

Q-Pulse System Architecture

Q-Pulse is a Windows-based "N-tier" application that has been built on the Microsoft .NET Framework. This utilises Microsoft SQL Server database technology and integrates with Microsoft Active Directory (AD).

N-Tier

Using an N-tier approach allows for easier maintenance and support. This is due to the fact it is easier to change and upgrade a single specific component than to make changes in a traditional client/server application. Therefore, the impact of application change on the QPulse development cycle is minimized and upgrades can be brought to market in a shorter period of time.

More importantly, the N-tier approach offers the greatest flexibility in distribution. This is because the tiers can reside anywhere from a single desktop to servers and clients around the world. This enables Q-Pulse to scale easily from the desktop or local area network to the enterprise or web application level.

.NET Framework

The .NET Framework is the Microsoft development environment that allows different programming languages & libraries to work together seamlessly. This creates Windows-based applications that are easier to build, manage, deploy, and integrate with other networked systems.

SQL Server

Q-Pulse is based on the Microsoft SQL Server database. SQL Server is a robust, scaleable, relational database management system that offers a variety of administrative tools to ease the burdens of database development, maintenance and administration. Q-Pulse is available in various database options from the embedded Microsoft SQL Server options MSDE and Express Edition to a full enterprise solution on Microsoft's SQL Server.

Q-Pulse using the Microsoft SQL Server Desktop Engine (MSDE) or Express Edition is ideal for use in the stand alone or local area network environment, where there is traditionally a lower transaction level and limited user base. Importantly, **MSDE and Express Edition** are embedded within Q-Pulse, meaning that it **does not require any proprietary license purchase**.

Q-Pulse using full SQL Server is appropriate for enterprise environments where there are a large number of users, significant transaction level and increased demands on database scalability across a wide area network.

Active Directory

Windows Active Directory service is the integrated, distributed directory service that is included with the Windows 2003 Server and Windows 2000 Server. Q Pulse allows you to import user accounts and user groups held in Active Directory. This means that there is no duplication of your network administration efforts and that resources will be freed to address other IT project priorities.

In addition, Q-Pulse provides the optional ability to authenticate with user passwords held in Active Directory. For the network administrator, this reduces the number of passwords used on the network. For Q-Pulse users, this means that they only need to sign into the network to be able to access the Q-Pulse system.