WinDSX New Installations

Use these instructions for new Installations and the next page for upgrades.

a) Before Installing the Software, you must login as a user with full administrative rights.

b) The PC should have as a minimum Windows 10™ Professional. See the official PC Requirements doc for full details
https://www.dsxinc.com/Library/shared/Docs/pcrequirements.pdf

c) Make sure that the Comm Server PC has the .Net Framework 4.0 or higher installed.

d) Insert the DSX USB Flash Drive into a USB Port on the Comm Server PC. Make sure you can read and write to the DSX Flash Drive. Do Not unplug the drive until after software is installed and key is configured.

NOTE//The first time the program is started or any of the executables are launched the process should be to right click on the .exe or shortcut and select "Run as Administrator".

1. To load the software, insert the WinDSX media. Navigate to the Install Folder. Open the Install Folder and right click on Setup.exe and select "Run as Administrator". Follow the prompts and allow setup to install the software into the C:\WinDSX folder.

2. If the software is to be loaded on more than one PC repeat Step 1 on all of those Client PCs. All Client PCs must use a UNC or have a Drive Mapped to the location of the shared database location (typically the WinDSX folder on the Comm Server or Host PC). The Shared Folder (location of the shared database) must be shared to all Windows Users that will run the DSX program from a Client PC.

3. In the WinDSX folder on each PC where the software was loaded, locate the db.exe and right click and select "run as administrator".

The default user name and the default password are master - both in lower case.

4. After starting the database program (db.exe) for the first time, go to the Setup Tab and make the following changes:

   a.) **System Parameters** - Set "Workstation Name" and "Number" to something unique (other than 1). Set both the "Regional TimeZone" and "Daylight Savings" option.

   b.) **DataBase Path** - Set Path to DataBase to Mapped drive or UNC of Shared WinDSX folder. Typically, the WinDSX folder of the Comm Server. \\server name\windsx

   c.) **Restart Program** - Exit Tab /Exit. Restart

5. Softkey instructions Start on page 3.

6. On the PC that is to be the Comm Server (perform all system communications) there is further configuration. Make the following changes in the database program on the Setup Tab:

   a.) **System Parameters / Yes,No Options Tab** - "This PC is Comm Server" must be selected.

   b.) **System Parameters / Communications Server Tab** enter the "TCP/IP Address" of this PC.

   c.) **Comm Ports** - Define all communication ports used to communicate with Location Master Controllers.

   d.) **Restart Program**

NOTE// -- Press F1 for Help on system programming and the User Manual which contains a list of the Order in which the database should be defined.
Permissions – In all configurations the Windows Login must have full control over the Local folder where the software is installed and to the Shared Folder where the database resides.
Remote Sessions – It is always best to use remote session software on a Client PC instead of the Comm Server. To remote into the Comm Server PC the Comm Server program must be configured as a Service.

Important Docs
Docs - Hardware - Hardware Installation Manuals, Quick Cards, LAN Module Instructions, 1040PNV instructions and UL Manuals.
Docs - Mobile - Pdf that shows how to configure the mobile service and an Mp4 that shows how to use it.
Docs - Software - Software installation and API configuration docs. Special application instructions.
Docs - User - Power Point, Mp4, PDF Training materials on new software. Enrollment Readers.

WinDSX Upgrade Instructions

Before Upgrading

1.   Prior to Upgrading the Software, make a backup in the DataBase program under Setup. *Do not try to restore this backup into the upgraded software.* This is just a precautionary measure.

2.   Next, Exit the WinDSX program fully, do not simply log off. Do this in WinDSX on all PCs including the Comm Server. Stop any and all of these Services-DSXComm, DSXKey, and DSXDbas.

Order of Upgrade

3.   If this system is using a Dedicated File Server for the database, the software must be un-installed and re-installed in that folder first. If the system is configured to use the Comm Server as the Shared folder containing the DataBase, this PC should be the first one updated. Once the File/Comm Servers have been updated all client PCs are next.

Un-Installing WinDSX

4.   Locate the appropriate Install folder on the new software distribution media and Open the Install folder and select Setup.exe, then right click and select **"Run as Administrator"**. The installer will prompt you to either *Repair or Remove* the old version of software, select "Remove". When the process is finished the WinDSX folder and data will still be intact and in place.

