

Azure SQL Database  
**Managed Instance**

Code name “Cloud Lifter”

# Why modernize by moving to cloud?

- Want to increase productivity and decrease costs
  - Data center is too costly and complex to manage
  - Hosting solution is high maintenance
- Want to accelerate your growth
  - Easily get new features to get that competitive edge
  - Expand your reach globally

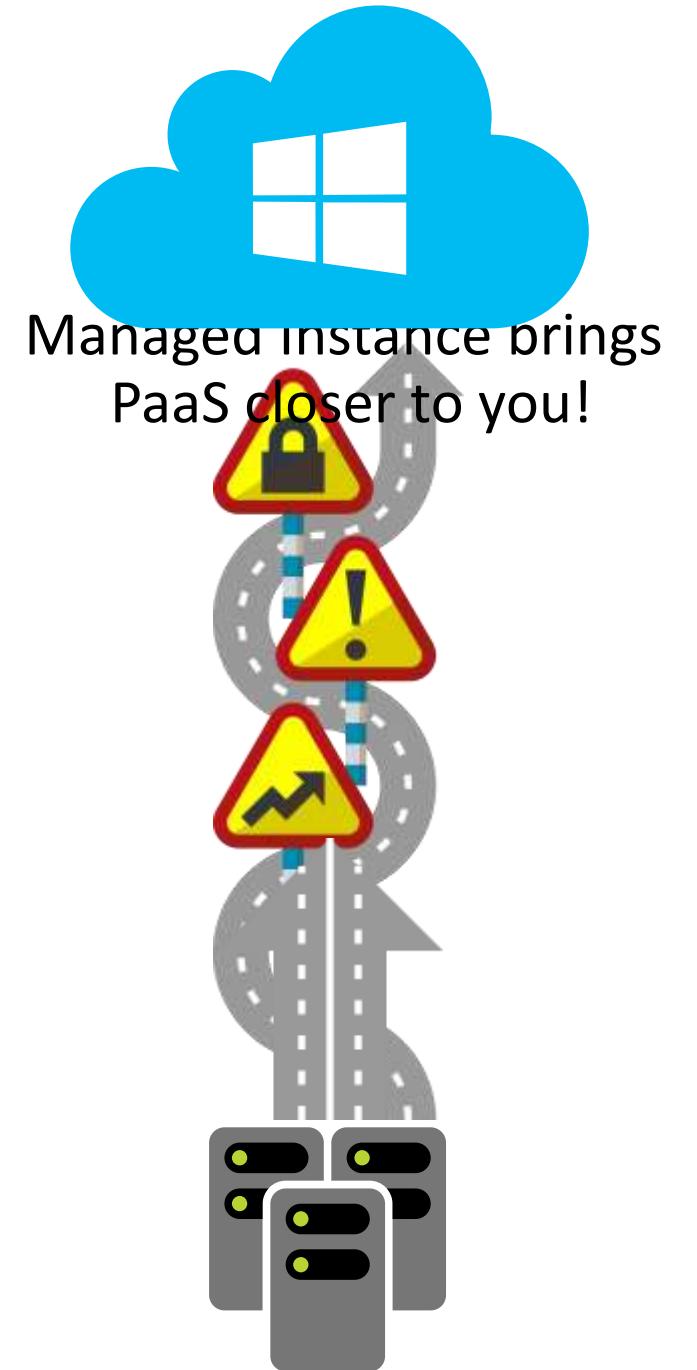
# Focus on your business...

Your work so far	How PaaS helps?
Hardware purchasing and management	<b>Built-in</b> Scales on-demand
Protect data with backups (with health checks and retention)	<b>Built-in</b> Point-In-Time-Restore
High availability implementation	<b>Built-in</b> 99.99% SLA and auto-failover
Disaster recovery implementation	<b>Built-in</b> Geo-redundancy and geo-replication
Ensure compliance with standards on your own	<b>Built-in</b> / easy to use features
Secure your data from malicious users and mistakes	<b>Built-in</b> / easy to use features
Role out updates and upgrades	<b>Built-in</b>
Monitor, troubleshoot and manage at scale	<b>Built-in</b> / easy to use features
Tune and maintain for predictable performance	<b>Built-in</b> / easy to use features

