



# Hewlett Packard Enterprise

*Pointnext*

Services for Database Modernization

Destination:

*Easy on-ramp to hybrid cloud with SQL*

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HPE Master Database Architect

HPES02

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# A new breed of IT needs to power the New Style of Business

*By the year 2020...*



**7.6  
Billion**

World population

**30  
Billion**

Connected  
devices

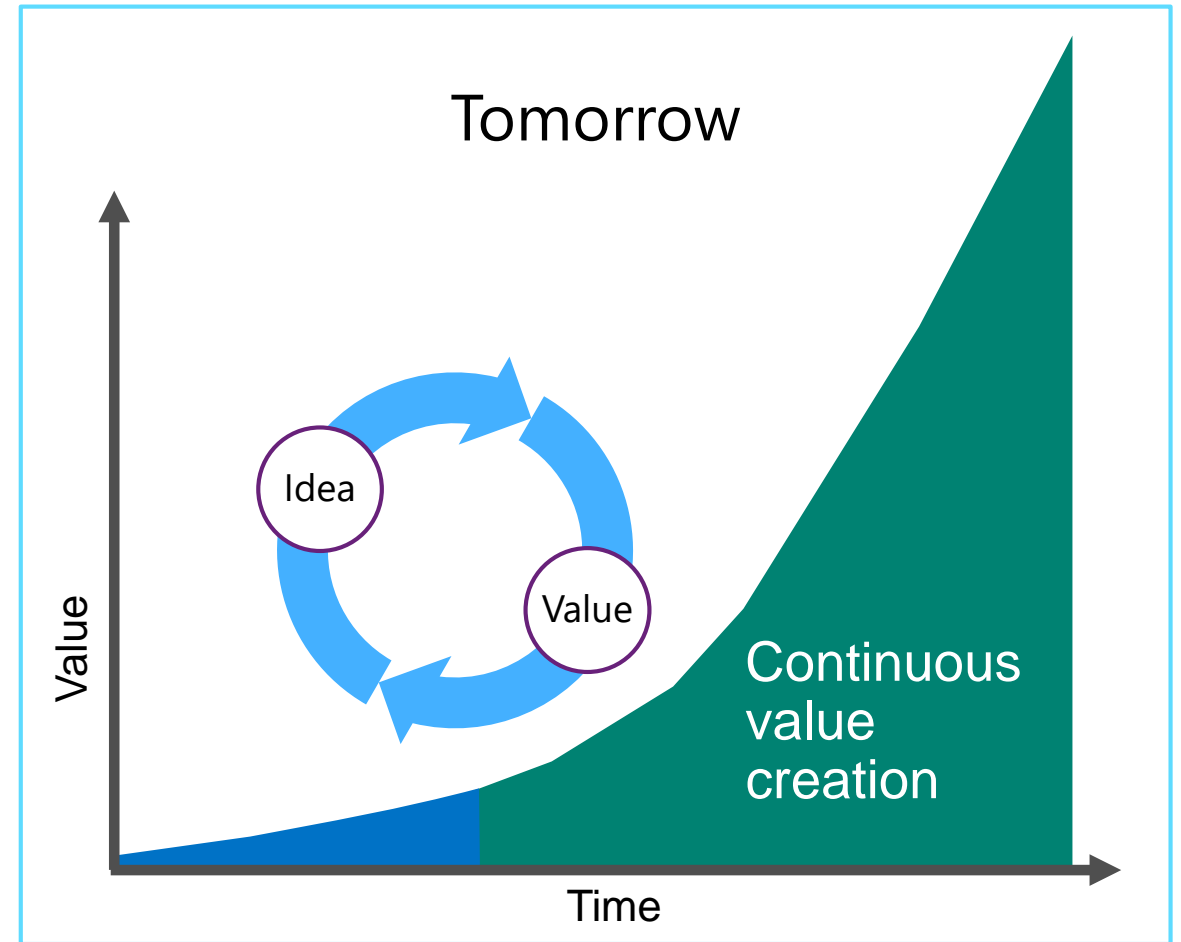
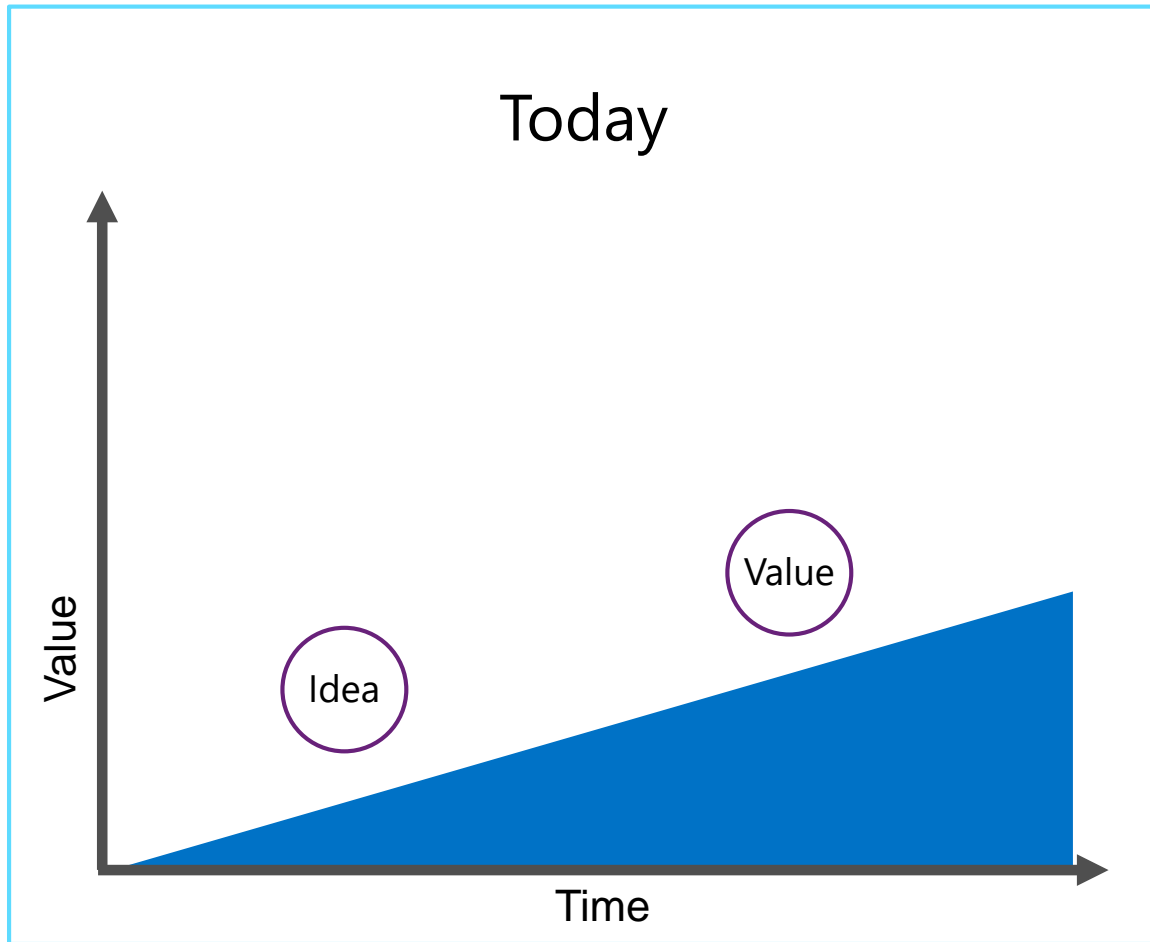
**1  
Trillion**

