



Microsoft

Azure Synapse Analytics

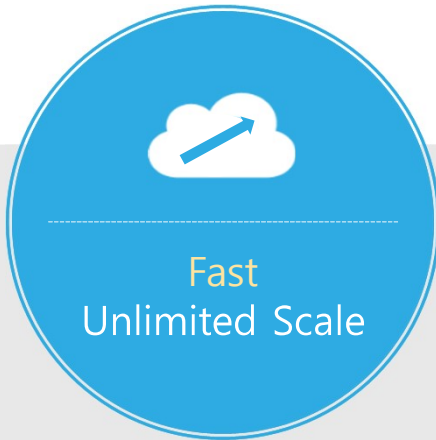
2020년 03월

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Chapter

Azure Synapse Analytics

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

2 Chapter

Azure SQL DW Architecture

01 | Logical Overview



Control Node (1)



Compute Node (1 ~ 60)



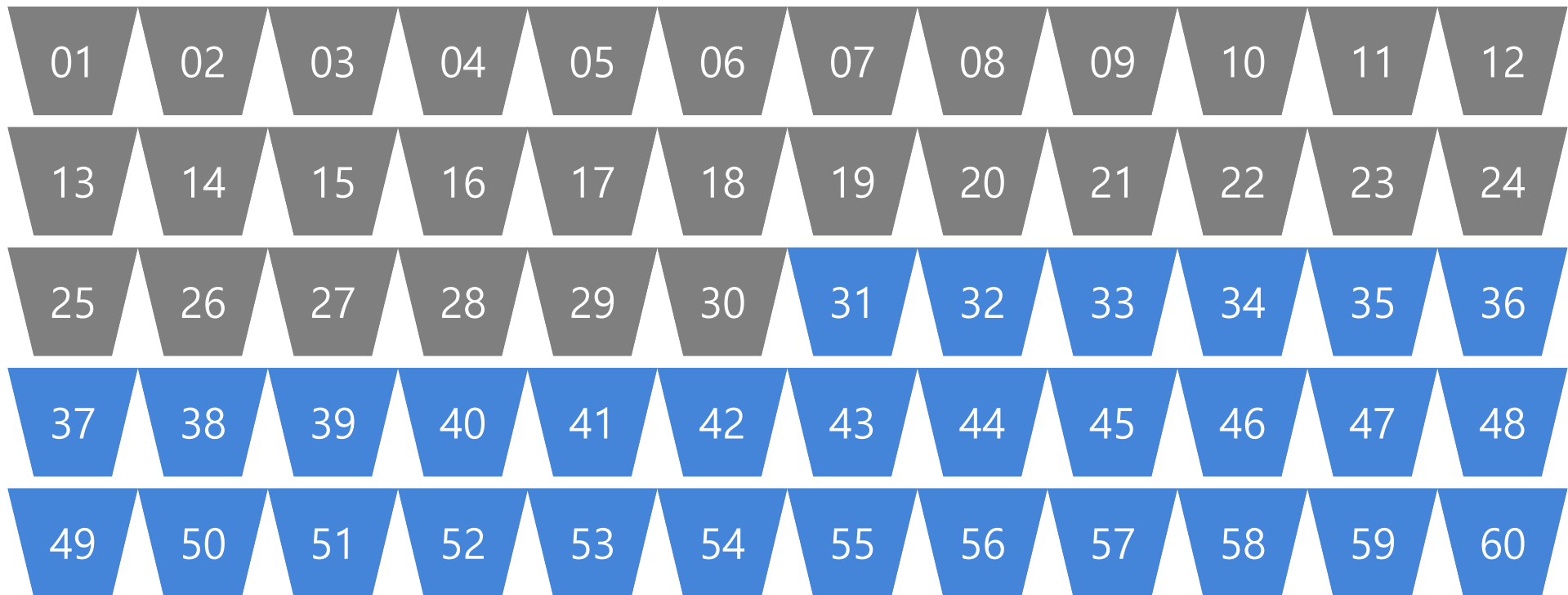
Storage



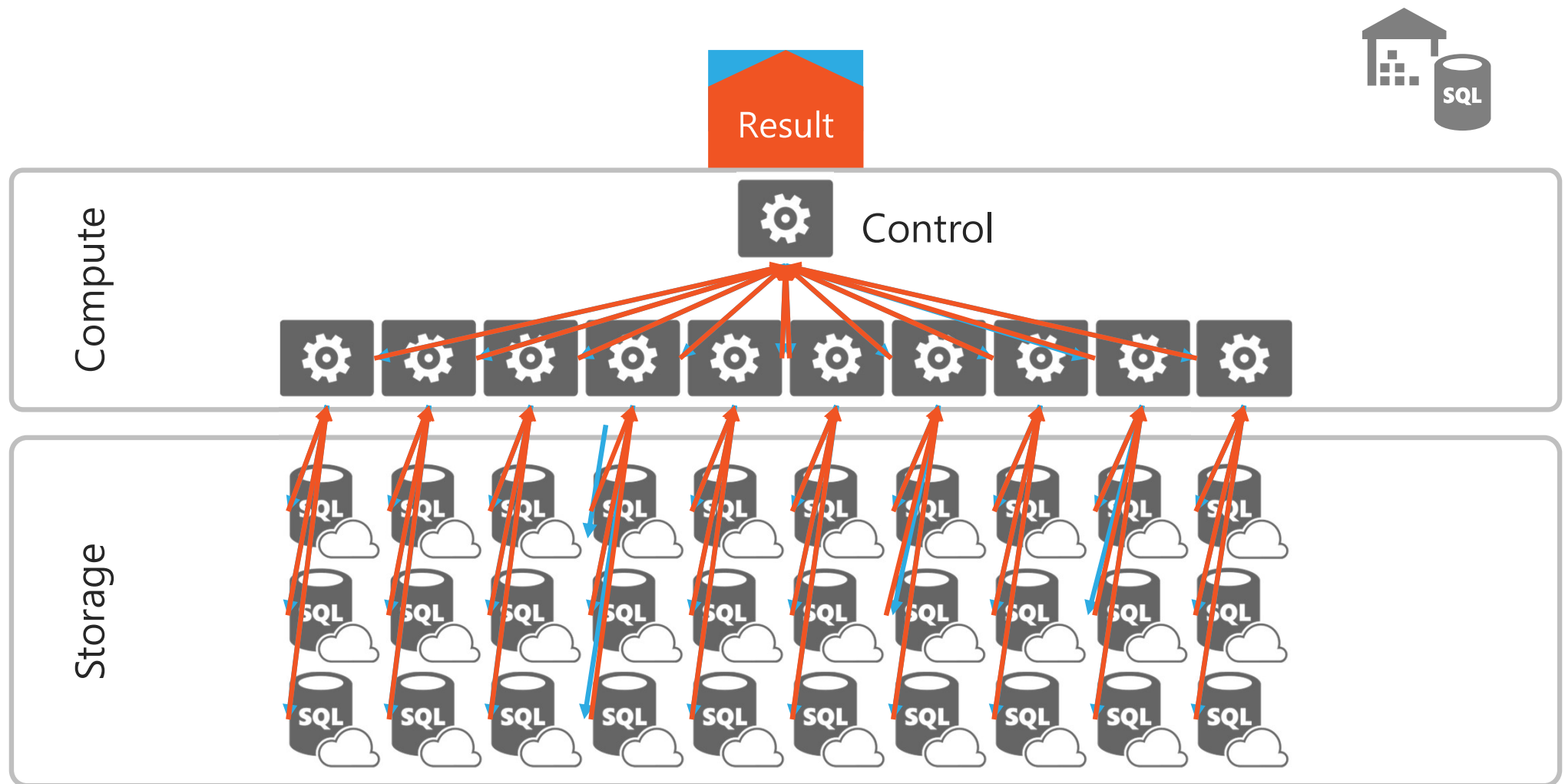
(60)

