

Banlaw FuelTrack™

System Requirements



Version:	Date:	Revision Details:	Author:
2.0	24/06/11	Revised documented content	Development Team
2.1	07/02/12	Updated requirements	Manuel Baleato
2.2	11/02/13	Updated requirements	Manuel Baleato
2.3	18/07/13	Removed serial communication	Development Team
2.4	05/02/15	Updated OS and SQL Server min req's	Manuel Baleato
2.5	10/11/15	Updated SQL Server min req's	Manuel Baleato
2.6	18/10/2016	Updated word format/content	J Silveirinha

Banlaw HSEQ Performance Standards

Keeping our employees, subcontractors, customers and the public safe is essential to the way we do business. To achieve this, health, safety, environment and quality is integrated into all business decisions and processes.

The **Banlaw HSEQ Plan** provides the framework that will continue to maintain and improve our health, safety, environment and quality culture and performance. A copy of our HSEQ Plan is available upon request.



Quality
ISO 9001
SAI GLOBAL

Our Head Office is located at Gateshead NSW Australia within our World Class Research and Development, Manufacturing and Assembly facilities. The quality management of these facilities is also externally assured and certified by SAI Global. **ISO 9001:2008, Certificate Number: QEC30088, expiry 31 December 2015.**

The scope of our certification includes: the design, development, manufacture, repair, service and support of dry-break refuelling systems, lubrication and evacuation systems, tank overflow protection systems and electronic fuel monitoring systems for on road and off road (including rail) fuel powered equipment.

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Australia - Banlaw Pty Limited

Head Office, Gateshead NSW
t. + 61 2 49226300

e. sales@banlaw.com.au

Regional Offices

Western Australia t. +61 8 9209 1351

e. sales@banlaw.com.au

Queensland t. +61 7 4800 4949

e. sales@banlaw.com.au

USA - Banlaw North America LLC

Nevada

t: + 1 775 754 2763

e. salesna@banlaw.com

w: www.banlaw.com

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FuelTrack Enterprise System Requirements

Document Purpose

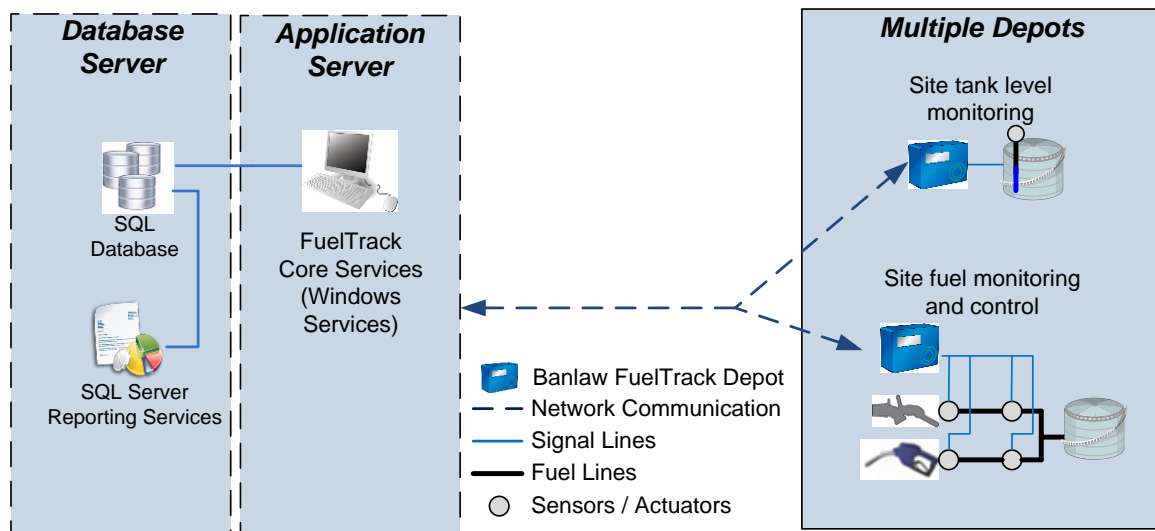
The purpose of this document is to detail Banlaw’s FuelTrack Fuel, and/or Inventory Management system site requirements including:

- ✓ Server specifications
- ✓ Supporting software
- ✓ Communications and bandwidth
- ✓ Remote support access

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FuelTrack Server

The ‘FuelTrack Server’ comprises an instance of the FuelTrack software and a SQL Server back-end database. There is no requirement for the application and database servers to separate servers. A single server can be used to function as both a database and application server.



FuelTrack Application Server

The below specifications are a guideline for the platforms supported by Banlaw software.

Supported operating systems environment:

- Windows Server 2008 x86 or x64 (SP2 or later)
- Windows Server 2003 (SP1 or later)
- Windows 8.1 x86 or x64
- Windows 7 x86 or x64
- Windows XP x86 (SP3)
- Require .NET Framework 4 or later
- Supports virtualisation

Hardware

- 1 GHz or faster CPU
- 1GB RAM
- 20GB disk
- 1280x1024 screen resolution

FuelTrack Database Server

- Microsoft SQL Server 2008 R2 or SQL Server 2012 with SQL Server Reporting Services - Express, Workgroup, Standard or Enterprise Editions (Workgroup or higher recommended). Both x86 and x64 are supported.
- Microsoft SQL Server Management Studio

Please refer to the Microsoft website for specific requirements for the above mentioned Microsoft products.

Client System Specifications

Supported operating systems environment:

- Windows Server 2008 x86 or x64 (SP2 or later)
- Windows Server 2003 (SP1 or later)
- Windows 8.1 x86 or x64
- Windows 7 x86 or x64
- Windows XP x86 (SP3)
- Require .NET Framework 4 or later

Hardware

- 1 GHz or faster CPU
- 1GB RAM
- 10GB disk
- 1280x1024 screen resolution

FuelTrack reports are delivered via Microsoft SQL Server Reporting Services (SSRS). The client requirement for this reporting facility is Microsoft Internet Explorer (version 7 or higher). Multiple concurrent users may run reports to view data at any time through their browser.

