



systems

Q5 SYSTEMS

Q5SMS Application

Technical
Requirements



Q5SMS - Safety Management System

Technical Specs

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MINIMUM SERVER HARDWARE REQUIREMENTS:

- These hardware requirements are for implementations where Q5SMS is installed within the customer's infrastructure

OPTION 1: SINGLE SERVER CONFIGURATION:

CPU: Intel Dual Core Xeon or higher
Ram: 6 GB or more
Hard Drive: 50GB and a minimum of 20GB free
Network: 10 Mbit

Operating Systems:

Windows Server 2008 R2 (x64)
Windows Server 2012 (x64)
Windows Server 2016 (x64)

OPTION 2: TIERED SERVER CONFIGURATION:

APPLICATION SERVER:

CPU: Intel Dual Core Xeon or higher
Ram: 4 GB or more
Hard Drive: 30GB and a minimum of 10GB free
Network: 10 Mbit

Operating Systems:

Windows Server 2008 R2 (x64)
Windows Server 2012 (x64)
Windows Server 2016 (x64)

DATABASE SERVER:

CPU: Intel Dual Core Xeon or higher
Ram: 4 GB or more
Hard Drive: 30GB and a minimum of 10GB free
Network: 10 Mbit

Operating Systems:

Windows Server 2008 R2 (x64)
Windows Server 2012 (x64)
Windows Server 2016 (x64)

For more details regarding database server requirements, please visit Microsoft's Hardware and Software Requirements for Installing SQL Server: <https://docs.microsoft.com/en-us/sql/sql-server/install/hardware-and-software-requirements-for-installing-sql-server>



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RUNTIMES AND FRAMEWORKS:

Java Developer Kit (JDK) 8 x64 with JRE
Dot Net Framework 3.5
Microsoft Visual C++ 2017 Redistributable (x64) (For Apache Httpd)
Crystal Report Runtimes (will provide)

PROGRAMS AND SERVICES:

Database servers:	Microsoft SQL Server 2008 R2 Microsoft SQL Server 2012 Microsoft SQL Server 2016
Java Servlet Container:	Apache Tomcat 8.5.16 x64
Web Front End (Optional):	Apache 2.4.27 x64
SMTP Server:	SMTP Service (Must support PLAIN Authentication)

MS SQL SERVER DATABASE CONFIGURATION NOTES:

A static port must be used (default 1433) to avoid conflicts.
Dynamic ports are not permitted.
MS SQL Server can be installed on separate server
The default SQL instance must be used - named instances are not permitted.

Typical database staging size is 1GB and average growth is 1GB per year

IN HOUSE DEVELOPED APPLICATIONS:

Java EE Application:	Q5 will provide war file for Tomcat
Report Server:	Q5 uses Crystal Reports 9 and (.net3.5)
Notifications Module:	VB app - sends email to SMTP server (.net3.5)
Quartz Server:	Runs from the Tomcat Instance

TOMCAT REQUIREMENTS:

MSSQL Driver:	sqljdbc42.jar
Spring Framework Driver:	spring-instrument-tomcat-4.3.6.RELEASE.jar
JVM Memory:	1 GB RAM

AUTHENTICATION:

Q5 can be configured with any authentication framework supported by Spring Security
Security and system logging is based on Apache log4j
Q5SMS uses a configurable role based security model



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CLIENT / USER DEVICE REQUIREMENTS:

MINIMUM CLIENT HARDWARE REQUIREMENTS:

Client machine must be capable of running Edge, Firefox, Safari, or Google Chrome.

Q5 SUPPORTED WEB BROWSERS:

Q5 supports the latest versions of:

- Edge
- Firefox
- Chrome
- Safari

MOBILITY:

ONLINE:

