# BUILDING YOUR APPLICATION ON THE CLOUD

Cloud Power

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# THE FUTURE MOVING FORWARD CLOUD COMPUTING

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- More servers and bandwidths are needed!

**Azure or not Azure?**

**Quoted from Boon Sheng WebBytes, Malaysia ISV on Azure**

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***"Well, when people ask me how many servers do we have, I answered, how many you need?"***

*Boon Sheng*

xilnex

On Demand Retail Business Solution

**Innovating Retail Management**

# TYPES OF CLOUD SERVICES

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"IaaS"
Infrastructure-as-a-Service
host

"PaaS"
Platform-as-a-Service
build

"SaaS"
Software-as-a-Service
consume

# WHAT IS CLOUD COMPUTING?
# SERVICES TAXONOMY

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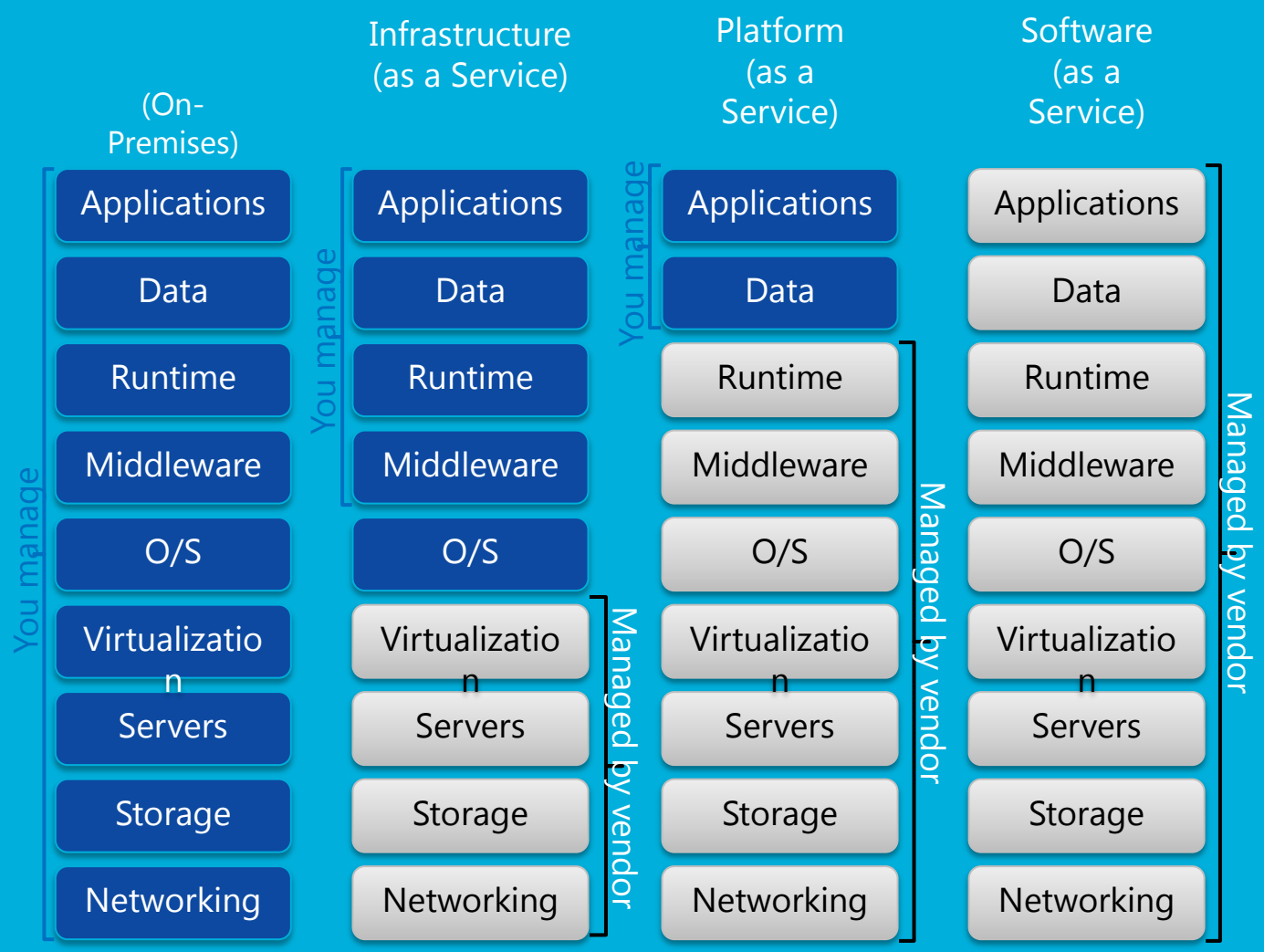


# WINDOWS AZURE PLATFORM IN ACTION

Your Application

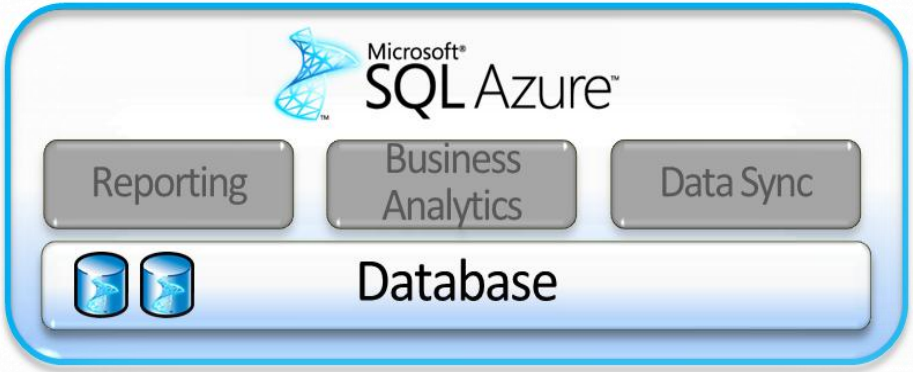
**You Focus on your Application**

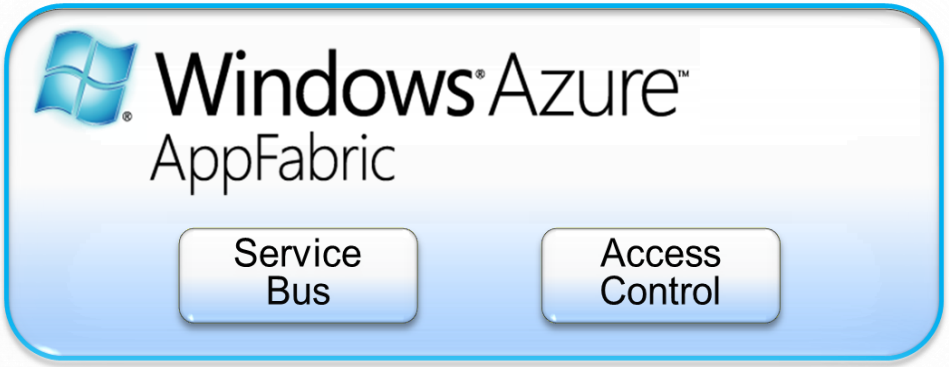
**And Azure Takes Care of the Rest**

OS Install, Licensing, Patching, and Maintenance
Networking (Load Balancer, Firewall, etc.)
Elastic Scale Up and Down, Pay for Use
99.95% Compute SLA
Faster Time to Market, Lower Costs, Less Risk

| Scale Out | Automated Service Management | High Availability | Multi-Tenancy |
|---|---|---|---|

