

IaaS or PaaS?



Section 2 - 30 minutes

What problem are you trying to solve?



IaaS

- **SQL Server licensing**

- Bring your own licensing (BYOL)
 - Use a Windows VM image, install SQL Server with your license key, pay for compute costs
- Image
 - Use a SQL Server VM image, pay compute & SQL Server costs
 - All features are installed – every last one!
 - SQL Server 2008R2, 2012, 2014, 2016
- BYOL image
 - Enter your key within 10 days
 - All features are installed

- **No “development” or “test” tier**

- Can use Express and Developer editions
- Use Azure Dev Test Labs



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Compute costs

SQL Server costs

Compute costs

Tier/size	Cores	RAM	Disk Size	Price	Tier/size	Web	Standard	Enterprise
Standard A2	2	3.5 GB	135 GB	\$0.18/hr	Standard A2	\$0.032/hr	\$0.40/hr	\$1.50/hr
Standard A7	8	56 GB	605 GB	\$1.20/hr	Standard A7	\$0.064/hr	\$0.80/hr	\$3.00/hr
Optimized D2	2	7 GB	100 GB	\$0.26/hr	Optimized D2	\$0.032/hr	\$0.40/hr	\$1.50/hr
Optimized D13	8	56 GB	400 GB	\$1.08/hr	Optimized D13	\$0.064/hr	\$0.80/hr	\$3.00/hr



* Pricing current as of September 27, 2016; East US 2 region

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VMs – you pay for Windows + SQL Server

Note that no matter what tier of server you have, the pricing is essentially per core – same as SQL on-prem licensing

Basic and Standard (A*) – general purpose.

Optimized (D*) – 60% faster processors, local SSD

Optimized Premium Storage (DS*) – same hardware for vm but can connect to premium storage

Optimized V2 (D* v2) – Faster CPU. “Dv2-series instances are based on the latest generation 2.4 GHz Intel Xeon® E5-2673 v3 (Haswell) processor, and with Intel Turbo Boost Technology 2.0 can go to 3.2 GHz.”

G Series (G*) – only West and East 2. “G-series virtual machines feature latest [Intel® Xeon® processor E5 v3 family](#), two times more memory and four times more Solid State Drive storage (SSDs) than the D-series”

GS same hardware but can connect to premium storage

No, you’re not getting as much memory on *any* of these. Tune, tune, tune!

PaaS

- **SQL Database**
 - Single database
 - Elastic pools
- **Database only – no Analysis Services, Integration Services, or Reporting Services**
 - SQL Data Warehouse
 - Data Factory
 - Power BI



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Single database

Tier/Size	DTUs	Max storage (per DB)	Price
Basic B	5	2 GB	\$5/mo
Standard S1	20	250 GB	\$30/mo
Premium P1	125	500 GB	\$465/mo
Premium P11	1,750	1 TB	\$7,001/mo

Elastic pool

Tier/DTUs	Max DBs (per pool)	Max storage (per pool)	Max eDTUs (per DB)	Price
Basic 100	200	10 GB	5	\$149/mo
Standard 100	200	100 GB	100	\$223/mo
Standard 1200	400	1.2 TB	100	\$2,701/mo
Premium 1500	50	750 GB	1,000	\$8,370/mo

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Basic
Standard
Premium

IaaS

- Need to rapidly move existing database into Azure
- Databases larger than 1 TB
- Predictable, steady workloads
- DR for on-premises SQL Server instances

PaaS

- New cloud-designed apps
- Apps that need built-in HA and DR
- Variable workloads and usage patterns
- Scale-out
- SaaS / single-tenant databases



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