



Frequently Asked Questions

FAQ

Date: 13 July 2005

Subject: Windows XP Operating System - Field Load Instructions

Note that this installation requires a 300 MHz computer or faster (a 3D Systems-supplied Itox or Dell computer or newer) with Buildstation™ 5.4 or newer software.

Required tools: Microsoft Windows® XP Professional full version (not update, preferably not a non-Microsoft such as Dell version), blank floppy, Buildstation 5.4 software. On some systems you may need to remove the 3D Systems cards to perform this installation.

If you are updating a functioning system be sure to backup the following files: procyon.mdb, license.dat, params.dat, *.cal, *.geo, calibration.ini, mfs.dll, viper.ini, viperupgrade.ini, 3D Systems registry key, computer name, domain or workgroup name, IP address. Also copy any BFF files etc that you want to keep.

Note: You may wish to create the same directory structure on a floppy as the structure under c:\winsla you are backing up. Then copy each of the above files into the correct directory.

Backing up the Registry Key

- From the "Start" button click on the "Run" option
- Type "Regedt32" in the Run window and hit "OK"
- Select "HKEY_LOCAL_MACHINE\Software\3D Systems"
- From the menu on top of the Registry Editor window select "Registry". Then "Save Key" then select A: or the network drive you are backing up to. Save the file as 3d.reg
- Close the Registry Editor window

Recording the computer name, domain or workgroup name & IP address

- From the "Start" button click on the "Settings" option
- Select "Control Panel" then "Network"
- Select the "Identification" tab and record the "Computer Name" and the "Workgroup or Domain" (note spaces etc)
- Select the Protocols tab and "TCP/IP Protocols" click the "Properties" button. Note the Adapter type, IP Address, Subnet Mask, Default Gateway. Click the Advanced option any additional settings. Also check and record setting information under the following tabs "DNS", "WINS Address" and "Routing". (Screen Captures may be helpful, for non-typical setups.)
- Close the all open windows

Backup the rest of the critical files

- Copy the *.Cal and *.Geo files from the c:\winsla\Config directory into a:\winsla\Config directory
- Copy the calibration.ini, viper.ini and viperupgrade.ini from the c:\winsla\Data into a:\winsla\Data
- Copy the license.dat, params.dat, procyon.mdb and mfs.dll from the c:\winsla\Bin directory into a:\winsla\Bin

Make the CD-ROM bootable and other CMOS changes

- Re-boot the computer and enter Setup (on an Itox hold down the Delete key as it boots).

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- Change the "Boot Sequence" choose "CD-ROM, C, A" (on an ItoX choose "BIOS Feature Setup", then choose "Boot Sequence")
- Exit this screen (Escape key on an ItoX)
- Choose "Power Management Setup" choose "PWR Lost Resume State" to "Turn On"
- Save and Exit (ItoX hit the Escape key and choose the "Save and Exit" option)

Skip to the applicable section to continue the installation. Your choices are:

- Removing an NT installation
- Removing an XP installation
- Starting with a blank hard drive

Removing an NT installation

- Re-Boot the computer with the XP CD in the drive. While booting hit the Enter key when the screen show "Hit any key to Boot from CD". This will come up as the last line at the bottom of the first full screen
 - Caution: If you hit the Enter key at the wrong point or more than once an error may occur
 - Note: this option is displayed soon after the monitor powers up
- At the "Welcome to Setup" screen hit the "Enter" key. (This screen takes several minutes to display)
- If you get an error message or the system hangs, power down the computer then turn it back on
- At the "Windows XP License Agreement" screen hit "F8"
- Delete all partitions - select one at a time type "D" and follow the instructions on the screen
- Don't hit "Enter" or make other changes, skip to the "Continuing the XP installation" section

Removing an XP installation

- Re-Boot the computer with the XP CD in the drive. While booting hit the Enter key when the screen show "Hit any key to Boot from CD". This will come up as the last line at the bottom of the first full screen.
 - Caution: If you hit the Enter key at the wrong point or more than once an error may occur.
 - Note: this option is displayed soon after the monitor powers up.
- At the "Welcome to Setup" screen hit the "Enter" key. (This screen takes several minutes to display)
- At the "Windows XP License Agreement" screen hit "F8"
- At the "Windows XP Professional Setup" hit the **Escape** key. (**Important step!**)
- Delete all partitions - select one at a time type "D" and follow the instructions on the screen
- Skip to the "Continuing the XP installation" section

