BD Alaris™ Technical Utility v2.0
Model: 1000SP02158

en Installation Guide

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BD Alaris™ Technical Utility v2.0 Installation

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Documentation provided with this product might reference product not present in your facility or not yet available for sale in your area. If difficulties are encountered while using this software, refer to the applicable *BD Alaris™ Technical Utility v2.0 User Manual* and/or service manual and related service bulletin(s) before contacting BD Global Customer Support. If necessary, contact a BD representative. Provide a description of the difficulty experienced, any messages that were displayed at the time of the difficulty, and the software version. Before you return the software to BD, contact BD Global Customer Support to get a return authorization number. Put the software in its original packaging (if available), write the return authorization number on the package, and return it to the nearest facility.

KEEP THIS DOCUMENTATION FOR FUTURE REFERENCE during the product's operational life.

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Introduction

This guide is intended for users of the BD Alaris™ Technical Utility (hereinafter referred to as Technical Utility) and their local biomedical engineers as well as BD Global Customer Support (GCS). This guide contains information regarding service and technical support for the product.

Purpose

This guide describes the procedure to install Technical Utility on the customer's physical machine.

NOTE: The Technical Utility installer is in English only, but a supported language can be selected during installation as the default for Technical Utility user interface.

Overview

Technical Utility is a software application that provides the ability to service and maintain the BD Alaris™ neXus, BD Alaris™ Plus, and BD Alaris™ GW families of infusion pumps.

This product will be used in a non-clinical setting by biomedical engineers and the BD Global Customer Support staff.

Technical Utility supports the following functions:

- Pump firmware upgrades
- Download of pump logs
- Technical Utility activity recording
- Create, transfer, and clear Wi-Fi configuration packages
- Wireless module software updates
- Download of wireless module logs

Conventions Used in this Manual

Italics	The names of document titles, cross-references, and text that requires emphasis are formatted in *italics*.
Bold	The names of buttons, menu commands, options, icons, file names, and folders are formatted in **bold**.
Courier bold.	User input is formatted in **Courier bold**.
Arial	For title bars or sections within the graphic user interface (GUI), the text is formatted in Arial font
⚠	A warning is a statement that alerts the user to the possibility of injury, death, or other serious adverse reactions associated with the use or misuse of Technical Utility
⚠	A caution is a statement that alerts the user to the possibility of a problem with the Technical Utility associated with its use or misuse. Such problems may include loss of data, display out-of-date information, or a change in configuration.
NOTE:	Notes contain supplementary information or emphasize a point or procedure.

Chapter 2

Requirements and Prerequisites

> ⚠️ **The Technical Utility will not perform as designed if the minimum system requirements are not met.**

NOTE: : If Technical Utility will not be using a local SQL Server™ Express instance created by the Technical Utility installer, the user must have the required credentials (Windows™ authentication or the hospital's SQL authentication) to install on a SQL Server™ instance provided by the hospital.

Minimum Requirements

Before you install Technical Utility, ensure that your computer meets the minimum hardware and software requirements listed below:

- Video adapter and monitor supporting 1280 × 768 or higher resolution and color depth greater than 256 colors
- Keyboard and mouse or compatible pointing device
- RS-232 serial communications port or multiport serial communications USB adapter

NOTE: When using a USB adapter, make sure to install the manufacturer driver, as generic Windows driver may not work.

- Multi-core processor, the recommended is Intel Core i5 or above
- 4 gigabyte (GB) RAM or above
- 10 GB of available hard disk space (with operating system installed)
- Windows 7 Professional SP1 (32-bit or 64-bit) or Windows 10 Professional (32-bit or 64-bit)
- CD drive (optional, if installing from CD)
- Microsoft Excel™ 2007 and later and/or Adobe Acrobat™ Reader™ for viewing Technical Utility reports
- Anti-virus application setup:
  The BD Alaris™ Technical Utility is expected to operate correctly with all anti-virus applications, no custom settings required.
- Preventing unauthorised access to your PC hard drive:
  It is advised that all unused USB ports on your PC are disabled, and all PC external interfaces are blocked for unauthorised use.

NOTE: In Serbian language environments, it is highly recommended to use Windows 7 instead of the Windows 10 operating system.