Applications

**5.8  
Trillion**

Bytes  
for each of those  
7.6 Billion  
People

# Time to value is priority #1

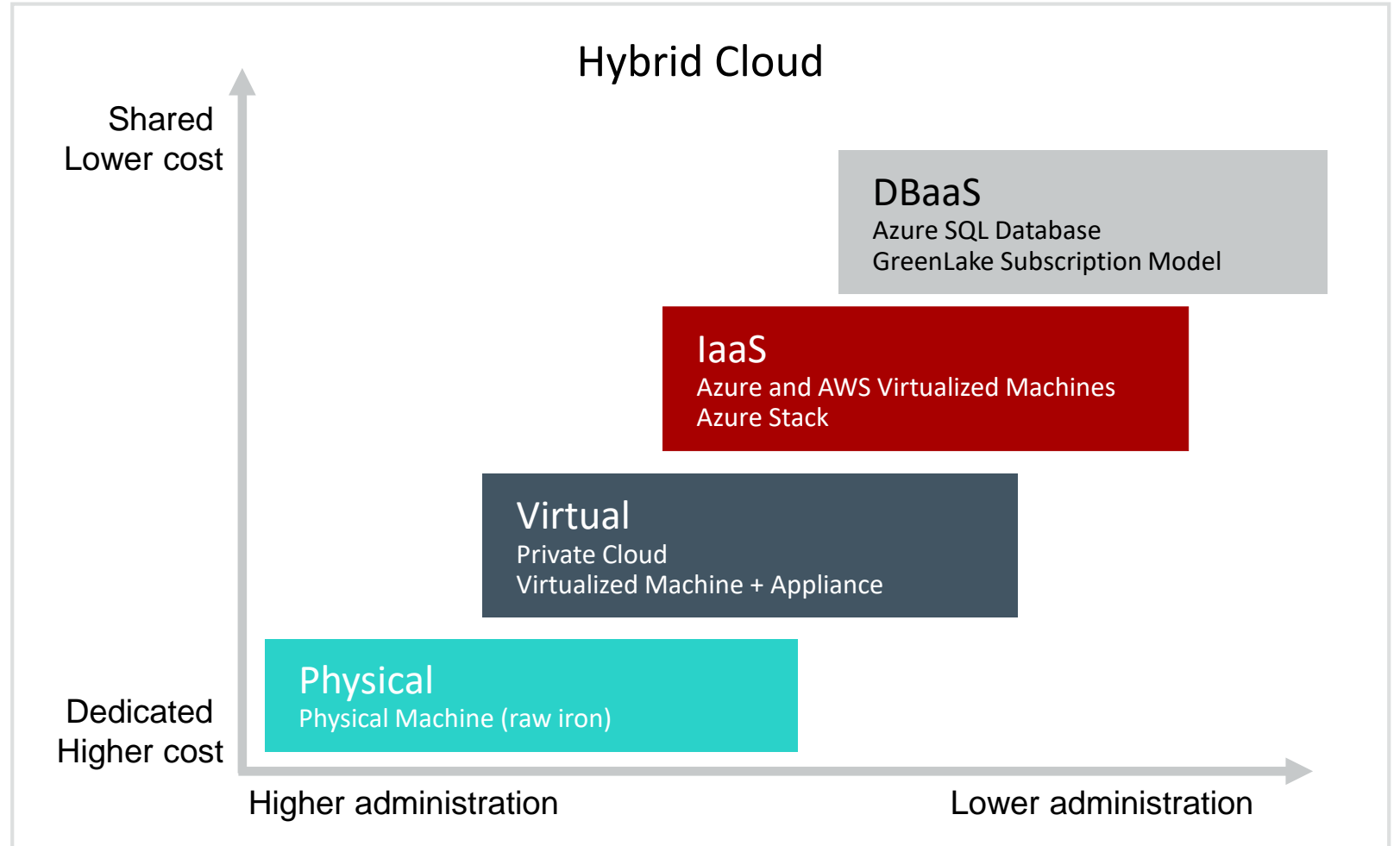


# HPE Database Modernization Status, Plans, Engagements

2018 Clients Engaged:



Partners Engaged:



# HPE Database Modernization - Scoring

## Assessment

Some of the factors include:

- Total Number of User Databases
- Total Number of Servers [P or V]
- Average Number of SQL Instances
- Total Number of Applications
- % of Servers in Multiple Locations
- % of Databases replicated in Multiple Locations
- % of Instances Clustered
- % of Databases replicated in Local Site
- Average Database Size [data, index, log]
- Average number of User Database Objects
- Average number of Users per Application
- % of Applications with Embedded SQL

## Modernization



**# Database + DB Complexity Score**

**Mathematically generated WBS:**  
The WBS Structure includes suggested task times [hours] Assessment through Migration and Delivery

- Actual hours will vary based upon database size, complexity and connected applications
- Solution/IT – Model IT Collateral Generation
  - ROM Costing – based upon local \$\$
  - SOW and Proposal
  - WBS and defacto Project Plan
  - Solution Decks

- HPE Tooling -

**Solution IT / Model IT Modeling**

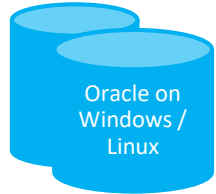
# HPE Database Modernization – Source/Target

