Zingasoft

CLOUD-BREEDS-INNOVATION

Running nopCommerce on Azure Tips and Tricks and Lessons Learned

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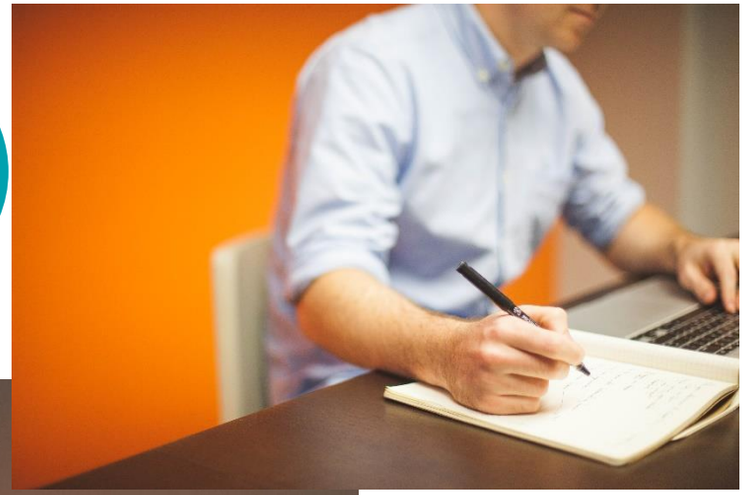
Before we begin… ☺

Talking Points

- A few words about Zingasoft and me
- Brief intro about Azure
- nopCommerce on Azure
  - Choose the right Architecture
  - Decide on the right tier
  - Some tips and trick
- Takeaways



Zingasoft

- Born in the cloud company
- Helping businesses enter into the digital era
- Customizing and integrating nopCommerce solutions
- Covering a broad spectrum of development services around cloud, web and mobile technologies (Xamarin)

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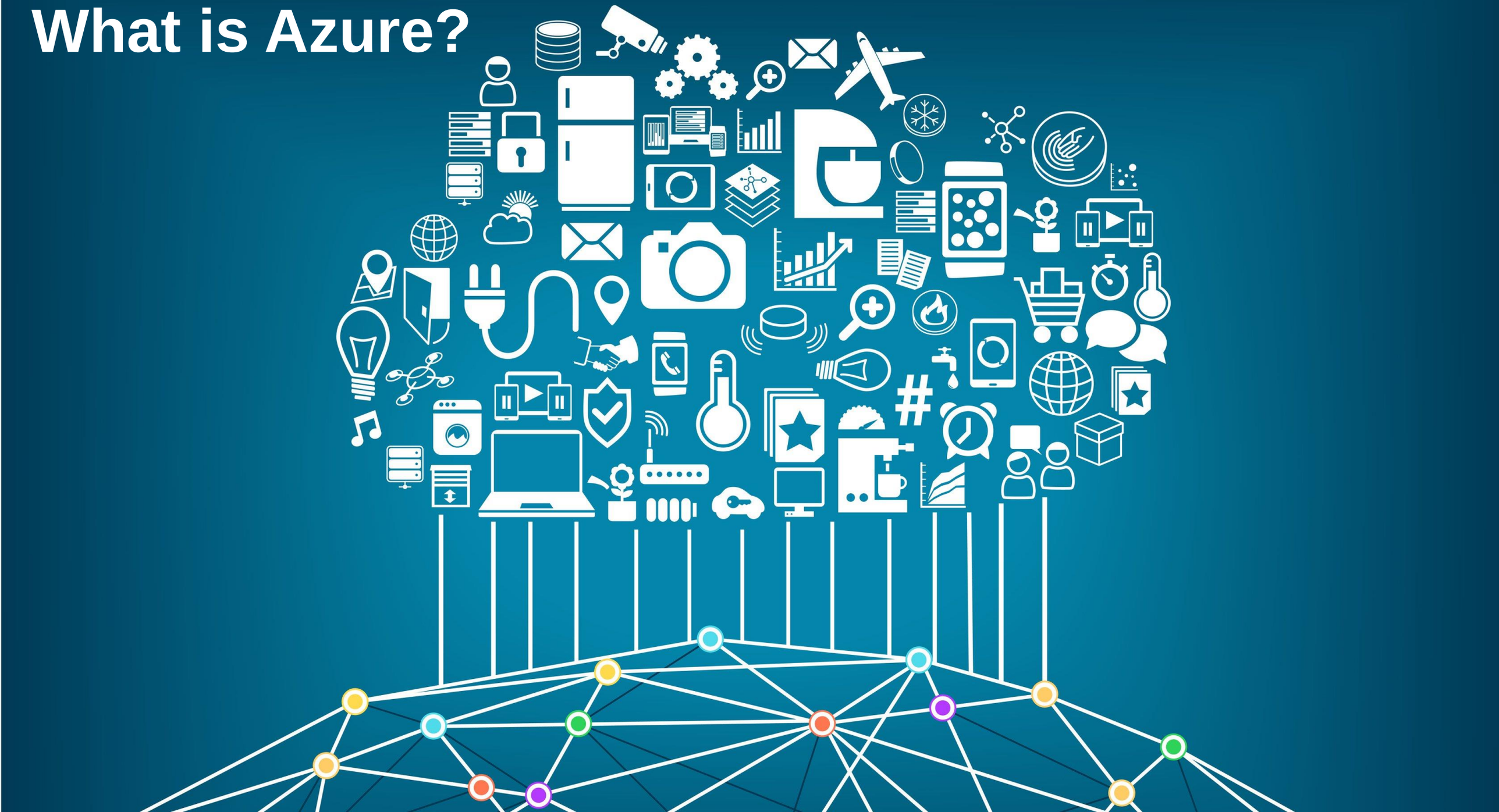
What is Azure?