# WINDOWS AZURE PLATFORM



# EVALUATING YOUR APPS FOR THE CLOUD

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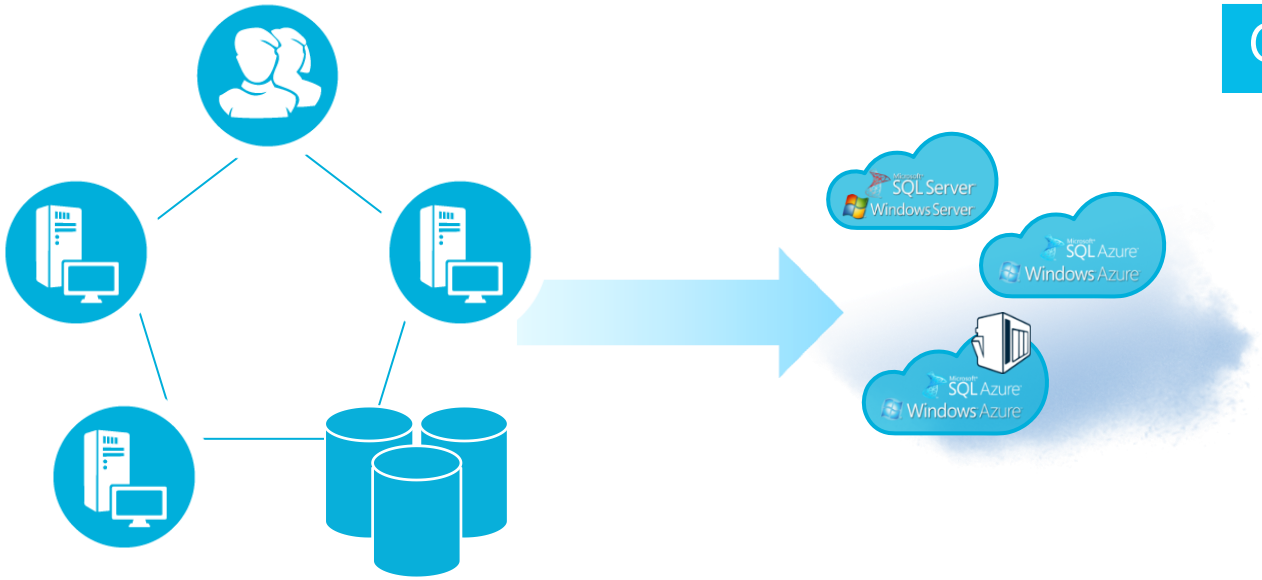


## Questions to Consider

- Application State
- Application Scale
- App Dependencies
- Latency Requirements
- Data Sensitivity
- SLA Requirements
- Regulation & Compliance

**Some Easy Cases** — e.g., web site sharing public data

**Often, Forklift Approach Will Not Work** — Careful decomposition needed

# CHALLENGES CROSSING ORGANIZATIONAL BOUNDARIES

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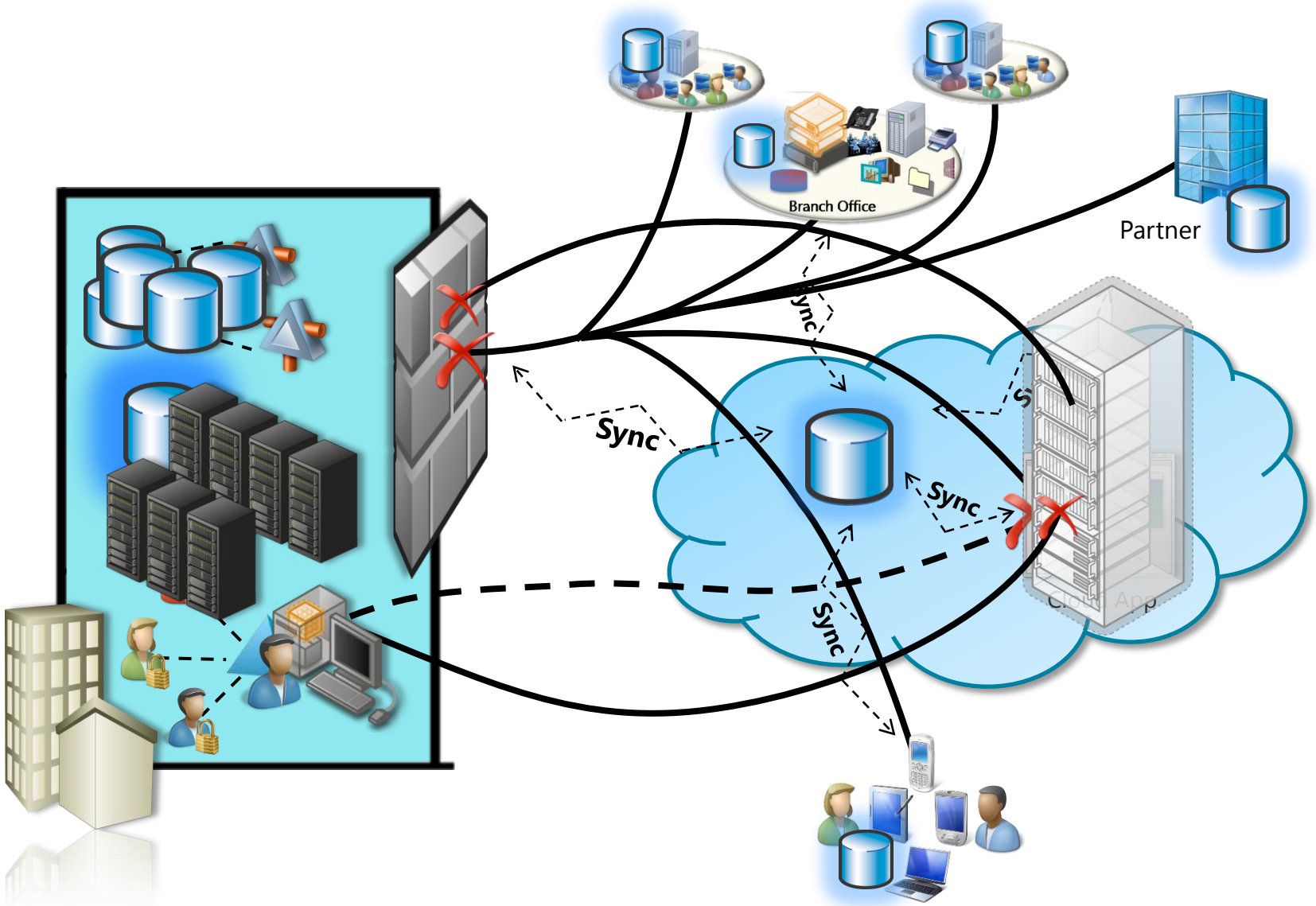


