

**ORDER DELIVERY TRACKING
ON PREMISE ENVIRONMENT
RECOMMENDATIONS**



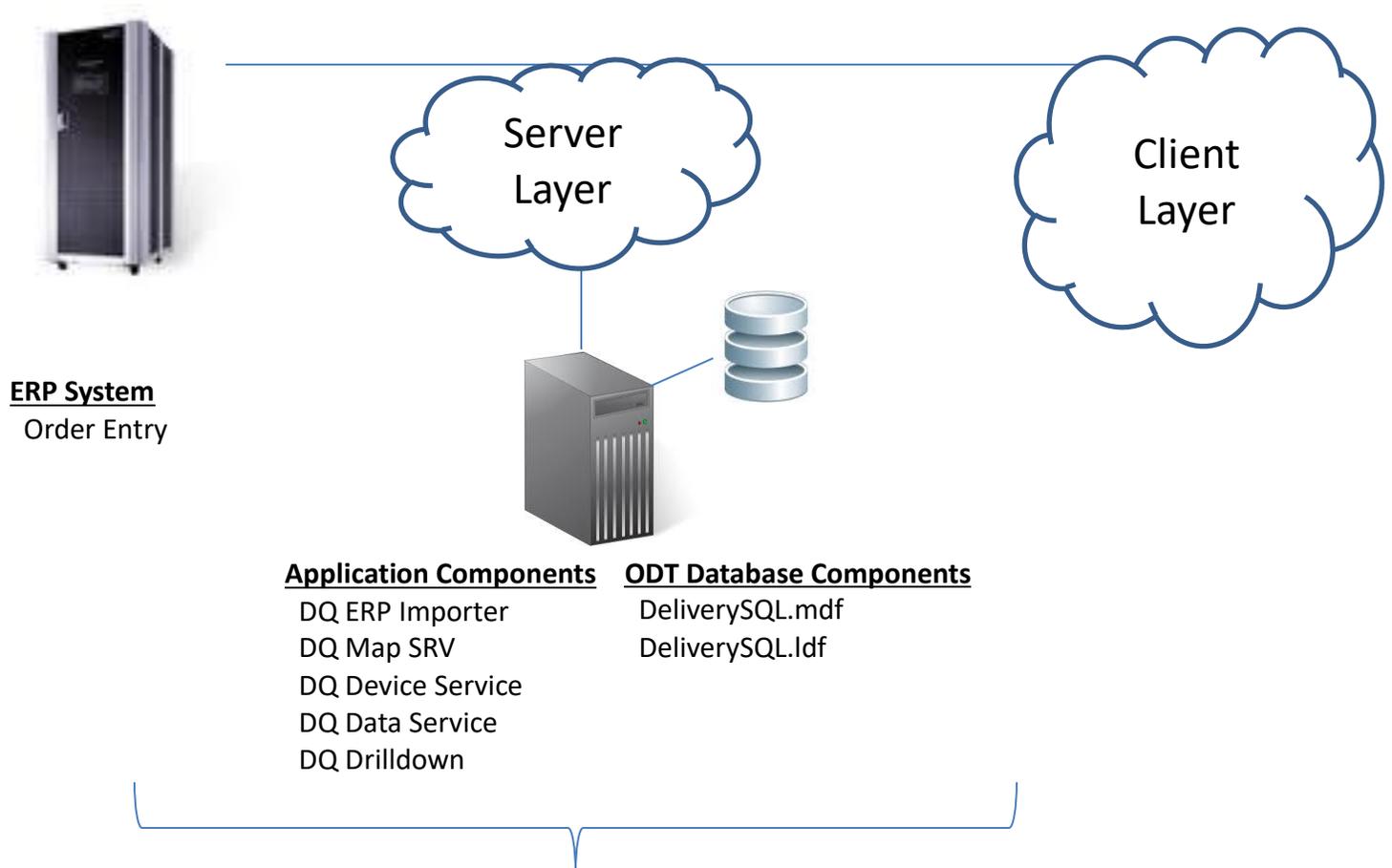
Contents

- 1. Introduction2
- 2. Backend Application and Database Servers3
 - 2.1. ODT Database Server3
 - 2.2. Application Server.....4
- 3. ODT User Client.....5
 - 3.1. Local Install6
 - 3.2. Terminal Server.....7

1. Introduction

This document will provide information about the proper deployment of DQ Technologies Order Delivery Tracking database, services, and client application software. The focus will be a deployed architecture over a hosted service model with options for client deployment.

Below is a sample diagram of the recommended deployment of ODT, its connection and communication with a hosted ERP system (if included in project scope), and the deployment of a client layer for serving (either direct or through terminal secession) the ODT user with the appropriate application level.