Developer Services
Visual Studio Team Services
Azure DevTest Labs
VS Application Insights*
HockeyApp
Developer Tools
Management & Security
Azure Portal
Scheduler
Operations Management Suite
Automation
Log Analytics
Key Vault
Security Center*
Compute
Virtual Machines
Virtual Machine Scale Sets
Cloud Services
Batch
RemoteApp
Service Fabric
Azure Container Service
Web & Mobile
Web Apps
Mobile Apps
Logic Apps*
API Apps
API Management
Notification Hubs
Mobile Engagement
Functions*
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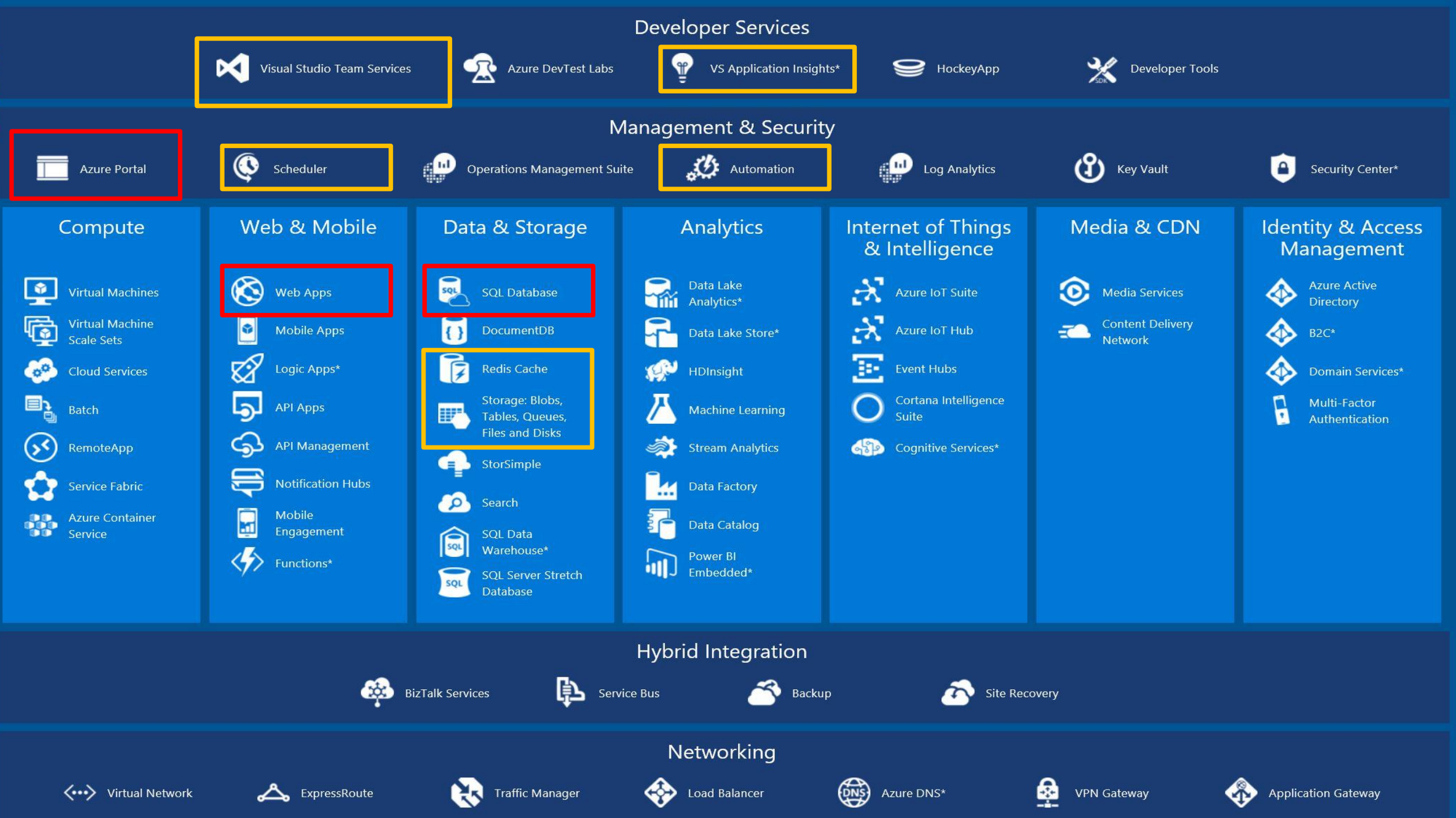
SQL Database
DocumentDB
Redis Cache
Storage: Blobs, Tables, Queues, Files and Disks
StorSimple
Search
SQL Data Warehouse*
SQL Server Stretch Database
Analytics
Data Lake Analytics*
Data Lake Store*
HDInsight
Machine Learning
Stream Analytics
Data Factory
Data Catalog
Power BI Embedded*
Internet of Things & Intelligence
Azure IoT Suite
Azure IoT Hub
Event Hubs
Cortana Intelligence Suite
Cognitive Services*
Media & CDN
Media Services
Content Delivery Network
Identity & Access Management
Azure Active Directory
B2C*
Domain Services*
Multi-Factor Authentication
Hybrid Integration
BizTalk Services
Service Bus
Backup
Site Recovery
Networking
Virtual Network
ExpressRoute
Traffic Manager
Load Balancer
Azure DNS*
VPN Gateway
Application Gateway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Azure Container Service
Web & Mobile
Web Apps
Mobile Apps
Logic Apps*
API Apps
API Management
Notification Hubs
Mobile Engagement
Functions*
Data & Storage
SQL Database
DocumentDB
Redis Cache
Storage: Blobs, Tables, Queues, Files and Disks
StorSimple
Search
SQL Data Warehouse*
SQL Server Stretch Database
Analytics
Data Lake Analytics*
Data Lake Store*
HDInsight
Machine Learning
Stream Analytics
Data Factory
Data Catalog
Power BI Embedded*
Internet of Things & Intelligence
Azure IoT Suite
Azure IoT Hub
Event Hubs
Cortana Intelligence Suite
Cognitive Services*
Media & CDN
Media Services
Content Delivery Network
Identity & Access Management
Azure Active Directory
B2C*
Domain Services*
Multi-Factor Authentication
Hybrid Integration
BizTalk Services
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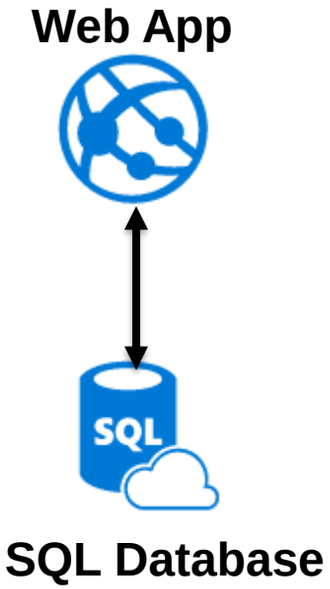
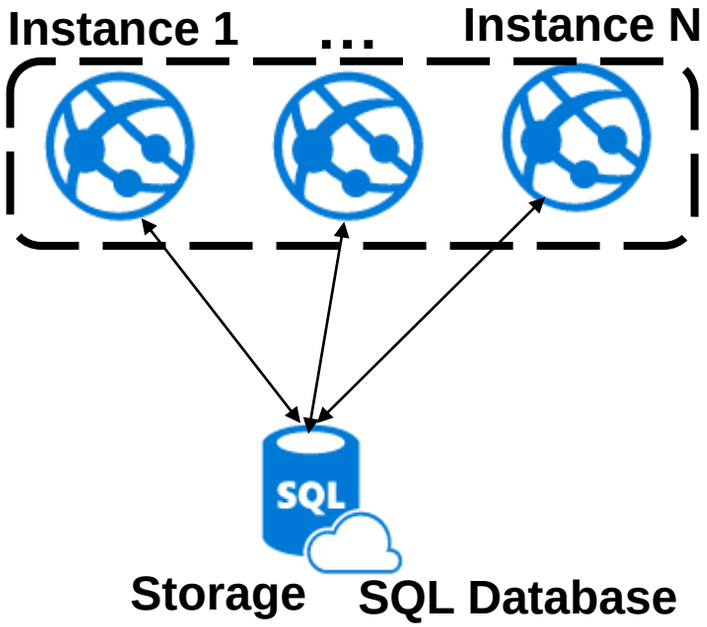
Application Gateway

Choosing the Right Architecture

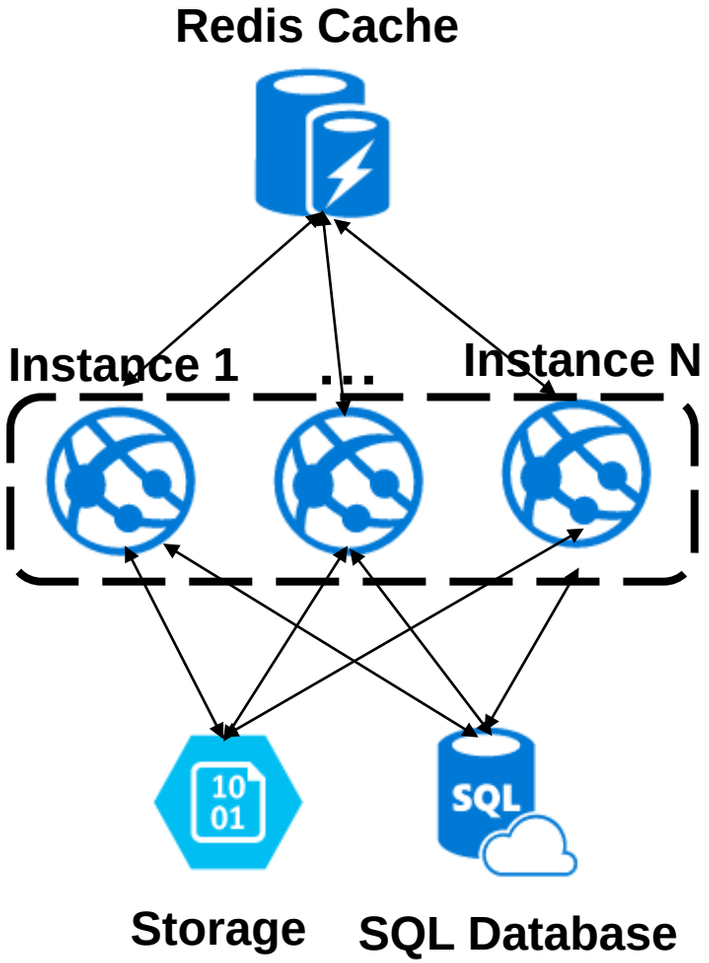
What are the options?