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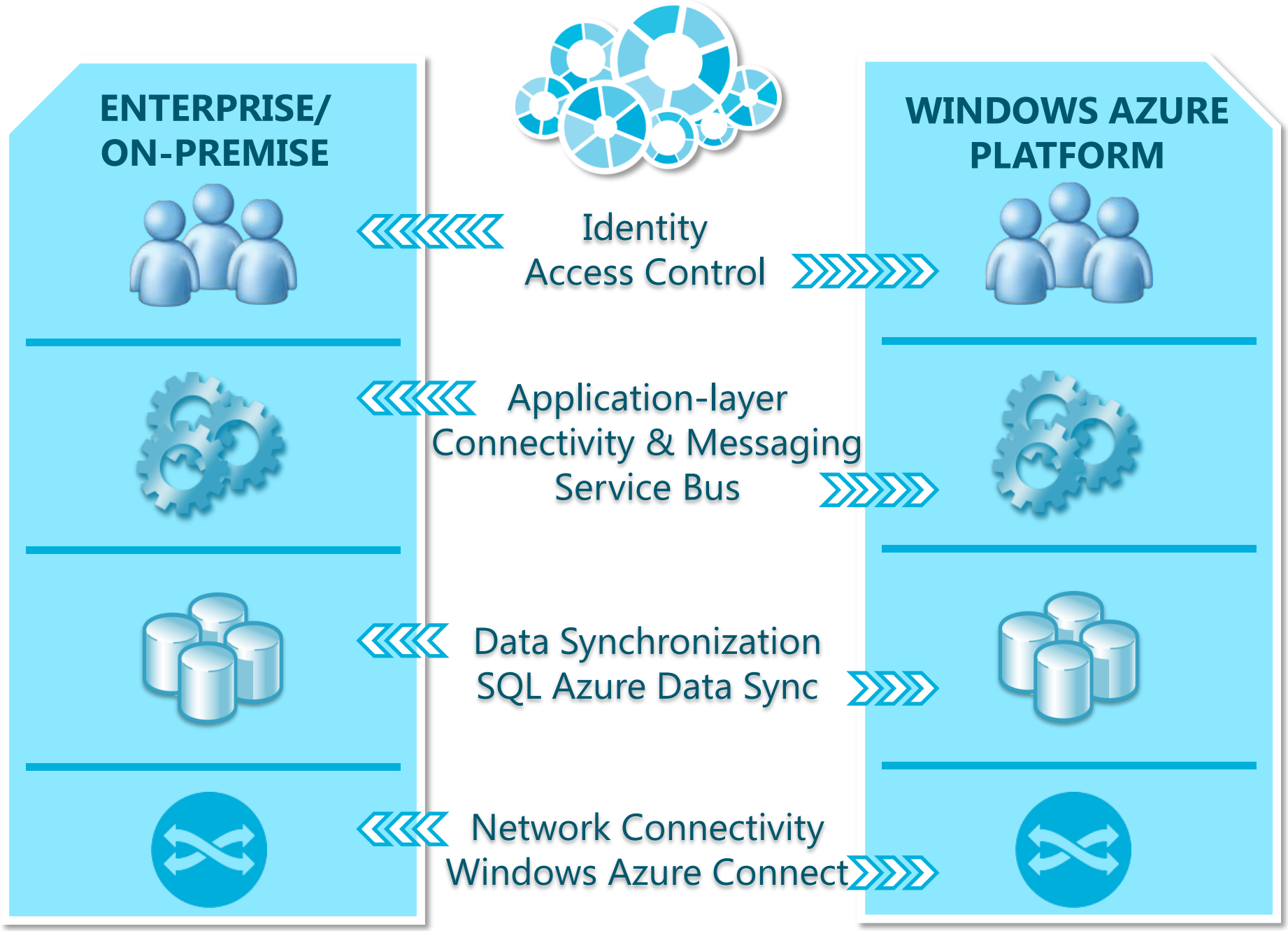
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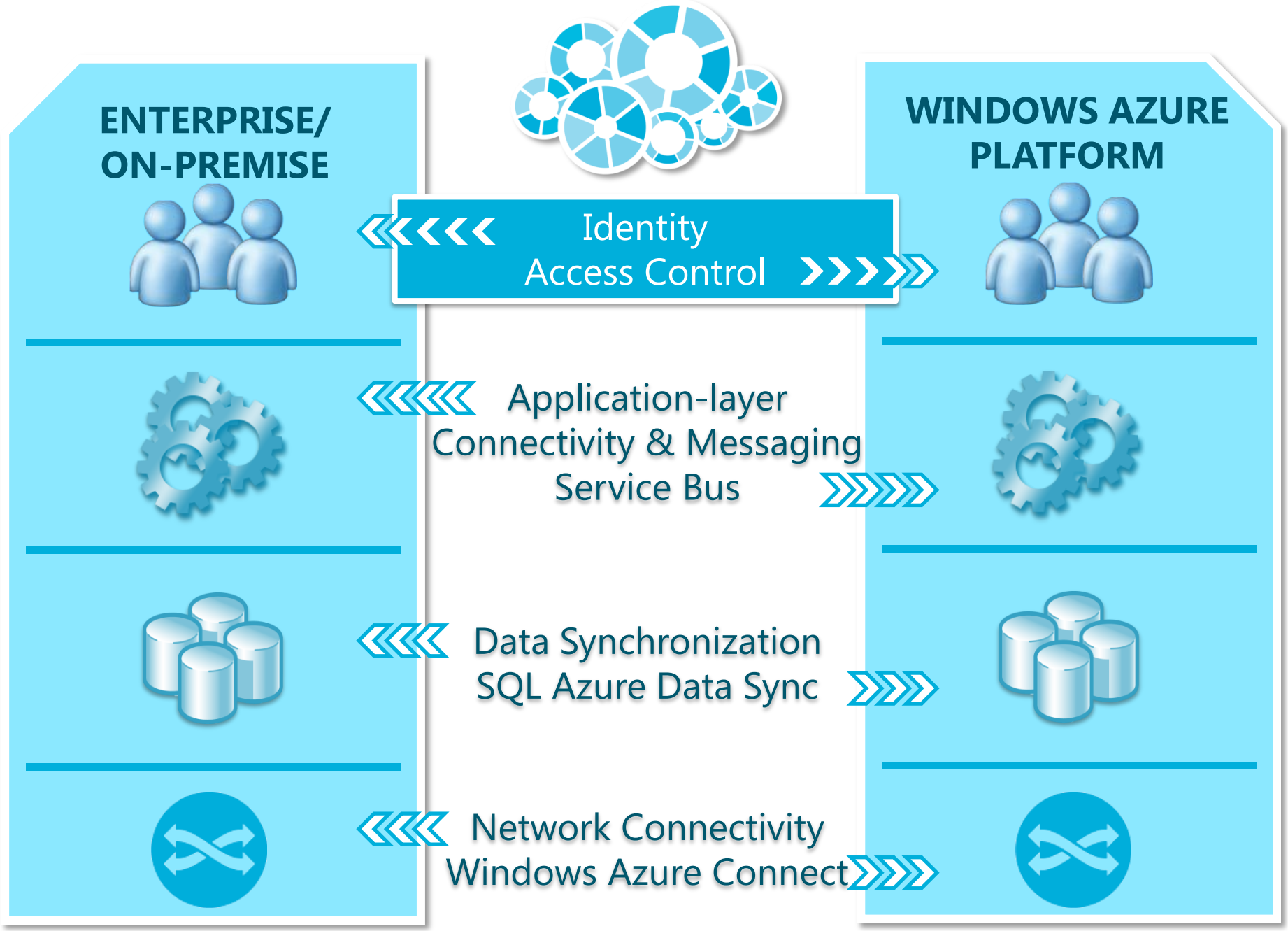
WINDOWS AZURE
PLATFORM
Identity
Access Control
Application-layer