Starting with a blank hard drive

- Re-boot the computer with XP in the CD-ROM drive
- At the "Welcome to Setup" screen hit the "Enter" key. (This screen takes several minutes to display)
- At the "Windows XP License Agreement" screen hit "F8"
- Skip to the "Continuing the XP installation" section

Continuing the XP installation

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- At the "Windows XP Professional Setup" screen hit "**C**" to create a partition in the unpartitioned space
- Type 7000 in the size field and hit "Enter". (This creates a primary partition of 6997 MB).
- Hit "Enter" which allows Windows to install on the new partition
- Hit "Enter" which formats the partition using NTFS
- After the format is completed, XP will continue loading. Note that you don't need to do anything until prompted (the display that looks like radio buttons is simply for your information only.) Don't be concerned if the computer reboots during this portion of the installation.
- At the "Regional and Language Option" screen hit "Next"
- At the "Personalize your Software" screen type "Root" in the "Name" box leave "Organization" blank, hit "Next"
- At the "Product Key" screen enter the key for this copy of XP (back of the XP booklet) and hit "Next"
- At the "Computer Name and Administrator Password" screen type "SLA" as the "Computer Name" and "3dsys" in the "Administrator Password" and "Confirm Password" fields and hit "Next"
- Complete the "Date & Time settings the hit "Next"
- At the "Networking Settings" use "Typical settings" and hit "Next"
- At the "Workgroup or Computer Domain" set up per the customer and hit "Next"
- The computer may re-boot at this point or in the next few steps if so login (password is 3dsys).
- At the "Display settings" hit "OK"
- Click "OK" in the test display dialog. **If you don't click "Ok" YOU WILL HAVE TO FORMAT THE DRIVE AND START OVER!!!**
- At the "Welcome to Microsoft Windows" screen click "Next"
- On the "Help protect your PC" check the "Not right now" radio button then the "Next" button.
- At the "How will this computer connect to the Internet" screen hit "**Skip**"
- At the "Ready to activate Windows" screen, check "No, remind me in a few days" then hit "Next"
- At the "Who will use this computer" fill in "Root" then hit "Next" (don't use names with spaces, this causes part of the account information to be saved under the first part of the name up to the space)
- At the "Thank you" screen hit "Finish". Windows will boot
- At this point the Network Identification Wizard screen may come up (depending on whether you are networked at the moment or not)

XP Configuration

- Right click on the "Start button" and then click on "Properties"
 - Select the "Classic Start menu" radio button
 - Select the "Taskbar tab" at the top of the screen and un-check the "Group similar taskbar buttons" then click Apply and OK
- Click on "Start" then click on "Settings" then "Control Panel"
 - Click the "Appearances and Themes" icon
 - Click on "Change the computers theme" button
 - Select the "Themes tab" and in the Theme drop-down select "Windows Classic"
 - Select the "Screen Saver" tabs in the Screen saver drop-down choose "None"

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- Select the "Appearance" tab then in the "Windows and buttons" drop down select the "Windows Classic" style
- Click Apply then Ok
- Select the Back button in the upper left corner of the screen
 - In the Control Panel screen select "Switch to Classic View"
 - Double click on the folder "Folder Options" icon
 - Select the "Use Windows classic folders" radio button
 - Select the "Open each folder in its own window" radio button
 - Select the "View" tab
 - Un-check "Hide extensions for known file types"
 - Un-check "Use simple file sharing" at the bottom of the list
 - Click "Apply" and OK

Accounts

- Double Click on the "User Accounts" icon
- Click on "Create a new account"
- Enter "3dsys" as the account name. Then hit "Next"
- Select the "Limited" radio button. Then hit "Create Account"
- Select the new "3dsys" icon
- Select "Create a password"
- Enter "3dsys" in the password and confirmation dialogs, hit "Create a Password"
- If prompted "Do you want to make your files and folders private". Select "No"
- Click the Back button
- Select the "Root" icon
- Click "Create a Password"
- Enter "3dsys" in the password and confirmation dialogs, hit "Create a Password"
- If you are asked "Do you want to make your files and folders private". Select "No"
- Close the "User Accounts" window

