

Getting Started with Oracle and .NET

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**Live for
the Code**

Program Agenda

- 1 Getting Started
- 2 Oracle Developer Tools for Visual Studio
- 3 Oracle Data Provider for .NET (ODP.NET)
- 4 Customer Speaker: Wells Fargo

Getting Started

Oracle .NET

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Oracle .NET Development Environment

Oracle Developer Tools for Visual Studio



Visual
Studio

App
Development

Oracle Data Provider for .NET

.NET
Framework

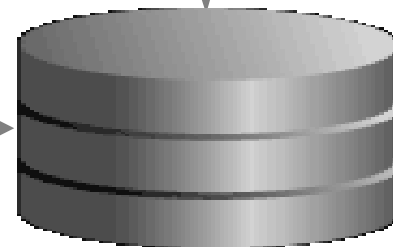
Deploy

Oracle Providers for ASP.NET



Database
Development

Deploy



Web or
Client/Server

Oracle Database Extensions for .NET

OTN .NET Developer Center

- <http://otn.oracle.com/dotnet>
- Free ODAC downloads
- White papers, articles, and tutorials
- Demo and YouTube videos
- Discussion forums
- Request and vote on new features
- Latest Oracle on .NET news

Develop on Windows

Run Database on any Platform



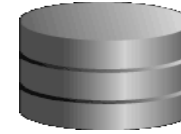
ODT and
ODP.NET 18c

Visual
Studio

Windows



Windows



Linux



Solaris



Other

Oracle DB 18c, 12c or 11g

Relationship with Microsoft

Engineering

- Close collaboration with Microsoft Engineering teams
- Access to pre-release Microsoft product drops

Marketing

- Visual Studio Industry Partner (VSIP)
- Event sponsorship – MS Ignite and Worldwide Partner Conference
- Joint training, road shows, collateral, etc.

Support

- Microsoft Premier Support Agreement
- Collaboration of support teams



Oracle Developer Tools for Visual Studio

Oracle Developer Tools for Visual Studio

- “Add-in” for Visual Studio
 - Works with VS 2017 and VS 2015
 - Download from OTN and Visual Studio Marketplace (MSI or Oracle Installer)
- Tight integration with Visual Studio data features
 - Server Explorer
 - Table Adapter Configuration Wizard
 - Entity Designer
- Oracle specific features
 - Oracle Designers (Table, View, Stored Proc, AQ, etc)
 - PL/SQL Debugging
 - Offline Database Project, Schema Compare... and much more

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D E M O N S T R A T I O N

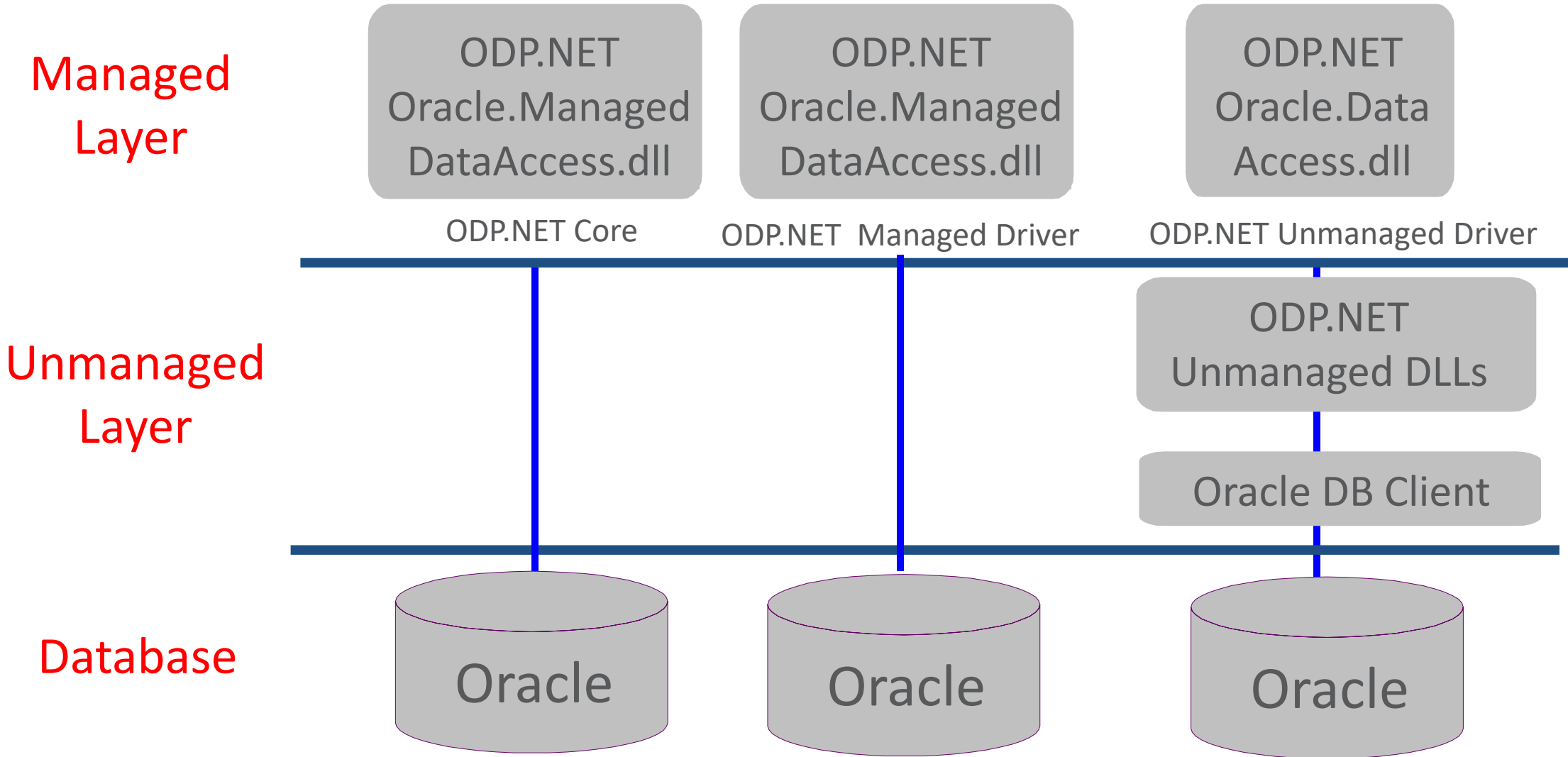
Oracle Developer Tools for Visual Studio