Connectivity & Messaging
Service Bus
Data Synchronization
SQL Azure Data Sync
Network Connectivity
Windows Azure Connect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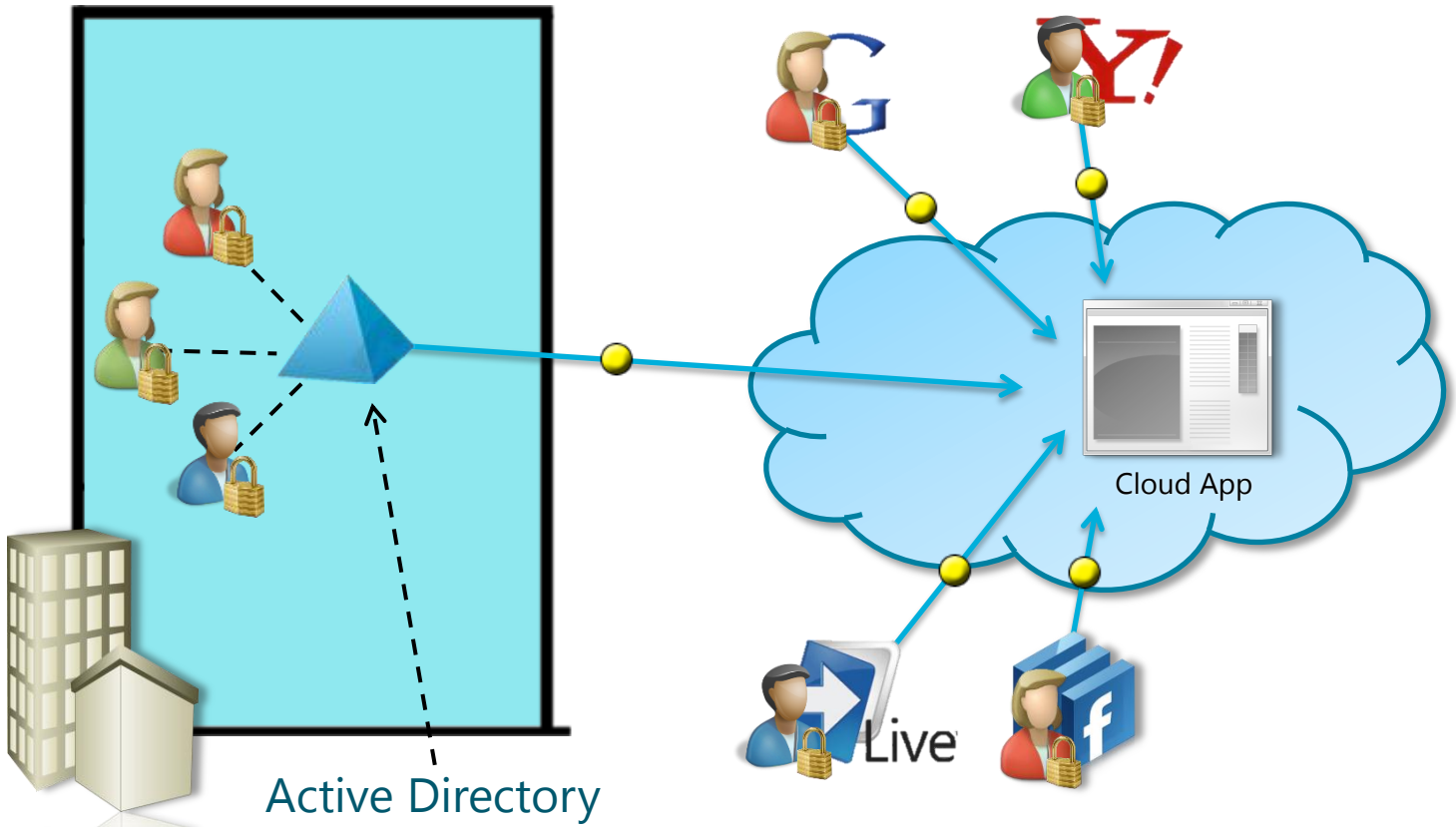
# IDENTITY CHALLENGES




