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# VIRTUAL WAREHOUSE

- Using virtual warehouse we process data.

# VIRTUAL WAREHOUSE

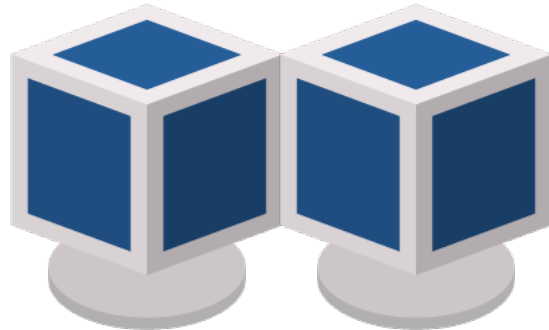
Warehouse Size	Servers / Cluster	Credits / Hour	Credits / Second	Notes
X-Small	1	1	0.0003	Default size for warehouses created using <a href="#">CREATE WAREHOUSE</a> .
Small	2	2	0.0006	
Medium	4	4	0.0011	
Large	8	8	0.0022	
X-Large	16	16	0.0044	Default for warehouses created in the web interface.
2X-Large	32	32	0.0089	
3X-Large	64	64	0.0178	
4X-Large	128	128	0.0356	

# VIRTUAL WAREHOUSE

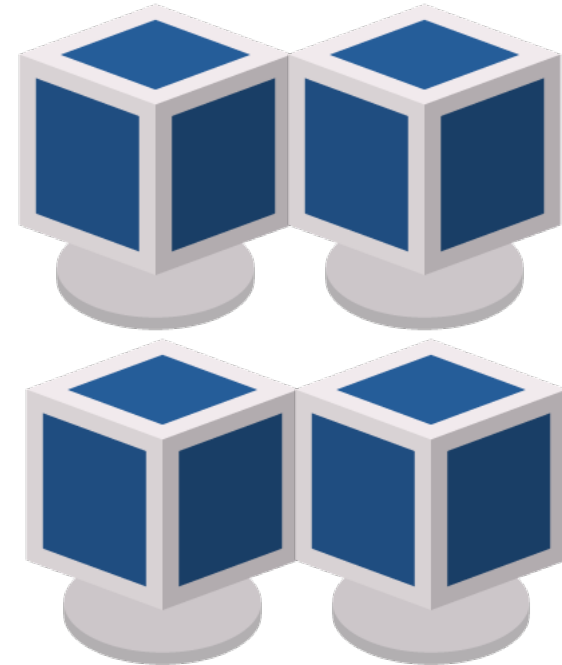
**XS**



**S**



**Medium**



# VIRTUAL WAREHOUSE

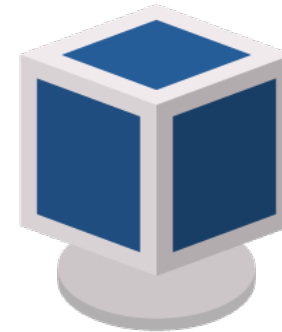
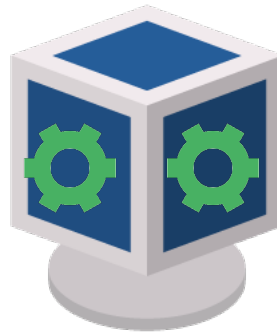
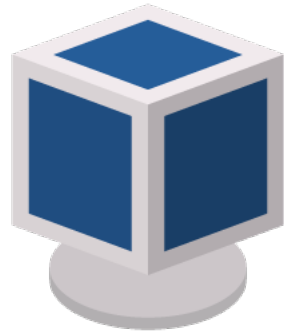
Running Time	Credits (X-Small)	Credits (X- Large)	Credits (3X-Large)
0-60 seconds	0.017	0.267	1.067
61 seconds	0.017	0.271	1.084
2 minutes	0.033	0.533	2.133
10 minutes	0.167	2.667	10.667
1 hour	1.000	16.000	64.000

