



# V4 Software Suite Installation Guide

Revision 1, 2021/10/12

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# 1 Introduction

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The RSWA-v4 software suite includes the following components:

1. The Array Explorer software, which is run on the RSWA units.
2. The Tessonics Data Service (TDS), which is a web-based application for data collection and reporting.
3. The Desktop Tools, which is a desktop application for managing RSWA units.

Each of the above components is required to use the RSWA units to their fullest potential. The remainder of this document outlines the steps required for installing the software components.

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## 2 Hardware and Software Recommendations

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Before installing the software suite, you will need a computer suitable for running the TDS server, and a (optionally separate) computer for running the Desktop Tools. Below we outline the recommended hardware and software specifications for these two components.

### 2.1 TDS Recommendations

#### Hardware

##### CPU

- Minimum dual-core CPU.
- 64 bit.
- Hyper threading support is preferred.

##### Memory

- Minimum 2 GB recommended.

##### Hard Drive

- Recommended at least 1 Terabyte (TB) of hard drive space. Actual space usage depends on how many inspections are taken, and how long inspections are required to be saved for.
- Solid-state hard drives are preferred for performance reasons.

#### Software

##### Operating System

- Windows 10, or Windows Server 2019
- 64 bit.

## **Firewall**

- By default, TDS uses port 443 (for SSL/TLS). This port must be opened on the firewall for inbound connections. TDS can be also configured to use plain HTTP, in which case port 80 must be opened on the firewall for inbound connections.
- TDS can be configured to use different ports, for both SSL/TLS and plain HTTP. If the default port is changed, then that port must be opened on the firewall for inbound connections.

## **Virus Protection**

We recommend using Windows Defender for protection on the computer hosting TDS.

## **Backups**

TDS stores all of its information in a SQLITE database file. By default, that file is `database.sqlite3`, and it is located in the same directory as where TDS is installed. It is recommended that the database file be periodically backed up. Since it is a plain file, copying it and pasting it into a secure location is sufficient for backing up the data.

# **2.2 Desktop Tools Recommendations**

## **Hardware**

Any modern PC can support Desktop Tools. It is a 32 bit Windows application.

## **Software**

Windows 10 is recommended.

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## 3 Installing the Array Explorer Software

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Your RSWA unit should have come with the Array Explorer software already installed. In most cases, there is nothing to do here.

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## 4 Installing the TDS Software

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The Tessonics Data Service (TDS) software acts as a data collection service as well as a reporting tool. It is a web-based application that you can access from any device with an internet connection.

### 4.1 Download and Initial Setup

The latest release of the TDS software can always be found on the downloads page of our website: <https://tessonics.com/downloads/>

To install the TDS Software, download the zip file and extract the contents to where you want to store the server software (e.g. C:/tessonics/tds-server). Once you've extracted the zip file, the server is ready to be run. Double-click launch-tds.bat to start the server. To stop the server, close the command-prompt window.

By default, the TDS server will create a database, some SSL certificates, and a config file (tds-server.json) in the same directory. If you wish to change the data location, or any other setting, open the file tds-server.ini, edit the fields, save your changes, and then close and re-start the server.

### 4.2 Migrating from a Previous TDS Installation

Previous versions of the TDS software relied on third party packages such as PHP, IIS, SQLServer, etc. The new TDS software does not have any outside dependencies. To migrate your data from an older TDS, download the migration software from our website and follow the following instructions. This only needs to be done once. For future upgrades to TDS, see the below section on upgrading.

**Migrate your database**

**Install the new TDS software**

**Check your data**

### 4.3 Upgrading

To upgrade the TDS server to a later version, download the version from our website, and extract the zip file right on top of your current installation. Once done, restart the server.



## 4.4 Running the Server as a Windows Service

In some cases it is advisable to run the TDS server as a Windows Service. This means the server will automatically start when the PC starts, and can run without having a user logged in.

To register it as a service, you will need to open a Windows Command Prompt.

1. Click on the Windows Start button, then type “cmd” (without the quotes) to search for the Windows Command Prompt. Right click on the application and select the option “Run as Administrator”.
2. Navigate to where you extracted the TDS server. For example, if you extracted the TDS server to C:/tessonics/tds-server, type: `cd C:/tessonics/tds-server` and hit Enter.
3. Run the command `./tds-server.exe /registerService` and hit Enter.
4. Close the Windows Command Prompt window.