- User – Doesn't want to use different identity for every app
- Developer – Doesn't want to write code to support multiple identity providers
- Administrator – Wants to easily grant access to apps to Active Directory identities

# IDENTITY SOLUTION: CLOUD SINGLE SIGN-ON WITH ACCESS CONTROL

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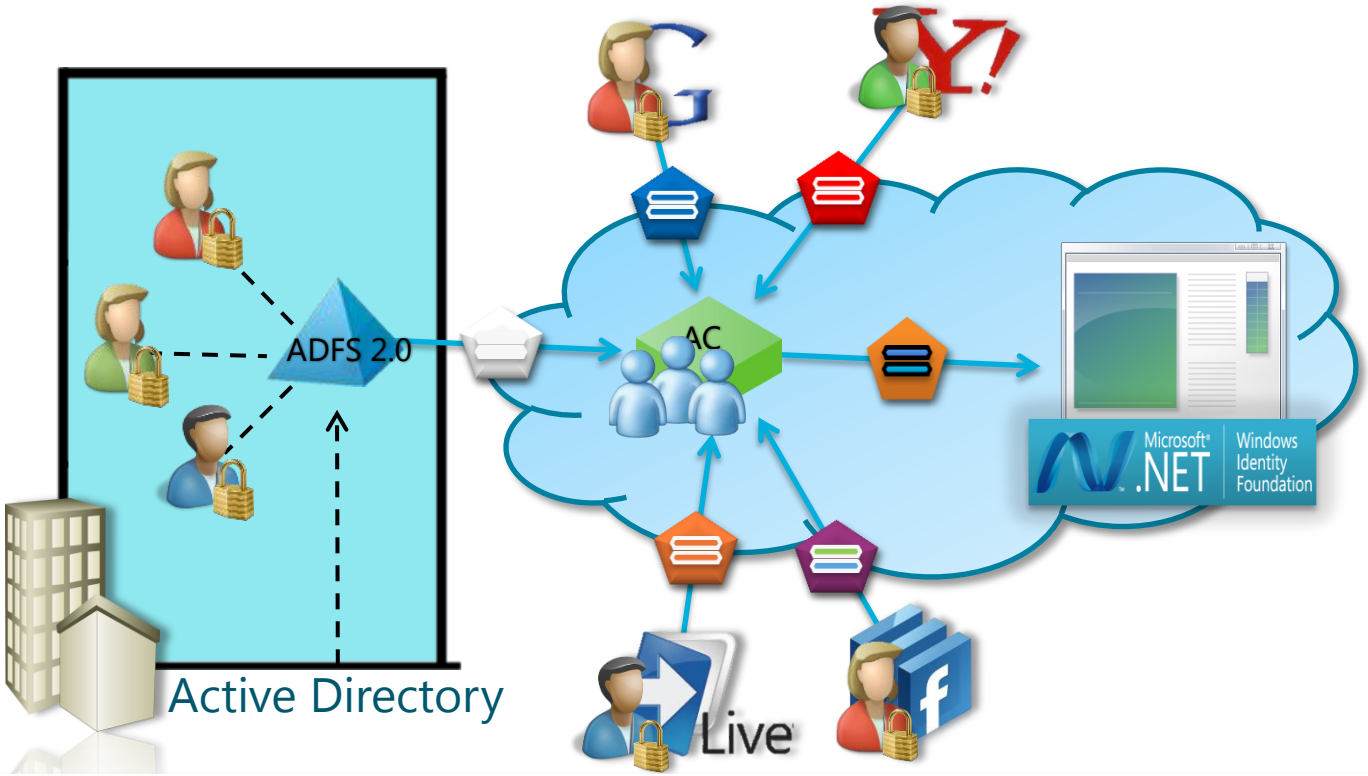
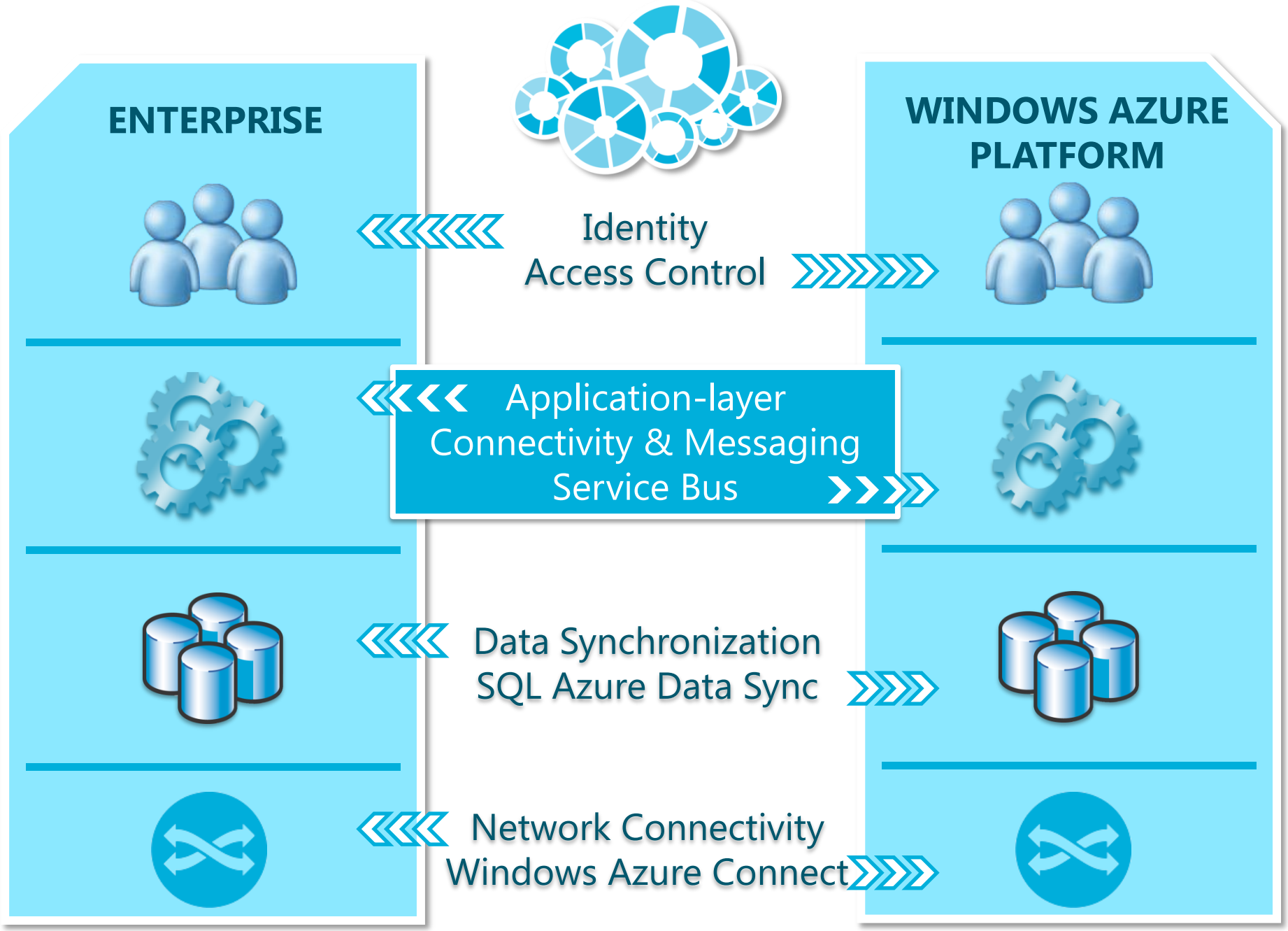



- User – Can use his preferred Identity Provider
- Developer – Writes one set of code to accommodate multiple Identity Providers
- Administrator – Grants access to all Active Directory users by establishing trust between Active Directory and Access Control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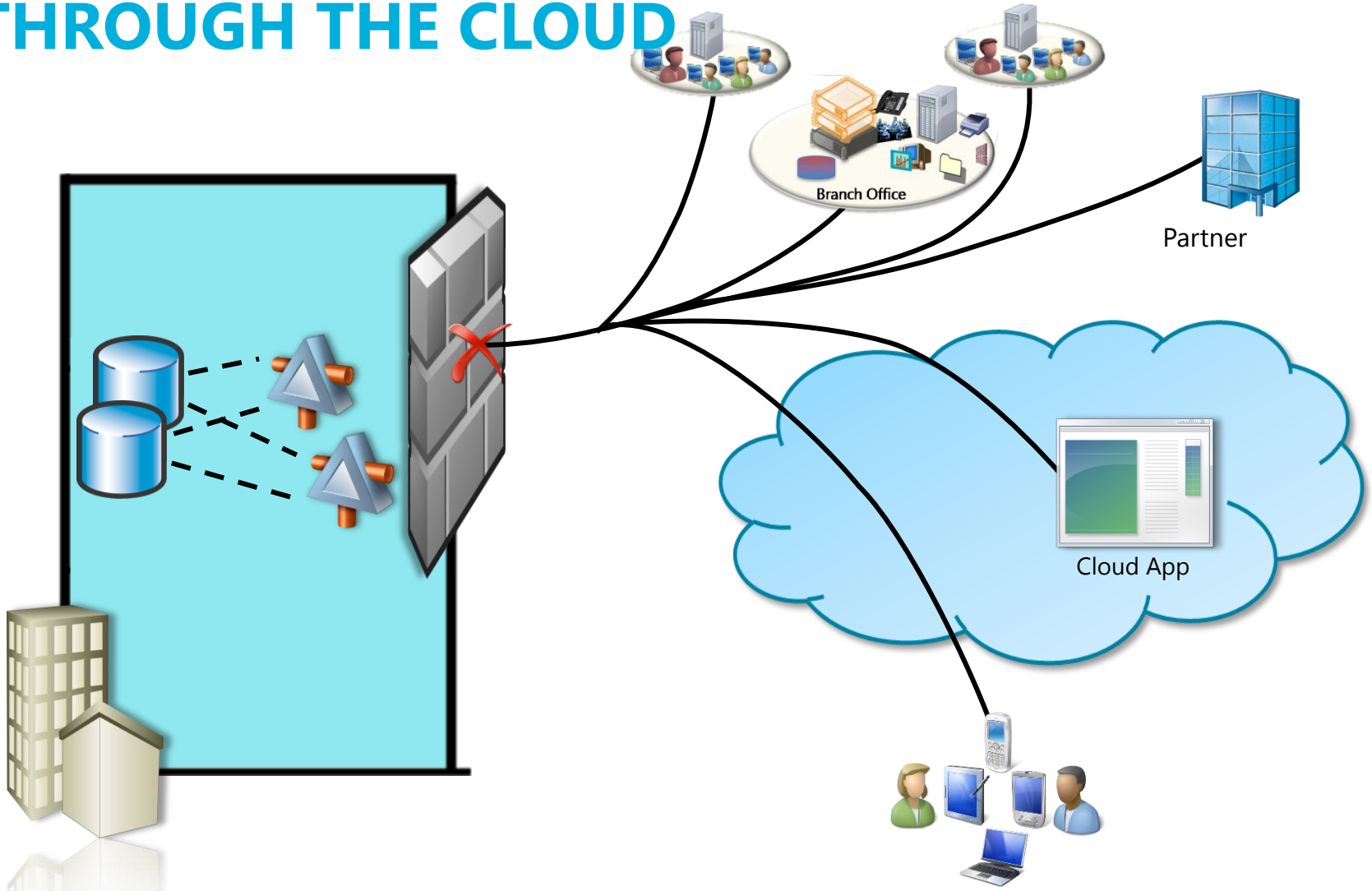
# APPLICATION CONNECTIVITY CHALLENGES
# EXTEND REACH OF SOA ASSETS THROUGH THE CLOUD