Note: Certain high-volume order and Database resource requirements may warrant separation of Application Server and SQL Database into two VM or physical systems.

2. Backend Application and Database Servers

There will be sections below suggesting server deployment resource and system recommendations, and various options for deploying ODT user clients. One item of particular note that will also be explained is that the ODT Database and ODT Application servers are constantly working/communicating in conjunction with one another and directly to DQ Technologies cloud based GPS platform. While the recommend architecture of the ODT database server will allow for multiple company instances on a single database server, the architecture of the ODT application server will not. ODT database server is many to one, companies to server. ODT application server is one to one, company to server.

2.1. ODT Database Server

The ODT Database Server is the machine on which the DeliverySQL database will reside.

- Microsoft Windows 2016 Server or (2019 or newer recommended)
- Microsoft SQL Server Express 2016 (SQL Express 2019 or newer recommended)
- Microsoft SQL Server 2016 Enterprise recommended for large enterprise users (SQL 2019 or newer recommended)
- System designed with required scale to match required data volume. Large environments or environments with very large order volume may require SQL DB Clustering, with storage considerations made taking into account production environment data and archival procedures.
- System recommendations are made based on examination of the customer order and flow through volume requirements.

Without knowing the exact order volume and order line detail information it is difficult to accurately estimate database growth and I/O requirements. It is possible for a single hosted SQL environment to serve the DeliverySQL database of multiple companies. Depending on the architecture of the SQL environment DQ Technologies will make recommendations regarding the number of separate company databases on a single server, and the appropriate available system resource levels.

Basic Enterprise Installation (1-5 locations, up to 30 heavy users, up to 60 casual users)

Processor - Dual Core Intel® Xeon®, At least 2.0 GHz

Memory – 8GB of RAM

Disk – ODT Applications require approximately 2 GB and ODT Database 2-5 GB

Medium Enterprise Installation (5-50 total locations, up to 50 heavy users, up to 200 casual users)

Multi Processor - Dual Core Intel® Processor, At least 2.0 GHz

Memory – 16GB of RAM

Disk – ODT Applications require approximately 2 GB and ODT Database 5-10 GB

Large Enterprise Installation (50+ locations, 250+ heavy users, 500+ casual users)

Multi Processor - Dual Core Intel® Processor At least 2.0 GHz

Memory – 32GB of RAM

Disk – ODT Applications require approximately 2 GB and ODT Database 20+ GB

2.2. Application Server

The ODT Server is the machine on which all the related services and import process will run and connect all external data points to the ODT Database Server, directly to any GPS based solutions (phones or black boxes or mobile applications), signature capture data, and updates directly back to the ERP system (optional for certain ERP solutions).

The ODT application server needs to be company specific and deployed as a single instance for each separate ODT database. While the ODT Database Server may host multiple database instances across a single SQL environment, the application server is designed to function as a single company instance.

We have found that the Application Server will run quite effectively in a virtualized server environment, proving adequate resources are provided to allow for the below named services.

- Microsoft Windows 2016 Server (or newer) operating system
- Appropriate ODBC driver for ERP Connectivity (if necessary)
- Internet Information Server (IIS) 7.0 or higher (including IIS 6 Compatibility Components)
- ASP.NET Framework 3.5
- ASP.NET Framework 4.0

The ODT Application server will be managing the following services

- DQ ERP Importer (If necessary)
- DQ MapSVR Service
- DQ Data Service
- DQ GPS and Mobile Product Services
- DQ Item Drill Down

3. ODT User Client

Standard Desktop User

Windows 7 Operating system (or newer), 2.0 GHz Processor, 4 GB Ram

Terminal Server (50+ users)

Dependent on number of users and application layer

For Clients Accessing the ODT Server

Windows 2008 Terminal Server (or newer) user Clients may wish to consider additional servers for load balancing and server redundancy.

3.1. Local Install



Client – Dispatch User Full Access

ODTView 2.0.x
ODT Reports
USB port for barcode scanner
*VRP Advanced Routing**

Client – Dispatch Limited User

ODT View 2.0.x
USB port for barcode scanning
Web Map Access

Client – Visible Only User

ODT View 2.0.x

Note: VRP Advanced Routing is an optional module available for purchase. Contact DQ Technologies for further details.

3.2. Terminal Server

Note: For Clients Accessing the ODT Server

Windows 2016 Terminal Server (or newer) user Clients may wish to consider additional servers for load balancing and server redundancy.

The same user level client requirement would also be true for any other of the currently available client service platforms (Citrix, ProPalms, RDP, etc.).

