

PREREQUISITES & CONSIDERATIONS

CAAB XL

February 2021

Version 1.0

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1 DOCUMENT CONTROL

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Version History

Version	Effective Date	Update Originator/Author	Reason Comment
0.0	2015	Jason Collins	Initial Draft
0.1	14/06/2017	Joel Wretham	Applied TSA Document theme
0.2	27/08/2019	Leilani van Schouwen	Update with current information
0.3	27/08/2019	Karl Spurling	Technical Updates for Secure Downloads
1.0	10/09/2019	Karl Spurling	2019.09 Release
1.1	16/02/2021	Joel Wretham	MS Partner logo updated

Document Approvals and Sign-off

	Date.....
TSA Representative	Signature.....

	Date
Customer Representative	Signature

2 INSTALL ENVIRONMENT

2.1 HOST MACHINE

- Dual Core 1.4 Ghz Processor (Quad Core 2.8 Ghz or faster recommended)
- 4 Gb RAM or higher (2Gb minimum may adversely affect computer performance)
- Internet access preferred
- Connectivity to same network as PABX
OR
- (RS232 Serial port) – only if phone system (PABX) outputs CDR records via serial cable

NOTE: CAAB Installation files will be provided via downloadable files outlined in the [Software Supplied](#) section of this document.

2.1.1 Hard Drive space requirements

- CAAB XL software
 - Server install – 2 Gb
 - i. SQL Server (if not installed already)
 1. SQL Software – 5gb
 2. Space for Database – upto max 10gb
 - Workstation client install – 500mb

2.2 OPERATING SYSTEM

For new installs TSA recommends the latest available operating system is used. Larger sites with large capture requirements should use Server Operating Systems where available.

It is also strongly recommended to install the Server component of CAAB XL **on a pc that is always running**; not one that has sleep functions enabled or is turned off after hours or weekends. Depending on your PABX solution, it may not buffer call records when CAAB is not running, therefore leading to **unrecoverable call record loss**.

SUPPORTED:	<ul style="list-style-type: none"> ▪ Windows 10 ▪ Windows 8 ▪ Windows Server 2016 ▪ Windows Server 2012 ▪ Virtual Machine versions of the above Operating Systems
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- Ensure **latest Service Packs and Windows Updates are applied** for all Operating Systems
- **.Net 3.5 and .Net 4.0 Features MUST be installed on all server Operating Systems** prior to the installation of SQL Server Express and CAAB XL software
- Virtual Machines should always be connected to an **“external virtual network”** to allow access to the phone system.
- Any throughput/firewall/routing issues with Virtual Machines will be raised back through to the customer’s IT support to resolve

3 SOFTWARE

3.1 SOFTWARE SUPPLIED

A link to the TSA secure file share will be emailed to the installer and/or client which will provide the ability to download the following:

- The CAAB XL Software license (PDF)
- The CAAB XL Software initialisation file (.ini)
- The CAAB XL software zip file containing the following:
 - The latest installer file (.msi extension)
 - The CAAB XL Quick Install Guide.pdf
 - A Training Folder – containing training documents and a FAQ document
 - Documentation folder – containing an Installation, Release notes and User Guide for your version of CAAB XL
 - SQL Server installation guides for CAAB XL.
 - An updated rates folder for updates to rates files after installation (only included if an update is required after install)
 - An updated drivers' folder (only included if there is an update to the PABX drivers after install)

3.2 MICROSOFT SQL SERVER

CAAB XL uses Microsoft SQL Server for the database backend behind CAAB, where all Call Accounting data is stored. SQL Server software is not included in the CAAB XL install.

Microsoft provides a free version: SQL Server Express. This version has limitations over paid versions (eg. Maximum database size is 10gb), however is usually more than sufficient for most CAAB XL installations. We recommend SQL 2016.

To obtain SQL Express 2016 SP2, the following link will download the full installer:

https://download.microsoft.com/download/4/1/A/41AD6EDE-9794-44E3-B3D5-A1AF62CD7A6F/sql16_sp2_dlc/en-us/SQLEXPRESS_x64_ENU.exe

(Supported Operating Systems - Windows 10, Windows 8, Windows 8.1, Windows Server 2008 R2, Windows Server 2008 R2 SP1, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016)

OR

To obtain SQL 2012 Express SP4, please download SQLEXPRESS_x64_ENU.exe (for 64bit Operating Systems) or the SQLEXPRESS_x86_ENU.exe (for 32bit Operating Systems) from the following Microsoft link

<https://www.microsoft.com/en-us/download/details.aspx?id=56042>

(Supported Operating System - Windows 10, Windows 7, Windows 7 Service Pack 1, Windows 8, Windows 8.1, Windows Server 2008 R2, Windows Server 2008 R2 SP1, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016)