*You would like to get PaaS benefits  
without paying a high migration  
cost?*

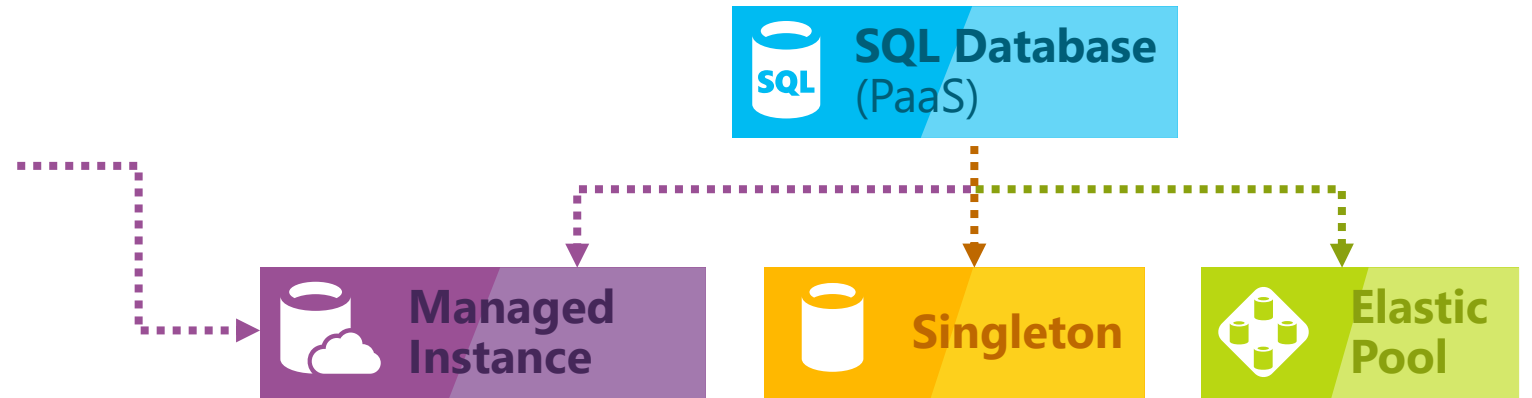
**If yes, than go for Managed  
Instance!**

???



# What is SQL Database Managed Instance?

A flavor of SQL DB designed to enable easy migration to fully managed PaaS, for almost any application!



## Easy lift and shift

- Fully-fledged SQL instance with nearly 100% compat with on-prem

## Fully managed PaaS

- Built on the same PaaS service infrastructure
- All PaaS features

## Full isolation and security

- Native VNET implementation
- Private IP addresses

## New business model

- Competitive
- Transparent
- Frictionless

# Managed Instance

The four pillars details

# Easy migration: nearly 100% like SQL Server

## Data migration

- Native backup/restore
- Log shipping (DMS)

## Security

- TDE
- SQL Audit
- Row level security
- Always Encrypted

## Programmability

- Global temp tables
- Cross-database queries and transactions
- Linked servers
- CLR modules

## Operational

- DMVs & XEvents
- Query Store
- SQL Agent
- DB Mail (external SMTP)

## Scenario enablers

- Service Broker
- Change Data Capture
- Transactional Repl

**Note: features will be added in stages until General Availability of Managed Instance**

# What's is missing?

- Features obsolete in the cloud

Always-On Availability Groups: HA is built-in

Windows Authentication: Azure Active Directory is the alternative.

Management Data Warehouse : [OMS](#) integration is the alternative.

- Retired features

Database Mirroring: built-in HA / geo-replication

Extended stored procedures: customers should use CLR

- Features considered post-GA

Filestream, Filetable

Cross-instance distributed transactions

Master Data Services (MDS), Data Quality Services (DQS)

Stretch Database

Policy Based Management



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**Managed Instance will offer all these features by GA!**

# Managed Instance: new business model

- Choose compute resources and storage independently, from two service tiers
- Azure Hybrid Use Benefit: use your on-premise licenses, with software assurance, to get discounts

