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BAS Application Note

Instructions for Moving an Existing BAS System to a New PC

Before Getting Started

Download the BAS installation program from the BAS website
1. Insert a USB flash drive in a PC with Internet access.
2. To access the BAS installation program for download:
   - Use a browser to access the BAS website at www.enertec-bas.com.
   - Click the 'Dealers Only' button on the lower left corner of the BAS home page. When prompted, enter
     User Name (basguest) and Password (basguest1)
   - The first screen of the Dealers Only' section is 'System Software'.
   - From the 'System Software' page, click the Download' link next to EMCS-1 System Site Software'.
     The installation file name is EMCS1_39j.exe.
3. When the download begins, click Save as' and save the file (EMCS1_39j.exe) to the USB flash drive.

Check the Windows Version on the New PC for Compatibility with BAS
1. BAS will run on any 32-bit version of Windows from XP through Windows 10. If the new PC is running Windows Vista or earlier it is nearly always 32-bit. A factory installation of Windows on PCs with Windows 7 and later are nearly always 64-bit.
2. BAS will not run on 64-bit Windows. The system type should be checked as follows:
   - Click 'Start'
   - Type 'system' in the Start 'Search' box.
   - Click 'System Information' in the Programs list.
   - Select 'System Summary' in the navigation pane.
   - The 'System type' under Item' will be displayed as either:
        x64-based PC' for 64-bit Windows.
        x86-based PC' for 32-bit Windows.
3. All versions of Windows through Windows 10 are available in both 32-bit and 64-bit. If the new PC has 64-bit Windows, you must acquire a 32-bit Windows installation disk and replace the 64-bit version with 32-bit.

Prepare the New PC

BIOS Setup
1. Most desktop PCs allow selection of the action to be performed when AC power is restored following a power loss. If available, this should be set to Turn On'.
2. To configure, launch the BIOS Setup Utility (method depends on manufacturer – usually press F2, Del, or Esc on initial bootup).
3. The power setting is typically found under the Advanced' menu. Look for a setting described something like When AC power is restored:' with options of Turn on', Leave off', and Restore last state'.
4. Select 'Turn On' for the action.
5. From Exit' screen, select Exit & Save Changes', press Enter, and select OK to save and exit.

Windows Initial Setup
This step only applies to a new PC that is being powered up for the first time.
1. On all screens, unless otherwise noted accept Windows default settings and click 'Next'.
2. On the 'Time Zone' screen, select the appropriate time zone.
3. On the 'Help protect your PC' screen, select 'Not right now'.
4. On the 'Computer Name' screen, enter 'BAS-HVAC' as the 'Computer Name' and 'BAS HVAC Control System' as the 'Computer Description'.
5. On 'Register with Microsoft' screen, select 'No, not at this time'.
6. On the 'Who will use this computer' screen, enter 'BAS' as 'Your name'.
7. Do NOT enter a 'Password' when prompted. Leave this entry blank.

Set System Time and Date
1. Double-click the clock in the System Tray to launch the 'Date and Time Properties' configuration screen.
2. From the 'Date & Time' tab, verify and if necessary set to the correct date and time.
3. From the 'Time Zone' tab, verify that the correct time zone is selected and that Automatically adjust clock for daylight savings changes' is checked.
4. Click 'OK' to save Date/Time settings changes.

Configure Power Scheme
1. Right-click on the Desktop and select Properties'.
2. From the 'Screen Saver' tab:
    - Change the 'Screen Saver Wait time' to 60 minutes.
    - Click the 'Power' button to configure Power Options'.
3. From the 'Power Schemes' tab:
    - Change the power scheme to 'Always On'.
    - Set the 'Turn off monitor' time to 2 hours.
    - Set the 'Turn hard disks' time to Never.
    - Set 'System standby' to Never.
    - Set 'System hibernates' to Never.
4. From the 'Advanced' tab:
    - Click to uncheck/disable the 'Prompt for password' under 'Options'.
    - Under 'When I press the power button on my computer' select 'Shut down'.
5. Click 'OK' to save the 'Power Options'.
6. Click 'OK' to save the 'Display Properties'.