Single Instance



Multi-instance, distributed file storage



Multi-instance, distributed file storage, distributed cache

Let’s compare the highlights

	Single Instance	Multi-Instance, distributed file storage	Multi-Instance, distributed file storage & cache
Starting cost	12 Euro/month*	51 Euro/month*	86 Euro/month*
Instances	1 shared/dedicated	3 (up to 20 at additional cost)	3 (up to 20 at additional cost)
Scaling options	Vertical	Vertical and Horizontal	Vertical and Horizontal
Auto scale	No	Yes	Yes
Custom Domain	Yes	Yes	Yes
SSL	+ Additional Cost	Yes	Yes
Automated Backup	+Additional Cost	+Additional Cost	+Additional Cost

**All costs are per service plan (NOT per single web application)*

Let’s compare the highlights

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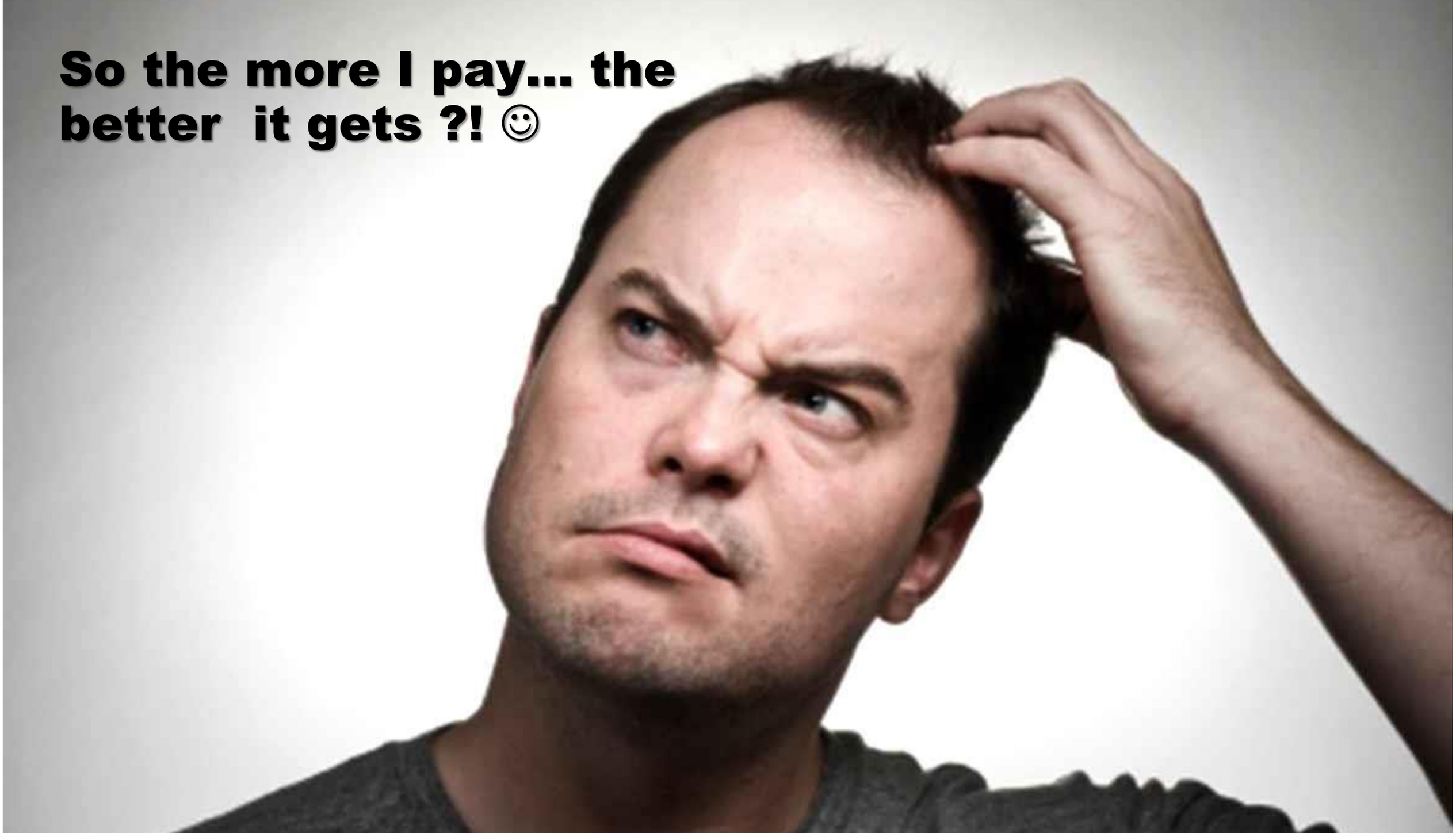
**All costs are per service plan (NOT per single web application)*

So the more I pay… the better it gets ?! ☺



Now… let’s see how strong we need to be to run nopCommerce on Azure

Carefully consider

App Service Plan

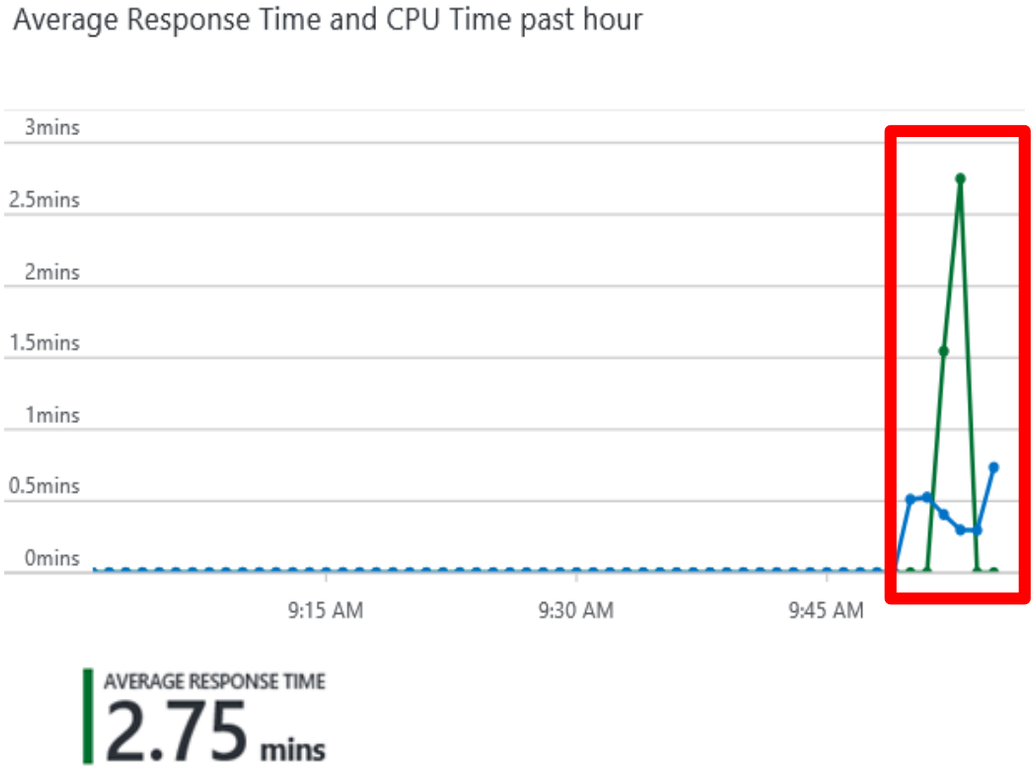
Database Tier

Redis Tier

Huh, why-y-y?...