Oracle Data Provider for .NET (ODP.NET)

ODP.NET Overview

- Three flavors
 - **ODP.NET Managed Driver**
 - Implements standard ADO.NET
 - ADO.NET: Microsoft's standard for data access from .NET code
 - Fully managed
 - **ODP.NET Unmanaged Driver**
 - Also implements standard ADO.NET
 - Unmanaged – requires Oracle Client (included)
 - **ODP.NET Core**
 - Implements .NET Core data access features
 - Cross platform (Linux, Windows)
 - Fully managed

ODP.NET Architecture



ODP.NET Choices

- **ODP.NET Managed Driver**

- Good choice for beginners
- Very easy deployment and small size (one DLL)
- Some newer Oracle Client features may not be implemented yet

- **ODP.NET Unmanaged Driver**

- Unmanaged – requires Oracle Client (included)
- More complex deployment and large size
- Generally supports most new Oracle Client features

- **ODP.NET Core**

- Cross platform (Linux/Windows), containers, microservices
- Very easy deployment and small size (one DLL)

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D E M O N S T R A T I O N

ODP.NET, Managed Driver

ODP.NET Overview

- Extended to provide native access to Oracle Database
 - Utilize advanced Oracle Database features
 - E.g. RAC, performance, security, data types, XML, etc.
- Download
 - Nuget (package manager in Visual Studio)
 - OTN: MSI installer
 - OTN: Oracle Installer
 - OTN: Xcopy install

ODP.NET on Nuget

- Oracle.ManagedDataAccess
- Oracle.ManagedDataAccess.EntityFramework
- Oracle.ManagedDataAccess.Core

Key ODP.NET Features

- Connection pooling and performance counters
 - Runtime Load Balancing, Fast Connection Failover: RAC and GDS
 - Transaction Guard
 - Planned Outage
- Native Oracle data types
 - REF Cursors, LOBs, XMLType, UDTs, arrays, Full PL/SQL support, etc.
- Performance
 - Caching
 - FetchSize and RowSize, InitialLOBFetchsize
- Entity Framework

Learn more about ODP.NET Core and Entity Framework Core

Today's session

- Using .NET Core and Entity Framework Core on Linux/Windows with Oracle Database
 - Today – 4:45 PM – 5:30 PM Moscone West – 3010

Oracle Providers for ASP.NET

- Pre-built services to store website state into databases
 - Easy to configure for any DB, including Oracle
- Tightly integrated with existing ASP.NET services, controls, and tools
 - DB use is nearly transparent to developer
- Easy to learn
 - Based on standard ASP.NET provider APIs and schema
- Installation
 - Run PL/SQL scripts to create provider schemas

Oracle Database Extensions for .NET

- Database feature
- Windows only
- Must have .NET Framework on DB server

Oracle Cloud

Try out your ODP.NET apps in the Cloud for free

- Oracle Cloud Infrastructure
 - Run .NET app server on Windows or Oracle Linux running on compute
- Oracle Database Cloud Service
 - ODP.NET supports Oracle Autonomous Database
- Free cloud credits: <https://cloud.oracle.com/tryit>

