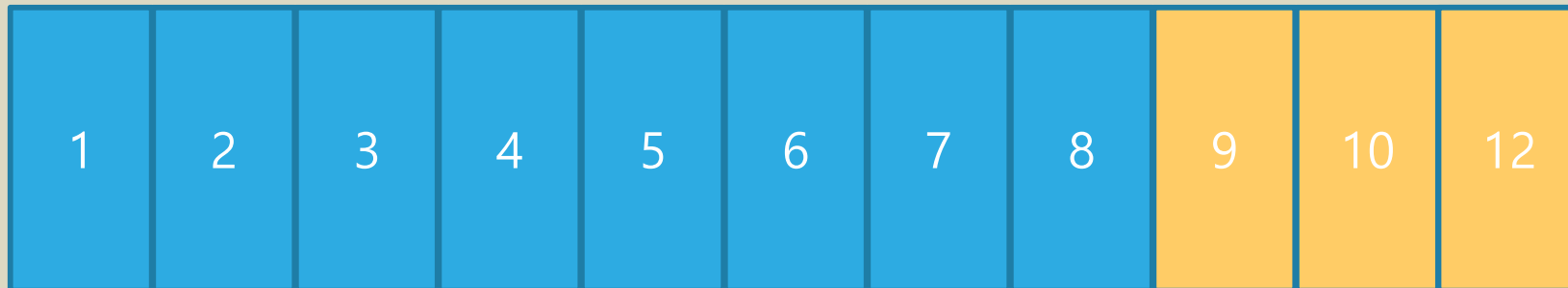
Service Level	Max Concurrent Queries	Max Concurrency Slots	Dynamic Resource Classes				Static Resource Classes							
			smallrc	mediumrc	largerc	xlargerc	staticrc10	staticrc20	staticrc30	staticrc40	staticrc50	staticrc60	staticrc70	staticrc80
DW100c	4	4	1	1	1	2	1	2	4	4	4	4	4	4
DW200c	8	8	1	1	1	5	1	2	4	8	8	8	8	8
DW300c	12	12	1	1	2	8	1	2	4	8	8	8	8	8
DW400c	16	16	1	1	3	11	1	2	4	8	16	16	16	16
DW500c	20	20	1	2	4	14	1	2	4	8	16	16	16	16
DW1000c	32	40	1	4	8	28	1	2	4	8	16	32	32	32
DW1500c	32	60	1	6	13	42	1	2	4	8	16	32	32	32
DW2000c	48	80	2	8	17	56	1	2	4	8	16	32	64	64
DW2500c	48	100	3	10	22	70	1	2	4	8	16	32	64	64
DW3000c	64	120	3	12	26	84	1	2	4	8	16	32	64	64
DW5000c	64	200	6	20	44	140	1	2	4	8	16	32	64	128
DW6000c	128	240	7	24	52	168	1	2	4	8	16	32	64	128
DW7500c	128	300	9	30	66	210	1	2	4	8	16	32	64	128
DW10000c	128	400	12	40	88	280	1	2	4	8	16	32	64	128
DW15000c	128	600	18	60	132	420	1	2	4	8	16	32	64	128
DW30000c	128	1200	36	120	264	840	1	2	4	8	16	32	64	128

03 | Importance

Control Node



Scheduler



Running

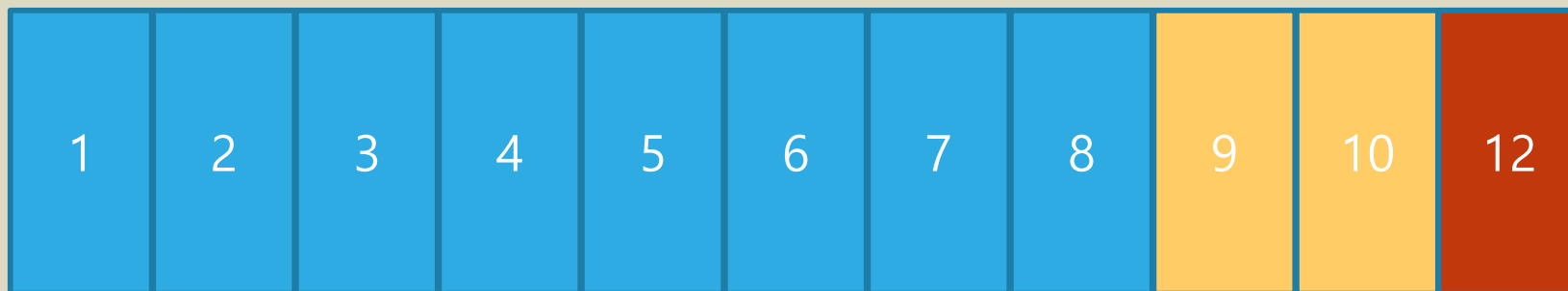
Queued

03 | Importance

Control Node



Scheduler



Running

Queued

 데이터솔루션

데이터로
새로운 세상을 그린다.

Thank you