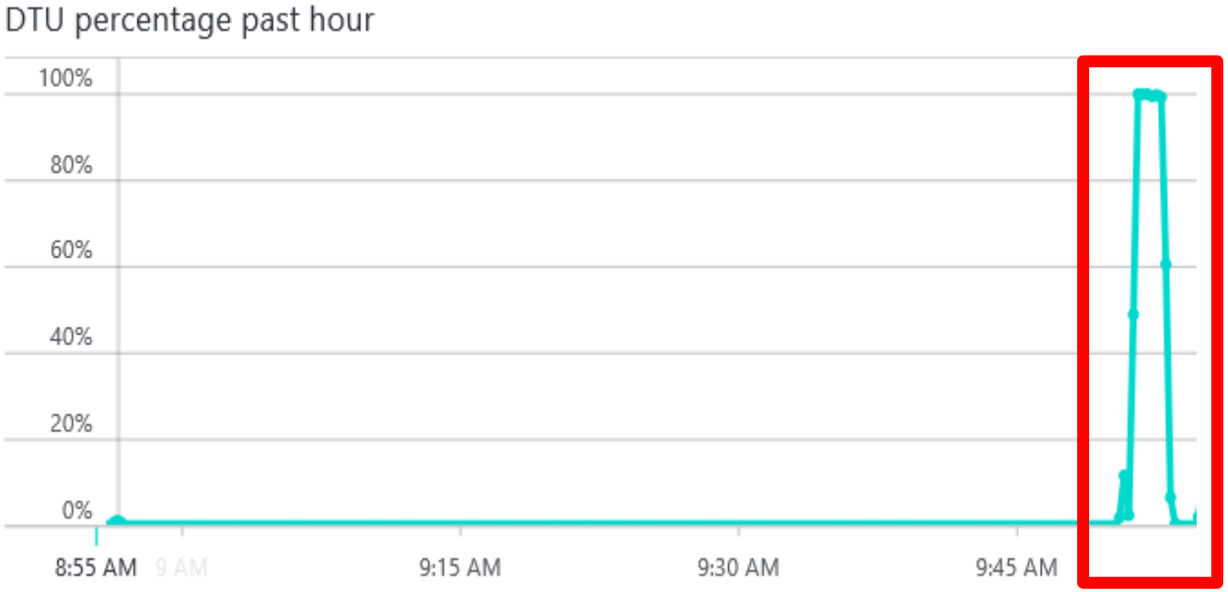
50 concurrent users, 2 minutes duration

Web App Performance
(“Shared” tier)



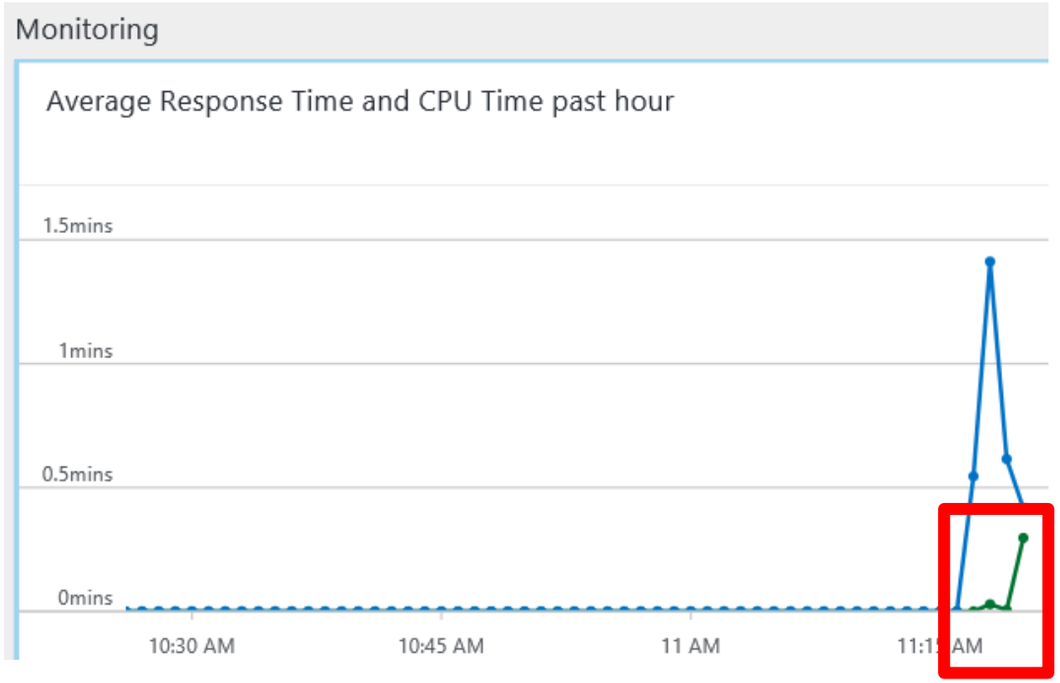
AVERAGE RESPONSE TIME
2.75 mins

DB Performance
(“Basic” tier – 5 DTUs)



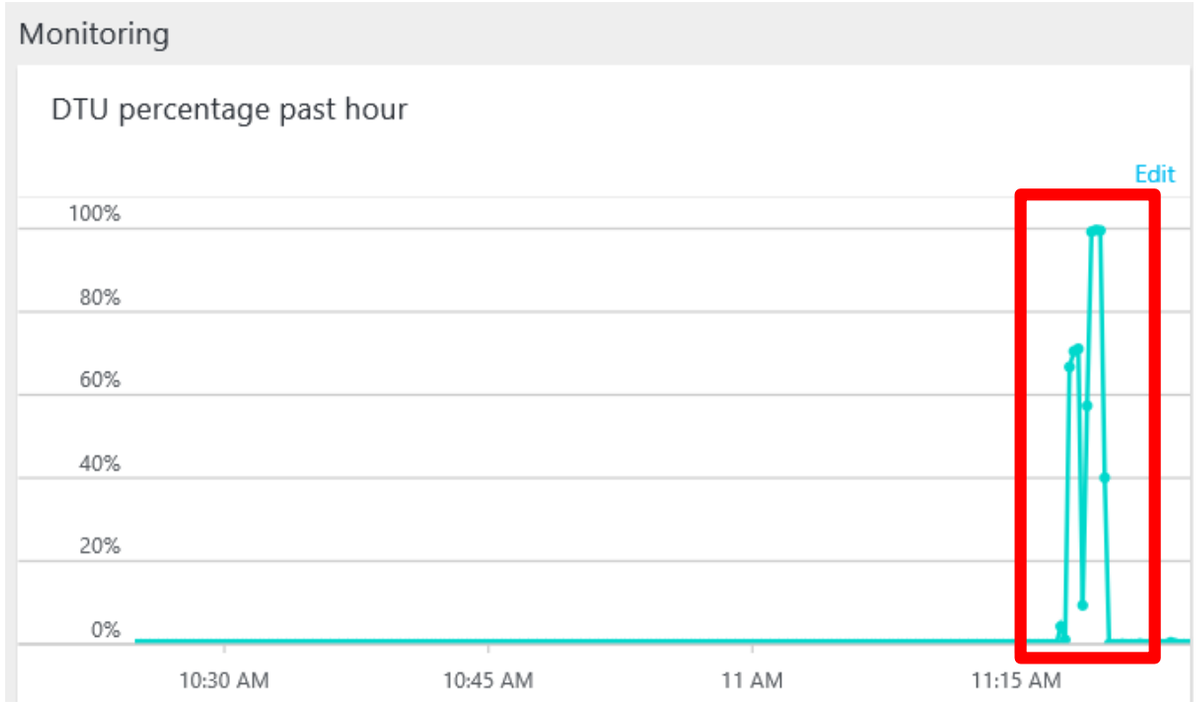
50 concurrent users, 2 minutes duration

Web App Performance
(“Shared” tier)