In addition to downloading SQL Server Express, TSA recommends downloading the latest version SQL Server Management Studio so to assist with advanced configuration and support if needed. This is available from the download link on the following page:

<https://docs.microsoft.com/en-us/sql/ssms>

(Supported Operating System - Windows 10 (64-bit)*, Windows 8.1 (64-bit), Windows Server 2019 (64-bit), Windows Server 2016 (64-bit)*, Windows Server 2012 R2 (64-bit), Windows Server 2012 (64-bit), Windows Server 2008 R2 (64-bit) -
* Requires version 1607 (10.0.14393) or later)

**For all SQL Server environments CAAB XL uses SQL authentication to access the SQL Server.
CAAB XL will NOT use Windows authentication credentials to access the SQL Server.**

When Installing SQL Express for CAAB XL the key points are as follows:

- **Named Instance**
 - For SQL Instance Configuration the default Named Instance is SQLEXPRESS, CAAB XL, by default looks for an instance name called CAAB, so we suggest changing it to CAAB also.
- **Service Accounts & Server Browser**
 - On the Service Accounts screen the default values can potentially be left at their default settings however if the CAAB Database is going to be accessed from other computers then the SQL Server Browser needs to be changed from Disabled to Automatic
- **Authentication Mode**
 - On the Account Provisioning tab, set the Authentication Mode to Mixed Mode and then enter a complex password for the System Administrator (sa) account.
- **Data Drive**
 - On the Data Directories tab of the same screen, we recommend if the computer has multiple local drives (an operating system and data drive(s)) the SQL folder defaults should be changed to a location on the data drive, not the operating system drive.

If the CAAB XL database is to be installed with an **existing SQL server** the following details are required:

- SQL Server name
- SQL Instance name (for where the database will be installed)
- SQL System Administrator (sa) User password / should the “sa” password not be able to be supplied, the Database Administrator must supply an SQL Authenticated user logon, with sufficient privileges to create and maintain the new database.

3.3 SQL DATABASE CONSIDERATIONS

Database creation must always be done through the CAAB XL program to populate the appropriate tables within the database itself. The CAAB XL program will not create tables within a pre-made database.

For sites with high volumes of call traffic and/or a large number of extensions, a full version of SQL Server may be recommended by TSA Software Solutions to prevent database capacity from being reached within a relatively short timeframe. The capacity limit of SQL Server Express databases is currently 10GB.

- NOTE: This would also depend on what information is being output by the Phone System (PABX) into the CDR data output (call records)

Should the CAAB XL software be installed on a device where it does not have “local” access to the SQL Database (eg there is a separate SQL Server):

- The SQL Server must have all relevant SQL-related ports opened through the firewall.
- The instance where the CAAB XL Database will be installed should also have “TCP/IP” and “Named Pipes” enabled against the Instance (SQL Configuration Manager)

Enabling the SQL Browser on the server is also highly recommended if CAAB XL is being installed on a non-default Instance

3.4 SOFTWARE SCOPE CONSIDERATIONS

- CAAB XL only reports on a per extension basis. It is unable to represent complex scenarios such as Hunt Groups or Multi-leg/Event based call records.
- There may also be some limitations on transferred calls, depending on the Phone System (PABX) type.

3.5 INSTALLING SOFTWARE & OPERATING SYSTEM CONSIDERATIONS

- CAAB XL installations should always be done under a **Local/Domain Administrator account**
- CAAB XL needs **exclusive access** to **Crystal Reporting**. It will conflict with any previously installed application using Crystal Reporting software.
- The CAAB XL software does not specifically need internet access for its operation, however the software itself is supported remotely by TSA Software Pty Ltd (via TeamViewer or RDP) and for ease of use may need access to <https://fileshare.tsa.com.au> to enable the download of rates updates.

4 NETWORK CONSIDERATIONS

4.1 PABX CONNECTIVITY

- **The CAAB XL PC/Server must have network access to the PABX phone system.**
The only exception to this rule would be a phone system (PABX) such as Cisco that delivers calls records via FTP, or if the phone system delivers call records through a serial cable.
- If the CAAB XL Server is on a different network than the phone system (PABX), routing and throughput must be configured before CAAB XL is installed.
This will ensure efficient installation and configuration of the CAAB XL software.
- TSA Software Solutions Pty Ltd is not responsible for network or PABX troubleshooting, should issues arise.
- If two different networks exist, where the CAAB XL Server is on one network and the phone system (PABX) is on its own independent network, physical solutions may be necessary to overcome any routing issues.
This may require configuring the phone system to output call records via a serial cable physically connected to the CAAB XL Server.
- The phone system (PABX) provider/support may need to be consulted in these types of cases.

