



DST Asset Strategy Evaluator Software

Installation and support guidance

Document Version 14

Software Version 2.4

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1. Application description

The DST Asset Strategy Evaluator software is a Microsoft Windows application utilising Windows Presentation Foundation (WPF) technology which stores and manipulates asset management decision support and configuration data in an SQL database. It is configured to facilitate a wide range of decisions such as the following 'decision types':

Lifespan Evaluator decisions

- *"Shall I replace a current asset and, if so, when?"*
- *"Shall I refurbish the current asset to extend its life?"*
- *"Which new asset alternative should I acquire to replace a current asset?"*
- *"Should I replace a current asset proactively, or wait until it fails?"*

This module also includes decision configuration options to evaluate a planned refurbishment (to extend current asset life), and to create alternative scenarios for evaluation of like-for-like renewal or changed designs (for a proposed new asset).

Maintenance Evaluator decisions

- *What is the optimal planned maintenance interval?*
- *Is preventive maintenance worthwhile, and if so, at what interval?*
- *Is planned maintenance worthwhile to recover asset performance and if so, at what interval?*
- *What is optimal interval for maintenance to extend asset life (e.g. painting, lubrication)?*
- *What is the impact of different design or operating options upon maintenance, costs, risks & performance?*
- *What is the benefit of on-line condition monitoring (compared to periodic maintenance)?*

Inspection Evaluator decisions

- *What is the optimal inspection interval?*
- *When is the next time the asset condition should be inspected/monitored?*
- *What is the optimal functional testing/failure finding inspection interval?*
- *What is the impact of different design, operating or maintenance assumptions upon inspection or monitoring strategies?*

Project/Change Evaluator decisions

- *Is a proposed project or change worthwhile?*
- *Which alternative project or change option is the best value?*

Inventory Optimizer

- *Should we hold a spare, and if so, how many?*
- *Should we hold spare whole equipment units or component part 'kits'?*
- *Which vendor or spares design option offers best value-for-money?*
- *Should we pool (shared holding) our spares or hold distributed/dedicated inventory?*
- *What is the optimal purchasing strategy for this inventory item?*
- *What should be the minimum and maximum inventory levels for this item?*

Schedule Optimizer

- *What are the combined cost, risk and resourcing implications for a combination of asset management activities?*
- *How should I organise multiple tasks into the optimal bundles and timings (e.g. shutdown strategy)?*

- *What is the best way of grouping activities to share transport, preparation or other overhead costs?*

Strategic Asset Management Planner (StAMP)

- *What are the cost, risk and resourcing implications of a combination of asset management activities?*

2. Obtaining the software

The DST software is available for download from the DST users page at www.decisionsupporttools.com. For further information, please contact Decision Support Tools Ltd on +44 (0)1635 299200.

Download steps:

- Go to DSTL website www.decisionsupporttools.com
- Click on the 'DST Software Release 2.4' tab on the top toolbar.
- To login enter your user name and password
 - These credentials can be obtained from DSTL.
- Download the 'DST Asset Strategy Evaluator Installer v2.4' installer.
 - This document and other supporting material are also available.

3. Installation scenarios

Note that the installation software is the same for all scenarios.

3.1 Standalone

The software is installed on a single computer/laptop. In this scenario, the software will utilise a local database of decisions. This is the default installation, and the software is by default configured to use a SQLite local database file.

The default installation of DST on a freestanding or Client PC will place all files in the user/app area (the usage license is specific to a certified user rather than the PC). This includes a default local database.

3.2 Network/Multi-user installations

To enable sharing of DST data (look-up reference data, case studies library etc.), enterprise-wide defaults, permissions etc. you may wish to set up a shared DST database, where these parts of the application are held. The Client/PC installation component is then limited to data input/output, user interface handling, local processing (calculations, simulations etc).

Note that there is no separate DST server component that requires installation. Shared database access is provided by a database server.

Once the software is installed and license-enabled (see licensing section below), the software can then be configured to a database server to link to a common database, in which the shared facilities and data reside.

