



**Andrew Slater & Geoff Barlow** 

# Optimising availability through hosting strategies

## **Cloud Service Models**

**On-Premises** 

**Applications** 

Data

**Runtime** 

**Middleware** 

0/S

**Virtualisation** 

**Servers** 

Storage

**Networking** 

**Cloud Hosting** 

**Azure / Node4 VDC** 

**Applications** 

Data

**Runtime** 

Middleware

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**Virtualisation** 

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Storage

**Networking** 

**Software as a Service** 

**BC** Online

**Applications** 

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0/S

**Virtualisation** 

**Servers** 

**Storage** 

Networking

You manage

Service provider manages



# There is no cloud

# It's just someone else's computer

Someone from the internet





## **Availability Considerations**

**On-Premises** 

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Backups

**Disaster Recovery** 

**Geo-Resilience** 

**High Availability** 

**Physical Security** 

**Internet Access** 

SLA

??%



## **Availability Considerations**

## **Cloud Hosting**

**Azure / Node4 VDC** 

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SLA

95% - 99.99%

18 days - 52 minutes

## **Availability Considerations**

**Software as a Service** 

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SLA

99.9%

8.7 hours



# Enhancing security and data protection measures

## **Common Security Threats**



## **Security Tips & Tricks**

Identity & Access Management

Entra ID vs NavUserPw

Role Based Access

MFA

### **Systems Hardening**

System Updates

Encryption

Data governance

02

### **People & Process**

Staff training

Ransomware simulation exercise

Joiners / Movers / Leavers

03

## **Disaster Recovery & Backups**

**Business Continuity Plan** 

Understand systems and data

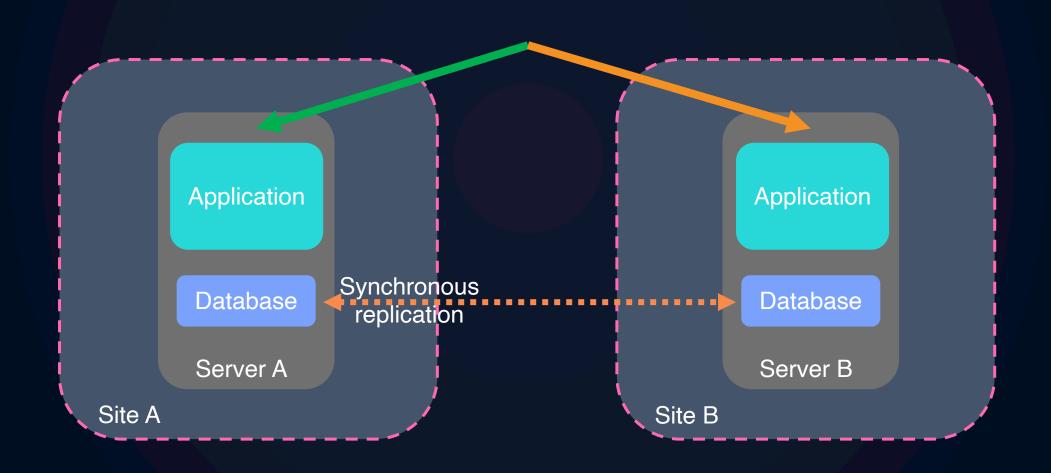
RPOs / RTOs

Budget

High Availability vs DR

The 3-2-1 Rule

# High Availability vs Disaster Recovery





## **Disaster Recovery & Backups**

**Business Continuity Plan** 

Understand systems and data

RPOs / RTOs

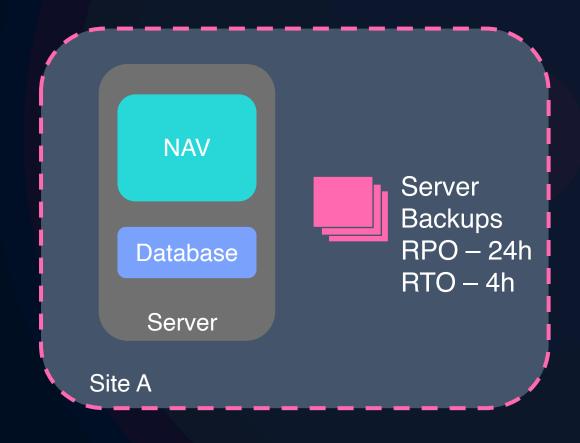
Budget

DR vs High Availability

The 3-2-1 Rule

## **The 3-2-1 Rule**

3 copies of your data2 different media types1 offsite copy

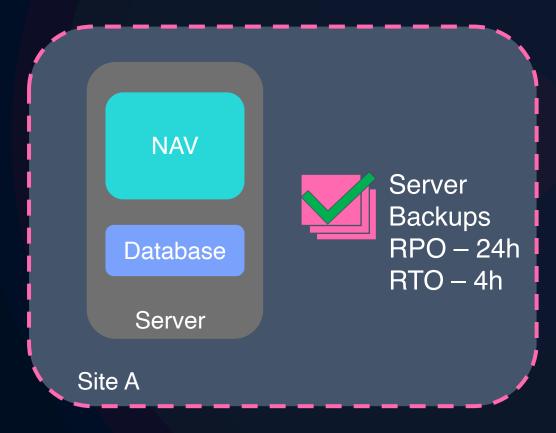


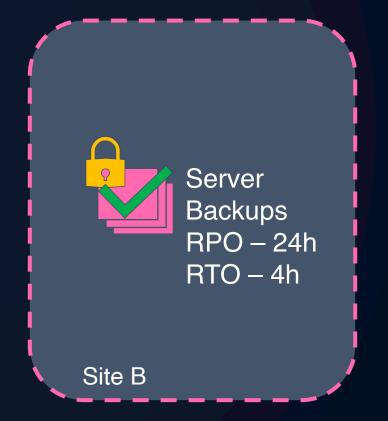




## The 3-2-1-1-0 Rule

- 3 copies of your data
- 2 different media types
- 1 offsite copy
- 1 immutable
- 0 backup verification failures





# Ensuring System Scalability and Performance



## **Improving BC Data Performance**

#### **Performance Tuning**



#### **Database Configuration**

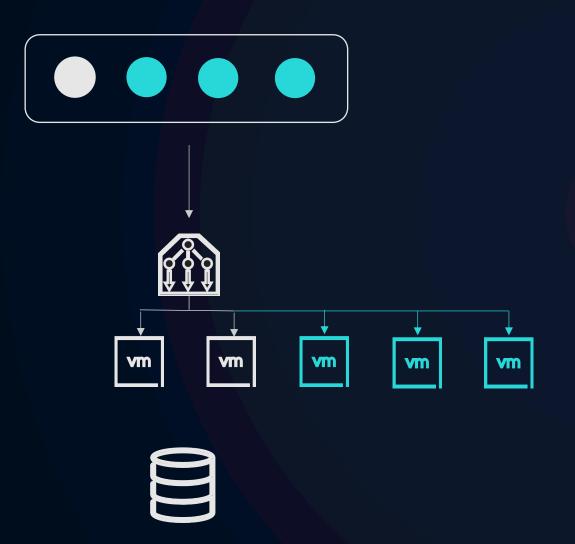
- Hardware Config
- Disk Layout
- Maintenance Jobs (e.g. Index Defragmentation)
- TempDB Files
- SQL Server build
- CPU/ RAM/ Storage optimisation