Device: Any device that has web browser capabilities
Modules: All Q5SMS modules

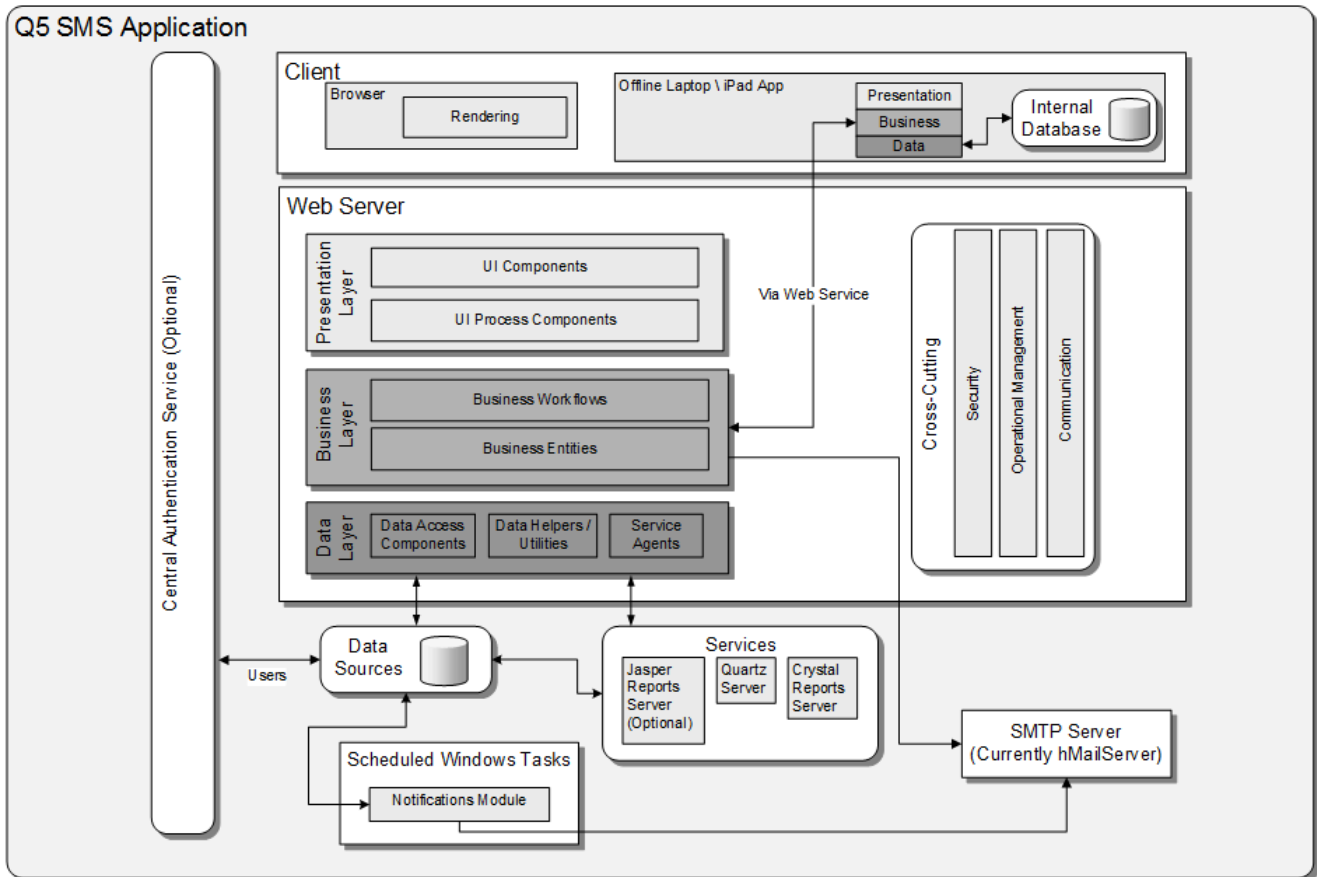
OFFLINE - "DISCONNECTED LAPTOP APPLICATION":

Device: Any Windows or MAC operating system
Modules: Robust – Q5SMS Audit, inspection and corrective action modules
Available Ram: 512 MB
Hard Drive: 750MB free
Network: 128 Kbit
Runtimes & frameworks: Java Runtime Environment (JRE) 1.8 (x64 only)

OFFLINE - IPAD APPLICATION:

Device: iPad
iOS Version: 9.7 or later
Modules: Lite - Q5SMS Audit, inspection and corrective action modules

Q5SMS - APPLICATION LOGICAL TOPOLOGY





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Q5SMS - PHYSICAL SERVER TOPOLOGY:

Q5 utilizes the data center services of Canadian Web Hosting and Peer1.
All new customer implementation will use the Canadian Web Hosting facilities located in Canada.

ABOUT CANADIAN WEB HOSTING:

Canadian Web Hosting, and its subsidiaries, represent a comprehensive service structure designed to meet their client's most demanding infrastructure and hosting requirements. With proven experience, and stability that is unique for a technology company, Canadian Web Hosting is the leader when it comes to web hosting and cloud hosting specializing in hosting business and enterprise-class clients from around the world. One of only a few SSAE 16 certified service providers in Canada, and with a heavy focus on compliance and business process including Canadian privacy laws (PIPEDA), Canadian Web Hosting delivers a secure and scalable service that helps customers meet their specific business requirements.

Today, Canadian Web Hosting is also one of the fastest growing web hosting companies in Canada, and continues to be recognized for its leadership and technology innovations. Canadian Web Hosting is headquartered in Vancouver, British Columbia, with additional locations in Toronto, Ontario and several data centers located across Canada.

Ref - Canadian Web Hosting : <https://www.canadianwebhosting.com>

CANADIAN WEB HOSTING DATA CENTERS:

Canadian Web Hosting data centers utilizes superior data center infrastructure that includes environmental controls, fire suppression systems, redundant power sources and UPS backup, multi-homed Tier 1 bandwidth, 24/7 security including card entry, video monitoring) as well as technical and monitoring capabilities.

Ref - Compliance Programs and Certifications:
https://www.canadianwebhosting.com/company/sas70_certificates

SERVER LOCATIONS:

The Canadian Web Hosting data centers are located in Canada

The Q5SMS production servers for all new customers are located at: CWH, Toronto, Ontario, Canada

The Q5SMS backup servers for all new customers are located at: CWH, Vancouver, British Columbia, Canada

Ref - CWH Data Center Locations: <https://www.canadianwebhosting.com/company/datacentres>

HIGH LEVEL NETWORK DIAGRAM

Q5 Production Network Infrastructure