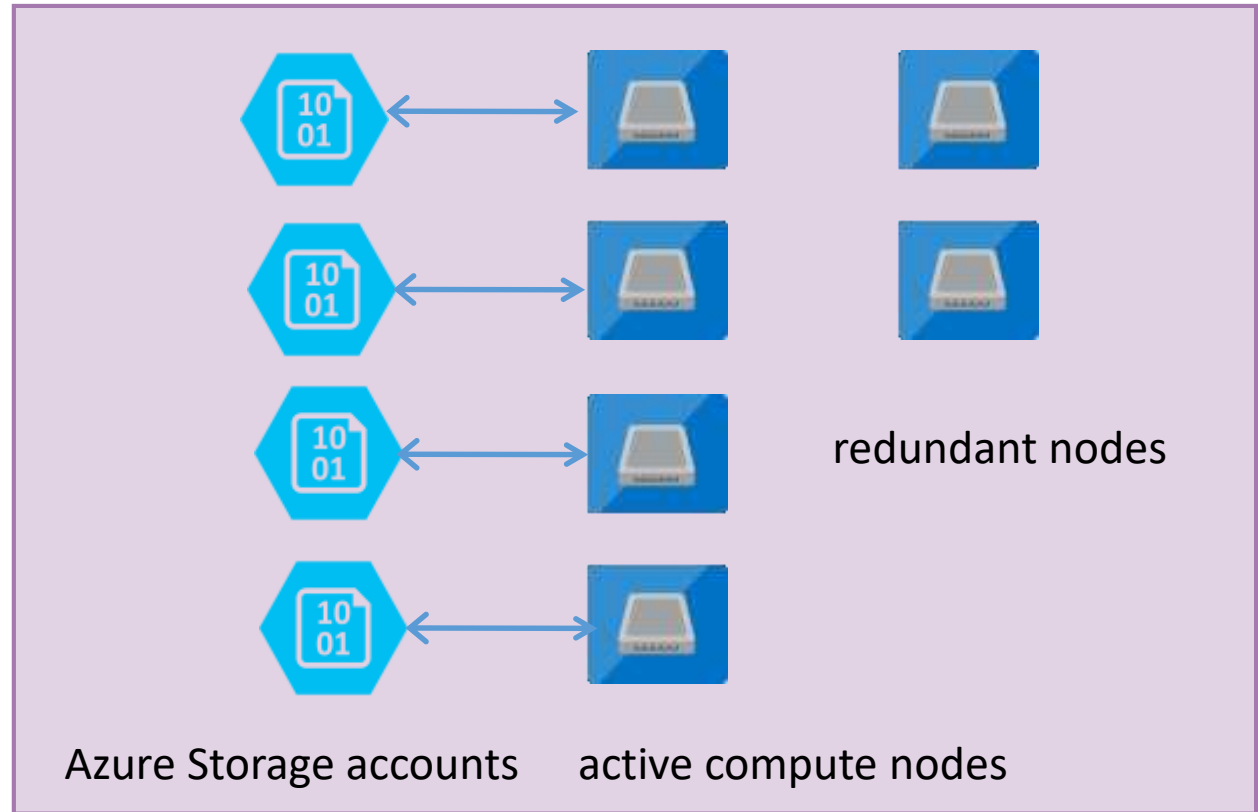
Service tier	General Purpose (high SLA, fast storage)	Business Critical (very high SLA, super fast storage)
Instance compute resources (contains multiple databases)	8, 16, and 24 vCores  Charged per: vCore / hour	8, 16, and 24 vCores  Charged per: vCore / hour
Type of storage (reserved in multiples of 32 GB)	Fast remote (Azure Premium) Charged per: GB / hour	Super fast local SSD Charged per: GB / hour
Backup storage	7 days retention free of charge  Charged per GB / hour	7 days retention free of charge  Charged per: GB / hour
I/O operations	Charged per million IOs	Charged per million IOs

- More choices (service tiers, sizes) may come before GA

# General Purpose

## Separate compute & storage

- Best for: apps with regular performance and HA requirements
- Single active node / instance
- Azure Premium Disks
- 100 databases / instance
- One file per disk

