

Technical Guidelines

Protean Software Technical Specification/Requirements



Summary

Database

- Protean operates on a SQL Server database and is compatible with SQL Server 2012 and above
- Protean Software recommend the use of SQL Server 2017 Standard or higher for companies with 5 or more desktop users
- Protean Software can provide SQL Server 2017 Standard Embedded licensing upon request
- The Protean SQL Server and associated databases can be held on a remote/hosted server if required, but all users must then connect to a full remote desktop environment held on the same local network as the SQL Server. If a hosted server is used, and Protean are to supply licensing, it should be a dedicated physical server or a VM on dedicated physical hardware that is used only by the customer, and not shared with other companies even if just for failover purposes
- Microsoft recommend for security reasons that SQL server should not be installed on a Domain Controller

Front End Client

- The Protean front-end client is used for 'office' users and is based on Microsoft Access Runtime 2016 32-bit or Microsoft Access Runtime 365 32-bit
- The Protean front-end client must be on the same local network as the SQL Server to operate
- For remote 'office' users, Protean can be installed in a full remote desktop environment (published remote desktop applications such as RemoteApps are not supported). A VPN connection for using Protean front end client is only supported if a remote desktop connection is used in conjunction
- Protean client cannot be installed on a PC or server that hosts a 64-bit version of Microsoft Office (having a 64-bit operating system with a 32-bit version of Microsoft Office is fine)
- Protean can interface with other local 32-bit Microsoft Office applications (including Word, Outlook, and Excel) of versions 2016 and above. If Office 365 is in use, the full MSI installed version is recommended rather than C2R, though if this is not possible then a version including Microsoft Access should be opted for
- Protean can interface with various desktop-based accounts systems (Sage 50, Sage 200, Quickbooks, and Opera) and CSV export routines are available for upload into the Xero cloud accounts system
- All users should have read/write access to the Protean file share to enable them to add/remove/modify associated files and documents. This can be placed on any server of your choosing

Protean Scheduler

The Scheduler is a copy of the Protean front-end programs set to run in the background looking for Tasks and Alerts that need to be run. These Tasks & Alerts are set up in the normal Protean front-end. We recommended that the Scheduler should run on a server under a continuously logged on Administrator level account so that it can run consistently including out-of-hours.

Reports/Documents Database

- Reports and document layouts for Protean (e.g. invoices, purchase orders, reports) are held in a separate Microsoft Access database. All users must be able to access this database via UNC path from the machines on which Protean client is installed

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Web Services

- An Android application is available for engineers to use for logging jobs and completing work reports
- A web portal is available for customers to log onto and print invoices and worksheets, and to request jobs and quotations
- A mobile friendly web portal is available for sales staff to view and create contacts, prospects, sales opportunities, quote requests, tasks and messages
- All of the web applications are IIS applications, which must be installed on the Default Web Site within IIS
- The web server must have a broadband connection, and be accessible via the internet with the use of a static IP address or hostname for which an SSL certificate must be provisioned and installed
- Port 443 (HTTPS) should be used for Protean Web Service access, and you will be required to configure port forwarding on any routers to allow TCP traffic through. An alternative port can be used if required
- Protean web services can be held within a DMZ if required. However, if you require engineers to be able to access additional resources (e.g. technical/service manuals) or be able to attach files to jobs (e.g. photos when on site) then both the IIS web user and the office clients must be able to access these files using the same physical file path

Note: If the customer does not own an appropriate SSL this will need to be purchased by the customer via their IT provider. Protean are unable to provide or provision SSL certificates.

Recommended Hardware Specifications

Application Server OS: Microsoft Windows Server 2012 R2 or above RAM: 16 GB Processor: Quad Core Processor at 2.0 GHz or higher (or 4 vCPUs) Hard Disk: 500 GB available Installed Features: .Net Framework 3.5 & .Net Framework 4.8 Domain Controller: For security and reliability neither SQL or Protean should be installed on a Domain Controller	Remote Desktop Server (if required) OS: Microsoft Windows Server 2012 R2 or above RAM: Base 4GB plus 2-4GB per user Processor: Quad Core Processor at 2.0 GHz or higher (or 4 vCPUs) Hard Disk: 250 GB available (note that this requirement increases if the RDS will be used as a fileserver) Office: 32bit 2016 or above licenced for each user Note: Additional resources may be required for higher user loads or if other applications/services are in operation
PCs OS: Microsoft Windows 8.1 or above RAM: 4 GB Processor: 2 processor cores at 2.0 GHz or higher Hard Disk: 2GB available Installed Feature: .Net Framework 3.5 Office: 32bit 2016 or above	Mobile Devices OS: Android v9 or above Camera: Rear-facing camera Connectivity: Data plan in place Hard Disk: Hard disk of 16 GB or above Brand: Reputable brand