Prerequisites

Technical Utility utilizes a database to store pump firmware, documentation, logs, Wi-Fi configuration packages, and wireless module software.

Option 1: Standalone local database (using own computer as local database)

Use this option if the user does not have an SQL Server instance already installed. Refer to *Installing ATU on New SQL Server Express Instance* on page *10* to install Technical Utility on a new SQL Server instance. If the user has a remote database installed, use option 2 below.

Option 2: Remote database install

For Technical Utility installations using a remote database instance, the following are required:

- Microsoft SQL Server 2012 SP2 Standard or SQL Server 2016 Standard.
- Mixed mode authentication
- Named or default instance
- SQL Server Agent
- Full-text and semantic extraction for search

NOTE: Database clusters are not supported.

NOTE: A static IP address assigned to the remote SQL database server may be required for a remote database installation.

NOTE: Firewall rules may need to be created in order to allow communication between the local ATU client and remote SQL database server.

See *Database Overview* on page *3* for more information.

Database Overview

Technical Utility connects to a database, which can be either a standalone local database or a remote database (for example, on a hospital server). Technical Utility connects to the remote database using a TCP/IP connection, as illustrated below.
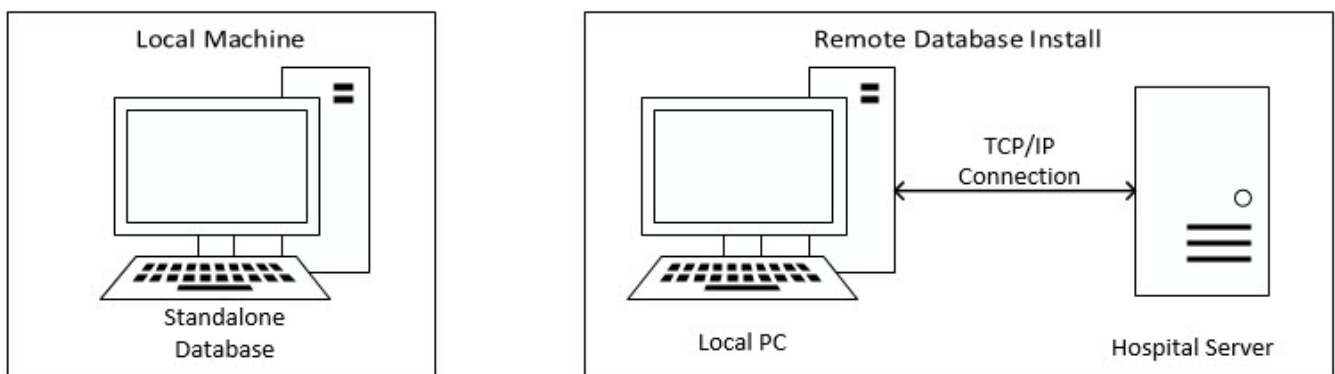
Encrypted SQL Connection

Technical Utility has the ability to run and use encrypted connection. To avail of this option, ensure encryption of the SQL connection is turned on:

