

# Oracle to Oracle on Azure VM Migration Accelerator



## Automates Oracle Migrations to Oracle on Azure VMs

- ✓ Accelerates, Simplifies, and Optimizes Migrations
- ✓ Minimizes Migration Costs, Time, and Risks
- ✓ Ensures Optimized, Cost-Minimized Operation in Azure



# *Oracle on Azure VM Migration Accelerator - Why Important?*

## **Oracle to Oracle on Azure VM Migrations**

Effective way to reduce operating costs, capital expenditures, and improve scalability

### **But... There Are Challenges**

- Oracle databases are often large and complex
- Often contain legacy, inefficient processes, queries – requires optimization to minimize Azure costs
- Most Oracle servers over-resourced/underutilized – Projecting optimal Azure resources and costs requires deeper analysis of resource use vs. simply transferring server capacity metrics to Azure
- Planning, optimizing, migrating requires many time-consuming, error-prone manual steps
- Migrations require combination of expert Oracle Database, Exadata, and Azure knowledge and migration experience that most organizations don't have

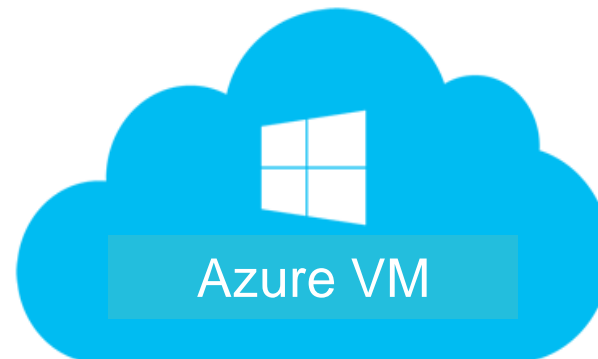
# Oracle to Oracle on Azure VM Migration Accelerator

## Accelerates and Optimizes Oracle to Oracle Azure VM Migrations

- Simplifies, automates and integrates critical phases of Oracle/Exadata migration to Oracle on Azure VMs
- Projects accurate Azure VM resource and cost projections optimized for your specific Oracle workload
- Identifies performance and cost optimizations to minimize Azure VM costs and ensure performance
- Automates Azure VM optimized resource provisioning - based on resource and performance requirements
- Directs data movement, testing and tuning Oracle on Azure VM

Expert system automation engine incorporates Oracle, Exadata and Azure expert knowledge and experience

**ORACLE®**



# *Benefits - Oracle on Azure VM Migration Accelerator*

- Minimizes time, cost and risk to migrate
- Ensures minimized Azure VM costs, better ROI
- Ensures Azure VM resource efficiency, performance optimized for your workload
- Repeatable, scalable transparent migration process ensures accuracy and control
- Ensures business objectives are met in Azure



# Teleran Migration Accelerator Case Study



"Teleran's Oracle Exadata to Azure VM Migration solution enabled the bank to deliver a cost-effective, low risk migration that met cost, performance and ROI expectations in Azure. Teleran's ongoing user and query management ensured that our business users were cost-efficient and productive in their use of Oracle in Azure."

**Director Data Warehousing, US Bank**

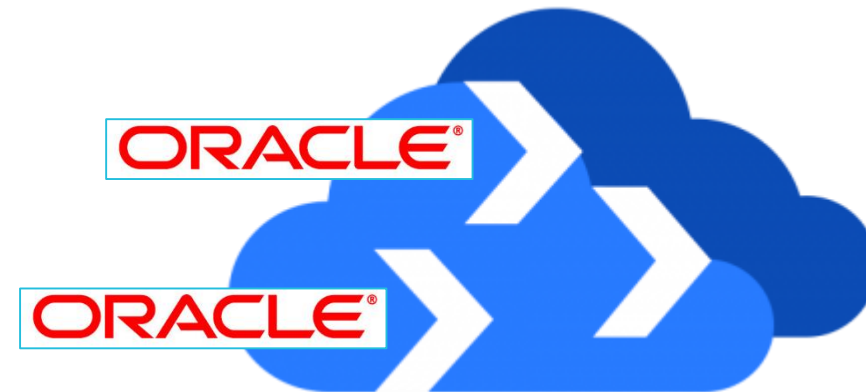
## Client Results

- Reduced migration time by 2 months vs. initial plan
- Decreased budgeted expense by 4 FTE months
- Lowered ongoing cloud consumption costs by 25% versus initial projections
- Optimizations ensured performance and business user productivity in Azure