Re-installing WinDSX

5.   Once the software is un-installed run the Setup.exe from the software distribution media again by right clicking and selecting **"Run as Administrator"**. Follow the prompts and be sure and install the new software into the folder where the old software was just uninstalled from.

6.   Once the software is loaded, locate the Db.exe program found in the \WinDSX folder where the software was just installed. Right click on Db.exe and select **"Run as Administrator"**. Once the Db.exe program is finished updating the database it will leave you on the DataBase Login Screen. If this is a dedicated file server or file share, select Cancel and upgrade the Comm Server next. If this is the Comm Server, Login to finish the upgrade. When running (Db.exe) on the Comm Server, for the first time after

the upgrade, the system may update and perform certain upgrades. (see Note// below).

7.   Repeat steps 4 - 7 for the Client PCs that run the WinDSX software. Regional Time Zones and Daylight Savings Options should be configured for each Workstation and each Location. These are found under *System Parameters* and under *Location*.

NOTE//When upgrading from version 3.5.15 or lower to 3.5.16 and higher at the Comm Server, the program upgrades the access levels. When upgrading from 3.7.100 or lower to 3.7.101 and higher at the Comm Server or DailyOps PC, the access levels are upgraded to the current schema. When upgrading from 3.10.17 and lower to 3.11.4 and higher the operator password encryption is upgraded to AES256.

Moving the Comm Server to a Virtual Server or new PC

To migrate the Comm Server to a Virtual Server or new PC, follow these simple steps.

1. Exit the program and stop the DSXComm Service on the Comm Server. Uninstall the software on the existing Comm Server. This leaves the \WinDSX folder and all data in place.

2. Copy the WinDSX folder from the old Comm Server after the software is uninstalled. Paste the WinDSX folder to the target drive of the New PC or Virtual Server.

3. Install the WinDSX software into the \WinDSX folder that was just copied to the new server. It may be necessary to adjust IP Addresses under System Parameters and Comm Ports.

Permissions – In all configurations the Windows Login must have full control over the Local folder where the software is installed and to the Shared Folder where the database resides.

Remote Sessions – It is always best to use remote session software on a Client PC not the Comm Server. To remote into the Comm Server PC the Comm Server program must be configured as a Service.

DSX Key Monitor and DSXSoftkey

Physical PC New Install and Upgrade

All New Version 5 Installations and version 3 to 5 Upgrades will require a SoftKey to be created or upgraded using the USB flash drive Installation Media from DSX.

For New Installations or upgrades on a Physical PC follow these steps.

*Warning: This key can only be assigned once. Make sure the Computer you assign it to is on the network domain where the system will be used. You cannot move keys from one **system** (domain) to another. The Key belongs on the Comm Server but can be moved to a Virtual Comm Server or as hardware is replaced to a new Comm Server as long as it's in the same Domain.*

a) Make sure that the Comm Server PC has the .Net Framework 4.0 or higher installed.
b) Make sure you have Administrative Privileges over this PC.
c) Insert the DSX USB Flash Drive into a USB Port on the Comm Server PC. Make sure you can read and write to the DSX Flash Drive. Do Not unplug the drive until after step 4.
d) Make sure you have launched the database program once to complete the installation before proceeding.
e) If this is an upgrade, make sure the existing dsxkeydata.xml file is in this WinDSX folder on the Comm Server where the flash drive is connected.

1. In the C:\WinDSX folder on the Comm Server where the software was just installed, locate and launch DSX_Key_Configure.exe

2. Select the appropriate option (typically the first) and click on Load Key followed by Assign Key.

3. When a grayed out Done is displayed, close the program.

4. In the same WinDSX folder locate and launch DSX_Key_Monitor.exe - If you see "Status OK" your key is ready. Close the DSX Key Monitor program. When closing the DSXKeyMonitor program, it will warn you and ask you if you want to close it. Select Yes.

Virtual Server New Install and Upgrade

If you are going to use DSX in a Virtual Environment, follow these instructions:

1. For new Installations select a Physical PC that is on the same Domain as the virtual server. For an upgrade the PC does not have to be on a Domain. Install the software on this physical client PC and make sure that items "a-e" under "Physical PC New Installs" to the left have been done.