1. From the Technical Utility Login Screen, click on **Advanced Database Settings**.
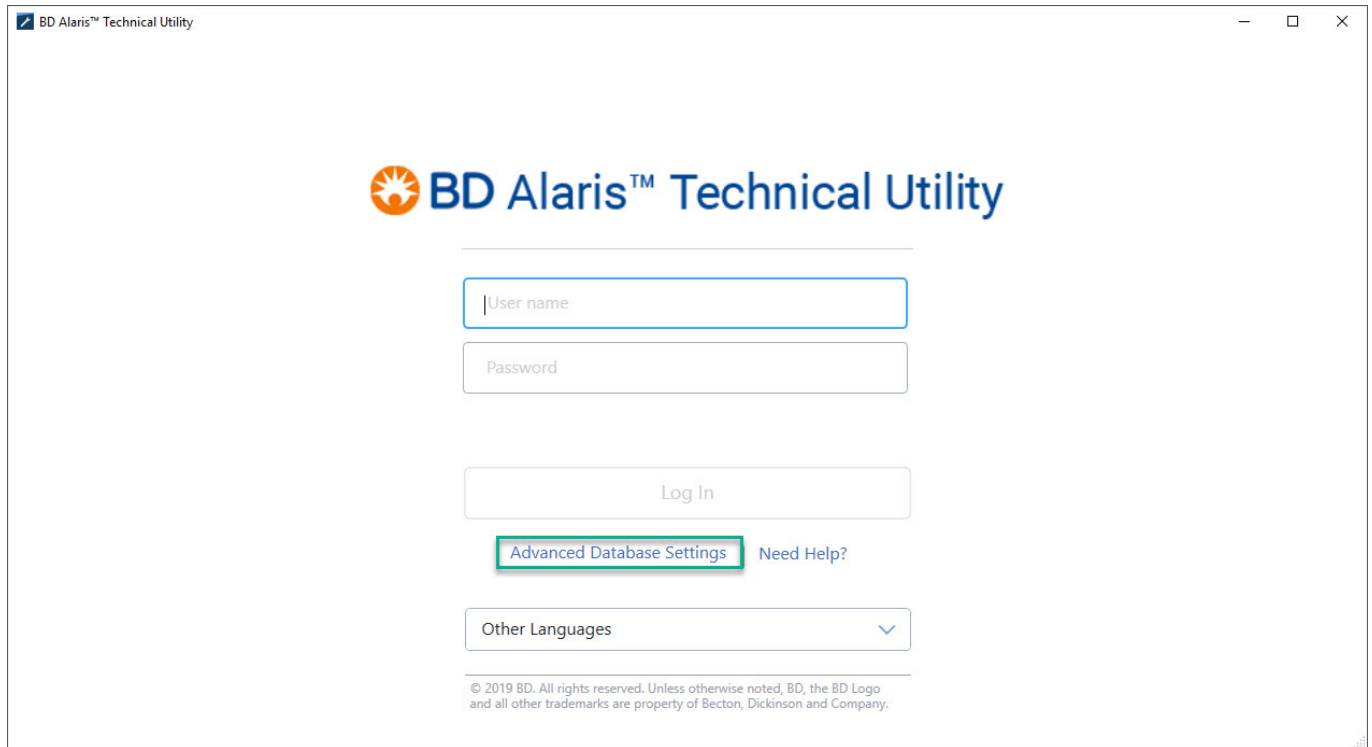
2. Click **Advanced**
3. Set **Encrypt** to **True**, then click **OK**.

Chapter 3
Installing Technical Utility v2.0

NOTE: Technical Utility installation fails if Microsoft SQL Server 2014 Standard or higher is already installed on the computer.

There is no error message explaining that the failure is due to an existing SQL Server 2014 Standard on the computer. In this case, the Technical Utility database must be backed up and Microsoft SQL Server 2014 Standard must be uninstalled. See *Uninstalling Microsoft SQL Server 2014* on page *10*.(This should be discussed with the local IT administrator). Technical Utility insta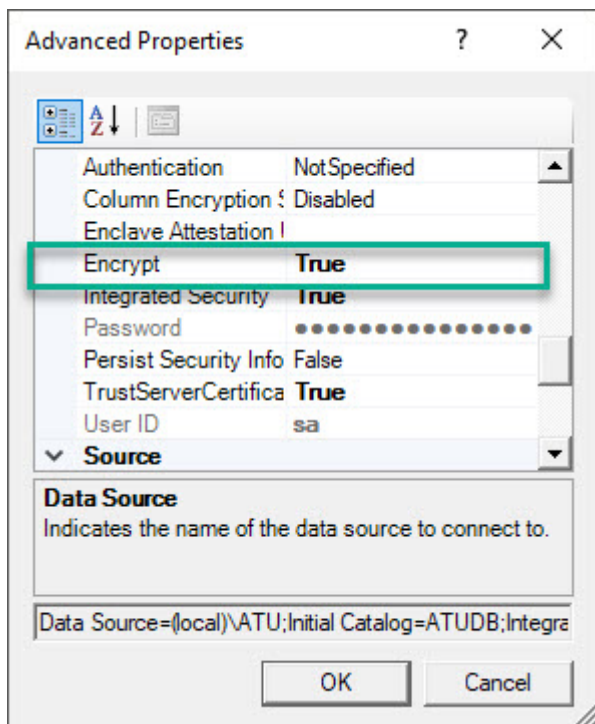llation can also be performed on another computer that does not have SQL Server 2014 installed on it. If there is an SQL Server installed, then a new instance can be created using SQL Server Installation Center (this is likely installed with SQL Server). The same procedure as the remote/existing database can be followed (see *Installing Technical Utility database on an Existing SQL Server Instance* on page *6*).

