

NASHVILLE

Zerto SON

2019



Microsoft Azure, I like it, I love it

Kyle Bromley



RESILIENCE
COUNTRY

A Little About Me



Kyle Bromley

Azure Solutions Architect, 6 years



Agenda

Microsoft Azure Overview

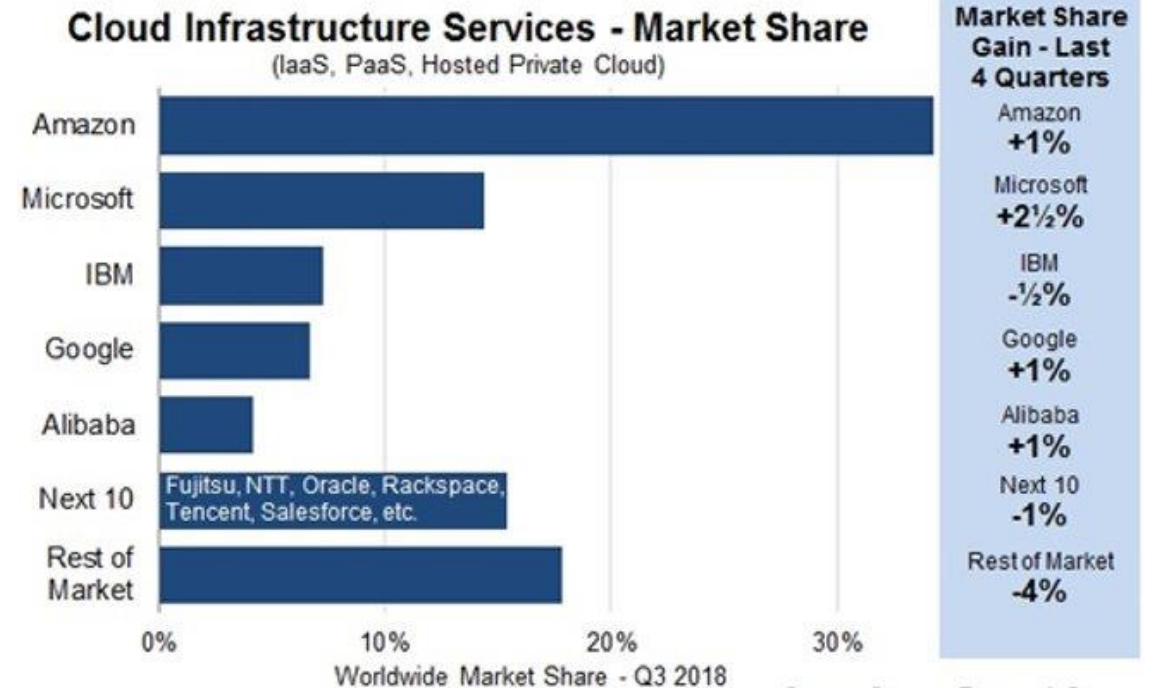
Microsoft Azure & Zerto - The Nut to Shell

Microsoft Azure & Zerto - Right Sizing Considerations

Azure Overview



- Public Cloud computing service created by Microsoft
- Provides software as a service (SaaS), platform as a service (PaaS) and infrastructure as a service (IaaS)
- Released on 1 February 2010
- Currently has over 600 services