# Oracle to Oracle VM in Azure Migration Accelerator

## Program Offer

- Standard Migration Package – base subscription fee per database migrated
- Teleran staff or certified Teleran service partner supports migration data collection, analysis and automation and scripting engine
- Customer or certified Teleran service partner conducts migration leveraging Teleran Migration Automation features:
  1. Azure Resource Assessment
  2. Optimization and Cost Minimization
  3. Azure Resource Provisioning
  4. Data Migration
  5. Testing and Tuning



# 1. Projects 'Right-Sized' Oracle on Azure VM Resource and Cost

- Pre-built scripts capture detailed, comprehensive Oracle database and server metrics, including Exadata, to ensure Azure resource efficiency and cost minimization
- Captures actual usage metrics – not just on-prem server capacity. (Most Oracle servers are over-resourced and under-utilized. Just transferring on prem server capacity metrics can inflate Azure VM costs significantly)
- Expert System Automation Engine analyzes Oracle/Exadata configuration and resource metrics
- Applies Oracle and Azure expert knowledge to project optimal Azure resources and costs

## Azure Cost Projections

Pricing Summary		Support Level	
Group Selections	\$ 1,441.50	Support Level	Includes Billing and Community Support
Cloud Services	\$ 0.00	Total Estimated Monthly Price	\$ 2,175.88
Network	\$ 0.00	Total Estimated Yearly Price	\$ 26,110.63
Batch	\$ 0.00		
Total	\$ 1,441.50		

## Example Database Metrics

- Oracle features
- Configuration settings
- Transaction counts
- User counts
- CPU, I/O, memory, storage
- Applications in use
- Performance/Result set metrics
- Peak usage across day/week
- Error counts
- Data volumes
- Data usage patterns
- Maintenance processes
- Data objects: schemas, tables, columns, views, stored procs, packages

## 2. Ensures Optimized, Cost Minimized Azure VM Usage

- Analyzes Oracle Database settings, operations and application usage to identify performance and cost optimizations
- Minimizes Oracle in Azure VM consumption costs and ensures optimal performance and manageability in Azure VM

### Guides Performance and Cost Optimizations



The screenshot displays a dashboard with tabs for Exception Analysis, SQL Analysis, Filters, and Statistics. It features two 'Overall Assessment' sections and a 'Negative Issue Activity' table. The assessment sections use colored circles (green, yellow, red) to indicate the status of various metrics. The 'Negative Issue Activity' table lists application executables and their performance across ten categories.

Application exe	Large Volume Transactions	DML/DLL	DB Errors	Multiple IPs	Data Pattern Change	Transaction Pattern...	SELECT *	Sub-SELECT	Query Complexity
EXCEL.EXE	Green	Red	Yellow	Red	Red	Green	Red	Yellow	Yellow
JOBSERVERCHILD.EXE	Yellow	Red	Yellow	Red	Red	Green	Red	Yellow	Green
MSACCESS.EXE	Green	Red	Yellow	Green	Red	Green	Red	Red	Red
PDTM.EXE	Red	Red	Yellow	Red	Red	Green	Red	Yellow	Green
PERL.EXE	Yellow	Red	Yellow	Red	Red	Green	Red	Green	Red
PYTHON.EXE	Red	Red	Yellow	Yellow	Red	Green	Red	Red	Yellow
SOLDEVELOPER.EXE	Green	Red	Yellow	Yellow	Red	Green	Red	Yellow	Red
SOLPLUS.EXE	Green	Green	Red	Green	Green	Green	Green	Green	Green

### Example Optimization Opportunities

- Inefficient or obsolete maintenance processes
- Unused Oracle features
- Wasteful procedures (concurrent Stats Pack/AWR)
- CPU saturation
- Poorly formed, resource wasting queries (many joins, select\*/wild card, duplicate queries, no data returned queries)
- Application errors, database errors
- Unused applications/reports
- Dormant data/Duplicate data