1. Insert the CD into the CD drive. Technical Utility auto-runs and the installation process starts.
2. If Technical Utility does not auto-run, navigate to **ATU - Setup.exe** and double-click it.
   The Microsoft SQL Server 2014 Express SP3 (x86 & x64Wow) ATU installation window appears.
3. Click **Install** to install this required component—even if it already exists. Click **Cancel** to stop the installation.
   If you already have these items, the Welcome screen appears —proceed to step 5.

NOTE: If SQL Server fails to install automatically, you must install it manually. See *Installing a Technical Utility Instance of SQL Express* on page *7*.

NOTE: If your system does not have Microsoft .NET Framework 4.6.2 installed, the Technical Utility software prompts for installation of the applicable software. Depending on the installation requirements, you may need to reboot your system after installation.

   Technical Utility optionally uses Microsoft SQL Server 2014 Express SP3 (x86 & x64Wow) ATU. Would you like to install it now? window appears.

4. Click **Yes** for local database installation or click **No** for remote database installation. See *Installing Technical Utility database on an Existing SQL Server Instance* on page *6*. Also click **No** for Technical Utility application only installation without a database. See *Installing Technical Utility Application with No Database* on page *7*.
   The SQL Server 2014 Setup Installation Progress window appears with the progress bar displaying the status of the SQL Server 2014 installation
   When the SQL Server 2014 installation is complete, you must reboot your system. Click **Yes** to reboot now or **No** to reboot at a later time. As the installation process restarts, the Welcome to the InstallShield Wizard for Alaris™ Technical Utility popup appears. If installer does not continue automatically after restart, relaunch the Technical Utility installer.
5. Click **Next**.
6. In the License Agreement dialog box, read the agreement, select **I accept the terms in the license agreement** and click **Next**.
7. In the Default Language dialog box, select your default language from the drop-down list and click **Next**.

NOTE: Each Technical Utility User will be able to adjust their preferred language in the settings.

8. In the Database Installation Mode dialog box, select one of the following types of installation:
   - Install Technical Utility on the local instance named ATU—this setup uses the ATU instance that has been installed locally on the machine. To perform this type of installation, proceed to *Installing Technical Utility database on an Existing SQL Server Instance* on page *6*.
   - Install Technical Utility on an existing SQL Server Instance—this setup uses an existing Microsoft SQL Server instance. See *Installing Technical Utility database on an Existing SQL Server Instance* on page *6*.
   - Install Technical Utility application only, no database—this setup installs the Technical Utility application only; users must specify a database instance at a later time. See *Installing Technical Utility Application with No Database* on page *7*.

NOTE: To review or change installation settings, click **Back**. To exit the Wizard, click **Cancel**. If you cancel, the Technical Utility installation is canceled but SQL Server 2014 remains on the computer. SQL Server must be uninstalled before you attempt to

install Technical Utility. See *Uninstalling Microsoft SQL Server 2014* on page *10*.

Installing Technical Utility on a Local SQL Instance Named ATU

1. In the Database Installation Mode dialog box, select **Install ATU on the local instance named ATU** and click **Next**.

   The Ready to Install the Program window appears.
2. Click **Install**.

NOTE: If desired, ensure that the Create Desktop Shortcuts box is checked so that the installer creates a shortcut to Technical Utility on your desktop.

   The progress bar displays the status of the Technical Utility installation.

   After the installation is complete, the Install Complete dialog box appears.
3. Click **Finish** to exit the wizard.

Installing Technical Utility database on an Existing SQL Server Instance

If you choose to install the Technical Utility database on the hospital's existing SQL Server instance, the installer displays a dialog box where you can provide the connection information to the SQL Server instance, including user name and password. This option should be used for the first Client PC when a remote SQL Server instance is used.