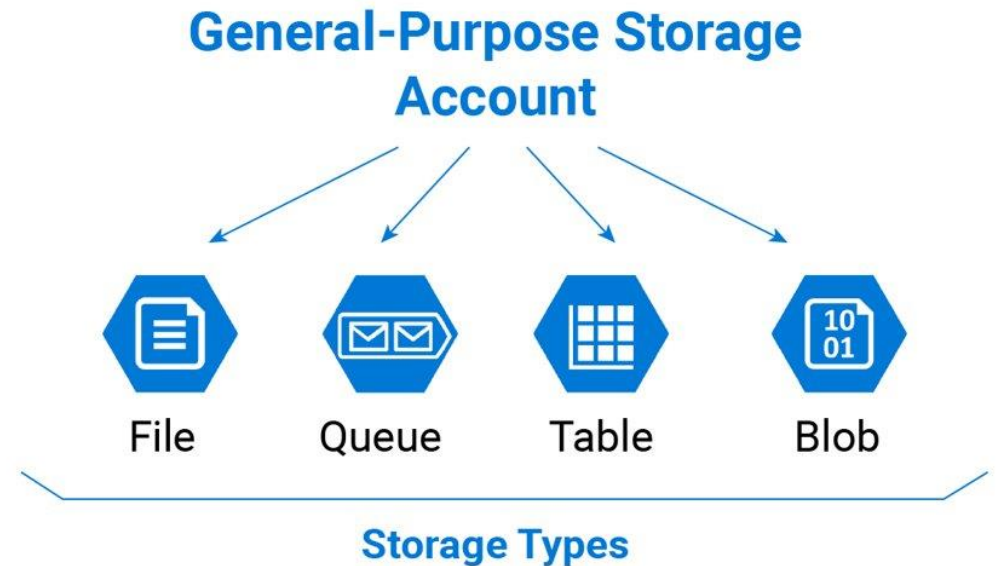


Microsoft Azure & Zerto

The Nut to Shell

Azure Fundamentals – Storage Account

- Azure storage account contains all Azure Storage data objects: blobs, files, queues, tables, and disks.
- Each Storage account can use up to 20,000 IOPS
- A single storage account is setup while installing Zerto



Azure Fundamentals – Storage Account Blobs

Block Blob

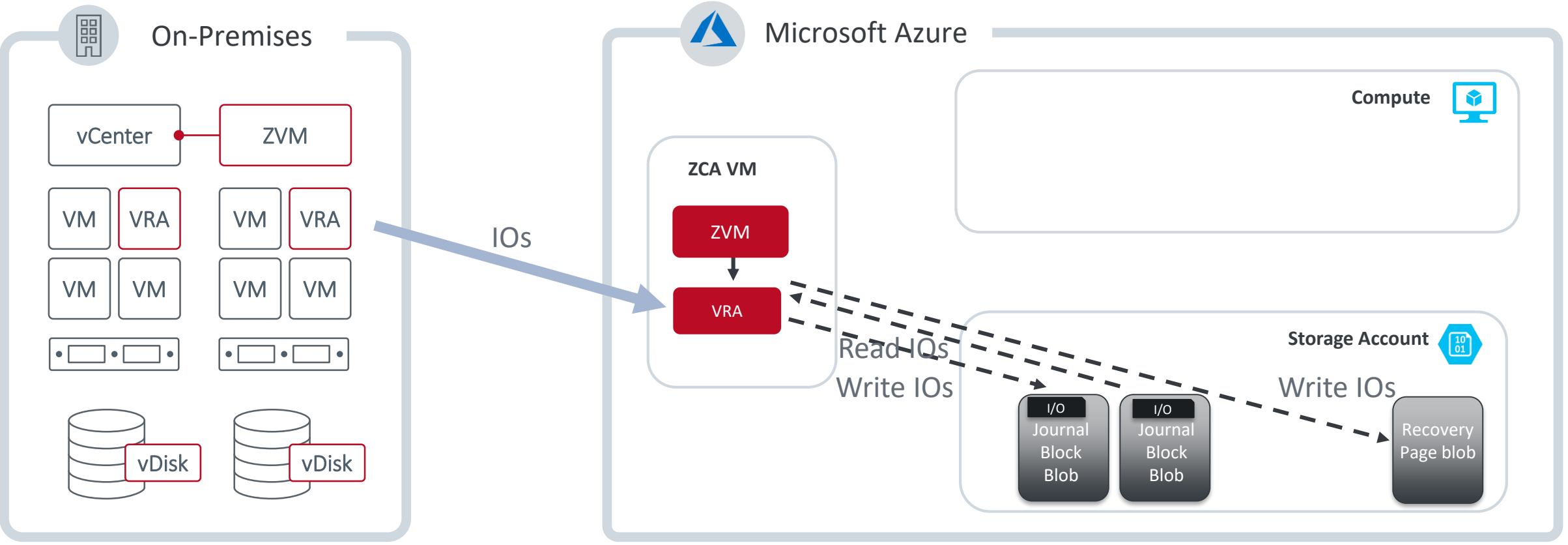
- Ideal for storing text or binary files, such as documents & media files
- No random write access
- Limited to 500 IOPS or 60MB/s
- Used by VRA for storing the Journal (VRA uses a single block)