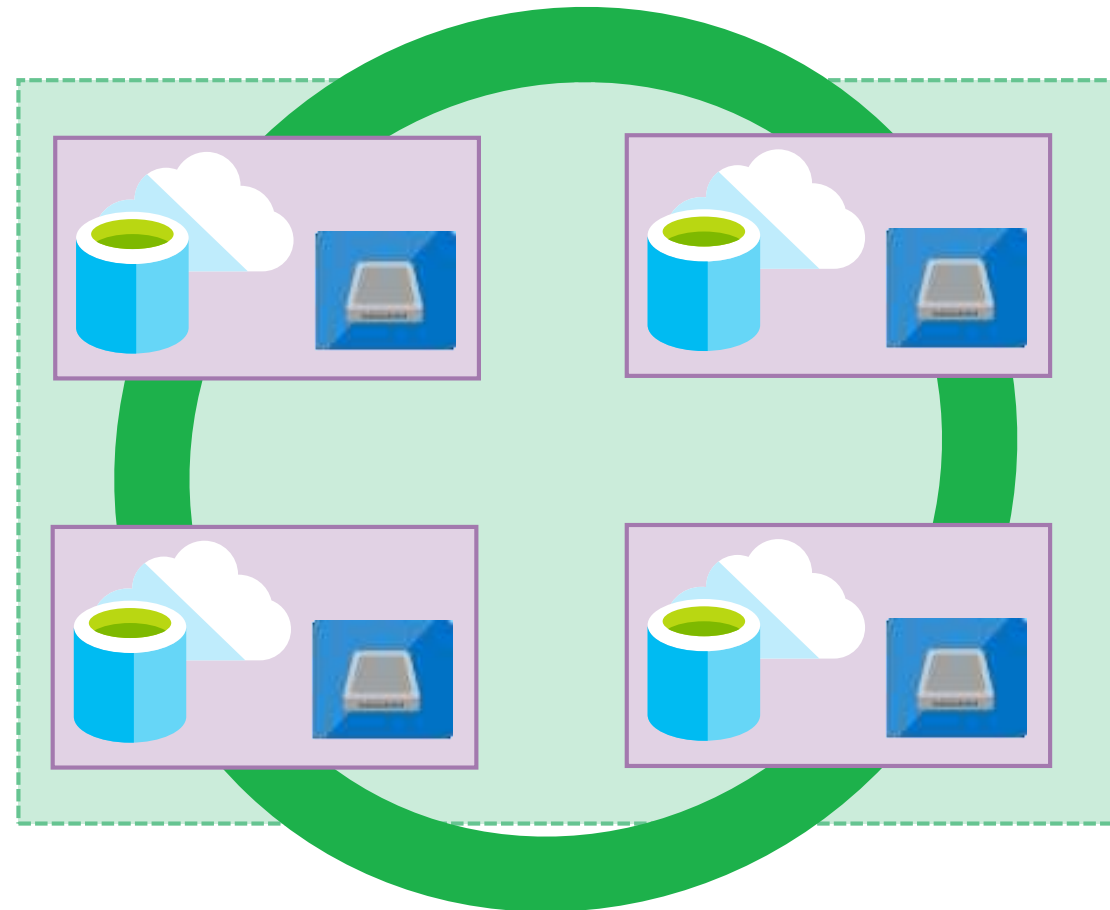


Service Fabric

# Business Critical

## Integrated compute and storage

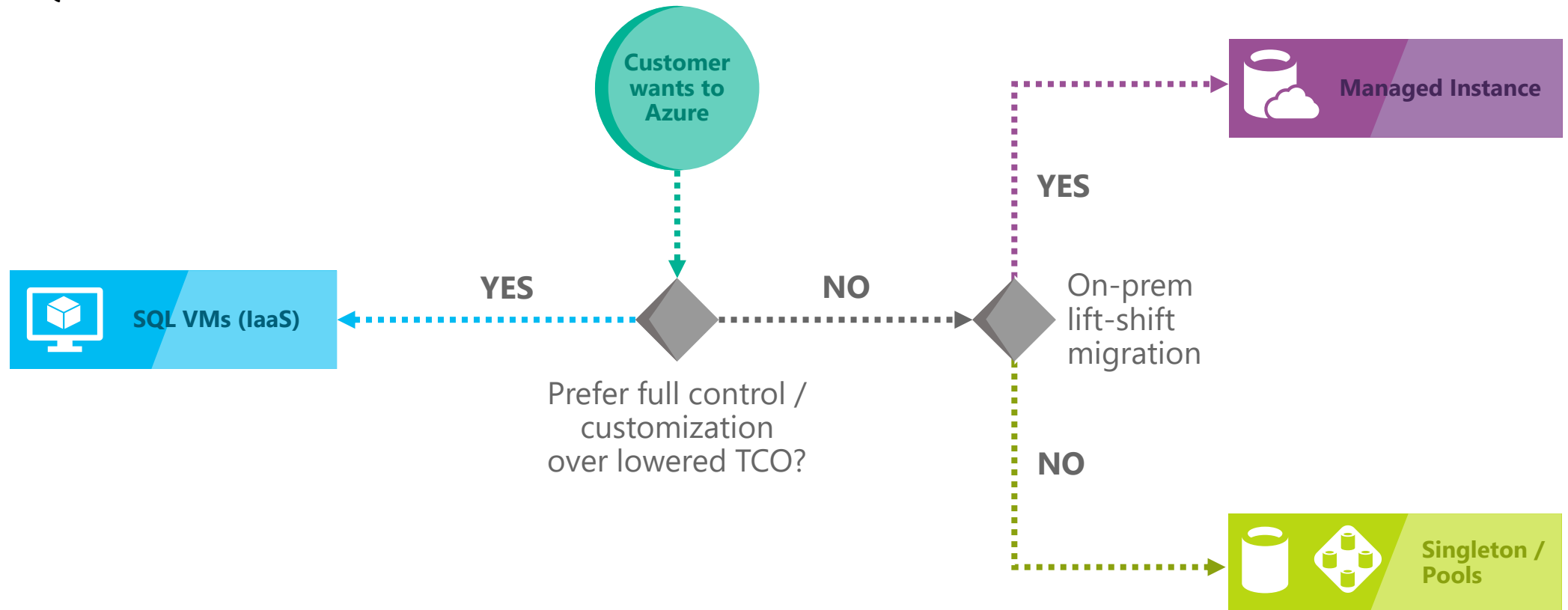
- Best for: mission critical apps that do not tolerate latency and downtime
- Super fast SSDs
- Multiple nodes / instance in Always On Availability Group
- 100 databases / instance