Upcoming .NET Sessions - Today

- Using .NET Core and Entity Framework Core on Linux/Windows with Oracle Database
 - Today – 4:45 PM – 5:30 PM Moscone West – 3010

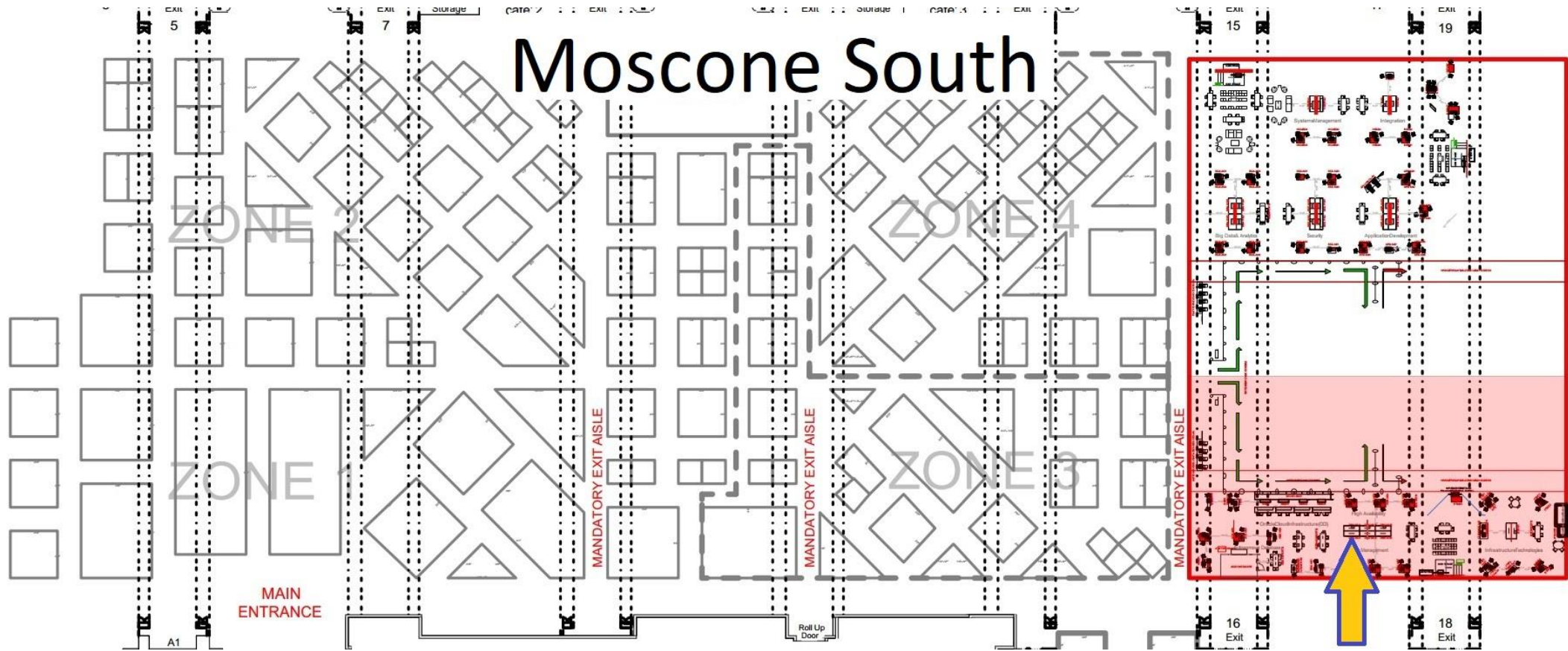
Upcoming .NET Sessions - Wednesday

- Move Your .NET Core Applications to Linux in the Cloud with Docker
 - Wednesday – 1:30 PM – 2:15 PM Moscone West – 2008
- Running Oracle Database and Applications in Docker Containers on Windows
 - Wednesday – 3:45 PM – 4:30 PM Moscone West – 3010
- Accelerate Application Performance: Tips for Faster Oracle Database .NET Programs
 - Wednesday – 4:45 PM – 5:30 PM Moscone West – 3010

Upcoming .NET Sessions - Thursday

- Eliminate Application Downtime with Oracle Database and .NET
 - Thursday – 9:00 AM – 9:45 AM Moscone West – 3010
- Hands on Lab: Building .NET Applications with Oracle
 - Thursday – 12:00 PM – 1:00 PM Marriott Marquis (Yerba Buena Level) - Salon ¾

.NET Demo at the Exchange – Booth DBA-WU2



Questions and Answers

Additional Oracle .NET Resources



OTN

otn.oracle.com/dotnet



GitHub

github.com/oracle/dotnet-db-samples/



Twitter

twitter.com/OracleDOTNET



YouTube

youtube.com/OracleDOTNETTeam



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