Page Blob

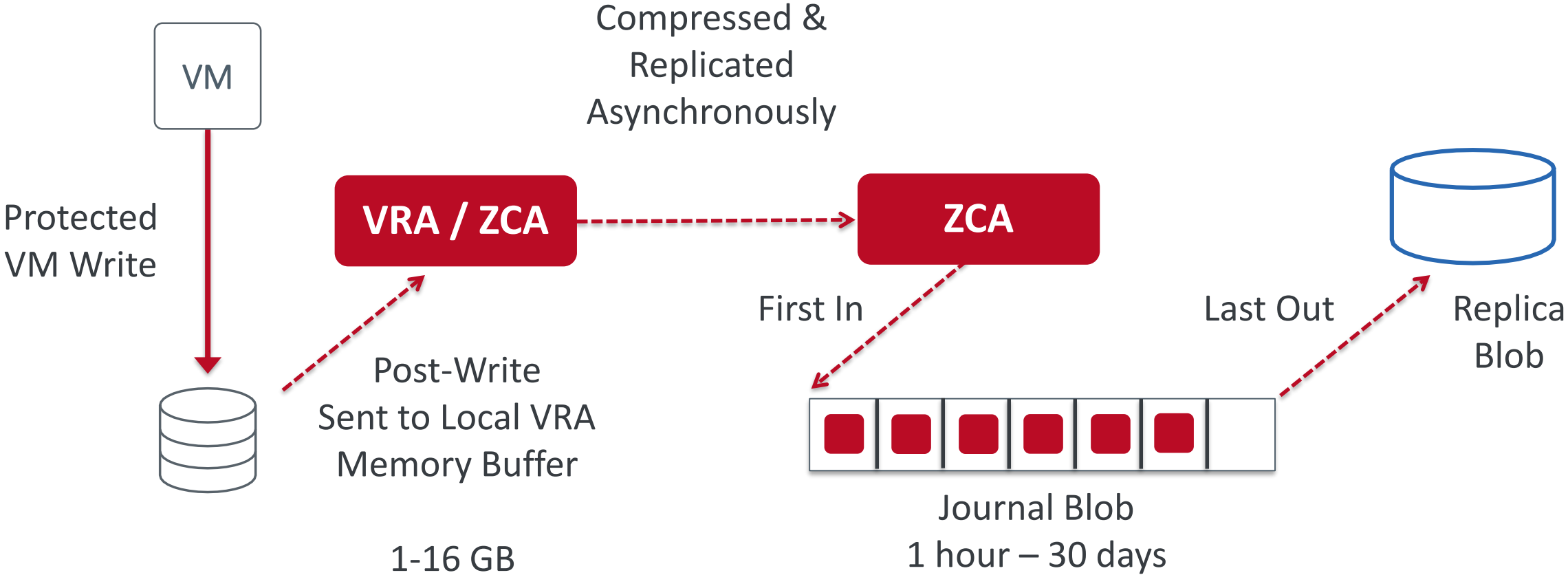
- Optimized for random read/write operations
- Limited to 500 IOPS or 60MB/s
- Use for the Recovery Volumes