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# CONNECTIVITY SOLUTION (1): EXPOSE ON-PREMISES SERVICES THROUGH THE SERVICE BUS

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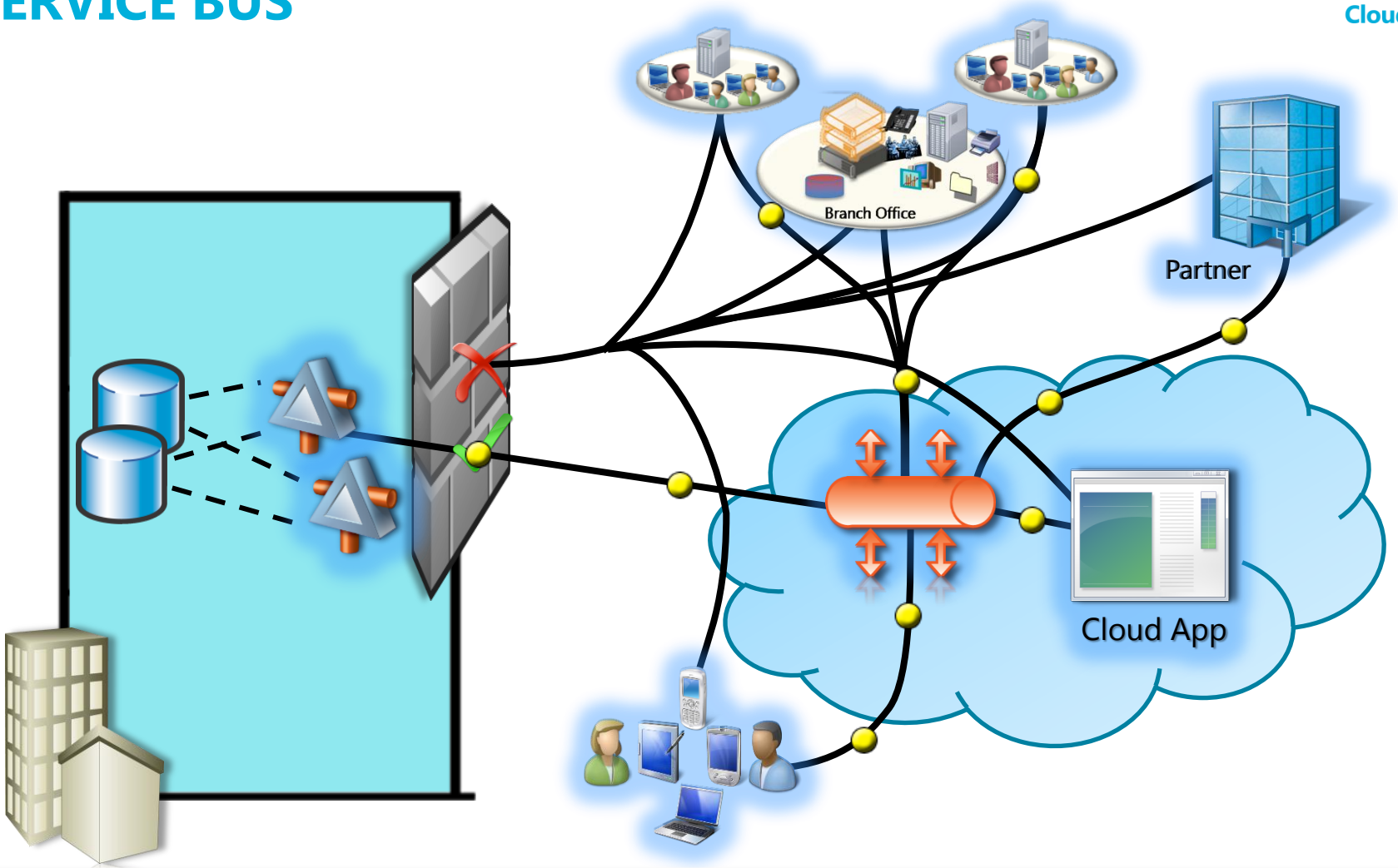
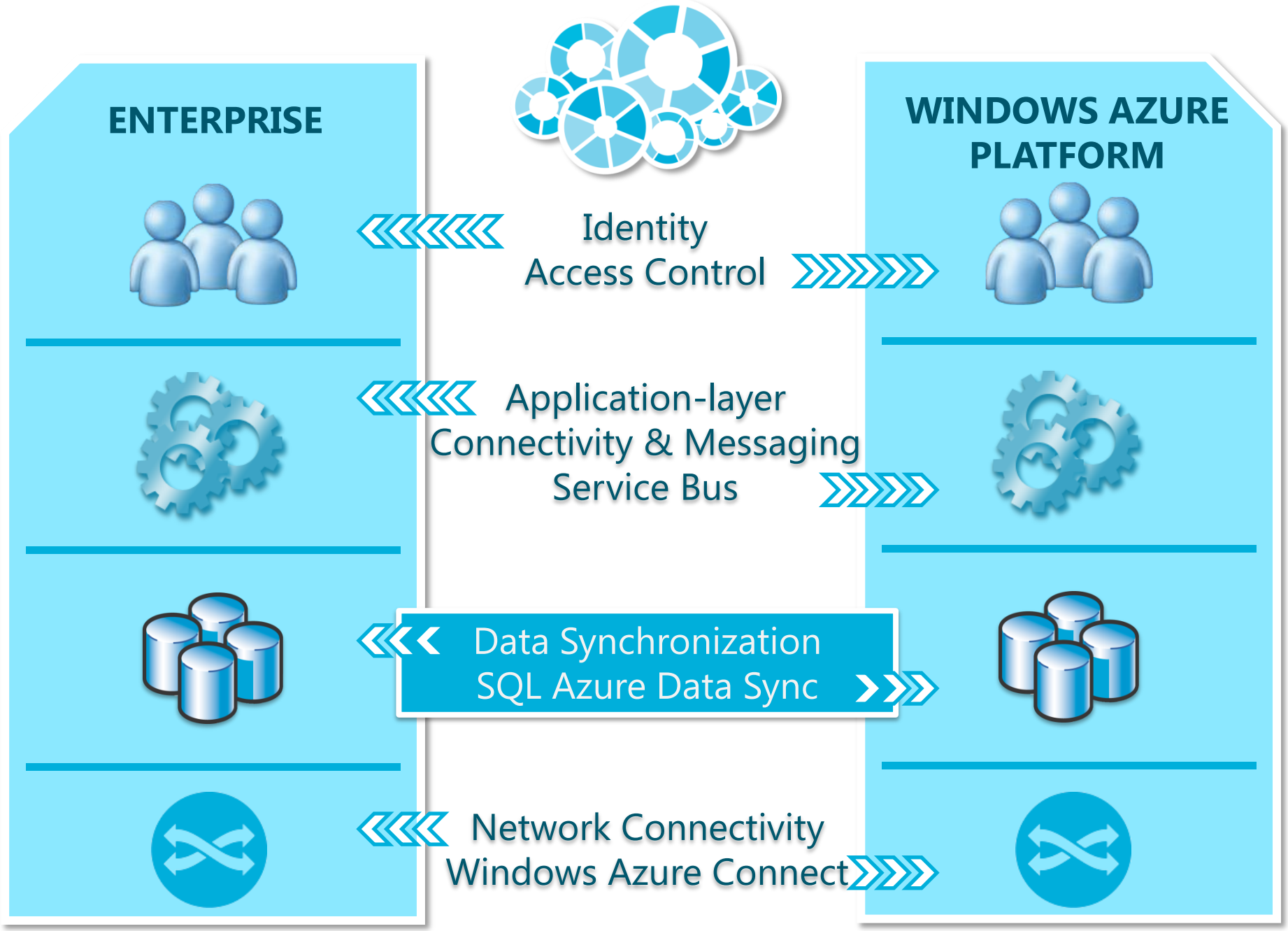