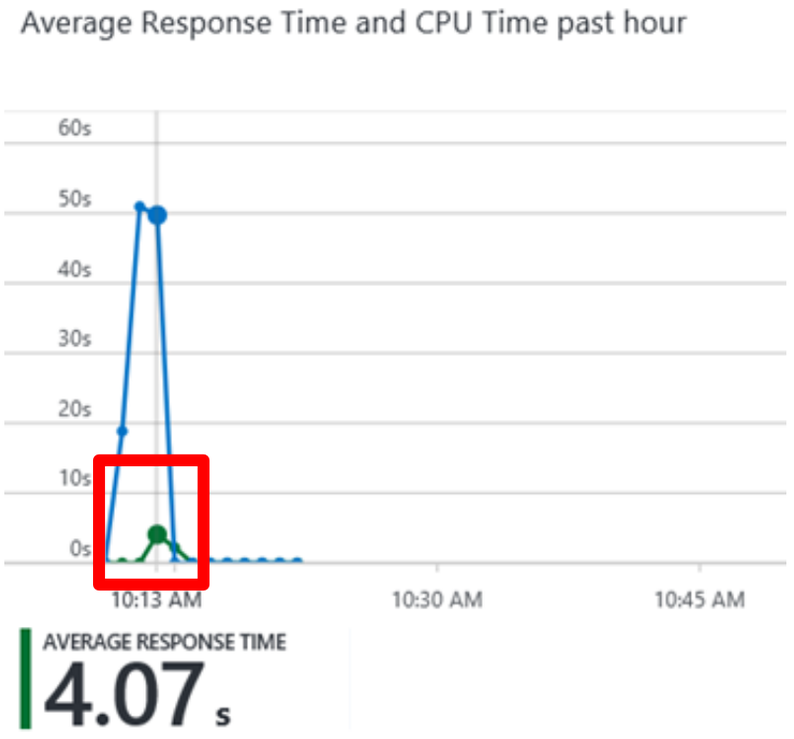
AVERAGE RESPONSE TIME
17.8 s

DB Performance
(“S0” tier – 10 DTUs)

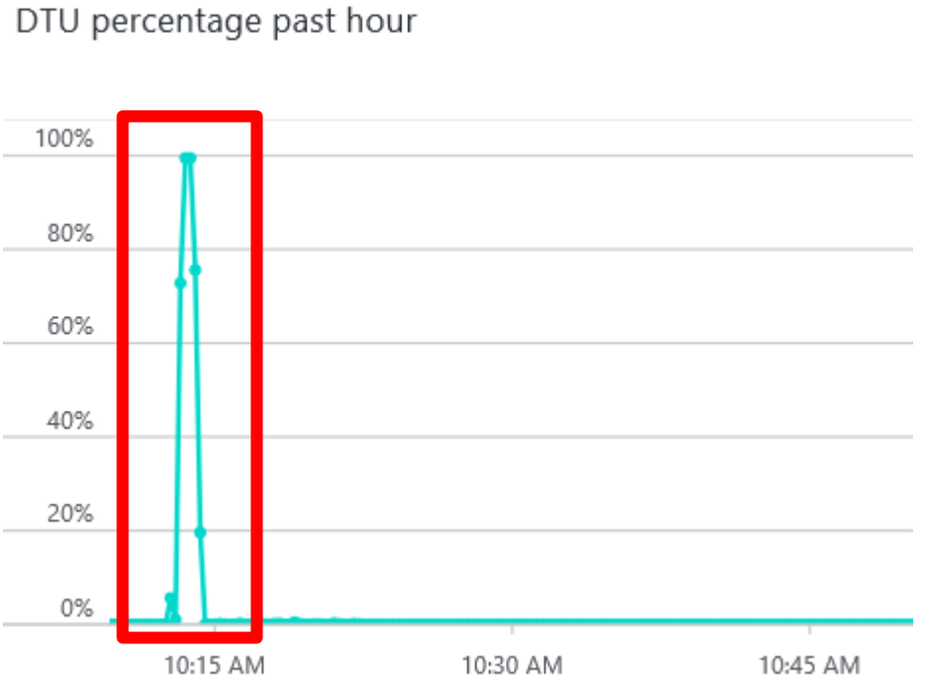


50 concurrent users, 2 minutes duration

Web App Performance
(“Shared” tier)

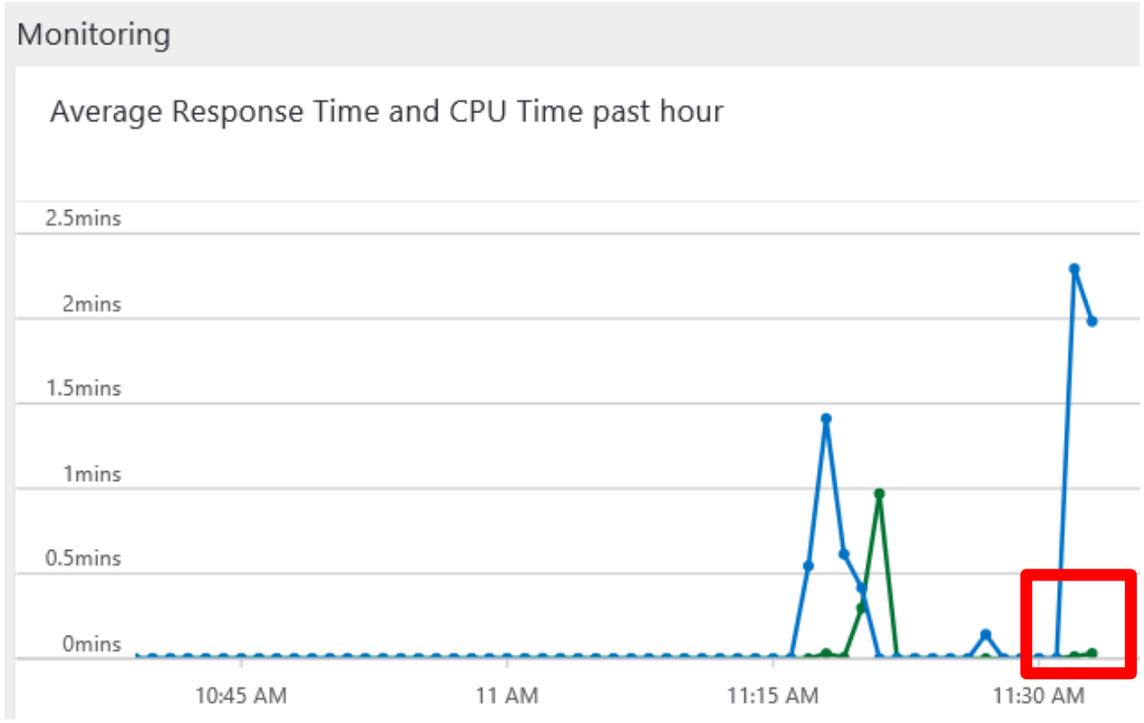


DB Performance
(“S1” tier – 20 DTUs)