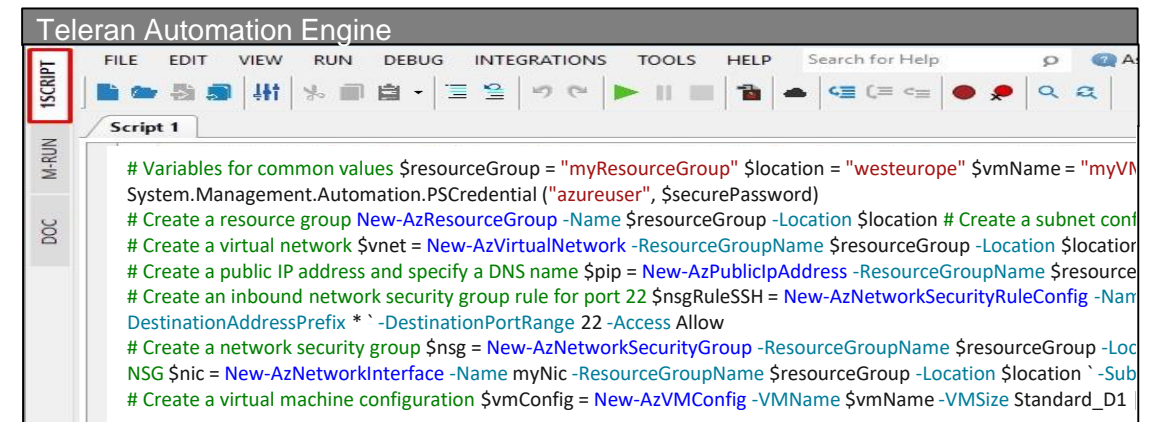


# 3. Automates Oracle on Azure VM Resource Provisioning

- Automated, customized scripts create Azure VMs and related services
- Optimizes VM resources based on Oracle workload analyses and expert recommendations
- Transparent Migration Accelerator process and confirmation steps ensure clear understanding of recommendations and ensure you are in control of migration

## Teleran Expert System Automation Engine

- Expert system combined with automated scripting engine
- Contains expert Oracle, Exadata, Azure system knowledge and migration recommendations
- Applies Oracle database settings and workload metrics with expert recommendations
- Selects appropriate pre-built Azure provisioning scripts, populates parameters and runs scripts



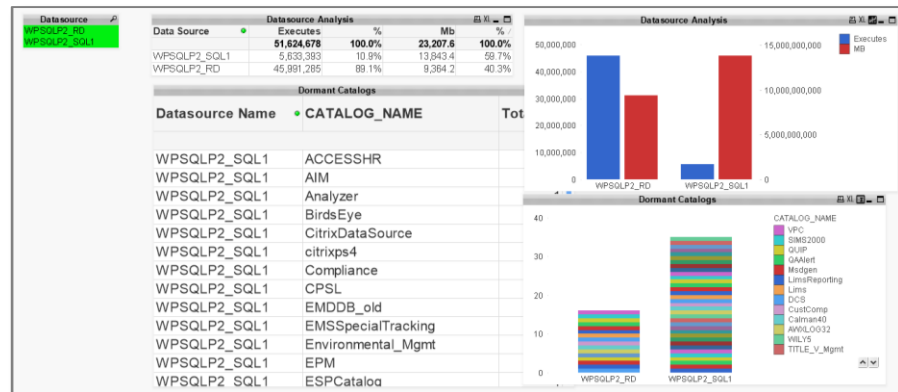
The screenshot shows the Teleran Automation Engine interface. The title bar reads "Teleran Automation Engine". The menu bar includes FILE, EDIT, VIEW, RUN, DEBUG, INTEGRATIONS, TOOLS, and HELP. A search bar for help is visible. The main window displays a PowerShell script titled "Script 1". The script content is as follows:

```
# Variables for common values $resourceGroup = "myResourceGroup" $location = "westeurope" $vmName = "myVM"
System.Management.Automation.PSCredential ("azureuser", $securePassword)
# Create a resource group New-AzResourceGroup -Name $resourceGroup -Location $location # Create a subnet confi
# Create a virtual network $vnet = New-AzVirtualNetwork -ResourceGroupName $resourceGroup -Location $location
# Create a public IP address and specify a DNS name $pip = New-AzPublicIpAddress -ResourceGroupName $resource
# Create an inbound network security group rule for port 22 $nsgRuleSSH = New-AzNetworkSecurityRuleConfig -Name
DestinationAddressPrefix * ` -DestinationPortRange 22 -Access Allow
# Create a network security group $nsg = New-AzNetworkSecurityGroup -ResourceGroupName $resourceGroup -Loc
NSG $nic = New-AzNetworkInterface -Name myNic -ResourceGroupName $resourceGroup -Location $location ` -Sub
# Create a virtual machine configuration $vmConfig = New-AzVMConfig -VMName $vmName -VMSize Standard_D1
```