1. In the Database Installation Mode dialog box, choose **Install ATU on an existing SQL Server instance** and click **Next**.
   The Database Server dialog box appears.
2. Enter information in the following fields:
   - Database server name and instance name that you are installing to.
   - In the Connect using section, select one of the following:
     - Windows authentication credentials of current user.
     - Server authentication using the Login ID and password below. Enter the **Login ID** and **Password**. The network administrator must provide a SQL Server login and password if using SQL Authentication.
3. Click **Next**.
   If the database is validated, Technical Utility is installed. If the validation is unsuccessful, an error message appears that the Technical Utility installer could not connect to the database.
   The Ready to Install the Program window appears.
4. Click **Next**.
   The progress bar displays the status of the Technical Utility installation.

NOTE: If desired, ensure that the Create Desktop Shortcuts box is checked so the installer creates a shortcut to Technical Utility on your desktop.

   After the installation is complete, the Install Complete dialog box appears.
5. Click **Finish** to exit the wizard.

Installing Technical Utility Application with No Database

If you choose not to install a database instance, the installer allows you to continue the installation without asking for database information. See *Connecting to a remote database after Technical Utility installation* on page *7* to connect to a remote database after installation. This option should be used for the second and subsequent Client PCs when a remote SQL Server instance is used. After completing the installation, proceed with *Connecting to a remote database after Technical Utility installation* on page *7*.

1. In the Database Installation Mode dialog box, choose **Install ATU application only, no database** and click **Next**. The Ready to Install the Program window appears.
2. Click **Install**.
   The Installing Alaris Utility window appears with the progress bar showing the status of the installation. Ensure that the Create Desktop Shortcuts box is checked so the installer creates a shortcut to Technical Utility on your desktop.After the installation is complete, the Install Complete dialog box appears.
3. Click **Finish** to exit the wizard.

Connecting to a remote database after Technical Utility installation

Technical Utility may be installed without connecting to a database. This section describes how to connect to a remote database after installation.

1. Double-click the **Technical Utility** shortcut and from the login window, click **Advanced Database Settings**.
2. The Connection Properties window appears.Select the **Server name** (or IP address) from the drop-down list and select **Use Windows Authentication** or **Use SQL Server Authentication** to log on to the server. If using SQL Server authentication, enter the **User name** and **Password**.
3. Click **OK**.

Installing a Technical Utility Instance of SQL Express

If the SQL Server Installation Center screen appears during Technical Utility installation, the silent managed installation of SQL Server has failed. Use the following procedure to manually install the Technical Utility instance of SQL Express.

1. Click **New SQL Server stand-alone installation** or add features to an existing installation.
2. In the Microsoft Update dialog box, click **Next**.
3. In the License Terms dialog box, review and accept the license terms and click **Next**.
In the Feature Selection dialog box, click **Select All** and click **Next**.
4. In the Instance Configuration dialog box, select **Named Instance**, enter **ATU**, select **Instance ID** (the text field will be updated), and click **Next**.

5. In the Server Configuration dialog box, select **Automatic** from the **Startup Type** drop-down list in the Service Accounts pane, and click **Next**.

6. In the Database Engine Configuration dialog box, under the Server Configuration tab, select **Mixed Mode (SQL Server authentication and Windows authentication)** and type the password (contact BD Global Customer Support to obtain the password), then click **Next**.

7. When the Complete dialog box appears, click **Close**.

Chapter 4

Upgrading an Existing Installation of Technical Utility

Upgrading Technical Utility v1.0 to v2.0

NOTE: Before upgrading Technical Utility, back up your SQL Server database (follow Microsoft's recommended procedure.)

1. Insert the Technical Utility v2.0 CD into the CD drive. Technical Utility auto-runs and the upgrade process starts.

2. If Technical Utility does not auto-run, navigate to **ATU - Setup.exe** for Technical Utility v2.0 and double-click on it.

3. If a previous version of Microsoft SQL Server is already installed on the system, a dialog is displayed notifying you that the installation is pending an upgrade to Microsoft SQL Server 2014. This is required to ensure compatibility with Technical Utility 2.0. Click **Install** to continue.

4. When the SQL Server 2014 upgrade is complete, you must reboot your system. Click **Yes** to reboot now or **No** to reboot at a later time.