Access to the FuelTrack desktop application is only required when system configuration or system data needs to be updated, for example when a new unit (piece of plant equipment) needs to be added to the system. Please note that the frequency of use required to make administration changes is quite low.

Supporting Software

The following software and services are *required* to be available on the FuelTrack application server and to be accessible from the user account under which the FuelTrack Server application will be run:

- Microsoft SQL Server Management Studio
- Terminal Services (to allow RDP sessions)
- Microsoft Internet Explorer
- HyperTerminal
- Command Prompt
- Adobe PDF viewer

Additional Information

- The FuelTrack desktop application and Microsoft SQL Server database engine are not required to be hosted on the same physical machine
- The FuelTrack core services and desktop application support virtualisation, i.e. it may be hosted on a virtual machine
- Banlaw is not responsible for maintaining or backing up the application or database servers
- The customer must inform Banlaw of any action that directly impacts Banlaw systems including but not limited to changes to servers, software, databases and communications infrastructure. Failure to do so may incur a charge should Banlaw staff be required to investigate and resolve any related problems
- The customer has access to, but is not permitted to, directly modify the Banlaw databases, doing so may incur a charge should Banlaw staff be required to investigate and resolve any related problems

FuelTrack Communication

The Banlaw system relies on an Ethernet network communication infrastructure, where typically each depot requires a static IP address.

Banlaw uses both wired and wireless serial-to-Ethernet converters. Each Banlaw FuelTrack depot contains one or more serial to Ethernet converters. Banlaw will provide a list of installed serial-to-Ethernet converters. Each serial-to-Ethernet converter requires a dedicated IP address. With the exception of the Banlaw installed serial-to-Ethernet converter, it is the customers responsibility to install and maintain any wired or wireless communications infrastructure including network cable and access points.

Note: *The requirements detailed below are general case only. Banlaw recognises that each client site has individual requirements.*

Architecture

- Each FuelTrack depot requires 1x static IP address
- Each tank level monitoring site/fuel farm requires 1x static IP address
- For onsite configuration, Banlaw will require the following site specific information:
 - Gateway IP addresses
 - Subnet mask(s)
- Banlaw requires ports 80, 14001 and 14002 to be open.
- Banlaw requires all access control lists to be updated to support the Banlaw system.
- For onsite configuration of wireless communications, Banlaw will require the following site specific information:
 - Network name (SSID)
 - Security/encryption mode (e.g. WEP, WPA)
 - Access keys/passwords/passphrases/etc
 - Site layout
 - Range between radio devices
- Banlaw software may require the ability to send ICMP messages in the form of ping requests.

Note: *Banlaw recognises that network security is an important issue for its clients and so will accommodate for configuration of security parameters to be completed by site personnel.*

Communications Bandwidth

There are no specific bandwidth or network performance requirements for the FuelTrack system. Overall, the communications footprint of the FuelTrack system is very small. The following points describe data transmissions within a typical FuelTrack system:

- Transactional data uploads consist of a single byte string per record less than 100 bytes
- Typically, each FuelTrack depot records between six to ten transaction records per hour, depending on site refuelling times/frequency
- Typically, each refuelling point (including mobile refuelling equipment, e.g. service trucks) will be fitted with a single FuelTrack depot, depending on specific site setup. Therefore, a typical site may have between five and ten depots
- Each individual FuelTrack depot can be configured with a specific automatic data upload (polling) schedule
- LevelTrack tank level monitoring software polls for sensor data once a minute

Additional Information

- A single FuelTrack system can handle multiple communications methods
- In situations where network equipment (e.g. Ethernet radio/bridge) will be used in addition to Lantronix devices the additional equipment will need to be installed in its own enclosure. Generally, there is not sufficient room in the FuelTrack depot enclosure to house additional equipment. The Ethernet equipment should be housed in its own stainless steel enclosure proximal to the location of the FuelTrack depot enclosure. This will allow the Ethernet equipment to be installed and tested prior to FuelTrack installation and commissioning. A patch lead from the Ethernet enclosure to the FuelTrack equipment can then be installed during the FuelTrack installation and commissioning phase.

Banlaw Remote Support Access

Banlaw requires remote access to client FuelTrack systems (specifically, the application server). This allows us to perform remote system health checks, to troubleshoot and often solve system issues without the need to travel to site.

The following is a list of requirements for remote system access:

- Some form of remote network access, such as a Virtual Private Network (VPN) connection, Internet portal (e.g. Citrix Access Gateway), etc
- Access to the FuelTrack application server – typically via a terminal services session (RDP)
- Access to the FuelTrack database - require access to an instance of SQL Server Management Studio (installed on FuelTrack application server would be ideal) with access to the FuelTrack database server
- A method of transferring files back and forth between the Banlaw office and FuelTrack application server (and instance of SQL Server Management Studio if not installed on FuelTrack server computer)
- Access to Microsoft Office applications (Excel and Word - installed on FuelTrack server computer is ideal)
- Login credentials to the SQL Server Reporting Services server - ideally with Content Manager privileges to allow Banlaw to:
 - View reports
 - Upload new reports
 - Create subscriptions (schedules can be created to have reports automatically emailed to users)
- Access to administrative tools on the application server, specifically *Services* to be able to manage FuelTrack services
- Access to component services
- Ability to install and uninstall software and services on the application server. Administrator privileges are preferred
- Command prompt
- HyperTerminal
- Adobe PDF viewer