Extend reach of existing on-premise services to facilitate greater collaboration between partners, branch offices, remote workers and devices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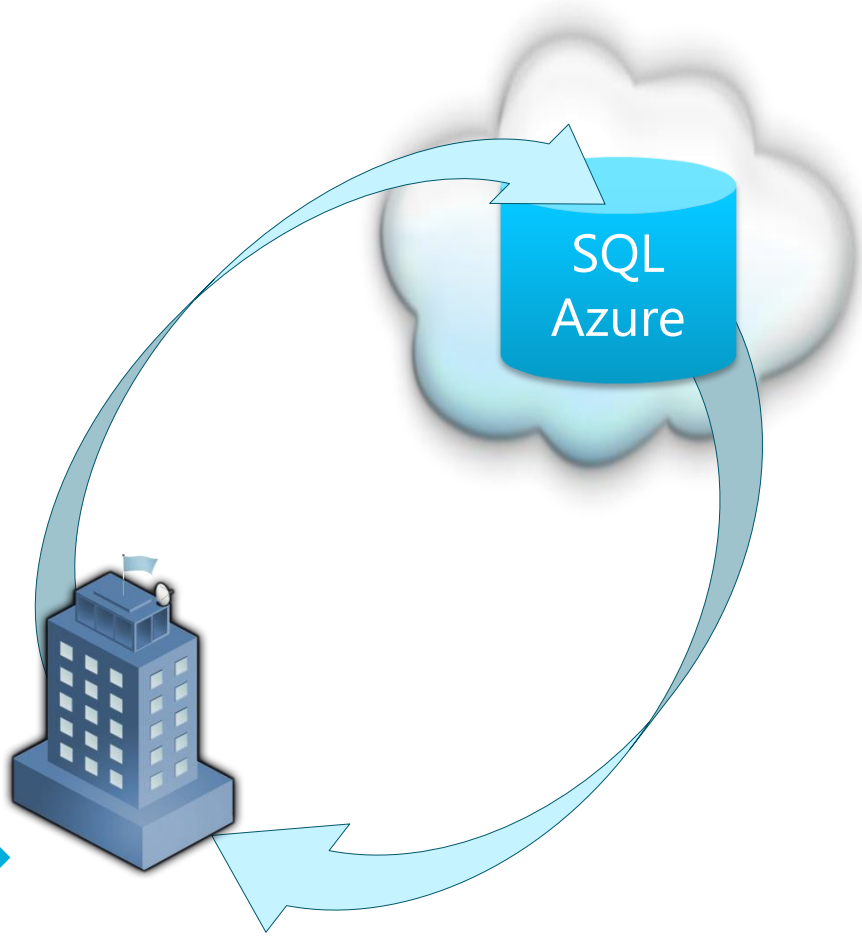
# SQL AZURE DATA SYNC (CTP)

- **Powers movement of data**
  - Cloud ⇔ cloud
  - On-premises ⇔ cloud
- **Getting data where you need it**
  - Sync SQL Azure instances
  - Sync SQL Server to SQL Azure
  - Sync offline apps to SQL Azure
  - Enable geo-replication of data