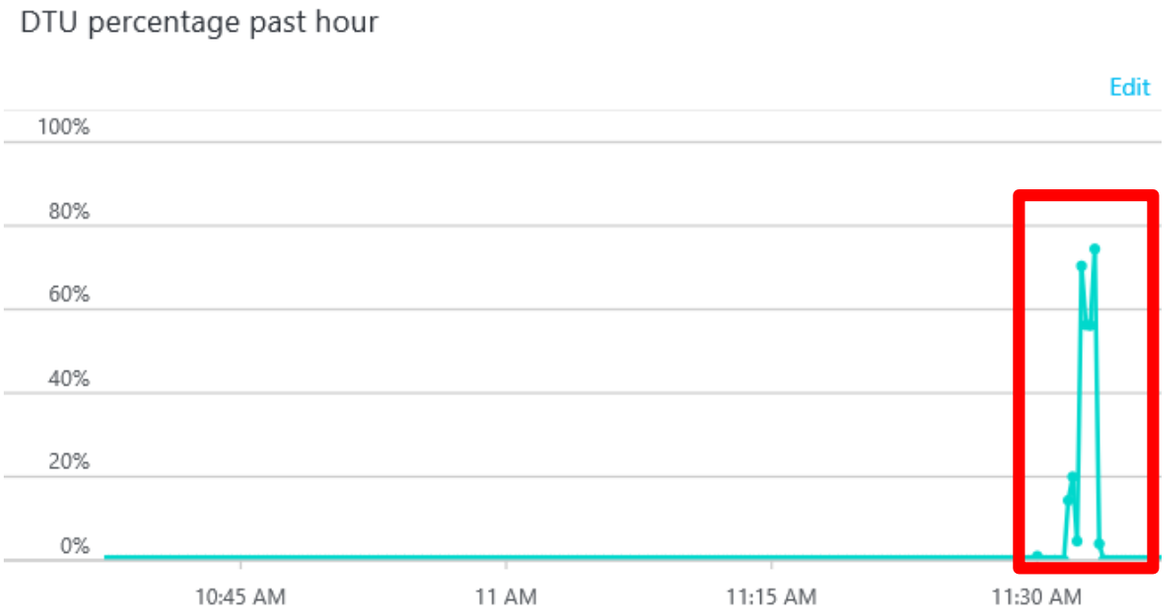
50 concurrent users, 2 minutes duration

Web App Performance
(“Shared” tier)



AVERAGE RESPONSE TIME
1.78 s

DB Performance
(“S2” tier – 50 DTUs)



Know your web service plan limits…

	Free	Shared	Basic	Standard	Premium
Apps per Service Plan	10	100	Unlimited	Unlimited	Unlimited
Storage	1 GB	1 GB	10 GB	50 GB	500 GB
CPU time	60 minutes	240 minutes	Unlimited	Unlimited	Unlimited
CPU Cores	Shared	Shared	1 to 4	1 to 4	1 to 8
RAM	1 GB	0.5 GB	1.75 GB to 7 GB	1.75 GB to 7 GB	1.75 GB to 14 GB

More at:

- https://azure.microsoft.com/en-us/documentation/articles/azure-subscription-service-limits/#app-service-limits
- https://azure.microsoft.com/en-us/pricing/details/app-service/

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More at:

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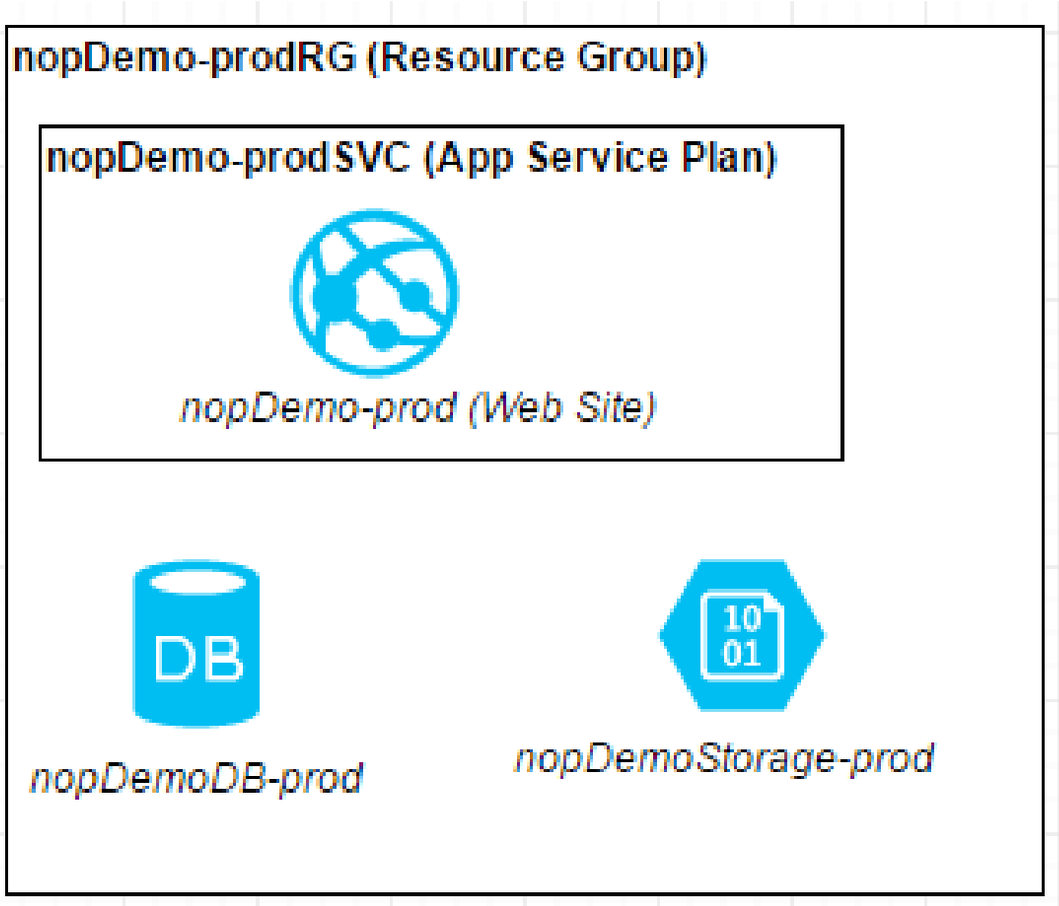
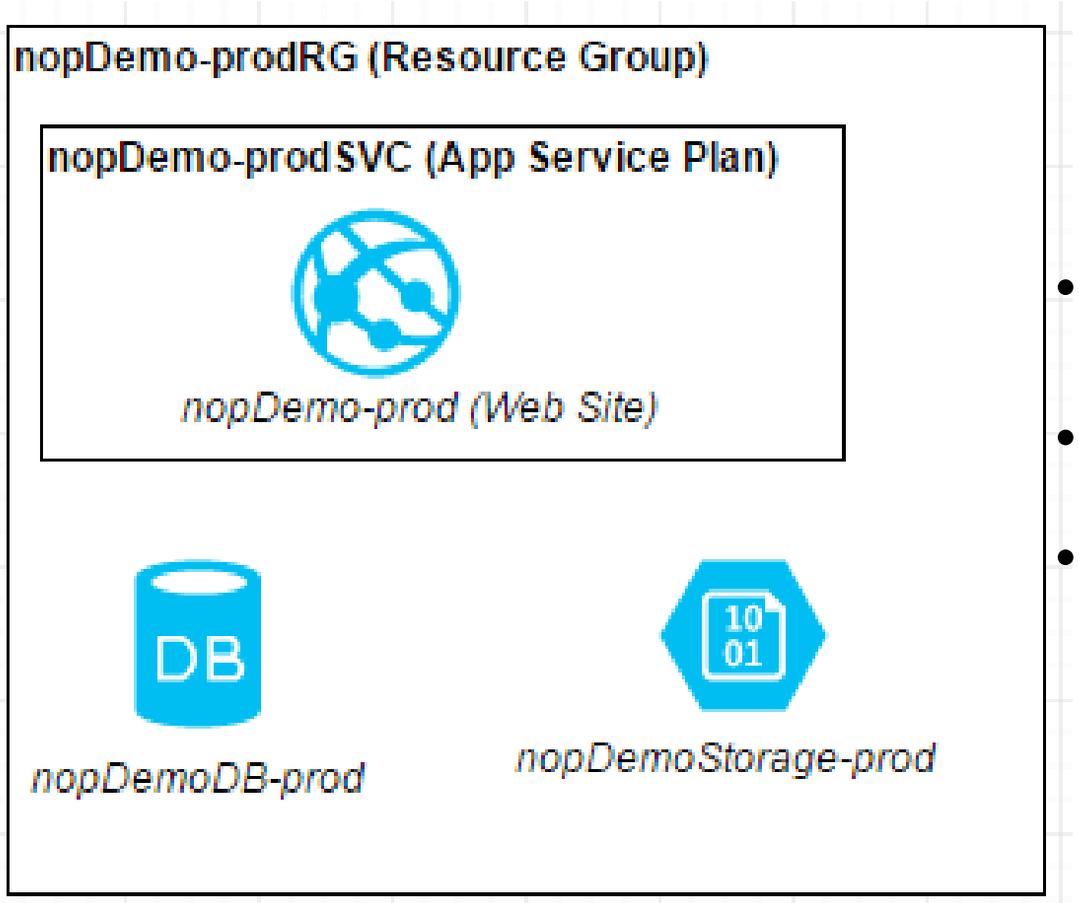
Working environment