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Web Services Requirements

- A broadband connection to the internet
- Static public IP address or hostname with associated SSL certificate
- IIS 7.0 or above is installed with its default configuration, plus the following extra features and their prerequisites:
 - ASP.NET 3.5
 - ASP.NET 4.5 (or higher)
 - IIS 6 Metabase Compatibility
- HTTPS (TCP port 443) on the server is accessible from the internet. An alternative port can be used if required

Considerations for Small Businesses

If you are a small business, or don't have many Protean users, you may find that running Protean from a PC is sufficient, rather than having to invest in a dedicated server. The following environment could support up to 5 office users and 5 mobile engineers:

- **OS:** Microsoft Windows 8.1 or above
- **RAM:** 16 GB or higher
- **Processor:** Quad Core Processor (Intel Core i5 or above) at 2.0 GHz or higher
- **Hard Disk:** 250 GB or more available (this should be increased accordingly if your engineers will submit photos with their job sheets)
- **Installed Components:** .Net Framework 3.5 & .Net Framework 4.8

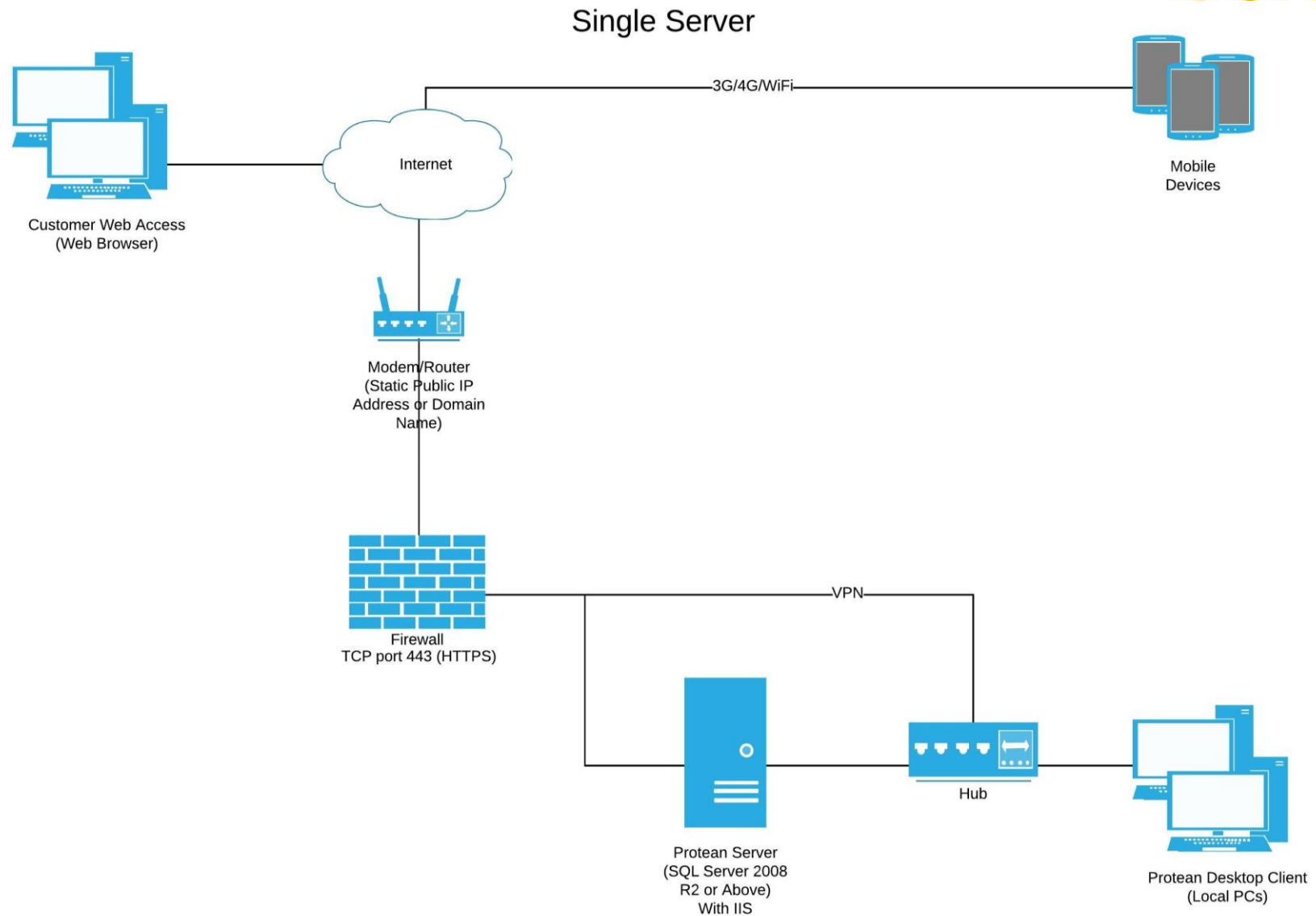
This solution would not be advisable for any companies utilising the Protean Customer Web Interface or Sales Application