5 PERMISSIONS CONSIDERATIONS

5.1 FOLDERS

If CAAB XL is to be used by any other logon than the original Administrator logon used to install the software, the following folder permissions must be changed:

- C:\CAABData
- C:\Program Files (x86)\CAAB XL
- C:\Program Files (x86)\Common Files\TSA
- C:\Program Files (x86)\Common Files\Business Objects

The permissions for the **Users** (or **Everyone**) group must be set to **Full Control** for all folders.

5.2 TERMINAL SERVICES SERVER

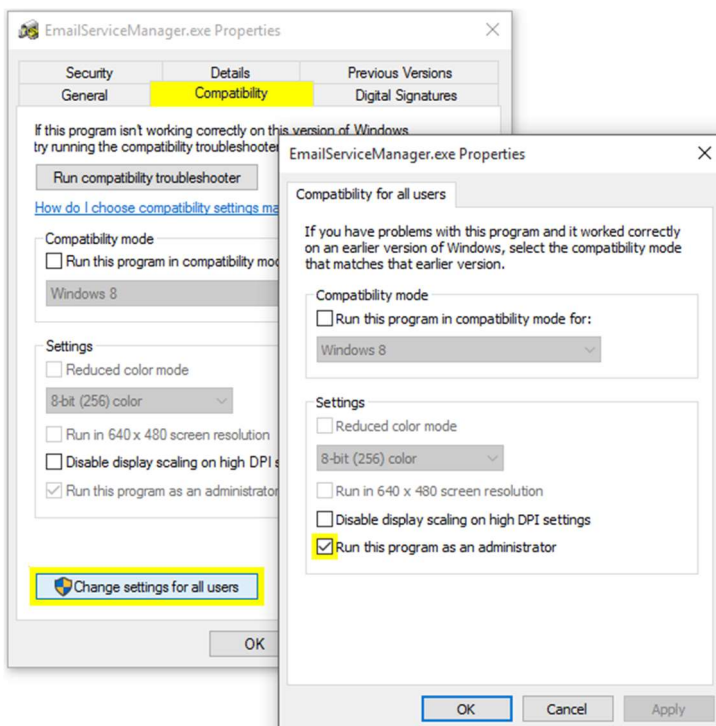
While Terminal Server installs are not officially supported, CAAB XL must always be installed in **Install Mode**.

The above folder permissions must always be set to ensure all users have access to the application

5.3 APPLICATION

The **Emailer Service Manager** (EmailServiceManager.exe) should be set to **“Run as Administrator”** for All Users in the Compatibility section. It is located here:

- C:\Program Files (x86)\CAAB XL\Program\EmailServiceManager.exe



5.4 WINDOWS SERVICES

- If using the CAAB XL Emler Service with a **Microsoft Exchange** email server, the Emler Service must be set as follows:
 - Create a **new Microsoft Exchange email address**
 - Create a **new Domain User** only for the purpose of running the Emler Service
 - Set this Domain User's **password to never expire**
 - Set the **Emler Service to run as the new Domain User**
 - Ensure this email address is **owned/used by this Domain User ONLY (Exclusively)**
- The call collection and processing services (SMDR/Central services) may need to be run as a specific user, depending on the Security/Group Policy/Domain environment.

6 PHONE SYSTEM (PABX) CONSIDERATIONS

6.1 CISCO CALL MANAGER AND CDR DELIVERY VIA FTP

Cisco Call Manager's method of CDR delivery is via FTP/SFTP. CAAB XL does not have a built into FTP server, and therefore supply/installation of one is required by the client/installer.

TSA Software recommend Filezilla FTP server for ease of setup, and will utilise this if TSA Software perform installation and no FTP is provided prior. TSA Software Solutions is not responsible for configuring any settings within Cisco Call Manager, this will remain with the client/installer to maintain.

An FTP Root folder will be created and the CAAB XL software component (Central Poller) will be configured to read from that folder, awaiting the delivery of call records from the Cisco server.

An FTP username and password will be created and delivered to the customer, to be used by the customer's Cisco support team to configure the Cisco server to deliver call records via FTP, using those credentials.

If an existing FTP Server already exists, two FTP credentials will be required, one for the CAAB software to collect call records, one for the Cisco server to deliver call records. Both credentials will require Read, Write and Delete permissions for the shared FTP root folder.

6.2 CDR (CALL RECORD) DATA FORMAT

The CAAB XL software is able to process call data from many different types of phone systems, yet its drivers depend on the call data being in a specific format to be able to process the data correctly.

Should the format not match the specific type that the CAAB software needs to process the data, the phone system (PABX) supplier or support company may need to be contacted to adjust the format of the call data as required.

If the phone system is not one that CAAB currently supports, TSA Software Solutions Pty Ltd may be required to create a new driver to support the phone system, requiring development time and samples of the call data from the phone system in question.