## Source



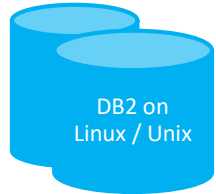
Down Level  
SQL Server

- Remediate and Convert expired or expiring SQL Versions
  - 2000 + 2005
  - 2000, 2005, 2008/R2, 2012
  - T-SQL compatibility
  - Azure readiness



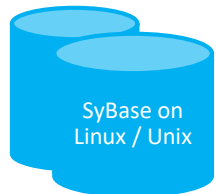
Oracle on  
Windows /  
Linux

- Convert and Transform Oracle Versions
  - 9i, 10g, 11i, 12
  - PL/SQL conversion
  - Code refactor / Re-plat
  - OS services and Provisions



DB2 on  
Linux / Unix

- Convert and Transform [IBM] DB2 Versions
  - 10, 11.x +
  - SQL conversion
  - Code refactor / Re-plat
  - OS services and Provisions



SyBase on  
Linux / Unix

- Convert and Transform [SAP] SyBase Versions
  - 12, 15, 16
  - T-SQL conversion
  - Code refactor / Re-plat
  - OS services and Provisions

## Modernization

### Assess, Design, Consolidate, Transform & Migrate:

- Application [SQL usage - Conversion]
- Conduct POC with tests / success criteria
- Cap growth calculation and tier selection
- Application and SQL transformation
- Application Testing
- Database Migration Groupings
- Database upgrades
- Storage Consolidation
- Virtualization and Azure/AWS Provisioning
- Load Balancing capability
- High Availability [RAC - AlwaysOn]
- System Management tools
- Disaster Recovery
- Production Roll-out
- Follow-on Knowledge Transfer & Training

## Target

### DBaaS

Virtualized Database  
Azure SQL Database  
Postgres/EDB on GreenLake

### IaaS

Virtualized Machines  
SQL Server on Azure VM  
SQL Server on Azure Stack  
SQL Server on AWS  
Postgres/EDB on Azure VM  
Postgres/EDB on AWS

### Virtual

SQL Server  
Oracle  
Postgres/EDB  
Virtualized Machine + Appliance  
Windows and Linux

### Physical

SQL Server  
Oracle  
Postgres/EDB  
Physical Machine (raw iron)  
Windows and Linux

# HPE Database Modernization Services

HPE Pointnext Consulting

## Advise

### **Prepare your organization and environment**

- HPE Database Migration Assessment Service
- Gathers number of Databases, Size, Complexity and Attached Applications
- Analyzes data
- Categorizes and prioritizes databases to be migrated
- Sizes target platform
- Executes Pilot Migration