NB. In all cases, having a dedicated server is the advisable solution to provide an optimal experience.

NB. This document is for information purposes only and you should seek advice from a security professional to determine your business security requirements.

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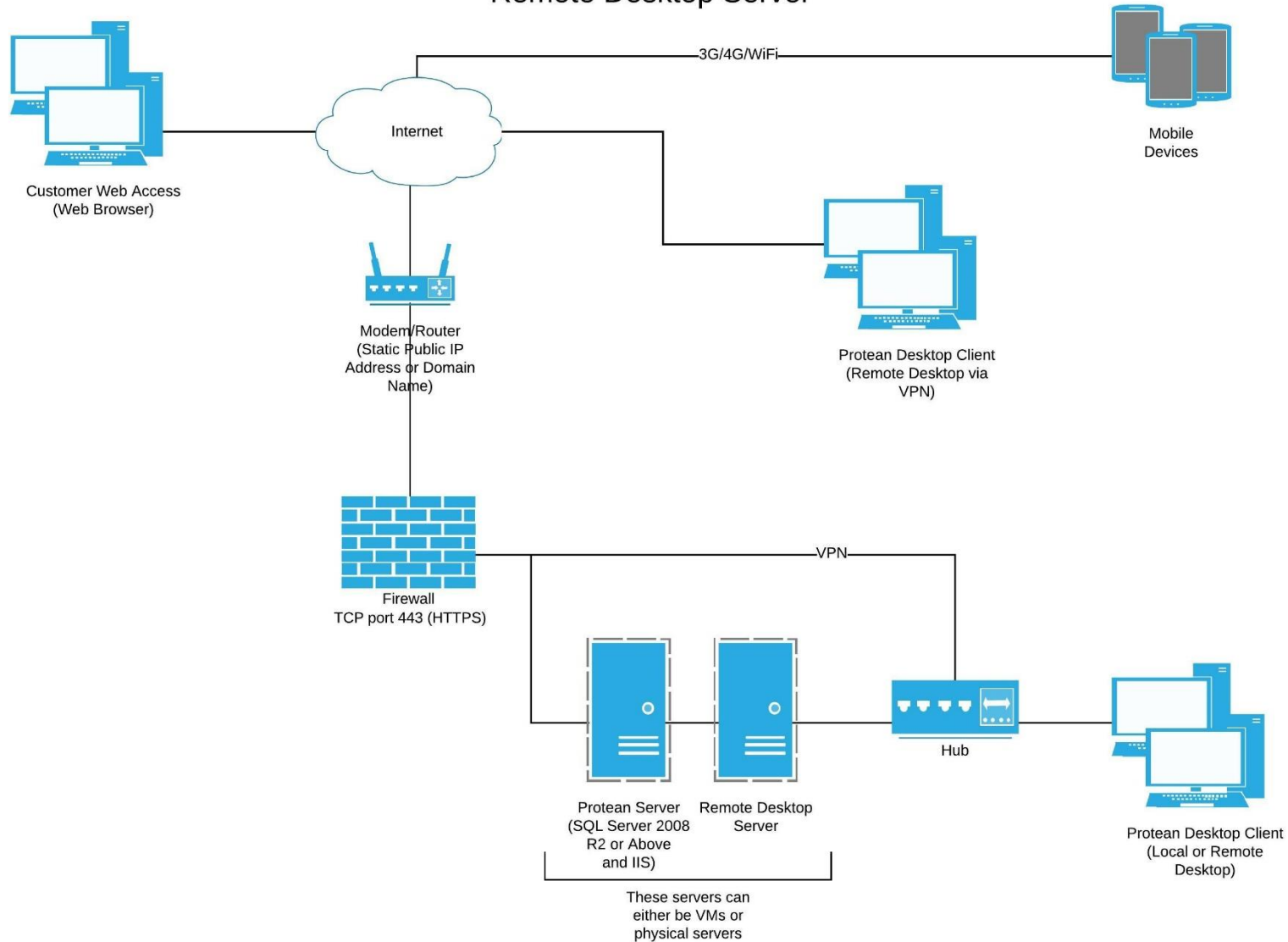
This configuration does not permit desktop client access from outside of the primary physical LAN. If Remote Desktop Services are required, see one of the Multiple Server Configurations