2. If this is an upgrade, copy the dsxkeydata.xml file from the WinDSX folder on the virtual server to the WinDSX folder on this physical client PC. In this case the PC does not have to be on the same Domain.

3. In the C:\WinDSX folder on this Client PC locate and launch DSX_Key_Configure.exe.

4. Select the appropriate option (typically the first) and click on Load Key followed by Assign Key.

5. When a grayed out Done is displayed, close the program.

6. In the same WinDSX folder locate and launch DSX_Key_Monitor.exe - If you see "Status OK" your key is ready. Close the DSX Key Monitor program. It will ask if you are sure – Select Yes and Close.

7. Copy the dsxkeydata.xml file to the WinDSX folder on the Virtual Server where the software has been installed or upgraded.

DSX Key Monitor Operational Notes:

•   There is a 30 second delay between the DSX program (Comm Server) being started and the DSX_Key_Monitor program allowing access to Card Holders.

•   The DSX_Key_Monitor.exe program will be started and stopped by the Comm Server program. Once you close DSX on this PC, the DSX_Key_Monitor program will also close. If you configure Comm Server to run as a service, it will start the DSX_Key_Monitor.exe program without configuring the key monitor program as a service.

•   The DSX-USB Flash Drive contains a copy of your DsxKeyData.xml Softkey. If needed, it can be copied onto a new computer in the same system (domain).

Comm Server as a Service

The Communications Server program typically runs as a process in the background and is usually started by the launching of the workstation program (ws.exe) and is terminated when the workstation program is closed.

The Comm Server program can run as a service without having a user logged into the Windows operating system.

Below are the steps involved with setting the Communications Server program up as a service.

1. You must be logged in as Administrator.

2. Make sure Comm Server is fully operational communicating with controllers and with Client Workstations before configuring it to be a Service. Close the DataBase and Workstation Programs.

3. Copy the InstSrv.exe, SrvAny.exe, and CS as a Service.exe programs from the Utilities folder on the distribution CD and paste them into the DSX directory where the software was just installed on the Comm Server PC.

4. Right click on "CS as a Service.exe" and select "Run as Administrator". Select "This PC should do daily operations" unless you are setting another workstation to perform DailyOps.

5. Click on "Create Registry Values". Click on "OK" when finished.

6. In Windows go to Services and verify that the DsxComm service was added. It should appear in the list of services.

7. Right click on DSXComm and select properties. Change the "Startup Type" to: Automatic (Delayed Start). Go to the Log on Tab and change the "Log On As" to a valid account that has the appropriate privileges for your system. Click OK to save the changes. Close Services.

8. If you are going to use a shared directory on some other PC, you will have to enter the database path using UNC. You cannot use a shared drive letter to refer to the database path. This can be \\servername\windsx or \\172.21.12.4\windsx

9. Start the DataBase and Workstation programs. Workstation should show "Comm Loss" in Red in the bottom right corner. This is correct.

10. Start the DSX Comm Service. Within seconds the Workstation program should show "Primary Online" in the lower right corner in place of "Comm Loss".

AES 256 Comm Encryption

DSX communications can now be secured using AES 256-bit Encryption. The encryption can be implemented between the Communication Server and the field controllers and between Communication Server and Workstations. This feature requires firmware version 3181 or higher in all controllers and that the feature be enabled in the DSX SoftKey. With Version 5 and 6 Software there is no charge for this feature, but it will have to be enabled in the software license DSXKeyData.xml.

Each Location can have an Encryption Key entered to encrypt the communications between the Comm Server and that Location's controllers. The AES 256-bit Encryption propagates itself from the Master Controller to all subsequent controllers at power up.

For Controllers (Location)
To enable encryption, enter up to 32 keyboard characters in the "Encryption Key" field on the General Tab of each Location. The key cannot be viewed once entered. Starting at the Master Controller power each Controller down and back up.

For Client PCs (workstations)
To enable encryption between the Comm Server and the Client PCs edit the System Parameters at the Comm Server and go to the Communications Server Tab. Enter up to 32 keyboard characters in the Encryption Key field. Close and restart the program and close and restart the DSX Comm Service. Restart the program on all Client PCs.

NOTE//Before you can configure Encryption you will need to email DSX Technical Support the DSXKeyData.xml file from your system. Encryption will be enabled, and the file sent back to you.