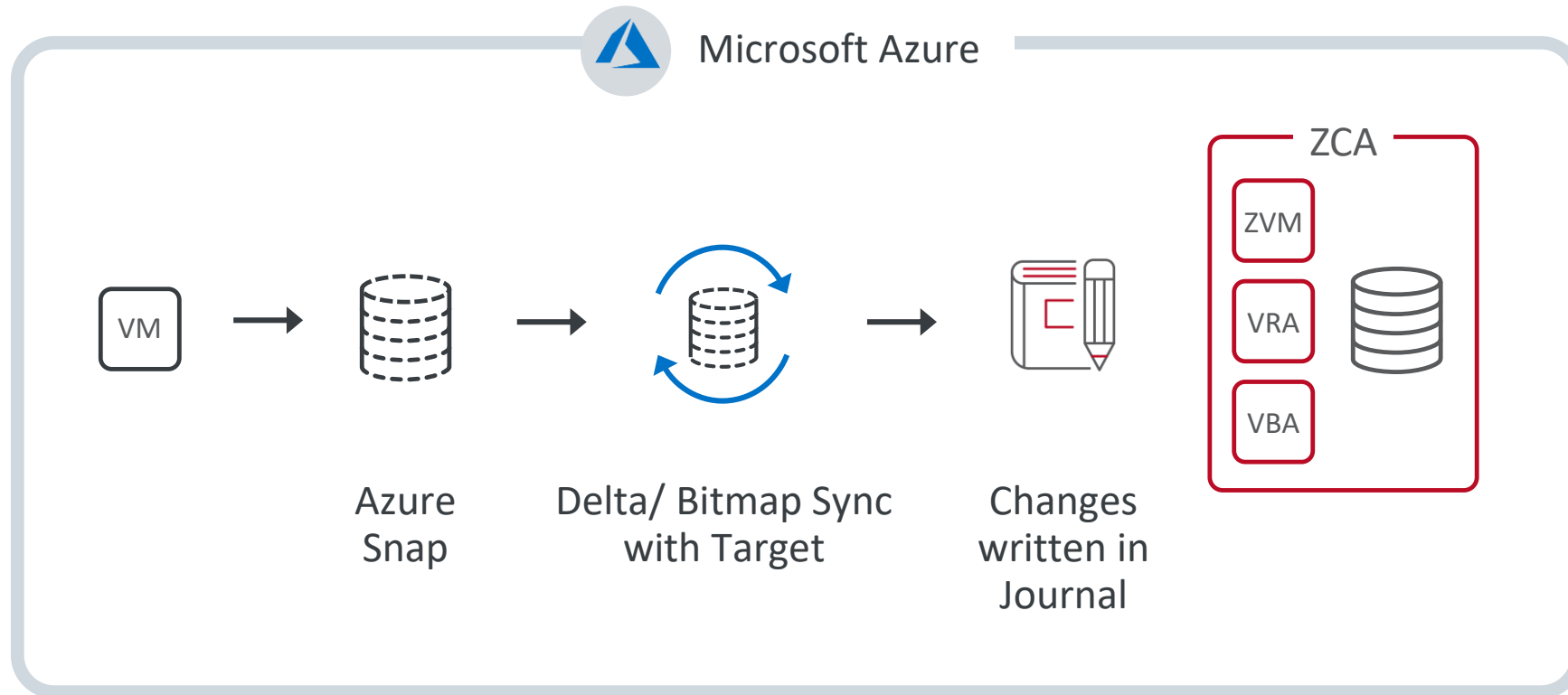
On-going replication to Azure



