DSX Access Systems, Inc.

# AES-256 Encryption

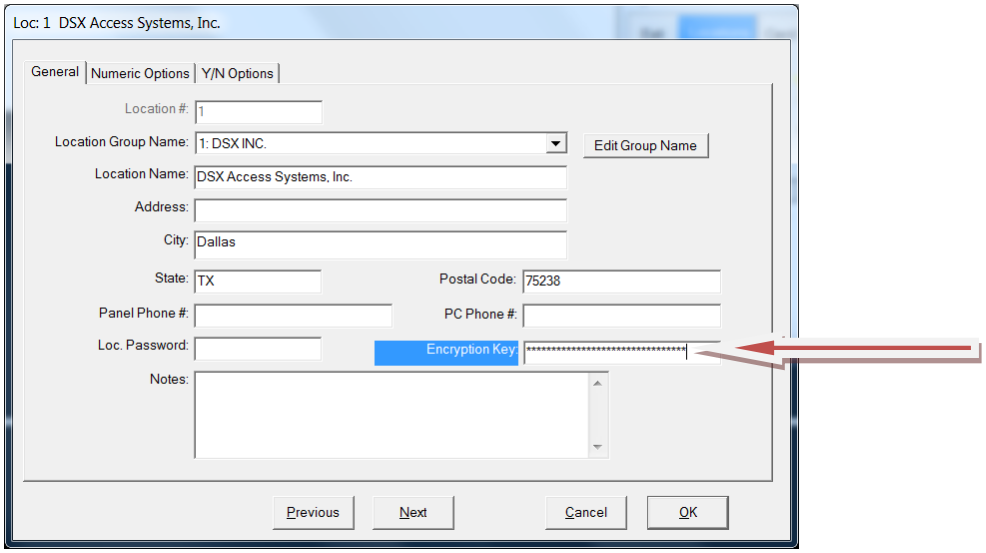
**AES-256 bit Communications Encryption**

WinDSX and WinDSX-SQL 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 USB Features Key. Each Location can have an Encryption Key entered to encrypt the communications between the Comm Server and that Location's controllers. A Different Key can be entered for encryption between the Comm Server and the Client Workstations.

**Encryption Key - Comm Server to Location Controllers**
The image below shows where the AES - 256 bit Encryption Code is entered for Communications between the Comm Server and the Location Master Controller and all Slave Controllers in that Location. Each Location can be given its own key.

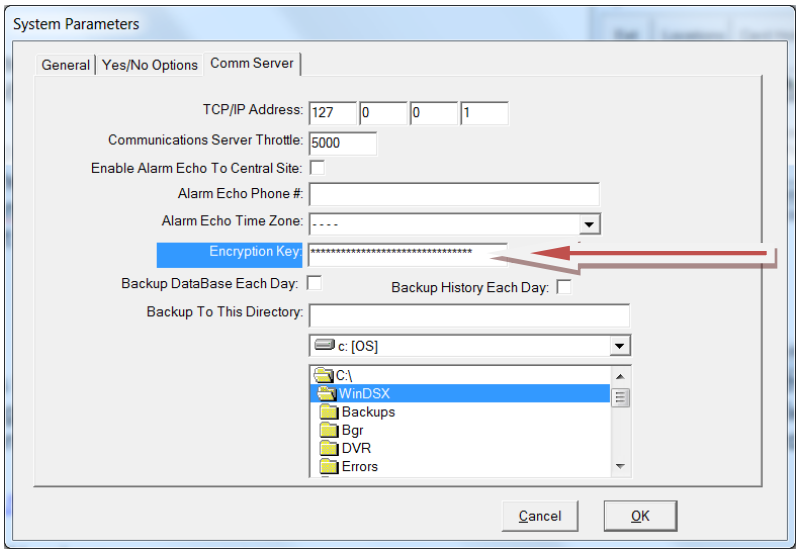
The Controllers will accept the Key on a power up. To move a controller in and/or out of encrypted communications requires a reboot of the controller. Enter up to 32 Keyboard characters as the encryption key.

**To Implement Communications Encryption to a Location**
1. AES-256 must be enabled in the DSX SoftKey and DSX_Key_Monitor must be running and recognizing the key.
2. Enter up to 32 Keyboard Characters in this field and click OK to save.
3. Close the program (File/Exit) and restart. If the Comm Server is running as a Service (DSXComm), stop the service and restart it.
4. Reboot the Master Controller First, followed by All Slave Controllers.
{To remove Encryption would require the same four steps above except in step 2 you would clear out the encryption field.}



**To Implement Communications Encryption to the Client Workstations**

1. AES-256 must be enabled in the DSX SoftKey and DSX_Key_Monitor must be running and recognizing the key.
2. Enter up to 32 Keyboard Characters in this field and click OK to save.
3. Close the program (File/Exit) on all Client PCs and restart. If the Comm Server is running as a Service (DSXComm), stop the service and restart it.
4. Re Start the Comm Server First, followed by All Client PCs.




This link is to a page that provides technical information about implementations that have been validated as conforming to the **Advanced Encryption Standard (AES) Algorithm,** as specified in the Federal Information Processing Standard Publication 197, *Advanced Encryption Standard.*

http://csrc.nist.gov/groups/STM/cavp/documents/aes/aesval.html

Validation Numbers
1628
1629