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WinDSX New Installations

Use these instructions for new installations. The directions for System Upgrades begin on page 2.

- Before Installing the Software, login as a user with full administrative rights.
- The PC requires a minimum of Windows 10™ Professional. See the **PC Requirements** doc for full details. Make sure that the Comm Server PC has the .Net Framework 4.5 or higher installed.
- Insert the DSX USB Flash Drive into a USB Port on the Comm Server PC. Verify the ability to read and write to the DSX Flash Drive.

Do Not unplug the DSX Flash Drive until after software is installed and key is configured.

NOTE: The first time starting the program or launching any executables, Right Click on the .exe and select "Run as Administrator".

To Load Software

1. 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. Repeat Step 1 on all Client PCs required. 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. **IMPORTANT** The DSX program and services must be closed before Sharing the WinDSX folder or setting permissions to it.

3. In the WinDSX folder of each PC, right click on the DB.exe and select "Run as Administrator". The default username & password is **master** (both in lowercase)

4. After starting the DataBase program (db.exe) on each PC for the first time, go to the Setup Tab and make the following changes:
- **System Parameters** - Set "Workstation Name" and "Number" to something unique (other than 1). Set both the "Regional TimeZone" and "Daylight Savings" option.
- **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 or \\ipaddress\windsx
- **Exit and Restart the Program**

5. Softkey instructions Start on page 3.

6. On the Comm Server PC (the PC that performs all system communications) Make the following changes in the Database program on the Setup Tab:
- **System Parameters / Yes-No Options Tab** - "This PC is Comm Server" must be selected.
- **System Parameters / Communications Server Tab** Enter the "TCP/IP Address" of this PC.
- **Comm Ports** -Define all communication ports used to communicate with Location Master Controllers.
- **Exit and Restart the Program**

NOTE: Press F1 for Help with system programming. The User Manual there 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 on Flash Drive

\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 Software

1. Make a backup in the DataBase program under Setup. *Do not try to restore this backup into the upgraded software.* This is just precautionary.

2. At the Comm Server, in DataBase go to Setup and Select System Parameters/Yes-No Options Tab and Select "AutoStart WS" and "This PC is Comm Server". Click OK to Save.

3. Next, Exit the WinDSX program fully, do not simply log off. Do the following in WinDSX on all PCs including the Comm Server. Stop any of these Services: DSXComm, DSXKey, and DSXDbas. After the upgrade, if the DSXKey Service is found, it can be removed as it is no longer used by the system.

Order of Upgrade

4. If this system is using a Dedicated File Server for the database, the software must be un-installed and re-installed on that PC 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 Server have been updated all client PCs are next.

Un-Installing WinDSX

5. 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. This folder can now be moved to a new PC or Server.

Re-installing WinDSX

6. 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 uninstalled from.

7. 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 further and perform certain database upgrades.

8. At the Comm Server, in DataBase go to Setup and Select System Parameters/Yes-No Options Tab and DeSelect "This PC is Comm Server". Click OK.

9. Locate DB.exe in the \WinDSX folder on the Comm Server and Run as an Administrator. The Workstation program should show Comm Loss in the bottom right corner of the program. Start the DSX Comm and DSXDBAS Services (if found) and Workstation should show Primary OnLine in the bottom right in Green.

10. Repeat steps 6 - 8 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*.

Moving the Comm Server

To migrate the Comm Server to a Virtual or new PC.

1. Exit the program and Stop all DSX Services on the Comm Server and all clients. Sort the WinDSX folder by file type and show file extensions. There should be no .ldb files. If there are, delete them. If you can't, there is a program or service still running.

2. Copy the WinDSX folder from the old Comm Server to the new one. Leave all subfolders. Remove all files from the root of \WinDSX that do not have a .mdb extension.

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, Comm Ports and in the LAN Modules. Recreate the Services and Make a new Softkey.

Permissions/Sharing 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. If the system is on a **Domain**, it requires a Domain User Account with Local Administrative Rights to the Local folder, the Comm Server PC folder or Shared database folder if different. The DSX program and services must be closed before Sharing the WinDSX folder or setting Permissions to it.

DSX Key Monitor and DSXSoftkey

New Installations & Upgrades on Physical PC

All New Version 5 Installations and Upgrades from 3.11 and below will require the purchase of a WinStart installation package and the creation of a SoftKey using the USB flash drive Installation Media from DSX.

*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 if they are in the same Domain.*

- Make sure that the Comm Server PC has the .Net Framework 4.0 or higher installed.
- Make sure you have Administrative Privileges over this PC.
- 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.
- Make sure you have launched the Database program once to complete the installation before proceeding.
- Make sure there is no DsxKeyData.xml file in the \WinDSX folder on the Comm Server or other PC where the flash drive is connected. If you find a DsxKeyData.xml rename the existing DsxKeyData.xml file to DsxKeyData.old.

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. If it asks about moving features from an old hasp, select No.

3. When a grayed out Done is displayed, close 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 it warns that it is required and asks if you are sure, select yes and close the program.

Installs and Upgrades on Virtual Server

If the Comm Server is to reside on a Virtual Server. Perform the Key creation Steps for new Installs on a physical PC on the same Domain.

When finished, Copy the DSXKeydata.xml file to the \WinDSX folder on the Virtual Server.

If there is not a physical PC on the same Domain as the Comm Server, Create the Key anywhere you can even a service laptop that has the WinDSX software on it, and send the key to DSX on the same day to have the Domain and Server name changed to be correct for the Comm Server. If the Comm Server is not on a Domain, the Key reflects the Comm Server PC Name. **The Key must be sent the same day it is created for a No Charge alteration.**

DSX Key Monitor Operational Notes

There is a 30 second delay between the DSX Comm Server program being started and the 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.exe 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.

Deleting and Creating Services

When upgrading from 3.11 or below, the DSX Services need to be deleted and recreated. The same is true when the Operating System is upgraded on the Comm Server PC in place.

Check for the following services and if found, Stop them and look at the logon properties at the Logon Tab specifically to see what account is assigned to them. Once Stopped delete the services with the instructions below: **DSXComm**, **DSXDbas**, and **DSXKey**. Once the Services are deleted, the DSXComm and DSXDbas can be recreated with newer provided tools and the instructions on the next page. The DSXKey service should be deleted but not recreated.

To Delete a Service, Open an Administrative Command Prompt and Type: **SC Delete ServiceName** pree Enter.

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.

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.

To Set Comm Server program as a Service

1.	You must be logged in with Administrator rights and privileges.

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 media and paste them into the WinDSX 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 \\ipaddress\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 DSXComm 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. Encryption can be implemented between the Communication Server and the field controllers and between Communication Server and Workstations. This feature requires firmware version 3214 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.

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. This will be done at no Charge for Version 5 and above systems.