02 | DataWarehouse Unit

DWu 1000c

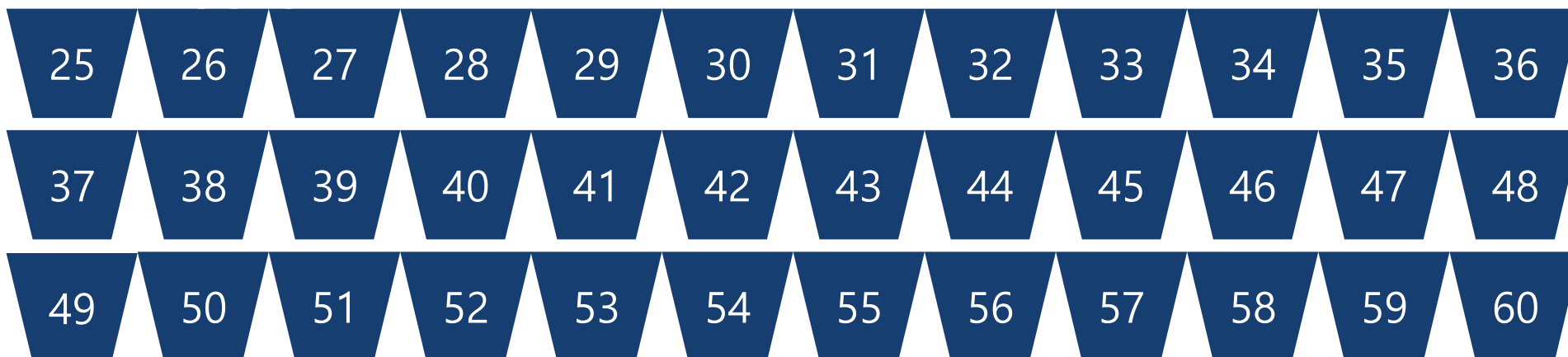


03 | Distributed Queries



04 | Table Distribution Options – Round Robin

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



05 | 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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Chapter

Azure SQL DW WORKLOAD

01 Resource Classes

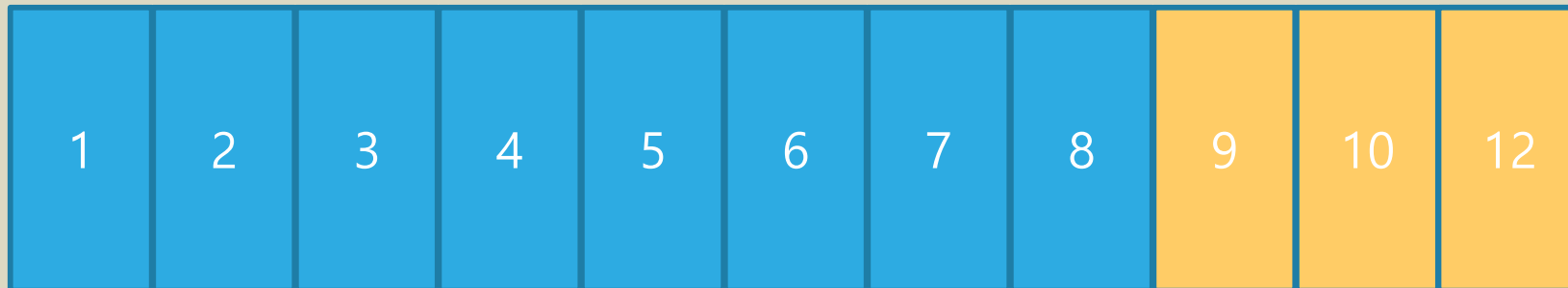
Service Level	Max Concurrent Queries	Max Concurrency Slots	Dynamic Resource Classes				Static Resource Classes							
			smallrc	mediumrc	largerc	xlargerc	staticrc10	staticrc20	staticrc30	staticrc40	staticrc50	staticrc60	staticrc70	staticrc80
DW100c	4	4	1	1	1	2	1	2	4	4	4	4	4	4
DW200c	8	8	1	1	1	5	1	2	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

02 | Importance

Control Node



Scheduler



Running

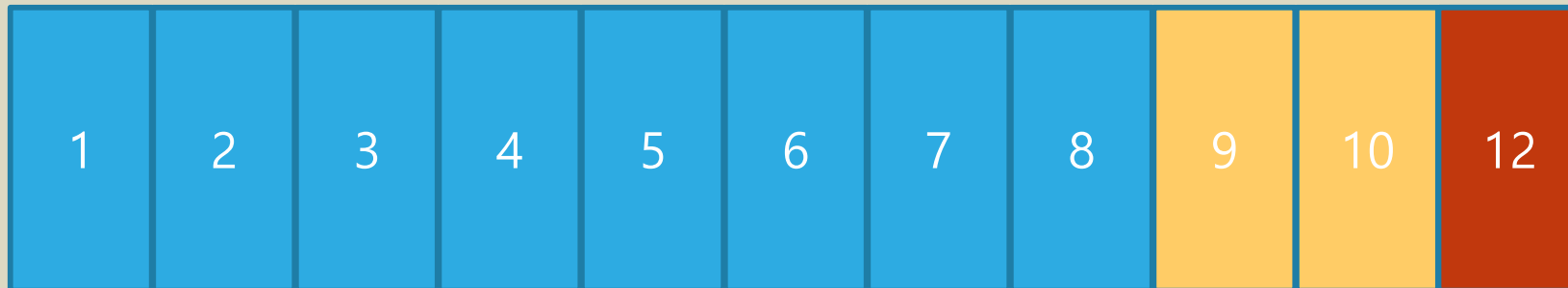
Queued

02 | Importance

Control Node



Scheduler



Running

Queued

 데이터솔루션

데이터로
새로운 세상을 그린다.

Thank you