## Consolidate & Migrate

### **Smooth migration and speedy consolidation**

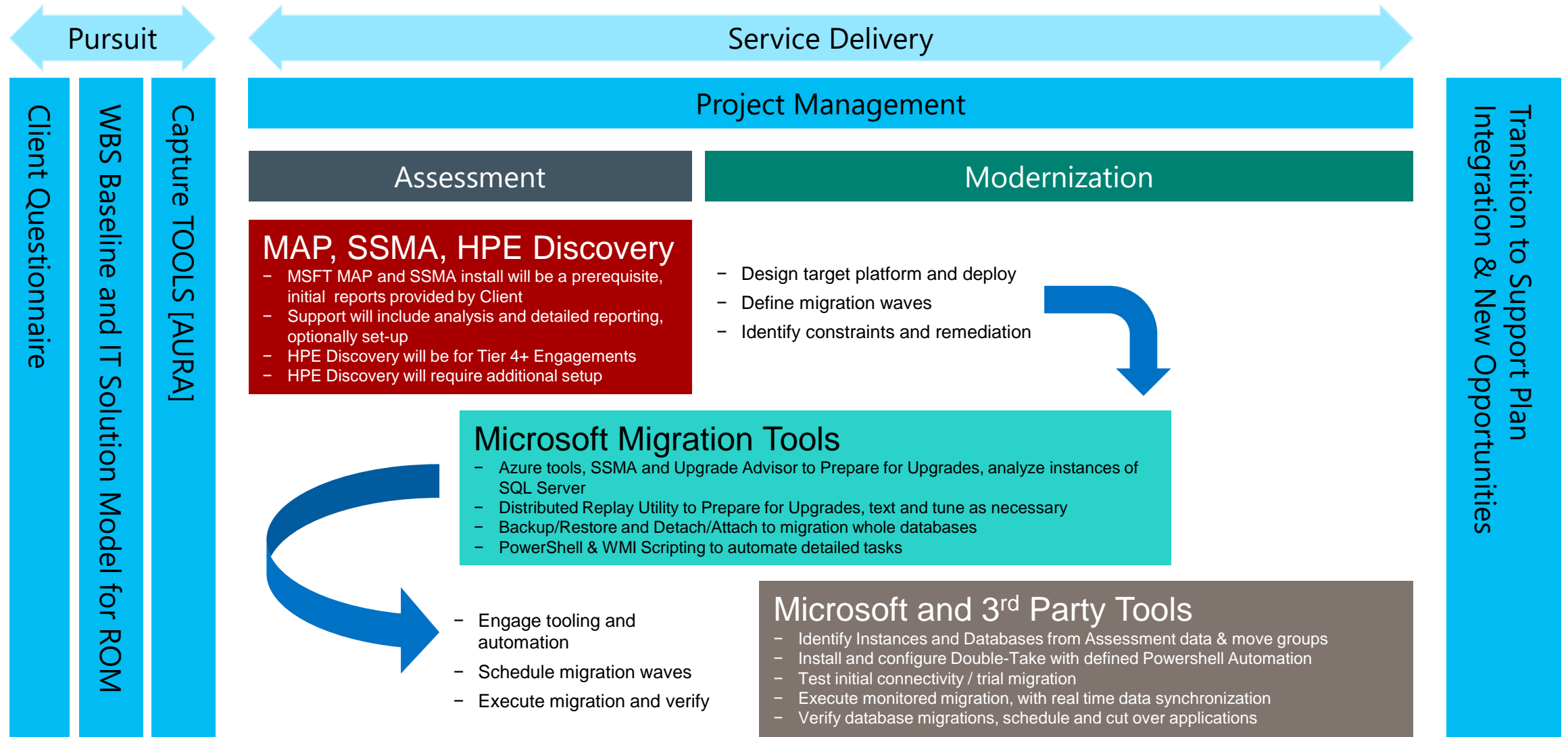
- HPE Database Migration Service
  - Based upon required Assessment
  - Estimates driven by number of Databases, Size, Complexity and Attached Applications
  - Specifies Database Migrations
  - Prepares for Database Migrations
  - Executes Database Migrations

## Operate

### **Proactive support and organizational readiness**

- Knowledge Transfer
- HPE Proactive Care
  - Proactive Select Credits
- HPE Education Services
  - Customized IT Staff training
  - Technical training

# HPE SQL Server Assessment & Modernization Tool Specifics





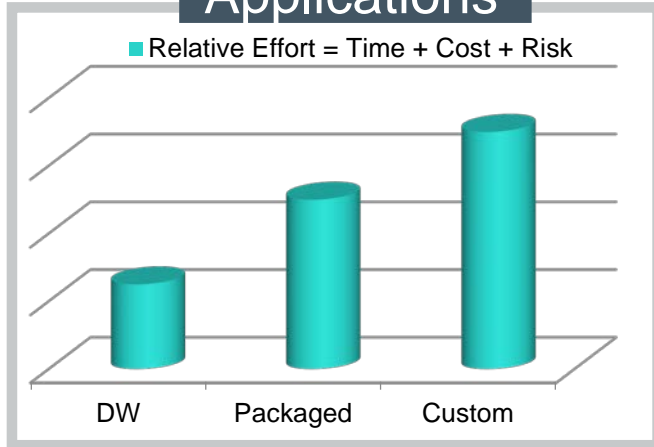
# HPE Database Consolidation and Migration – MSFT Bare Metal

Source

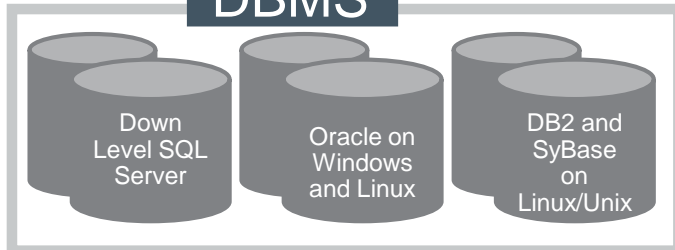
Modernization

Target

## Applications



## DBMS



### MSFT Azure Services

Data Factory  
Visual Studio Team Services  
Application Insights

### MSFT Traditional Tools

MSFT Analysis & Planning [MAP]  
SQL Server Migration Assistant [SSMA]  
SQL Server Integration Services [SSIS]  
Performance Monitor and SQL Trace