The most popular and flexible configuration of DST for multiple users is as follows:

- Central Server-based shared database (various SQL options)
- Client-installed application elements with user permissions for nominated (Certified competent) users
- Client-installed local database (SQLite) for Certified Expert Users/Facilitators *also*, for working when not connected to network (typical of remote workshop sessions with study groups). NB Expert User/Facilitator then exports the selected cases from the local database to import into the Server database when next connected to the network.

3.3 Remote installation



The software can be installed remotely but may not be operated remotely (see also section 5.3). This enables central IT departments to manage installations and upgrades, but requires the individual users to complete the final step of any new machine licensing.

4. Licensing scenarios

4.1 Machine licensing

Each installation of the software on a user's computer account requires a machine license – this is a license file that is obtained from Decision Support Tools Ltd and generated based on an identification of each computer. The identification takes the form of a 'SI' number that the software will report on installation and first running.

4.2 Concurrency licensing

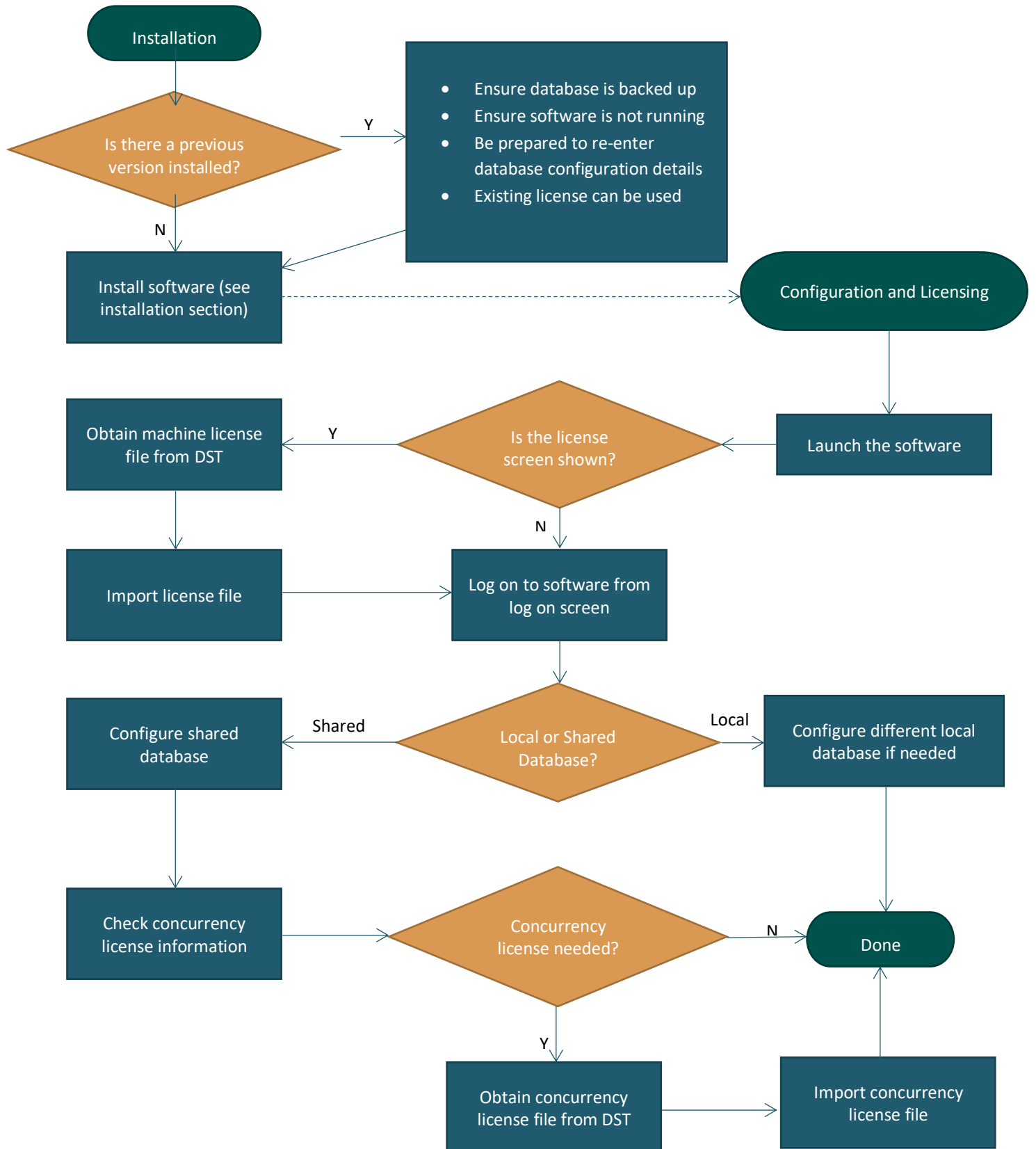
For a shared database/multi-user scenario the software will require a concurrency license. This license will be installed once for all individual computer installations sharing the central database. The license will take the form of a file that is obtained from Decision Support Tools Ltd and is specific for the nominated shared database. The database and location identification takes the form of a number that the installed software will report.