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Multiple Servers with Remote Desktop Server

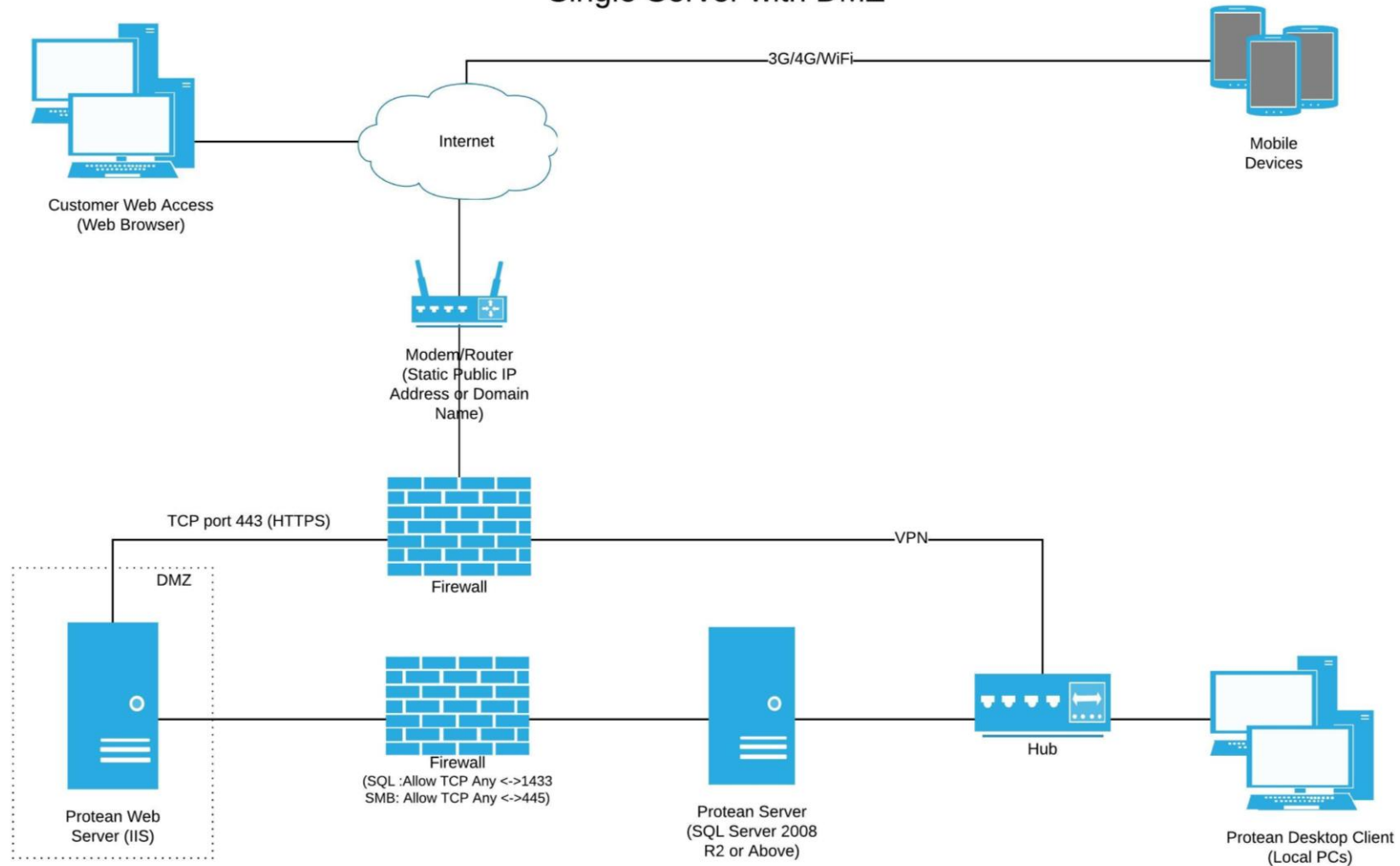


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Single Server with DMZ



Be sure to read details on Page 1 relating to the access of documents when using a DMZ

This configuration does not permit desktop client access from outside of the primary physical LAN. If Remote Desktop Services are required, see one of the Multiple Server Configurations

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Multiple Servers with DMZ and Remote Desktop Server