After that, the TDS server can be controlled through Windows’s Service Manager. Click on the Start button, and type service, then select the Services app. The TDS Server will be in the list of services, under the name tds-server.

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## 5 Installing the Desktop Tools Software

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Once you have the TDS software installed, the next step is to install the Desktop Tools.

### 5.1 Download the Desktop Tools Software

We distribute the Desktop Tools software as a standalone executable. Download it from here:

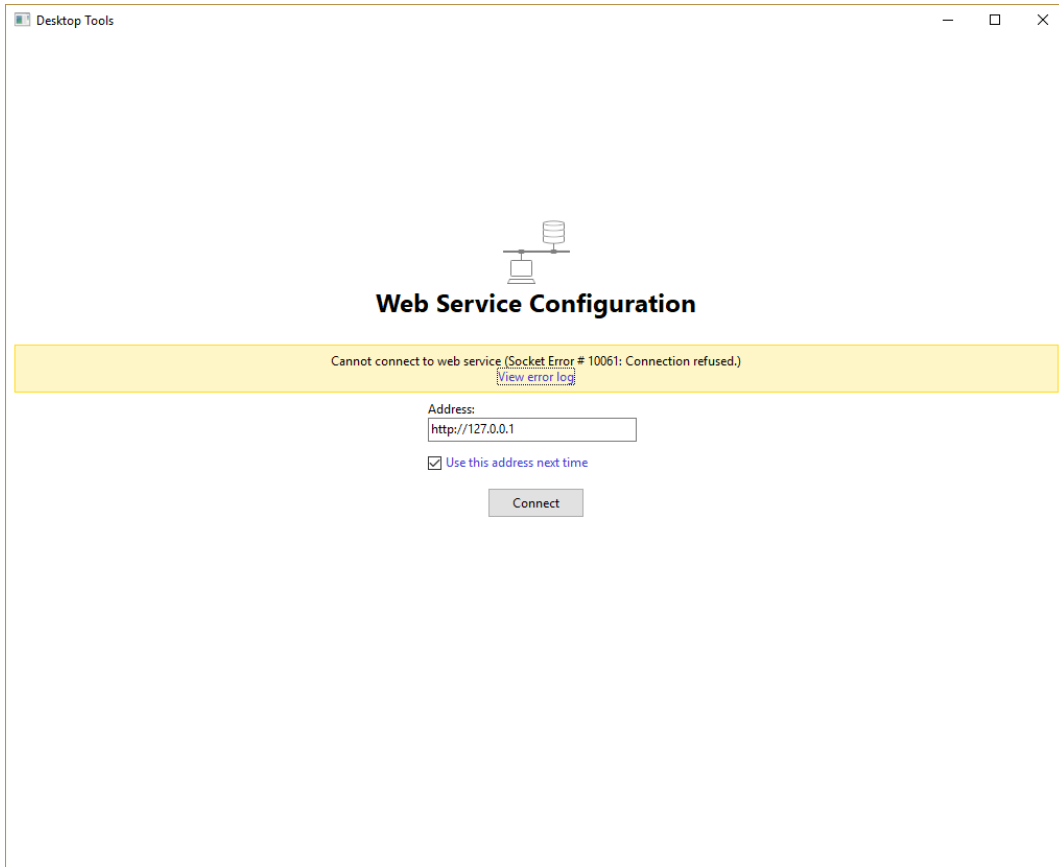
<http://tessonics.com/files/rswa-v4/releases/3.99.99/desktop-tools-3.99.99.zip>

Once the zip file has finished downloading, extract the contents to a convenient location on your computer. We recommend using a folder on your desktop such as desktop-tools.

### 5.2 Configure the Web Service Location

Finally, double click the application desktop-tools.exe to start it. You will be prompted to enter a server URL to connect to. This URL needs to be the same URL that you configured the TDS server to use. If you are using the desktop-server, then use the URL 127.0.0.1.

Once done, click Connect, and you will be shown the Desktop Tools main page.