Concurrency licenses allow a maximum number of users to access each module of the software at a given time. When a user accesses a module they reserve (assign to themselves) a concurrent license for a period of usage (4 hours). This period is renewed by each further access to the module during the usage. The period is terminated either by non-usage for 4 hours or upon exit of the software, whichever is sooner. If all concurrent licenses are all "in use" then subsequent users will be informed that they cannot access a module until the license has been released.

5. Licensing for remote access

By default, the software will not permit usage over a remote connection (e.g. Remote Desktop Protocol (RDP)). Please contact Decision Support Tools Ltd if you wish to discuss licensing for this scenario. However, the software can be installed remotely, enabling central IT departments to manage installations and upgrades.

6. Installation and licensing process



7. Installation

These are summary instructions to install a copy of the DST Asset Strategy Evaluator software on a personal computer.

NB If you have a previous installation or databases, please ensure that they are backed up.

It is recommended that a copy of any important decisions are also Exported for backup from time to time.

Also note, the installation process will also attempt to create a copy the previous database file in the same folder. This does not affect the installation of the software. This copy will remain after the installation process.

You may need to configure a database platform for the software to use. (See Appendix B for more details). For standalone use, SQLite is recommended and is the default format for a PC installation.

1. Software prerequisites – see **Appendix A**. These are typically included by most installations of windows.
2. **Ensure any old version of the product is closed.**
3. Run the selected setup program file (**DST Asset Strategy Evaluator installer v2.4.msi**) to install the program.
4. Launch the software from the start menu.
5. The software needs to be licensed for each new computer – on first starting, the software will present the license screen informing you of your licensing status for the DST Asset Evaluator modules, and your '**System Info**' code. You will need this to obtain a license file from DSTL – see below.
6. If the software is licensed, you will be presented with the user log-on screen. By default, the sample database software user is '**Admin**' and the password is '**PA\$\$WORD**' (case sensitive).
7. If you encounter any problems installing, licensing or running the software please see below (section **Support and feedback**).

On installing the software, or upgrading the software version, for the first time in each case, the database will need to be updated by the software administrator. Please see Appendix C for information about this procedure.

8. How to obtain licenses

The DST software requires a license which is tied to an individual personal computer or laptop. These licenses can be obtained from Decision Support Tools Ltd. To license the software please follow the following steps:

1. When you run the program for the first time it will display a message detailing your licensing status and your computer's "**System Code**".
2. Telephone (+44 (0) 1635 299200) or email this code to techsupport@decisionsupporttools.com.
3. You will then receive a license file from DSTL – copy this to a suitable location on your computer.
4. Click the "**Import**" button on your DST Asset Evaluator software and locate the license file.
5. This process will be needed for each computer installation.
6. To review or renew a user's license, select "License" from the Home menu.

The software may also require a concurrency license for shared database use. To obtain this license the process is similar:

1. When you have licensed and configured the database, log on to the software.
2. From the Admin menu select "Enterprise defaults" and then select "Concurrent license" from the left hand side. This will display a message detailing your concurrent licensing status and your "**DBID**" code.
3. Telephone (+44 (0) 1635 299200) or email this code to techsupport@decisionsupporttools.com.
4. You will then receive a license file from DSTL – copy this to a suitable location on your computer.
5. Click the "**Import**" button on this screen and locate the license file.
6. This process will be needed only once for the shared database.