- 1 Web App -> S2 Tier (~125 €/mo)
- 3DBs -> Basic Tier (3 x ~4 €/mo = 12 €/mo)
- Storage -> (~0.02 €/mo per 1GB)

Working environment



- 1 Web App -> S2 Tier (~125 €/mo)
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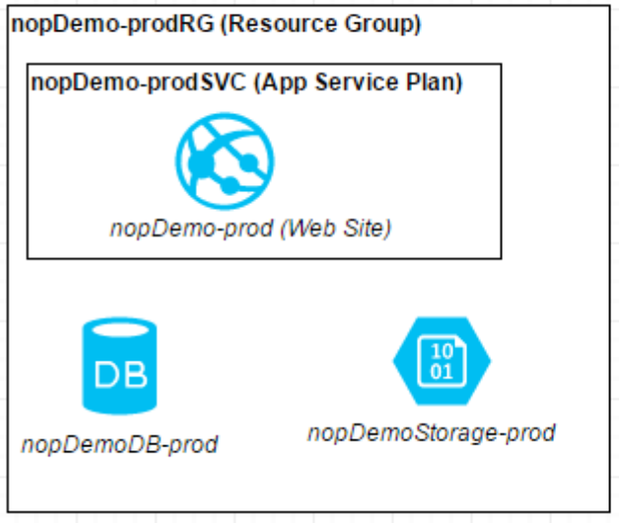
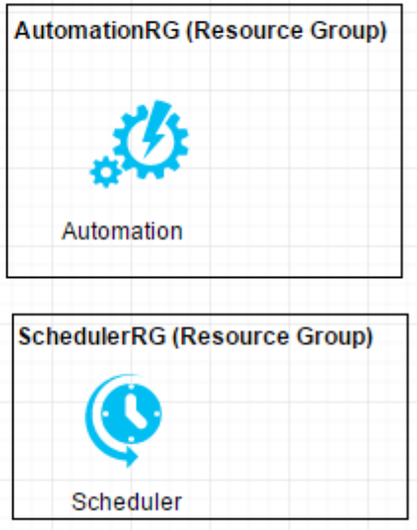
Working environment - Optimized