Remove Unnecessary Programs

This step applies primarily to a new PC and is optional.

1. Select Start/Settings/Control Panel.
2. Select 'Add or Remove Programs'.
3. From the 'Currently installed programs' list, remove any unused programs and/or any trial version software. If any un-install utilities ask for permission to restart Windows, select 'No, I will restart my computer later'. The following programs are normally uninstalled:
   - Acrobat.com (do not remove Adobe Reader)
   - Adobe AIR
   - Adobe Flash Player 10 ActiveX
   - Compatibility Pack for the Office system
   - LiveUpdate
   - MS Office Home and Student / Powerpoint Viewer / Activation Asst
   - MS SQL Server 2005 Compact Edition
   - Skype 4.1 / web features
   - 3rd Party Internet Security / Firewall
   - Windows Live Essentials (select all 6 Windows Live components)
   - Windows Live Sign-in Assistant / Sync / Upload Tool
4. After removal of all unnecessary programs, close the 'Add or Remove Programs' screen.
5. Restart Windows by selecting 'Start', 'Turn Off Computer', and then 'Restart'.

Install the BAS System Software and Data on the New PC

Retrieve Data Backup from the Old PC

1. Insert the USB flash drive in the old PC. Note the drive letter assigned to the USB drive.
2. Switch to the BAS Energy Zone program.
3. From the BAS menu, select 'Access' and enter a valid Level 4 or 5 password (use '22455' if password is not known).
4. From the BAS menu, select 'Tools' and then 'Edit BAS SYSTEM.INI'.
5. Using the BAS Text Editor, scroll to the '[Backup Options]' section of System.ini.
6. Check that the drive letter in the setting 'ExternalDrive=E:\BASDATA.ZIP' is correct for the USB drive. If not, change the drive letter and then 'Save' System.ini.
7. From the BAS Text Editor menu, select File' and Save' and then File' and Exit'.
8. From the BAS menu, select 'Tools' and then 'Backup Data'.
9. BAS will first backup all data files to [C:\BAS\Data\Backup\BASdata.zip](C:\BAS\Data\Backup\BASdata.zip) and report "### files successfully compressed ..." when finished. Click 'Ok'.
10. BAS will then attempt to backup all data files to the USB drive. When done, BAS will report "### files successfully compressed ...". If BAS displays "0 files successfully compressed ..." or any other error message, contact BAS.
11. Click 'Ok' to exit the backup utility.
12. Remove the USB flash drive from the old PC.
13. From the BAS menu, select System' and then Exit' to close Energy Zone on the old PC.
14. Remove the USB/RS485 comm port adapter from the old PC. Do not install in the new PC at this time.

Install the BAS System Software on the New PC

1. Insert the USB flash drive in the new PC. Note the drive letter assigned to the USB drive.
2. Using Windows Explorer, navigate to the USB flash drive.
3. Double-click the installation program (EMCS1_39j.exe) on the USB flash drive to install BAS.
4. Click 'OK' or 'Continue' when prompted.
5. After the installation has completed, close the folder views of 'Startup' and 'BAS' that are automatically opened during installation.
6. Go to Windows Start/Programs and right-click the mouse with the mouse pointer over any of the entries under Programs. From the pop-up menu, select 'Sort by Name'.