9. System Requirements (IT specification)



9.1 Supported Operating Systems

The DST software will be supported on the following operating systems (in both 32 bit and 64 bit editions):

- Windows XP (SP3)
- Windows 7
- Windows 8, 8.1
- Windows 10

9.2 Software required

- Microsoft .Net Framework v 4.0
- (Optional) Microsoft SQL Server database (see 6.4 below for editions and options)

9.3 Client Rights needed

- User permission to access and modify local configuration file (.config).
- User permission to append events to the windows application event log.
- User permission to store license information in the registry (HKEY_CURRENT_USER\Software\Decision Support Tools Ltd\).

9.4 Database access

The DST software will require access to a designated database. By default, the software is pre-configured to work with a local **SQLite** database file which contains some sample data. For larger volumes or network scenarios **SQL Server** is recommended.

The default installed location for the database is: **C:\Users\<User>\AppData\Local\Decision support Tools Ltd\DST Asset Strategy Evaluator**

9.5 Database configuration

The Software supports these databases:

- SQLite v3 or above
- SQL Server Compact edition v4
- SQL Server 2005 or above client access, all editions. (See also SQL Server Configuration document). NB it will be necessary to create the database first.

Additional security policies must cover and allow client access to database servers where shared database usage is required.

It is possible that other database providers could be supported. Please contact DSTL for further information, Telephone (+44 (0) 1635 299200) or email techsupport@decisionsupporttools.com.

See appendix B for further details.

10. Sample database

A sample database is supplied with the software and will be installed as the initial database. This database is for the SQLite platform and is called SALVOSample.s3db.

11. Support and feedback

- a) If there are any software *installation* or *licensing* problems, please contact techsupport@decisionsupporttools.com or +44 (0)1635 299200.



b) The usage *feedback and suggestions* must be captured in a consistent format to be useful. An Excel template is provided for this purpose (this also contains a summary list of the known issues and other functions being developed). For each identified issue, unexpected behaviour or improvement suggestion please supply the following (using the Excel template, with a filename clearly identifying your name/company):

- Circumstances (section of the programme, 'page' of data, what you were doing)
- Description of error or improvement suggestion (what you encountered, and what should be done about it)
- Screenshots (Windows 7 Snipping Tool is good, or earlier Windows Ctrl+PrtSc, or other tools such as the Snipping Tool app are helpful) – there is a separate tab in the spreadsheet for adding screenshots, but please clearly label and cross-reference them in the 'issues' list.
- Steps to recreate the problem – very important (what data you input, what previous steps you followed etc.)
- Details of your PC and operating system (e.g. Lenovo X500 laptop running Windows 7 64-bit)



Appendix A – Software prerequisites

Prerequisites: Obtain and install any prerequisite software utilities (if they are not already installed). **Most versions of Windows supported by the software will not need any additional installations for the prerequisite.**

If you are installing from a DST-supplied DVD or memory stick, the prerequisite files are also included.

The correct edition (32bit or 64bit) of these utilities for your computer must be installed: see <http://support.microsoft.com/kb/827218> for guidance if you are in any doubt.

You can obtain **Microsoft .Net Framework v4** by either

Download from <http://www.microsoft.com/download/en/details.aspx?id=17851>

OR install from DST DVD: **dotNetFx40_Full_x 86_x64**

Appendix B – Database configuration

To configure the database, load the program and then click “Change database” on the log on screen. NB you may need to load the program “As administrator” to do this.

The software will allow selection of a standalone SQLite database file or configuration of a SQL Server. The SQL Server is specified by Server name, database name, credentials/NT authentication and whether the configuration information is stored in an encrypted format.

Alternatively, to configure the platform and associated database/database file manually (if connection information is not encrypted):

- Locate the configuration file ('DST Asset Strategy Evaluator.exe.config') in the program installation folder (default: C:\Users\\AppData\Local\Decision support Tools Ltd\DST Asset Strategy Evaluator).
- Edit this file in a suitable text editor
- Locate the section at the end of the file labelled <connectionstrings>
- Edit the *connectionString* and *providerName* parameters as needed. Do not edit any other information in the file.
- The *connectionString* parameter will be specific to the provider. See examples below.
- The *providerName* parameter will be dependent on the database platform:
 - SQL Server - MSSqlServer
 - SQL Compact – MSSqlServerCE
 - SQLite - SQLite
- Save and then restart the program.