### HPE Traditional Tools

HPE Discovery

### 3<sup>rd</sup> Party Tools

Vision Software Double Take / SQL Move

## Paas & SaaS

Azure SQL Database  
Virtualized Database

### MSFT Azure Services

SQL Database [SQL Elastic database pool]

### MSFT Services

SQL 2017 Database [traditional]  
StoreSimple  
Backup

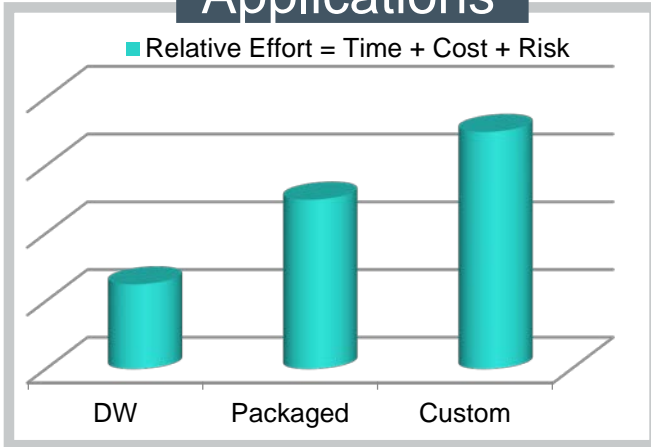
# HPE Database Consolidation and Migration – MSFT Private Cloud

Source

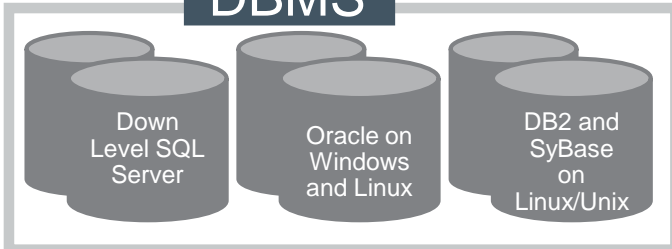
Modernization

Target

## Applications



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HPE Discovery

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Virtualized Database

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SQL Database [SQL Elastic database pool]

## IaaS

SQL Server in Azure Stack VM  
Virtualized Machines

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StoreSimple  
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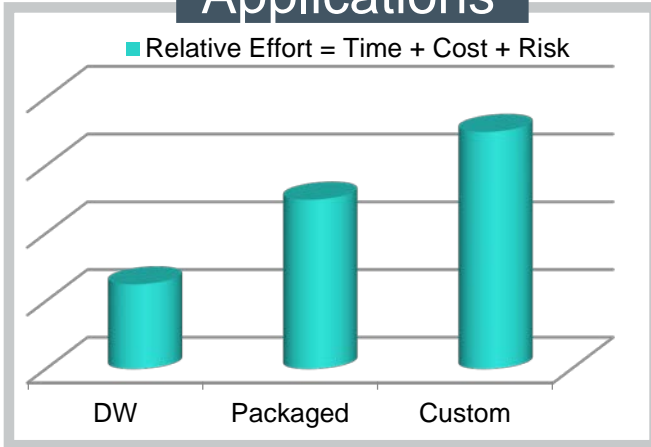
# HPE Database Consolidation and Migration – MSFT Public Cloud

Source

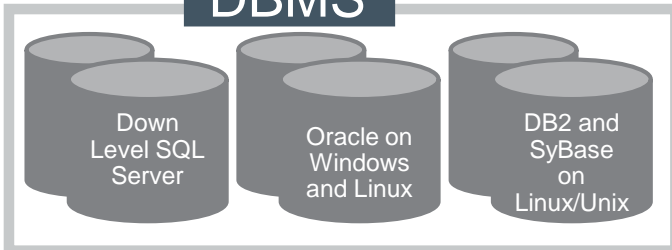
Modernization

Target

## Applications



## DBMS



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Performance Monitor and SQL Trace

### HPE Traditional Tools

HPE Discovery

### 3rd Party Tools

Vision Software Double Take / SQL Move

## Paas & SaaS

Azure SQL Database  
Virtualized Database

### MSFT Azure Services

SQL Database  
SQL Data Warehouse  
StoreSimple  
Backup and Site Recovery

## IaaS

SQL Server in Azure VM  
Virtualized Machines

### MSFT Azure Services

SQL 2017 Database [traditional]  
Windows Virtual Machines  
Windows Virtual Machine Scale Sets  
Virtual Networks  
StoreSimple  
Backup  
Site Recovery