# Positioning SQL offerings in Azure

SQL IaaS

SQL PaaS



# Easy migration: SSIS / SSAS / SSRS

Will **not be installed** side-by-side with Managed Instance

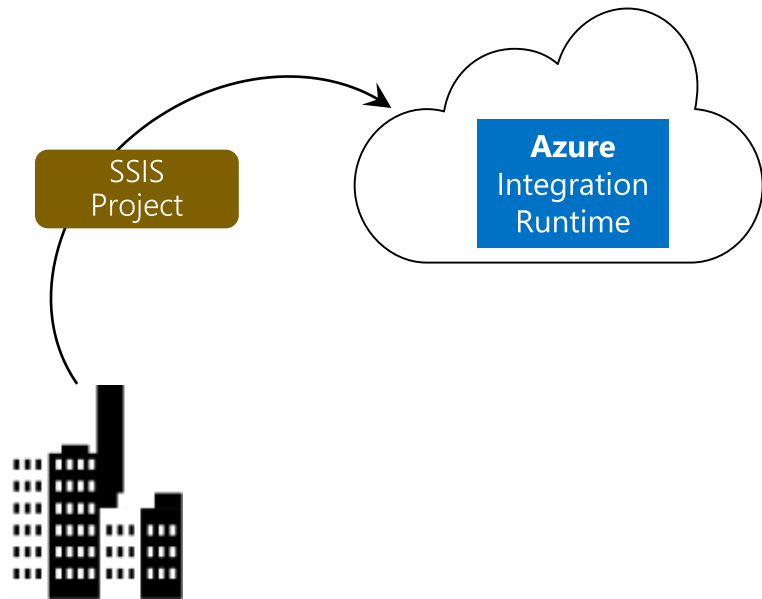
Recommendation: **move to PaaS model**

- Migrate your SSIS packages to new SSIS on Azure Data Factory (PaaS service)
- Migrate your OLAP models to Azure Analysis Services

... or run these services in Azure virtual machines

For SSRS: run in a virtual machine, or switch to Power BI

# Integration Runtime for SSIS



## Managed Cloud Environment

Pick number of nodes & node size, resize later if needed

## Compatible

Same SSIS runtime across Windows, Linux, Azure Cloud

## SSIS + SQL Server

SQL DB Managed instance + SSIS in cloud

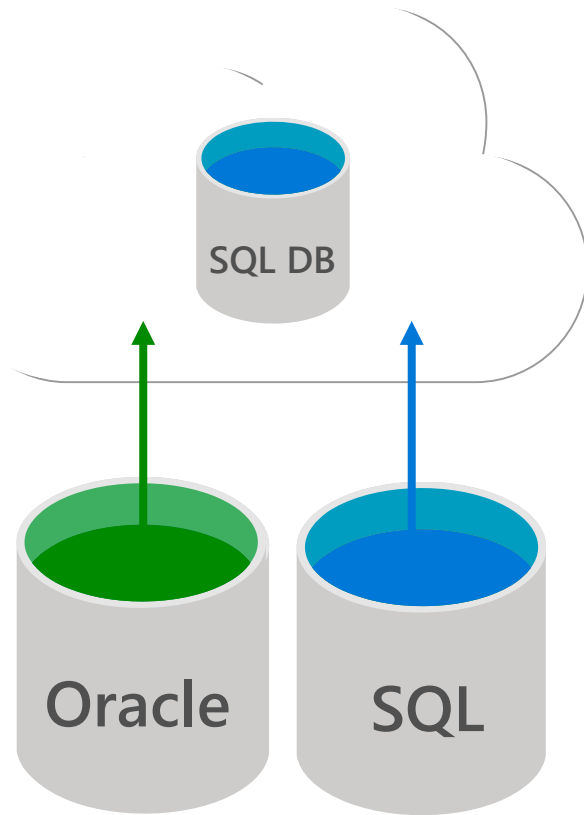
Access on premises data via VNet

## Get Started

Hourly pricing (no SQL Server license required)

Use existing license (coming soon)

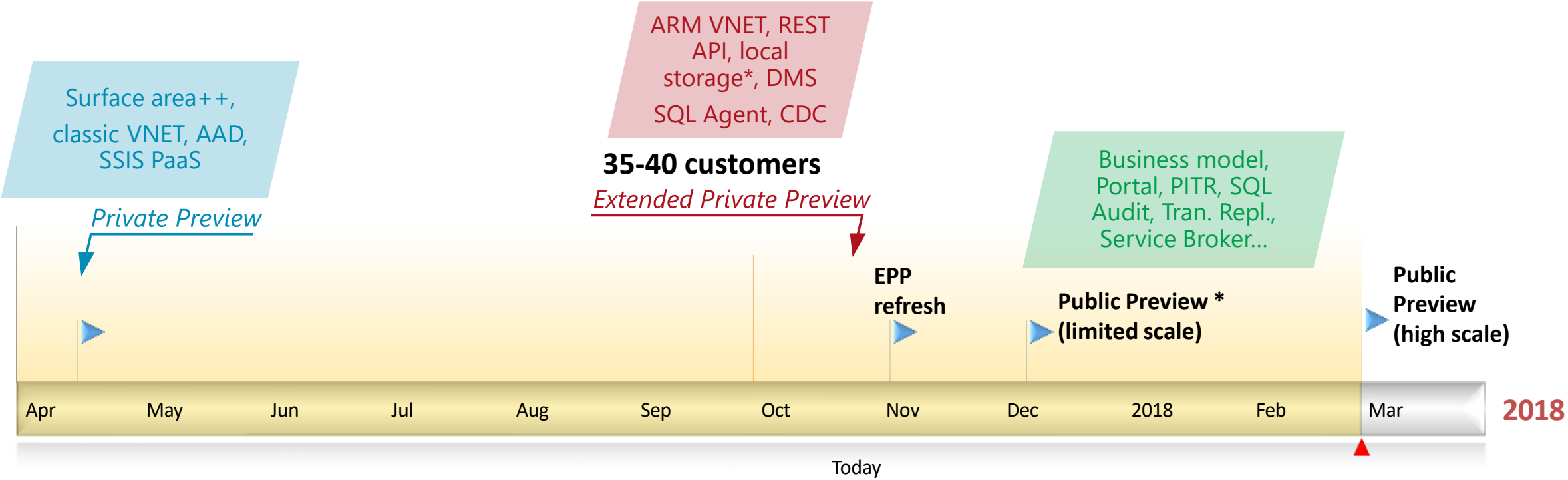
# Easy migration: Database Migration Service