5. After restarting, the InstallShield Wizard for Technical Utility detects that a previous version of the software already exists. Click **Ok** to continue. See *Installing Technical Utility on a Local SQL Instance Named ATU* on page *6* to complete installation.

Chapter 5

Cleaning Up and Restoring the Technical Utility Database and Backing Up the SQL Server Database

Cleaning Up the Technical Utility database

When the local database usage is at 75%, it is recommended that you clean up the database to continue using Technical Utility. You cannot log on to ATU after the database usage reaches 95%.

NOTE: Deleting the remaining ATU database files results in the loss of your local ATU database of hospital information that is stored on your computer. Back up your local database before removing the files.

1. Click the **Settings** icon on the Navigation menu.
2. Under **Database Information** section,click **Start Cleanup**.
3. In the Database Cleanup Utility Tool dialog box, select the **Yes** check box.
4. Select the date range to delete data from the database.
5. Click **Start Cleanup**.
6. In the Info dialog box, click **OK**.
7. In the Database Cleanup Utility Tool dialog box, click **Close**.

Restoring the Technical Utility database

To restore the Technical Utility database, follow Microsoft's recommended procedure for restoring databases.

Backing Up SQL Server Database

Follow Microsoft's recommended procedure for backing up your SQL Server database.

Chapter 6
Uninstalling Technical Utility v2.0

Uninstalling the Technical Utility v2.0 Application

NOTE: Before uninstalling Technical Utility, back up your SQL Server database (follow Microsoft's recommended procedure.)

1. Navigate to **Windows Control Panel > Programs and Features**, select **BD Alaris™Technical Utility**, and click **Uninstall**.

2. In the Are you sure you want to uninstall BD Alaris™ Technical Utility? dialog box, click **Yes**.

Uninstalling Microsoft SQL Server 2014

3. Navigate to **Control Panel > Programs and Features**, select **Microsoft SQL Server** 2014, and click **Uninstall/Change**.Choose **Remove**.

4. In the Select Instance dialog box, click **Next**.

5. In the Select Features dialog box, click **Select All** to remove all features, and then click **Next**.

6. In the Ready to Remove dialog box, click **Remove**.

7. When the Complete dialog box appears, click **Close**.

8. Return to **Control Panel > Programs and Features** and continue to uninstall all instances of Microsoft SQL Server 2014.

Uninstalling Remaining Technical Utility Database Files

CAUTION: Deleting the remaining ATU database files results in the loss of your local ATU database of hospital information that is stored on your computer. Back up your local database before removing the files, if needed.

1. Continue to delete any remaining files from the ATU instance.

    a. Navigate to **drive C > Program Files (x86) > Microsoft SQL Server** folder.

    b. **Delete** the **MSSQL12.ATU** folder.

Chapter 7
Troubleshooting

Troubleshooting Technical Utility

Follow these procedures to troubleshoot some common issues with Technical Utility:

Issue	Resolution
Technical Utility does not install; an error message appears stating that Technical Utility installation cannot be completed.	Check to see if Technical Utility already exists on the system; Technical Utility will not install if there is already an instance of it.
SQL Server installation fails.	If you already have SQL Server on your system, and you try to install SQL Express, it will fail. Do not install SQL Express on top. Remove one to install the other. Check the SQL Express install log. Check for presence of Alaris PK Editor 1.1.1 and/or Alaris Guardrails Editor 2.2.1 which use Microsoft Desktop Engine (MSDE) as the database engine. If these are installed, export the data and uninstall those applications. Restart the system and reattempt the installation.
Technical Utility needs repair.	Select the repair option in Technical Utility installer.
.NET installation fails.	Check for Windows Update to make sure that all updates are installed.
The print function for pump logs is slow and an error message appears during log download.	If a large amount of event log data is being downloaded and queued up to print, there may be an error message stating that the print function failed. The Window Print dialogue box appears after clicking **OK** on the error message and the print function is available. Select **Print** only once; otherwise the same log reports prints multiple times.
ATU cannot connect to a remote SQL database server.	A firewall may be preventing the communication between the local ATU client and remote SQL database server. Create firewall rules that allow communication between the local ATU client and remote SQL database server.