# SQL AZURE DATA SYNC (CTP)

SQL Azure Database

Sync

Sync

Data Sync Service For SQL Azure

Retail Stores

Remote Offices

Sync

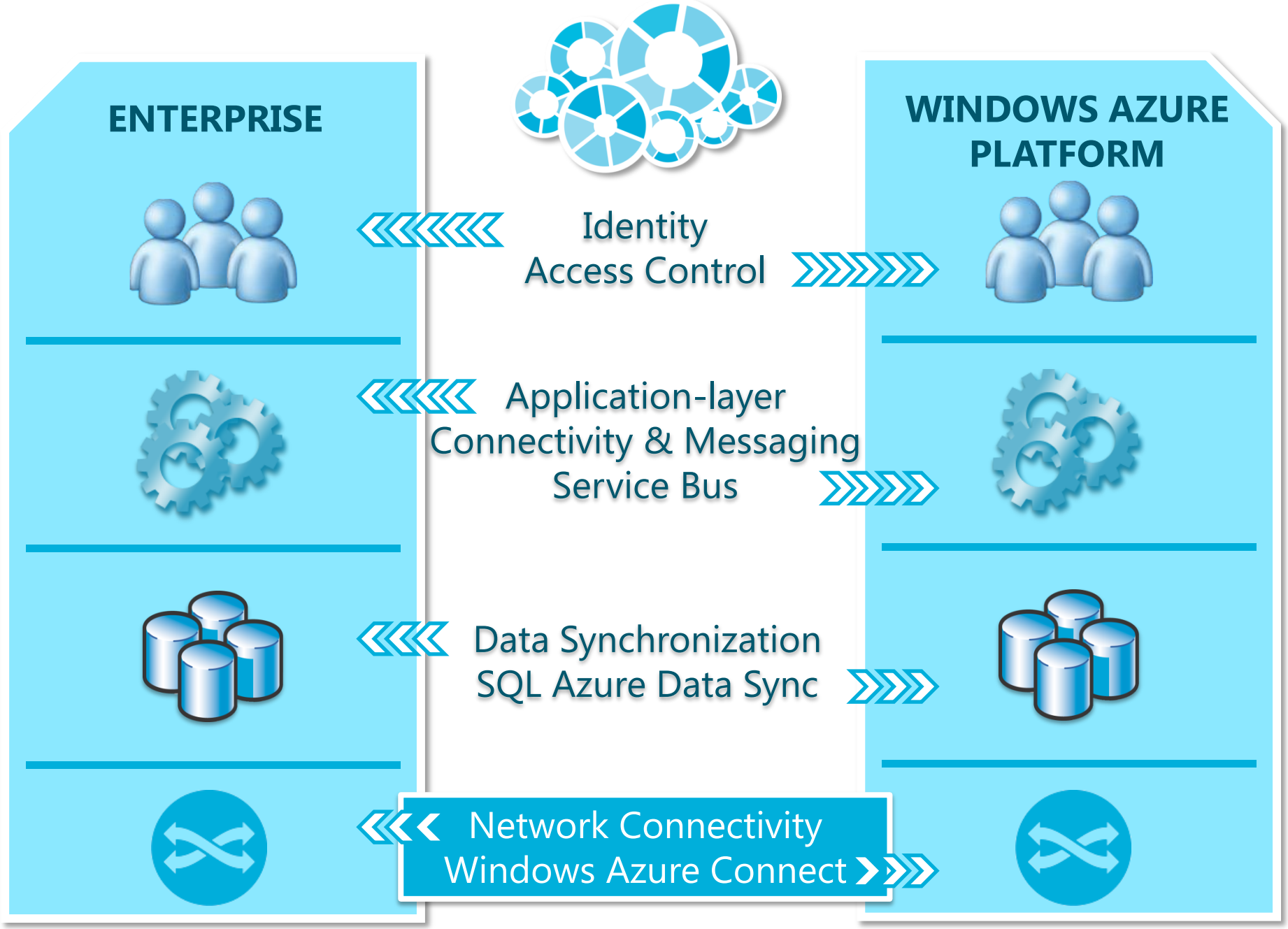
Sync

Sync

Sync

Sync

On-Premises (Headquarters)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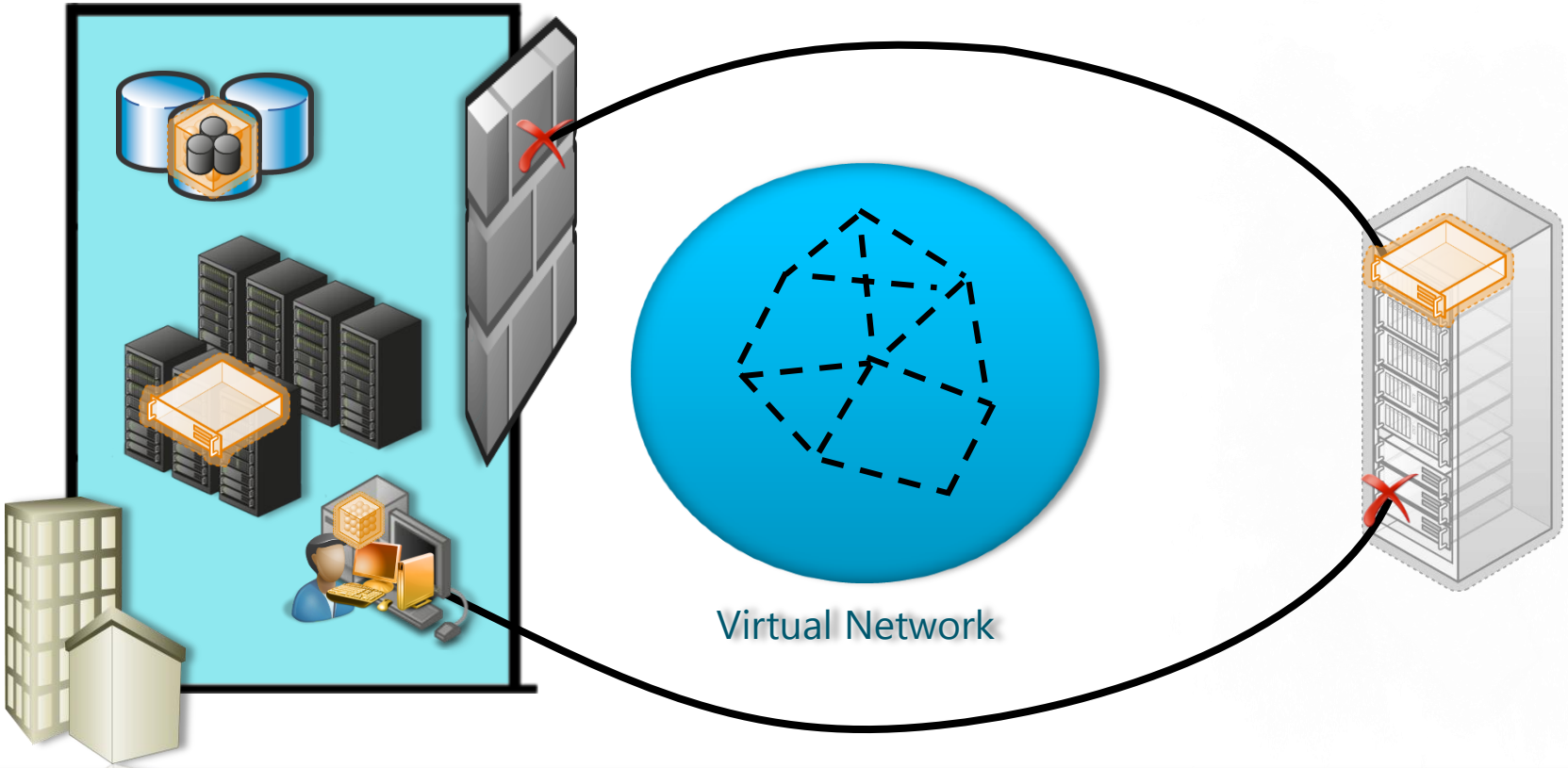
# WINDOWS AZURE CONNECT (CTP)




- Provides seamless, secure IP-level network connectivity between Windows Azure and on-premise resources
- Connecting to cloud resources (roles) for administrative purpose

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## Demo

**Patrick Yong**
http://patrickyong.net
CTO | IPS Infonomics Sdn Bhd
MVP (SharePoint Server)

IPS INFONOMICS

MVP Microsoft Most Valuable Professional

# WHERE TO START

- **Move existing application to Azure**
  - Start from small, low-risk application to the cloud
  - Gain experience from it.
  - This migration may be partial

- **Make Azure the default for new application development**
  - Codes from Azure can be migrated/reused for on-premise.
  - The difference is the usage of Azure specific technologies ie Azure storage. Create components to cater for this differences (ie when on premise use file system. Cloud – call blob storage)

- **Move Critical Applications**
  - Migrate critical application on the Cloud

- **Download the demo at** http://AzureOneDay.codeplex.com

# WINDOWS AZURE PASS

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- Windows Azure Platform 30 day pass with no credit card required
- Pass is limited and requires 2-3 business days for approval
- Login to http://windowsazurepass.com
- Select 'Malaysia' and promo code is 'APMY2011'

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