**Figure 5.1** Configuring the Web Service Location

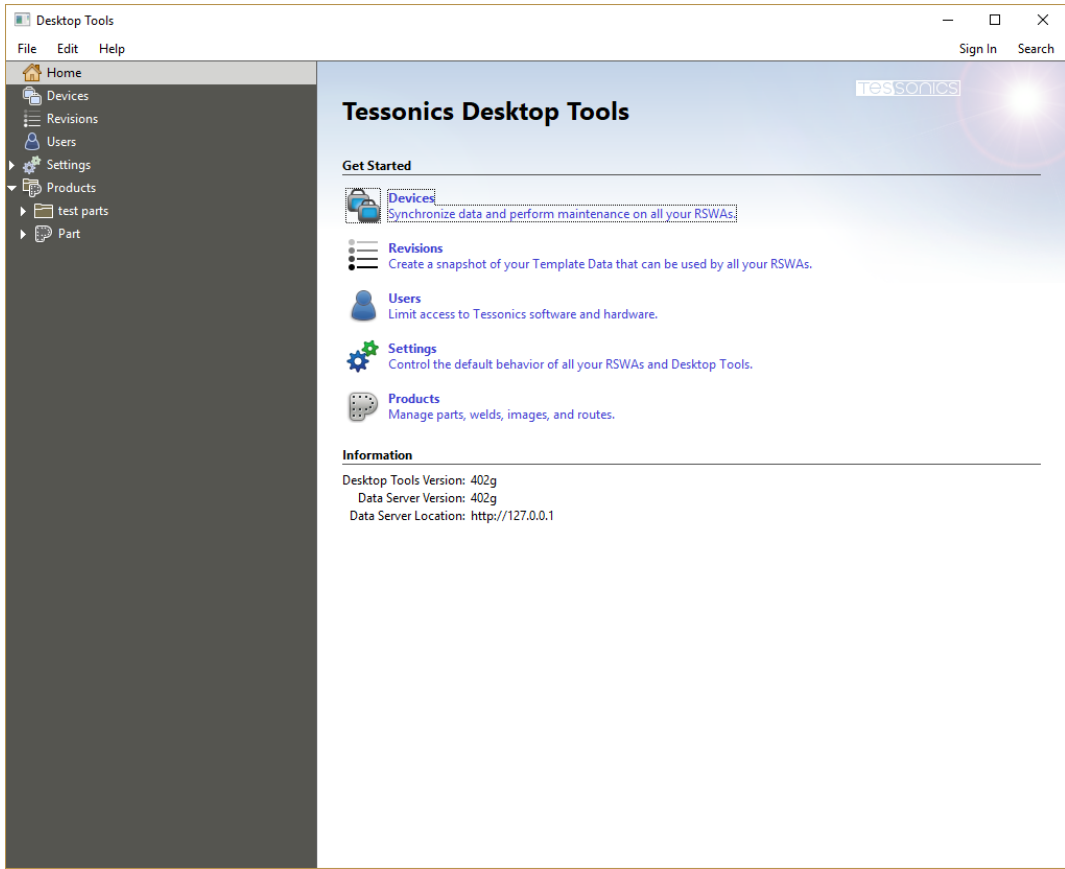


Figure 5.2 Desktop Tools Main Page

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## 6 Next Steps

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At this point, you have successfully installed the RSWA-v4 software suite. Next you will want to create users to manage the RSWA units and perform inspections, create part templates, and synchronize this data with your RSWA units.

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## 7 Common Issues

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### 7.1 Desktop Tools Cannot Connect to TDS Server

First, verify that the tds server is running. Log into the computer that the tds server was installed on, and verify that it is running. If it was installed as a Windows service, open the Windows service manager and check that the service tds-server is running.

Next, open a web browser on the same computer that tds server is running on, and browse to `https://localhost`, if your tds server is configured to use SSL, or `http://localhost`, otherwise. You should see the tds server's home screen.

If you can see the home screen on the same computer that the tds server is running on, but not on the computer that desktop tools is running on, check to ensure that a) the two computers are on the same network, and b) there are no firewall rules preventing traffic from reaching the computer that the tds server is running on, on port 443 (for SSL) or port 80, otherwise. If you changed the port by editing `tds-server.ini`, then make sure that that port is allowed by the firewall instead.

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# A Revision History

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| Date       | Revision | Changes         |
|------------|----------|-----------------|
| 2021/10/12 | 1        | Initial release |

End of document



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