#### **Reporting Overhead**

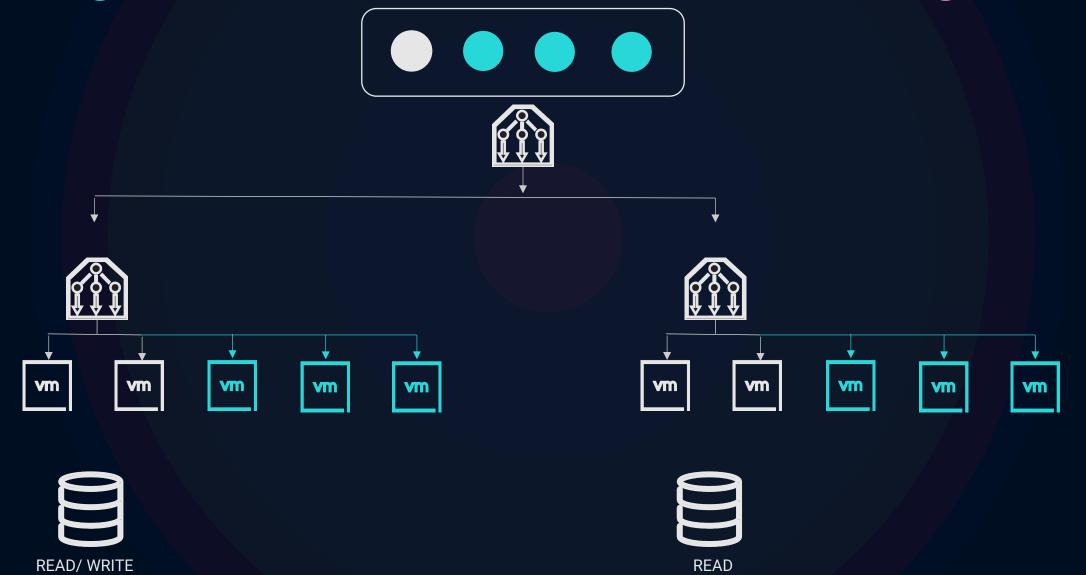




# **Using Cloud Scale for Demand Management**



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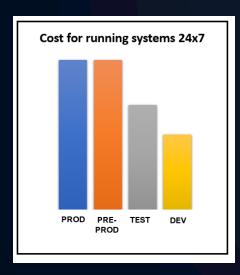


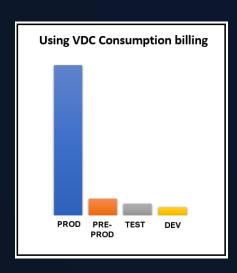


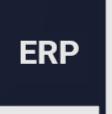
# **Cloud Economics for Non-Production Environments**

#### **Leverage Cloud Economics to reduce costs**

The scenario below shows an organisation that was only using their Pre-Prod, Test and Dev environments for 80 hours per month, on average. By moving to a consumption model and turning off the resources when not in use, they would save 61% of their compute costs per month







**Production:** Your Live environment, operated under controlled change.



**Staging or Pre-Production:** Where you test the final release on an exact match to production, to test areas such as performance.



**Test Environment:** A close match to production configuration to test the code for bugs, glitches and interoperability.



**Development Environment**: This is where the magic begins – developers write, edit, and test their code in a controlled setting.



# 04 In summary

# **Comparing your options**

## **Software as a Service**

Dynamics 365 BC Online

## **Cloud Hosted**

Azure / Node4 VDC

**On Premise** 

## Pro's

- Access to a rich, pre-built ecosystem for Dynamics.
- A per user focused pricing model.
- No overhead of managing the underlying infrastructure.
- Access to easily scalable resources.
- Control over the environment, without the hassle on managing hardware.
- Pay for use, consumption model.
- Full control and customisation over the assets.
- Systems can be located close to time critical infrastructure.
- · Data sovereignty.

## Con's

- 6 Monthly major upgrades are mandated.
- Lack of visibility around back-end metrics due to "black box model".
- Lack of control as a prescribed service.
- Managed service or skills needed to operate a modern platform for BC.
- Cost Control can be complicated.
- Need to design for the service SLA's.
- Hard and expensive to recreate cloud ecosystem.
- Many skills required to operate and maintain the environment.
- · Lumpy investment profile.



Identity Management 3-2-1-1-0

Performance Tuning