- Fully managed, reliable and seamless, migration service for both operational databases and data warehouses
  - Minimal down time migrations
  - Homogeneous and heterogeneous source-target pairs
- Public preview: SQL 2005+ to SQL DB / Managed Instance
  - Initial focus on reliability and performance
  - Iterative addition of source-target pairs
- For more information, contact [datamigrationteam@microsoft.com](mailto:datamigrationteam@microsoft.com)

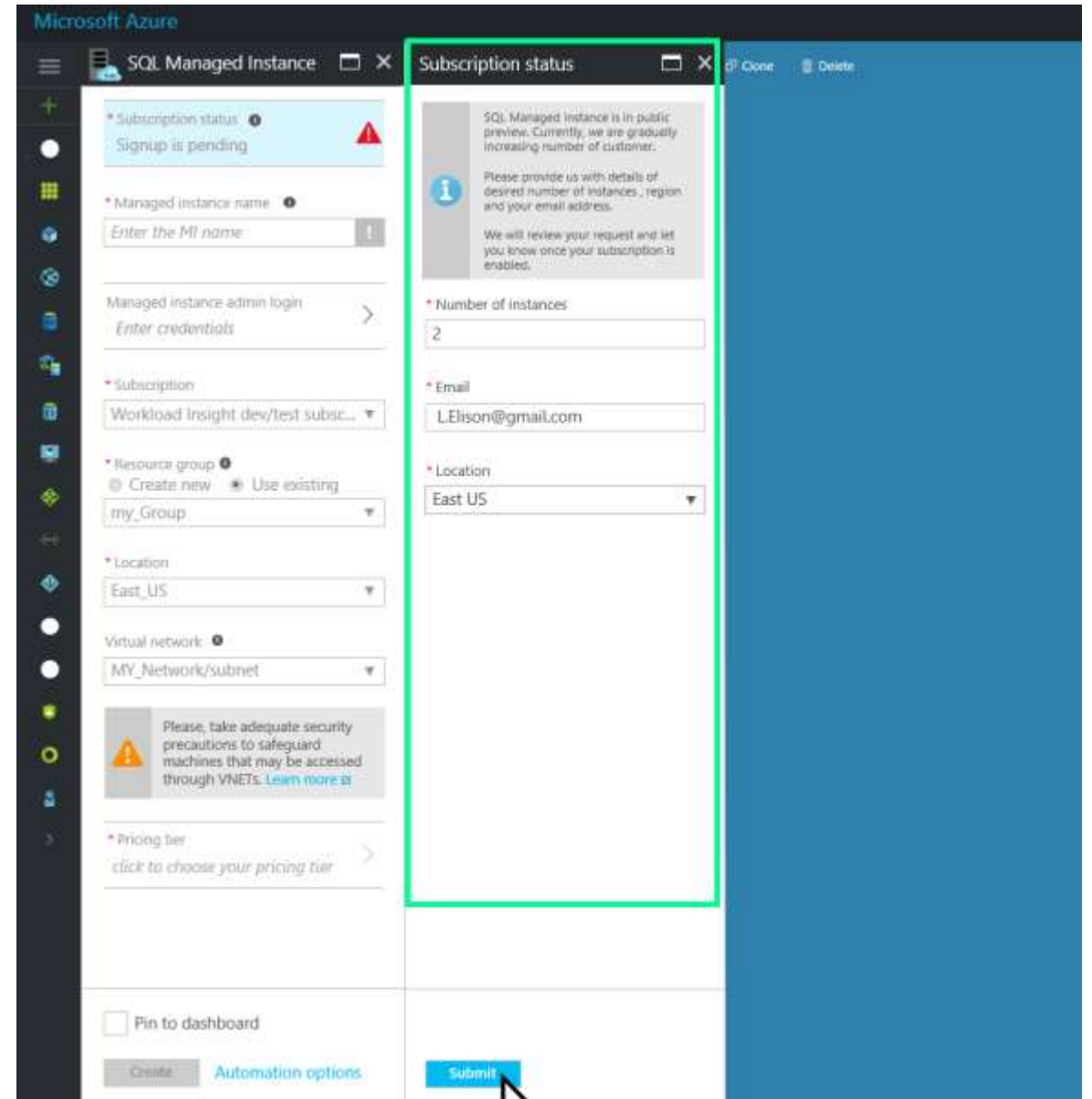
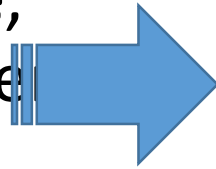