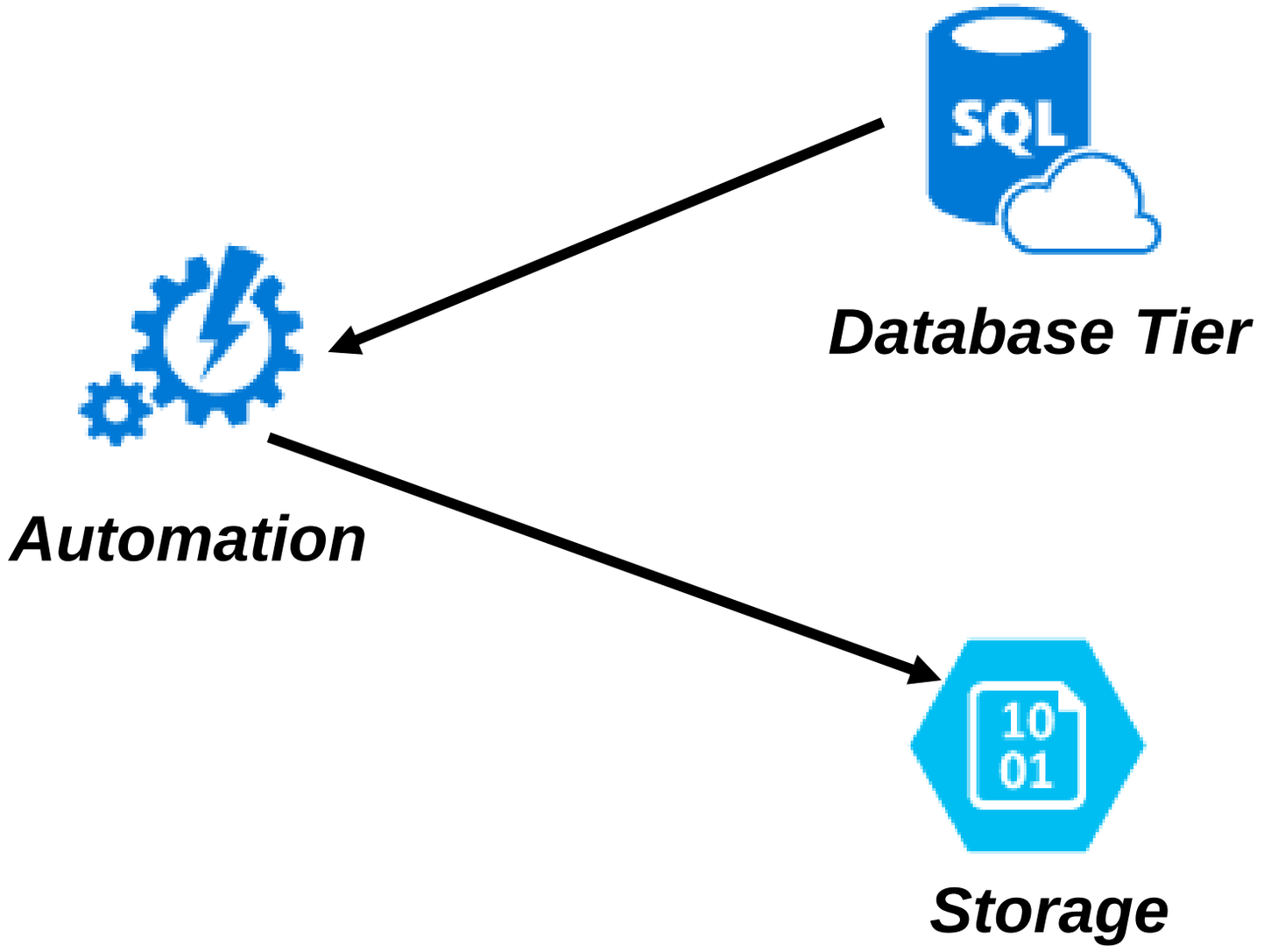




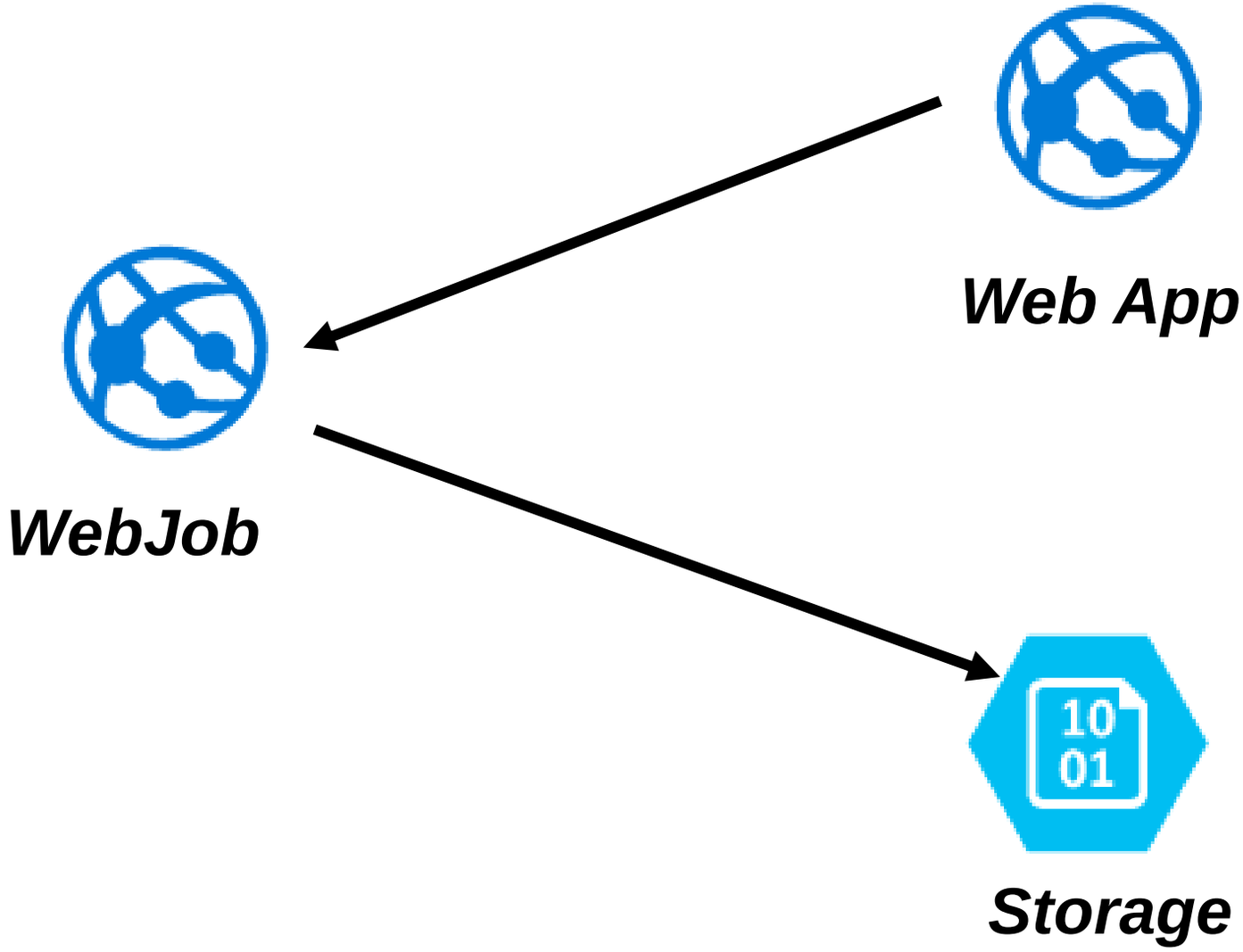
- Web Apps -> Free + Shared Tier (~8 €/mo)
- DB -> Basic Tier (~4 €/mo)
- Storage -> (~0.02 €/mo per 1GB)
- Automation -> (~2 €/mo)
- Scheduler (~12 €/mo)

Let’s walk another mile ☺
...and see some other tips and tricks

Automate DB Exports



Background file backups

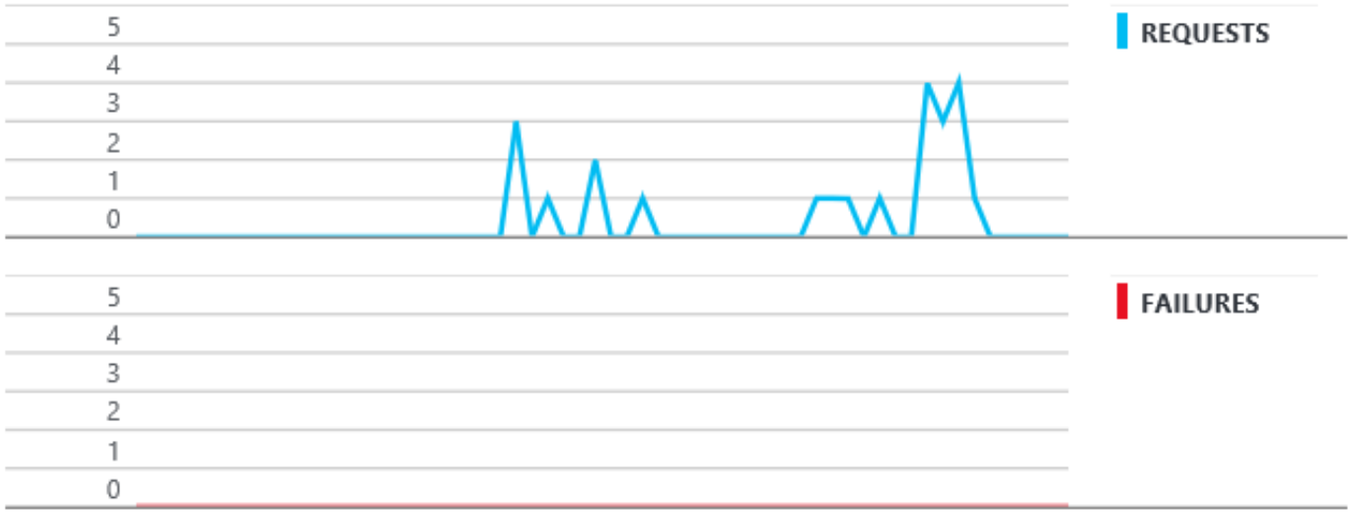


Application Insights

Slowest Requests (past 24 hours)

REQUEST NAME	DURATION (95TH)
GET Home/Index	13.90 s
GET Customer/Login	7.21 s
GET Product/NewProducts	4.38 s
GET News/List	1.32 s

Live Stream



…and more to play with

- Resource Group distribution
- WebHooks
- Resource manager templates
- And….

Let’s not forget the alerts!

Takeaways

- Don’t just deploy an app, decide the architecture beforehand
- Careful with Database capacity (kind of a bottleneck)
- Know the limits of your tier
- Take advantage of side Azure services to make your life easier

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Thank you! ☺

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