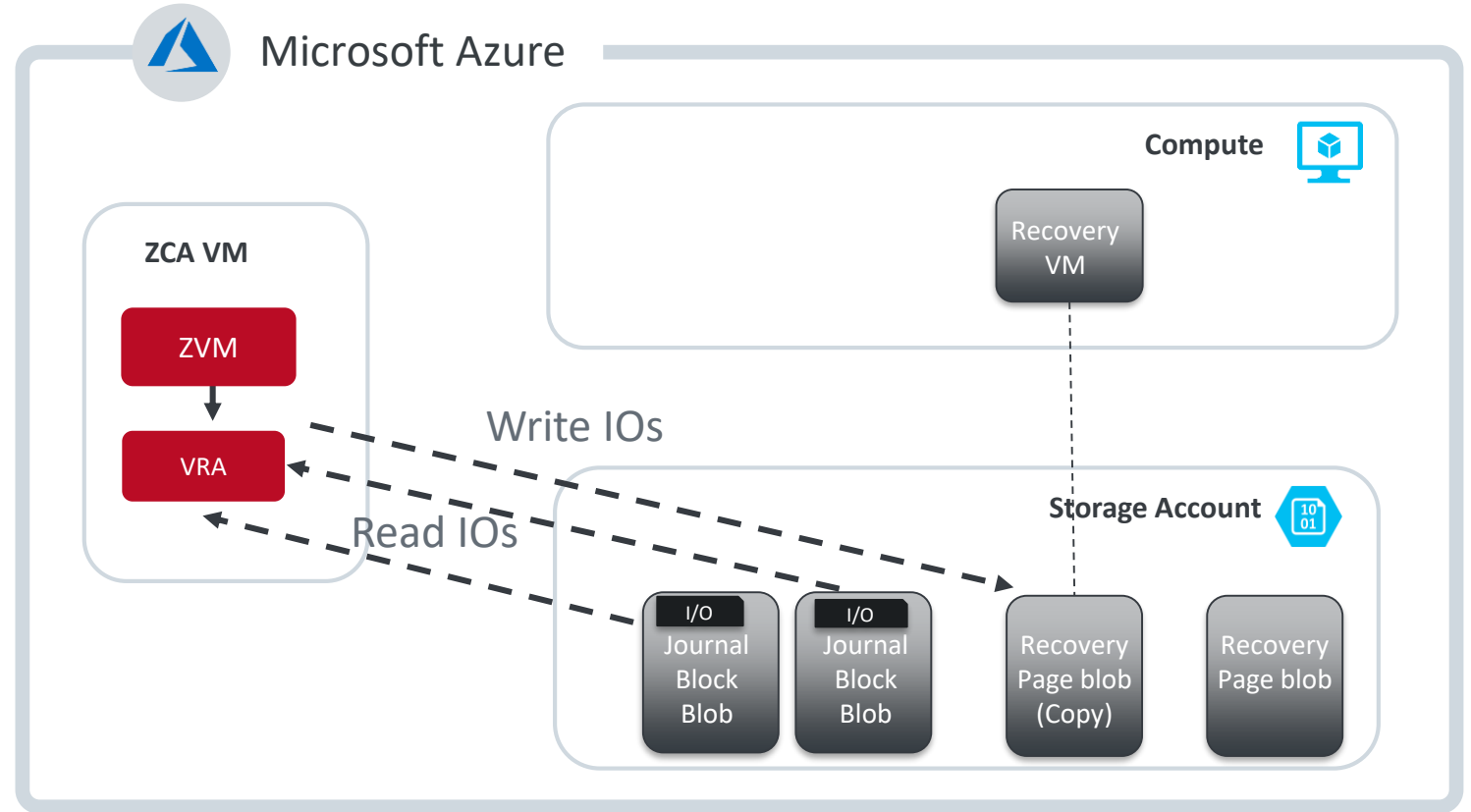
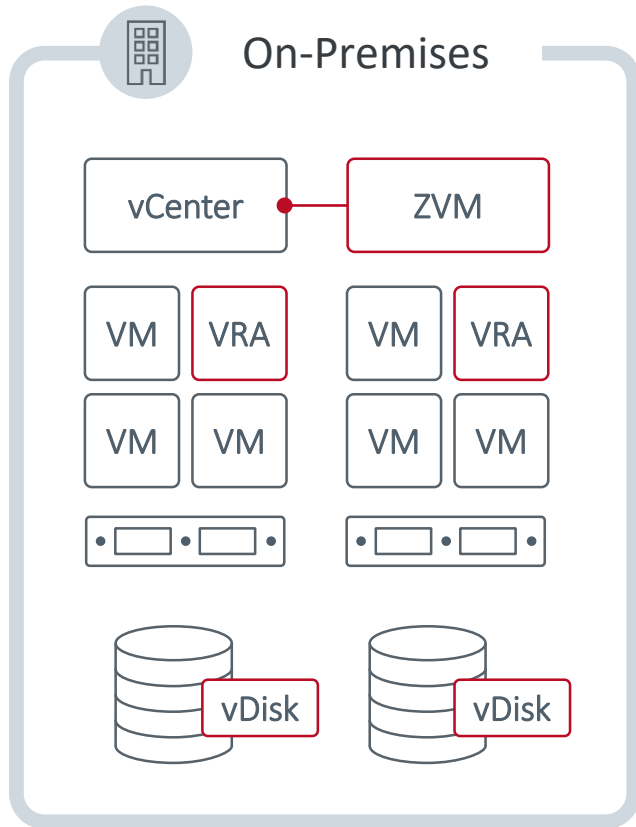
Replication: Summary