# 4 & 5. Informs Data Movement, Testing & Tuning

- Sends recommendations to data movement tools to prioritize and move the right data at the right time
- Monitors and assesses key Oracle performance and consumption metrics in Azure VM during data validation, testing and post-migration production
- Ensures cost and performance meets ongoing business SLA and ROI expectations

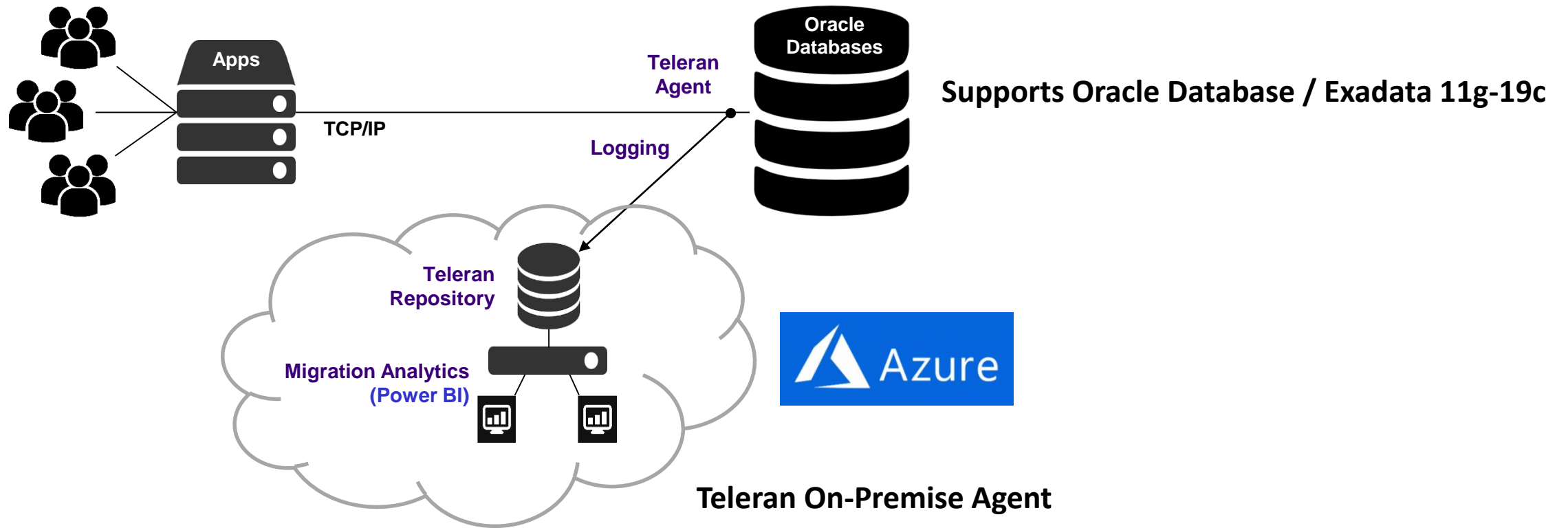
Data Movement Recommendations



Monitoring Performance & Consumption in Azure VM



# SaaS Offering – Unobtrusive, Efficient, Scalable



## Teleran On-Premise Agent

- Unobtrusive – No database agents to slow performance
- Flexible Deployment – Resides on physical DB server/Exadata or mid-tier
- Supports Oracle RAC and Exadata environments
- Fast – Rapid, automated implementation



# Teleran

- 10+ years in business
- HQ - Fairfield, New Jersey USA
- Software patents in AI/Expert Systems, Usage Analytics  
Data Security, Machine Learning, Real-Time Controls
- Customers include Allstate, McKesson, Thomson Reuters, Wells Fargo and many other Fortune 500 and mid-size firms



Teleran Technologies, Inc.  
363 Route 46 West, NJ, USA 07004  
(973) 439-1820  
[www.teleran.com](http://www.teleran.com)