# Product rollout



# Public Preview\* – limited scale

- Limited compute capacity until February
- Provisioning / scaling limits (20-30 customers first month, growing every month)
- **Enrollment process and triage**, focusing on important customers (field nominees)



Microsoft Azure

SQL Managed Instance

Subscription status

Subscription status

Signup is pending

Managed instance name

Enter the MI name

Managed instance admin login

Enter credentials

Subscription

Workload Insight dev/test subsc...

Resource group

Create new Use existing

my\_Group

Location

East\_US

Virtual network

MY\_Network/subnet

Please, take adequate security precautions to safeguard machines that may be accessed through VNets. [Learn more](#)

Pricing tier

click to choose your pricing tier

Pin to dashboard

Create Automation options

Submit

SQL Managed Instance is in public preview. Currently, we are gradually increasing number of customer.

Please provide us with details of desired number of instances, region and your email address.

We will review your request and let you know once your subscription is enabled.

Number of instances

2

Email

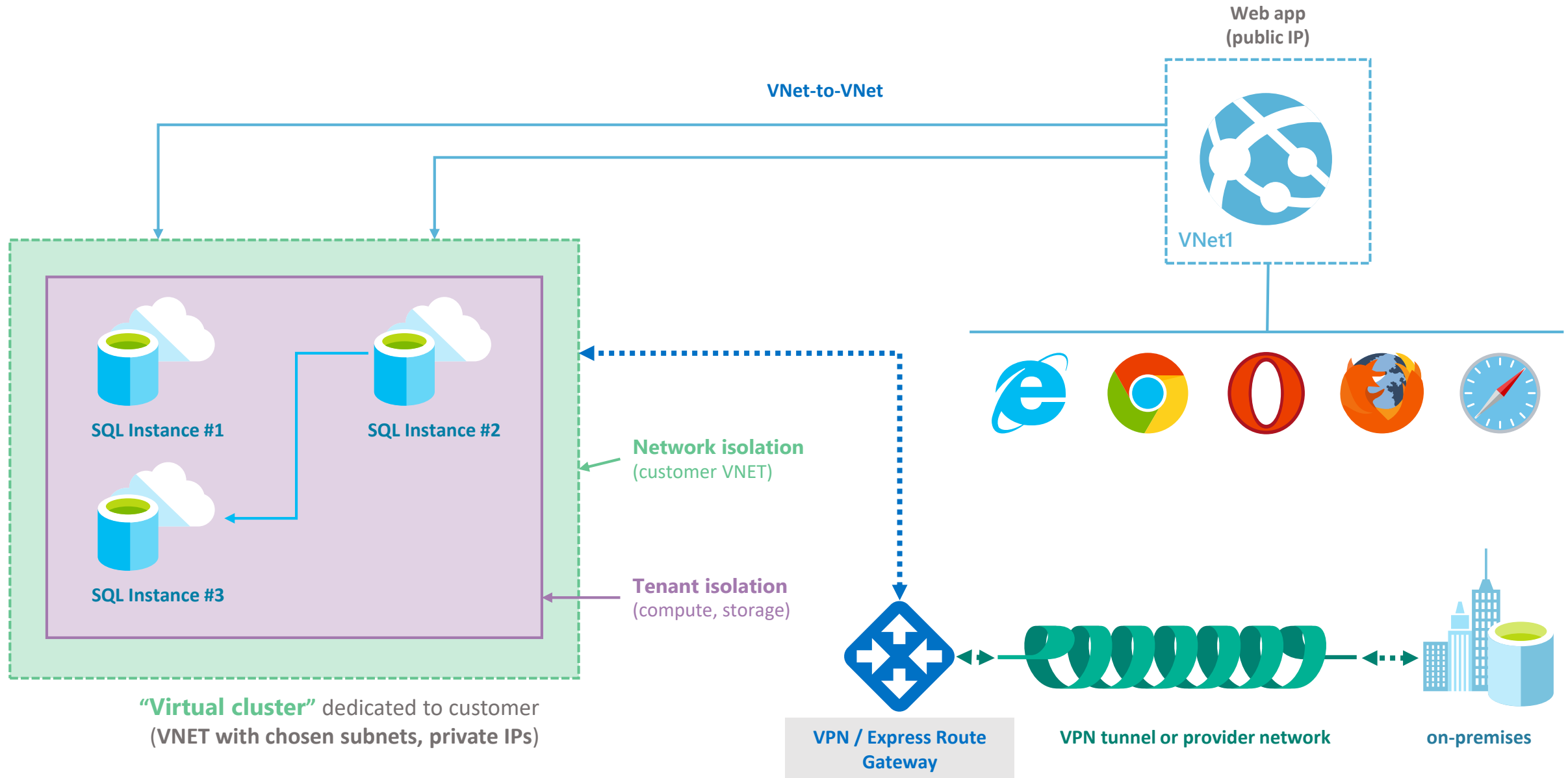
L.Elison@gmail.com

Location

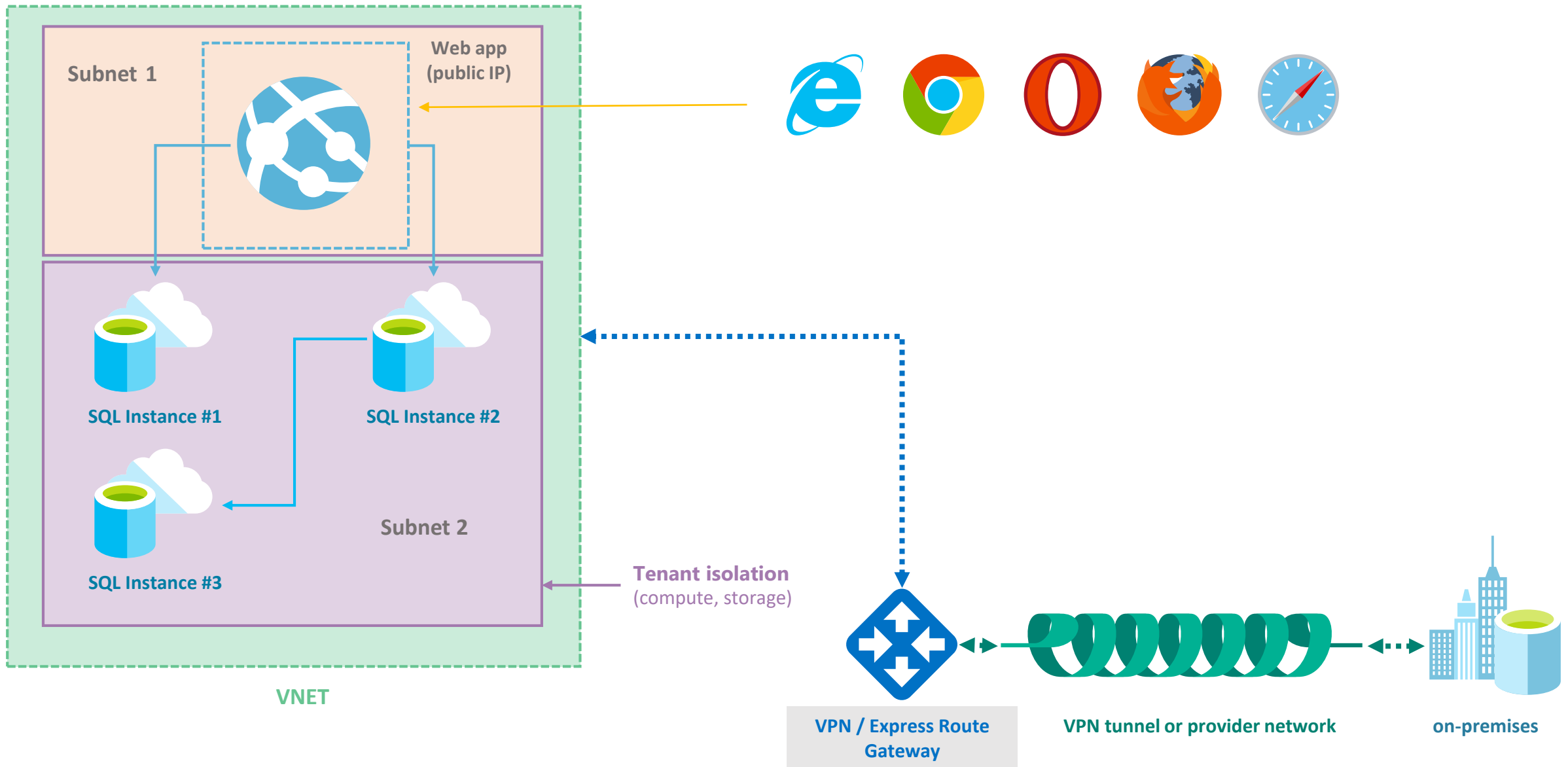
East US

Networking isolation

# Removing security & isolation concerns



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