To Install a USB/RS485 Type Comm Port Adapter
1. Device drivers must be installed for the USB/RS485 adapter on the new PC.
2. Using Windows Explorer, navigate to the C:\BAS\Data\Dealer\Drivers folder.
3. Double-click the installation program USOPTL4a.exe to install the drivers.
4. Click 'Next' or 'Typical' at each screen of the installation wizard to accept the default settings.
5. Click 'Finish' at the last screen to complete the installation.
6. Insert the USB/RS485 adapter into any USB port on the PC.
7. Windows will identify the adapter and enable the drivers.
8. Find the COM port number assigned to the USB/RS485 adapter by Windows:
   - Select Start/Settings/Control Panel.
   - Double-click the 'System' icon.
   - Select the 'Hardware' tab from the 'System Properties' screen.
   - Click the 'Device Manager' button.
   - From the hardware list, click the '+' sign to the left of 'Ports (COM & LPT)'.
   - Under 'Ports' will be an entry for either 'RS-485 Port' or 'RS-485 Isolated Port' followed by the COM port number assigned to the device by Windows. Note the COM port number for use later in the installation.
   - Close 'Device Manager'.
   - Close 'System Properties'.
   - Close 'Control Panel'.

Restore Data Backup from the Old PC to the New PC
1. Use Windows Explorer to copy the backup file (containing the data backed up from the old PC) from the USB flash drive to the 'C:\BAS\Data\Backup\' folder on the new PC. If the file already exists and prompts for permission to overwrite, select 'Yes'.
2. If not already running, launch BAS.
3. From the BAS menu, select 'Access' and enter a valid Level 4 or 5 password (use '22455' if password is not known).
4. From the BAS menu, select 'Tools' and then 'Restore Data from Internal Drive'.
5. When prompted for permission to overwrite existing files, select 'Yes to all'.
6. When completed BAS will report "### files successfully restored ..." . Click 'Ok'.

Configure the BAS System on the New PC

EnerNet Settings
1. From the BAS menu, select 'Access' and enter a valid Level 5 password (use '22455' if password is not known).
2. From the BAS Menu, select 'System' then 'Site Configure' and EnerNet Settings'.
3. Check the 'Trunk 1' COM port selection.
4. Change the COM port selection if it does not match the COM port number discovered earlier during installation of the RS485 comm port adapter.
5. All other EnerNet Settings were restored from the old PC and should not need to be modified.
6. Click 'Ok' to exit and save the EnerNet Settings.

Configure the Backup Utility
1. From the BAS menu, select 'Tools' and then 'Edit BAS SYSTEM.INI'.
2. Using the BAS Text Editor, scroll to the '[Backup Options]' section of System.ini.
3. Check that the drive letter in the setting 'ExternalDrive=E:\BASDATA.ZIP' is correct for the USB drive. If not, change the drive letter and then 'Save' System.ini.
4. From the BAS Text Editor menu, select File' and Save' and then File' and Exit'.

Configuring BAS for Remote Site Access Using the Internet and LogMeIn.com
1. There are no changes to the BAS system configuration that must be made in order to use the Internet and LogMeIn.com for remote site access.
2. The first step in enabling Internet access is to confirm that the PC has a working Internet connection. The easiest way to do this is to launch Internet Explorer and attempt to access any known good web site, such as www.Google.com.
3. Once an Internet connection has been confirmed, the steps for installation include: - Using the Internet Explorer address bar, type the address to a LogMeIn.com installation link provided by BAS (typically www.Enertec-BAS.com/logmein.htm).
   - Allow the LogMeIn.com installation program to download and run.
   - Use the typical/default options provided for the installation except when given the option to install a trial version of LogMeIn Pro, decline the offer and select LogMeIn Free.
   - The installation will ask for an Access Code (or password) to use for remote access. This is the password that will be used by all users when connecting remotely to the site through LogMeIn.com.
       - When the installation is complete, a LogMeIn.com icon will appear in the Windows System Tray (with the Windows clock in lower right corner of the Desktop). To check the status of the LogMeIn.com connection, roll the mouse pointer over the LogMeIn.com icon. A ToolTip (message) will appear above the mouse pointer. If the installation was successful the message will read "LogMeIn – Enabled and Online".
4. Contact BAS for assistance with installing and setting up a LogMeIn.com connection. The entire process takes about 15 minutes and can be done over the phone.