Sample configurations:

SQL Server Express

Using a local database called "DST_ASE" on the SQLEXPRESS instance:

```
<connectionStrings>
  <add name="DSTAssetEvaluator_Alpha" connectionString="Data
Source=.\SQLEXPRESS;integrated security=SSPI;initial catalog=DST_ASE;"
  providerName="MSSqlServer"/>
</connectionStrings>
```

SQL Compact

Using a local file "DST_ASE.sdf" in the default data folder:

```
<connectionStrings>  
  <add name="DSTAssetEvaluator_Alpha" connectionString="data  
source=|DataDirectory|DST_ASE.sdf;" providerName="MSSqlServerCE"/>  
</connectionStrings>
```

Note that the '|DataDirectory|' component is a special term that asks Windows what data folder to use. Other valid connectionString examples are:

- "DST_ASE.sdf" – which will place the file alongside the installed program files (NB this is not recommended in Windows 7).
- "C:\MyData\DST_ASE.sdf"

SQLite

Using a local file "DST_ASE.s3db" in the default data folder:

```
<connectionStrings>  
  <add name="DSTAssetEvaluator_Alpha" connectionString="data  
source=|DataDirectory|DST_ASE.s3db; Version=3;" providerName="SQLite"/>  
</connectionStrings>
```

Note that the '|DataDirectory|' component is a special term that asks Windows what data folder to use. Other valid connectionString examples are:

- "DST_ASE.s3db" – which will place the file alongside the installed program files (NB this is not recommended in Windows 7 upwards).
- "C:\MyData\DST_ASE.s3db"

Appendix C – Database schema updates

The database schema will need to be deployed/updated by an administrator in the following situations:

- First time use of a SQL Server
- DST Software version upgrade
- Using a database that was originally created in an older version of the DST software.

To do this, as an administrator:

- Launch the DST software from an appropriate computer (the software will need to have been licensed)
- Click the "Change database" link from the log in screen (this can also be accessed from within the software by logging off)
- If the currently selected database is correct, click the "Deploy schema changes" button and confirm.
- If the currently selected database is not correct, select an appropriate local or remote database.
- If the database to be selected is a remote SQL server, check the "Deploy schema" checkbox as part of the configuration.

Warning: if the database schema is upgraded it will prevent the database file/system from being used with an earlier version of the DST software.

Appendix D – Frequently asked questions and troubleshooting

| | |
|---|--|
| What are the default credentials to log on to the software? | User “Admin”, password “PA\$\$WORD” |
| Cannot log in using the correct default credentials | Ensure the database schema has been deployed (see appendix C) |
| On upgrading the software, if a computer has a previous machine license, will I need to obtain a new license? | No – the existing license will be used. |
| The installation reports than process cannot complete: | Check that the prerequisites are installed, notably the .Net Framework. |
| When I import a machine License file the system continues to report that it is not licensed: | Import the license by running the software with Windows administrative privileges. Confirm you are not trying to run the software remotely; if so the license may be valid but the software will not be enabled. |
| I receive the message “All licenses in use, please try again later”: | <p>You have a situation where more than one person is attempting to access the software with a shared database. You will need to obtain a concurrency license.</p> <p>If you already have a concurrency license and encounter this message frequently you may need to obtain more concurrent licenses.</p> |
| I receive an error relating to the database schema needing an update; | Your database is for a previous version of the software. See Appendix C. |
| Cannot connect client software to the database: | Ensure the client can access the database independently of the software using a tool such as OSQL, SQL Server client tools, MS Excel |
| Is there a server component that needs to be installed? | No. In a shared database scenario it is likely that SQL Server will be used, but no separate DST installation is needed. |
| I have encountered another error: | Please make note of the circumstances of the error, including a screenshot, and contact DST support. |