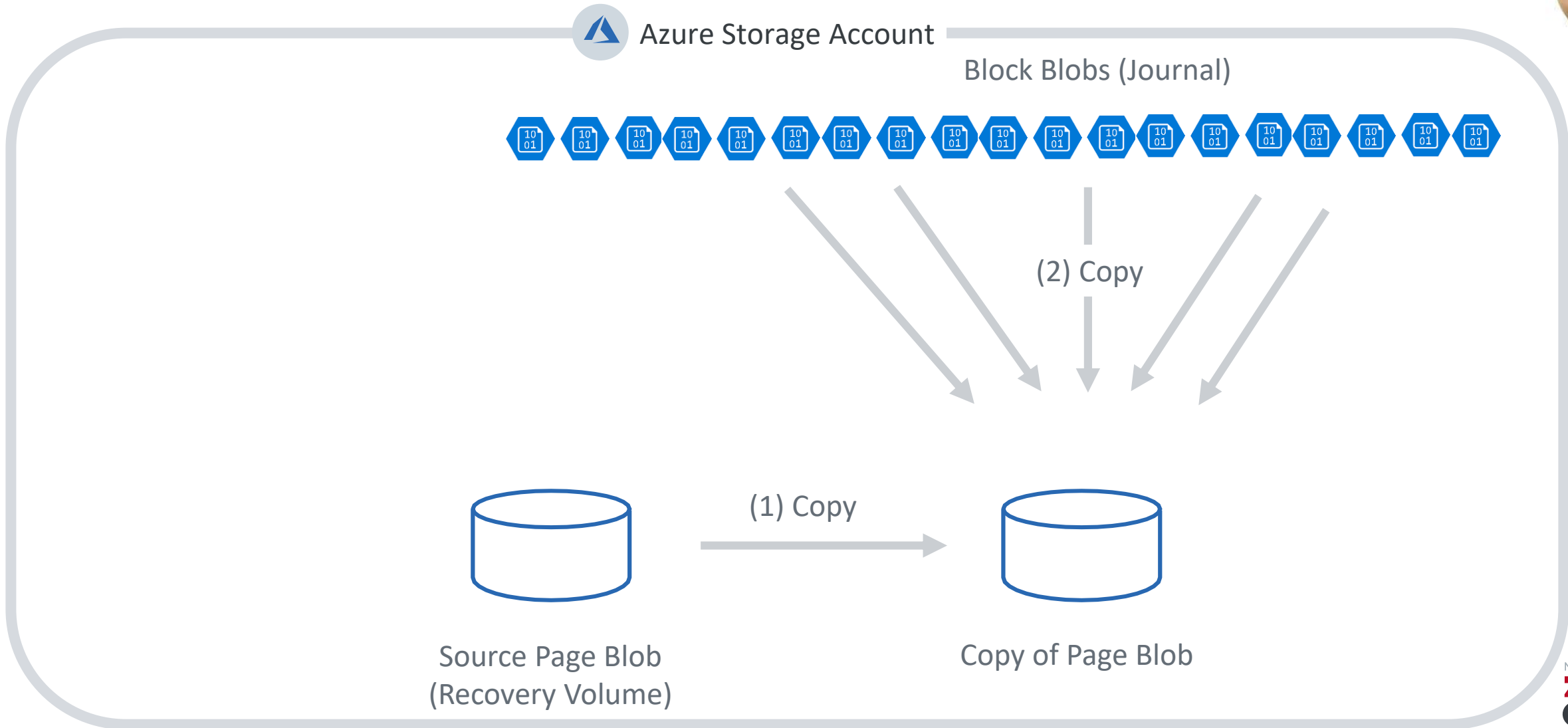
From Azure Replication



Failover flow in Azure



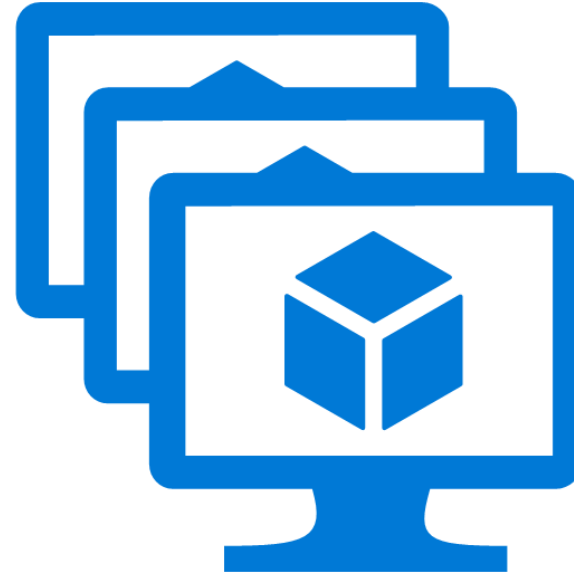
Promotion flow in Azure



Introducing... new Azure services



Azure Storage Queue



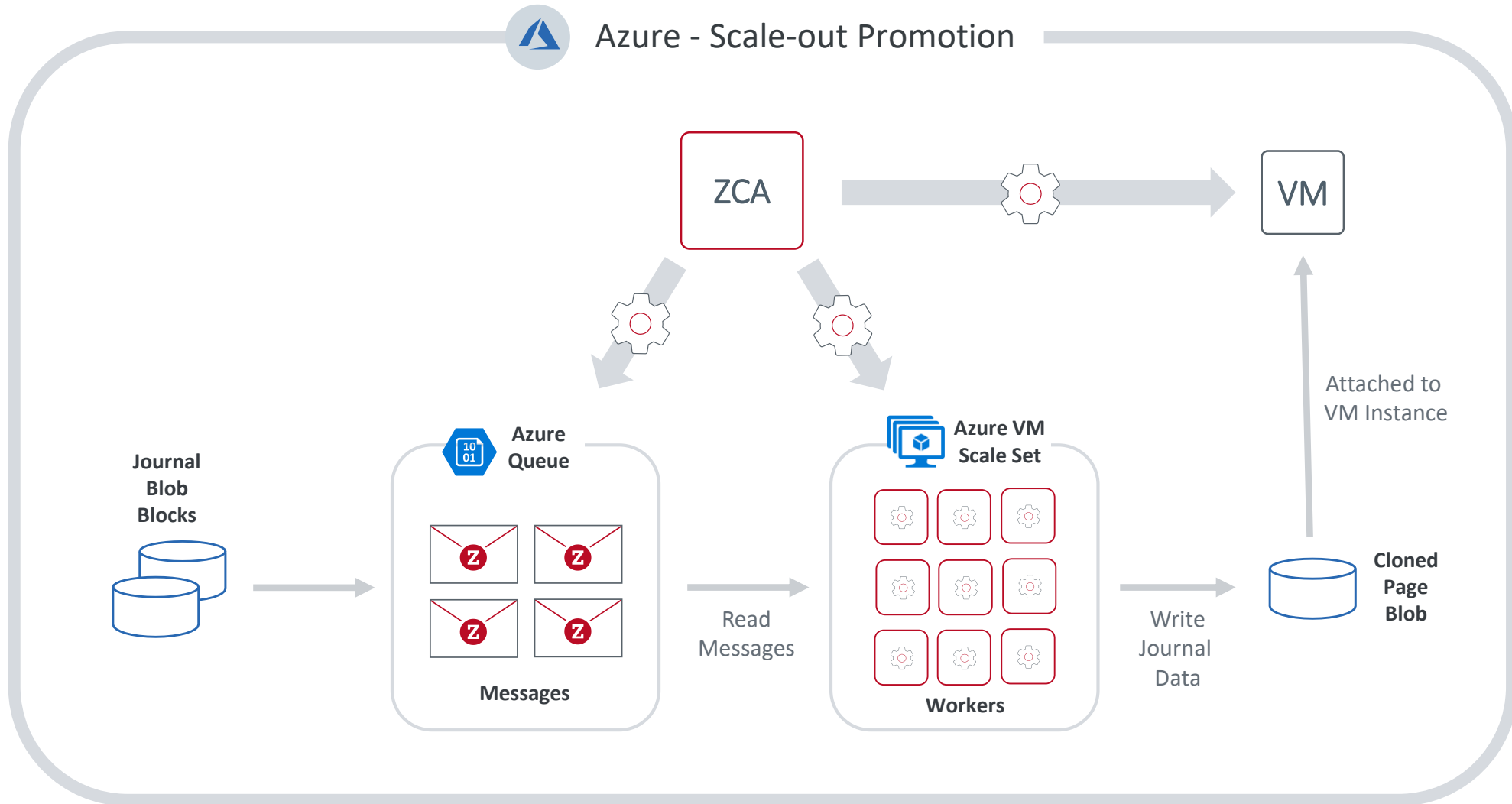
Virtual Machine
Scale Set

Scale Out Worker Properties

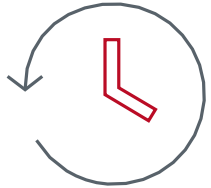
- Leverage cloud services
- Scalable solution (up to SA limitations)
- Ready for multi Storage Account
- SaaS deployment



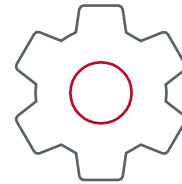
Worker's Role



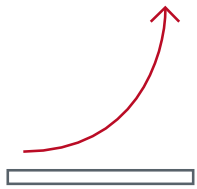
As a result



Faster RTO



SaaS based Worker Engine



Removes single point of contention



Enables full use of Azure performance limits

Azure and Networking Considerations

- Zerto having its own vNet and subnet is recommended, but not required.
- In at scale environments, Zerto benefits from its own vNet as a general rule of thumb.
 - Recommended for the ZCA's scale out on demand architecture.
- A single ZCA will take up 42 IPs possibly, recommended to have its own vNet and subnet to reduce impact to production IP spaces.
- Take this into mind when creating your subnet as a /24 /26 /32, etc.