~ 1.35 \$

~ 86 \$

# VIRTUAL WAREHOUSE

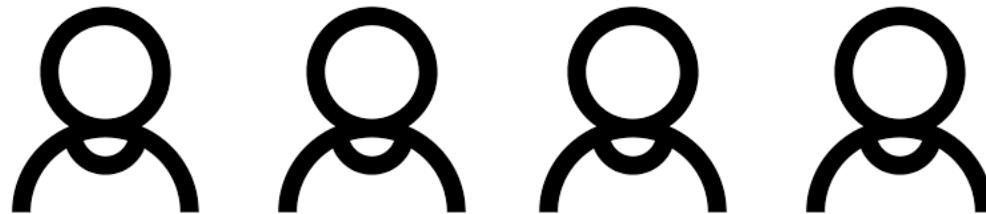
XS



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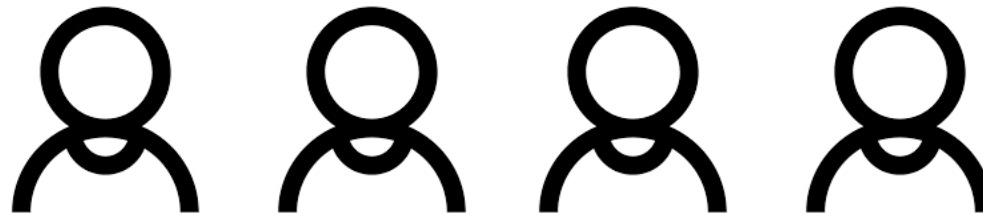
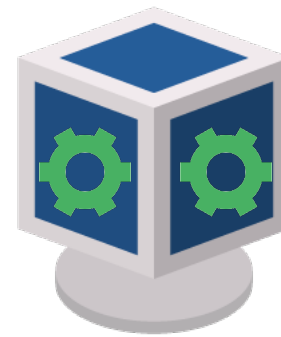
# VIRTUAL WAREHOUSE

XS



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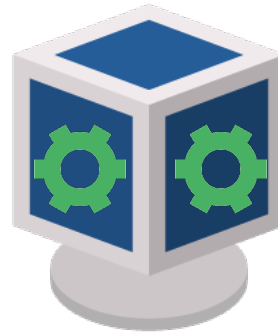
XS



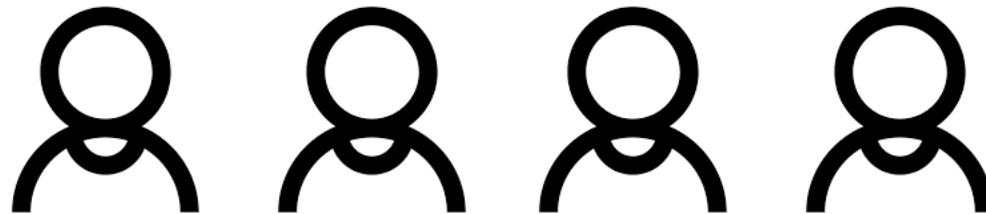
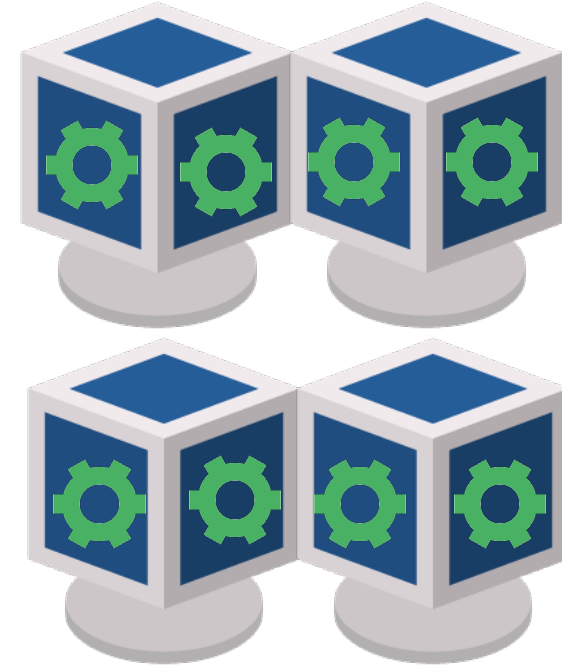
# VIRTUAL WAREHOUSE