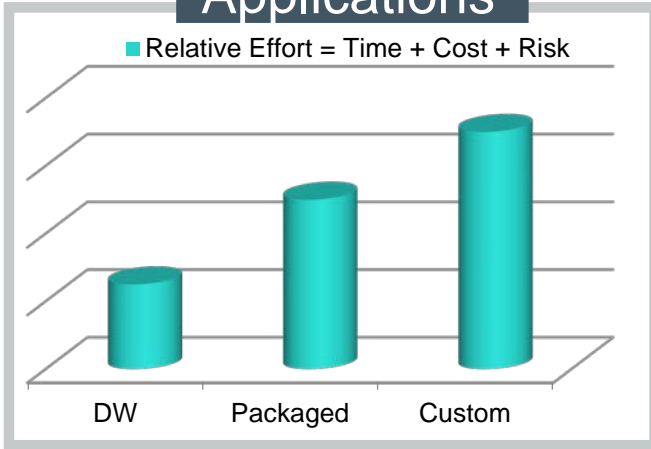
# HPE Database SQL Cloud Readiness – MSFT Public Cloud

Source

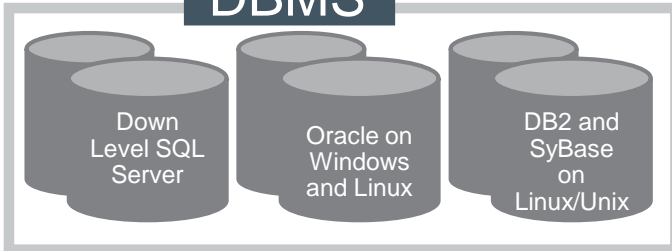
Modernization

Target

## Applications



## DBMS



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Application Insights

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Virtualized Database

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SQL Database

## IaaS

SQL Server in Azure VM  
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### MSFT Azure Services

SQL 2017 Database [traditional]

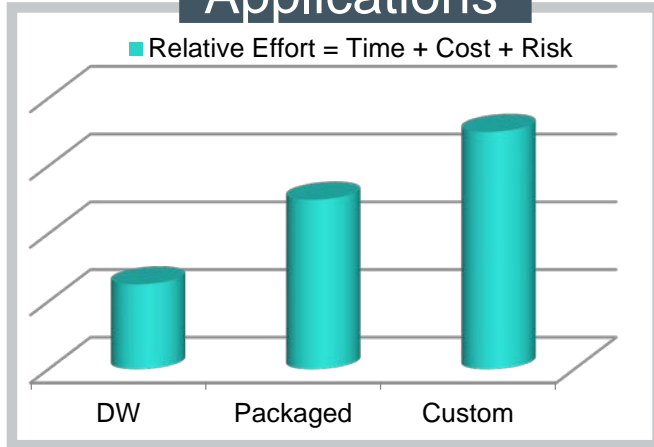
# HPE Database SQL Cloud Performance – MSFT Public Cloud

## Environments

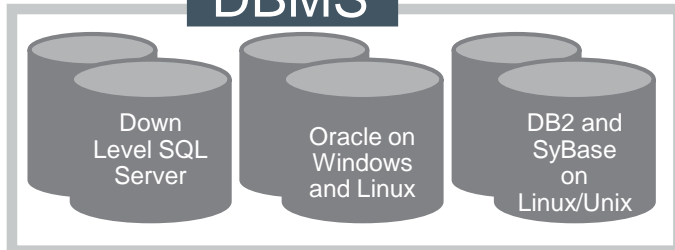
## Performance Tuning

## Target

### Applications



### DBMS



#### MSFT Azure Services

Application Insights  
Log Analytics  
Azure Monitor  
Azure Resource Manager

#### MSFT Traditional Tools

MSFT Analysis & Planning [MAP]  
SQL Server Migration Assistant [SSMA]

### Paas & SaaS

Azure SQL Database  
Virtualized Database

#### MSFT Azure Services

SQL Database  
SQL Data Warehouse  
StoreSimple  
Backup and Site Recovery

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Windows Virtual Machine Scale Sets  
Virtual Networks  
StoreSimple  
Backup and Site Recovery



**Hewlett Packard  
Enterprise**

Thank you

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