VPN / Express Route – Which is for me?

VPN

- Bandwidth is capable and similar to express routes; however bandwidth is “suggested”. Aka not guaranteed.
- You get what you can get, but never promised anything.

Express Route

- Dedicated Fiber line direct into Azure backplane. Bandwidth is more guaranteed with Express Routes.
- Can be very cost-effective running on a Metered Express Route.

How do I make that call?

VPN

- If you want the smallest RPO, but your internal SLAs can handle the RPO increasing if there is congestion or bandwidth dips.
- VPNs are cost effective, secure, but not as consistent as an Express Route with bandwidth.

Express Route

- If you need the smallest data loss gap possible / minimal RTO, Express Route is more consistent on bandwidth than a VPN tunnel over internet to Azure.

Storage

- Each ZCA links to its own Storage Account and can automatically create it upon install.
- SA's have a limit of 20000 IOPS, and 40 disks running a max of 60MBps on Standard Unmanaged Storage.
- Know what your VMs are putting down to disk and spread the workloads.
- Deploy a Microsoft Service Endpoint for Azure Storage to the ZCA's subnet.



ZertoCON

Solving the skills gap

Hands-on Azure Lab & Certification

Providing IT Staff with free resources to increase cloud skills

1 Self paced training

- Self paced training & skill building resources
 - [MS Learn](#)
 - [AI School](#)
 - [IoT School](#)
 - [DevOps Labs](#)
 - [MyZerto Labs](#)

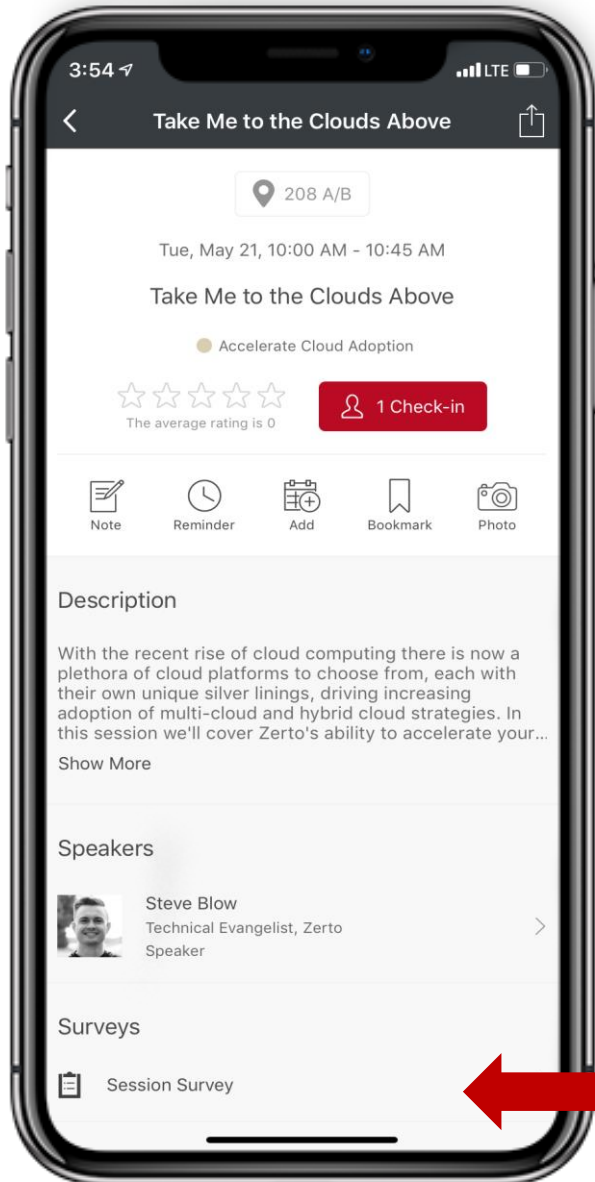
2 Online Events

- 1-3-hour online developer experiences
 - [Azure Developer Webinars](#)
 - [Cloud Immersion Experiences](#)
 - [Zerto Azure Workshops](#)

3 In person events

- One to multiple day hands-on immersive experiences
 - [Azure Developer Camp](#)
 - [MTC events](#)
 - [OpenHack](#)
 - [HackFest](#)
 - [Microsoft & Zerto Workshops](#)

Questions?



Tell us what you think

1. Open the ZertoCON app
2. Select the schedule
3. Find this session
4. Take the brief session survey

Thank You
Zerto