Complete the Installation

Startup Test
1. From the BAS menu, select 'System', then 'Exit', and click 'Ok' to confirm.
2. Restart Windows by selecting Start, Turn Off Computer, and then Restart.
3. The BAS System Software should automatically launch on Windows startup.
4. There should at least these two programs listed on the Windows Taskbar, BAS EnerNet Server and Energy Zone.
5. From the BAS menu, select 'Access' and enter a valid Level 4 password (use 22455' if password is not known).
6. The System should be communicating with all RSCs in the system through the RS485 adapter. The LEDs on the RS484 adapter can be used to verify trunk line operation.
   - A communication cycle is completed once every 4 seconds.
   - The cycle is repeated continuously.
   - Each communication cycle includes a data packet being transmitted by the PC to all possible RSC addresses and a response from each on-line RSC being received at the PC.
   - Each cycle begins with a 1 second burst of data from the PC. This is indicated by the red 'TD' (Transmit) LED on the adapter. It should be on solid for 1 second and then off for 3 seconds. - After the Transmit has completed, both the TD' and RD' LEDs should be off for about
     1.5 seconds.
   - Next the RSCs will begin to respond in order of their configured address. The red RD' (Receive) LED will flash once for each RSC that responds. The responses take about 1.3 seconds to complete.
   - After the Receive has completed, both the TD' and RD' LEDs should be off for about 0.2 seconds.
   - The cycle then repeats with a Transmit of data from the PC.
   - The state of the TD' and RD' LEDs should match the description above. There should be no intermittent flashes or blinking with either LED when they should be off.
7. If any RSCs have communicated with the system, BAS Watchdog will also launch and be listed on the Taskbar.

Review Configuration
1. Perform a quick scan of all system settings and configurations to look for any errors or other problems with data transfer from the old PC.
2. Contact BAS for assistance if any discrepancies are noted.

Verify Installation of Adobe Reader
Adobe Reader is used by BAS to display the BAS User's Manual. To verify that Reader is installed and working:
1. From the BAS menu, select Help' then User Manual'.
2. Select Accept' if the License Agreement for Adobe Reader is displayed.
3. Adobe Reader should then launch and display the BAS User's Manual.
4. Select File/Exit to close Adobe Reader.
5. If Adobe Reader does not work as described, new setup files should be downloaded from the Adobe website and installed.

Perform Final Backup of Configuration on the New PC
1. If not already insertec, insert the USB flash drive in the new PC.
2. Switch to the BAS Energy Zone program.
3. From the BAS menu, select 'Access' and enter a valid Level 4 or 5 password (use '22455' if password is not known).
4. From the BAS menu, select 'Tools' and then 'Backup Data'.
5. BAS will first backup all data files to C:\BAS\Data\Backup\BASdata.zip and report "### files successfully compressed ..." when finished. Click 'Ok'.
6. BAS will then attempt to backup all data files to the USB drive. When done, BAS will report "### files successfully compressed ...". If BAS displays "0 files successfully compressed ..." or any other error message, contact BAS.
7. Click 'Ok' to exit the backup utility.
8. When the backup has successfully completed, remove the USB flash drive from the new PC and store in a secure location.
9. From the BAS menu, select 'Access' and then 'Logout' to secure the BAS system.

Remove the BAS System from the Old PC

1. Disable auto-start of BAS on Windows startup:
    - Select Windows Start, then Programs, then the Startup folder.
    - Move the mouse pointer over the BAS icon in the Startup folder.
    - Right-click the mouse and select 'Delete' and then 'Yes' to confirm.
2. Delete the BAS program and data files from the hard disk drive: - Use Windows Explorer to navigate to the C:\ drive.
    - Click to select the BAS folder in the right hand pane of Windows Explorer.
    - Right-click the mouse and select Delete' and then Yes' to confirm.
3. Remove the BAS folder from the Programs list:
    - Select Windows Start and then Programs.
    - Move the mouse pointer over the BAS folder in the Programs list.
    - Right-click the mouse and select Delete' and then Yes' to confirm.