XS



Medium

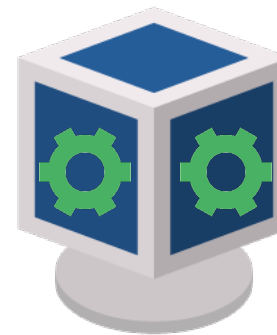




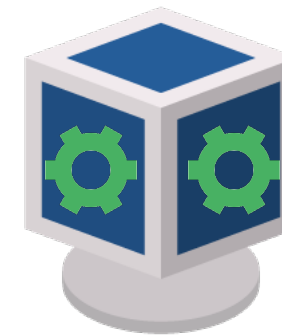
# MULTI CLUSTER VIRTUAL WAREHOUSE



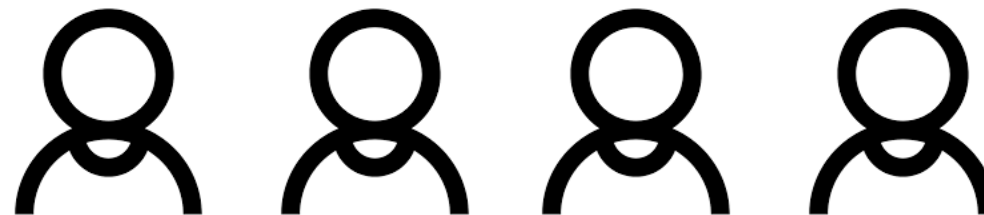
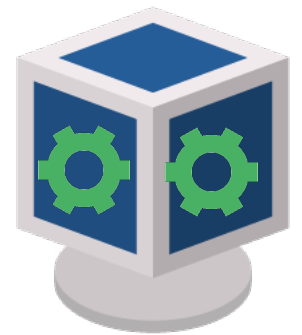
XS



XS



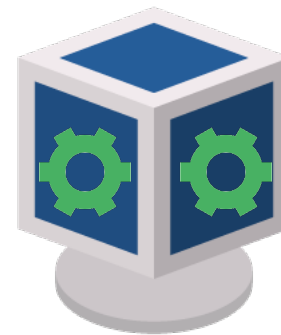
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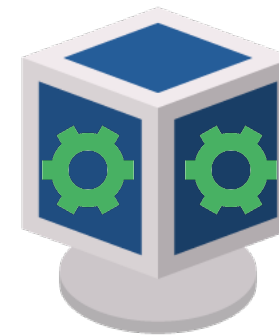
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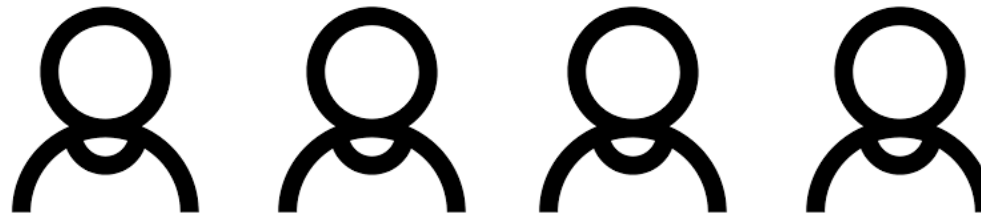
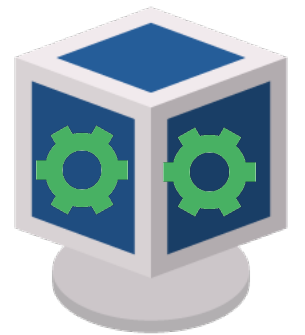
XS



XS



XS



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# MULTI CLUSTER VIRTUAL WAREHOUSE



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# Q/A

- How many queries does snowflake queues before it spins up additional cluster ?
- what is the trigger to suspend a cluster if no load is present?

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How many queries does snowflake queues before it spins up additional cluster ?

- **STANDARD :**

- Immediately when either a query is queued, or the system detects that there's one more query than the currently-running clusters can execute.

- **ECONOMY :**

- Only if the system estimates there's enough query load to keep the cluster busy for at least 6 minutes.

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what is the trigger to suspend a cluster if no load is present?

- **STANDARD :**

- After 2 to 3 consecutive successful checks (performed at 1-minute intervals), which determine whether the load on the least-loaded cluster could be redistributed to the other clusters without spinning up the cluster again.

- **ECONOMY :**

- After 5 to 6 consecutive successful checks (performed at 1-minute intervals), which determine whether the load on the least-loaded cluster could be redistributed to the other clusters without spinning up the cluster again.

# AUTO-SCALE MODE

- This mode is enabled by specifying different values for maximum and minimum clusters. In this mode, Snowflake starts and stops clusters as needed to dynamically manage the load on the warehouse. This mode is effective for statically controlling the available resources (i.e. servers), particularly if you have large numbers of concurrent user sessions and/or queries and the numbers do not fluctuate significantly.

# MAXIMIZED MODE

- This mode is enabled by specifying the same value for both maximum and minimum clusters (note that the specified value must be larger than 1). In this mode, when the warehouse is started, Snowflake starts all the clusters so that maximum resources are available while the warehouse is running.
- This mode is effective for statically controlling the available resources (i.e. servers), particularly if you have large numbers of concurrent user sessions and/or queries and the numbers do not fluctuate significantly.