Partitions

- Double click the "Administrative Tools" icon, then "Computer Management" then "Disk Management" (under "Storage" - next to the last item in the tree)
- Right click the CD-ROM drive graphic
- Choose "Change Drive Letter & Paths"
- Click the Change button
- Select R: and click "Ok" and "Yes"
- Right click the "Unallocated" disk area graphic
- Select "New Partition" then "Next"
- Select the "Extended Partition" radio button and hit "Next"
- Enter 4096 when prompted for a partition size and hit "Next"
- Select "Finish"
- Right click the new green "Free space" partition and select "New Logical Drive"
- Click the "Next" button, then "Next" at the "Drive Size" dialog then next again at the "Select Partition Type" window
- Assign drive letter "E" and hit "Next" (in some cases have to hit "Next" 3 times?)
- In the "Format Partition" dialog ensure that the following settings are made:
 - File system "NTFS"
 - Allocation unit size "Default"
 - Volume label "Swap"
- Click "Next" then "Finish"
- Right click on the "Unallocated" graphic
- Select "New Partition" and click "Next"

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- At "Select Partition Type" the "Primary partition" radio button should be selected. Hit "Next"
- In the "Specify Partition Size" hit "Next"
- Assign drive letter "D" and hit "Next"
- In the "Format Partition" dialog ensure that the following settings are made:
 - File system "NTFS"
 - Allocation unit size "Default"
 - Enter the Volume label as "Data"
- Hit "Next"
- Hit "Finish" to complete the new partition
- Note that the new partition will automatically be formatted
- After the formatting is complete close the "Computer Management" window
- Click view then "Refresh"
- Close the "Administrative Tools" window

Swap File Setup

- Click on "Systems" and then "Advanced" tab
 - In the "Performance" section click the "Settings" button
 - In the "Performance Option" screen click on the "Advanced" tab
 - In the "Virtual memory" section click the "Change" button (bottom of the window)
 - Click the "E" partition (top of the window)
 - Click the "Custom Size" radio button, and enter 4020 in both the "Initial size (MB)" field and the "Maximum size (MB)" fields
 - Click the "Set" button
 - Verify that the "Paging file size" for drive "E" shows "4020 – 4020"
 - Click the "C" partition
 - Select the "No paging file" radio button, then click "Set"
 - Verify that the "Paging file size" values are not shown for drive "C"
 - Hit OK and OK that the computer must be re-boot for the changes to take effect
 - Close the "Performance Options", "System" and "Control Panel", then "Apply"
 - If asked to Reboot choose "Ok", then "Ok", then "Reboot" then login to the "Root" account

Display Settings

- Click on "Start" then click on "Settings" then "Control Panel"
- Double click "Display" and then the "Settings tab"
 - Move the Screen resolution slider to 1024 x 768 (on some systems 800 x 600 resolution may be required if the display looks distorted at the higher resolution)
 - Hit "Apply" then "Yes" then "OK"

Date and Time Configuration

- Double click "Date and Time"
- Select the "Internet Time" tab
- Clear the "Automatically synchronize with an Internet time server" check box
- Hit "Apply" then "Ok"

Network Connections

- Choose "Local Area Connection"
- In the "Network Tasks" dialog choose "Change settings of this connection"
- Double click "Internet Protocol TCP/IP"
- Click the "Use the following IP address" radio button

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- Enter the (static) IP address, Subnet Mask & Gateway you recorded earlier
- Save and close the "Network Connections" window

Domain settings

- Choose "System"
- Select the "Computer Name" tab
- Verify the Computer Name and Workgroup or Domain are correct

Explorer Setup

- Close all applications so that you can see the desktop
- Right click the Start button then left click on Explorer
 - Click on the C:\Program Files directory
 - In a blank area of the right hand pane, right click
 - Select "View" then "Details"
 - Select "Tools" from the menu at the top of Windows Explorer
 - Select "Folder Options" then the "View" tab
 - Verify that "Hide Extensions For Known File Types" and "Use simple file sharing" are unchecked
 - Click the "Apply to All Folders" button
 - Click "Yes"
- Close all applications so that you can see the desktop

Buildstation Software Installation

- Close all applications so that you can see the desktop
- If you want to install the previously backed up Procyon.mdb file – first create a "winsla" directory on C:\ then under C:\winsla create a bin subdirectory. Next copy the backup Procyon.mdb file into c:\winsla\bin.
- Insert the Buildstation software CD. If a graphic opens asking you "What do you want Windows to do?" Select "Take no action" (in some cases the option may be "Cancel" rather than "Take no action").
- Install Buildstation software (careful to choose the correct SLA® system type, especially with a Viper™ system installation)
- Install any Buildstation software updates
- From the backup you made of critical files copy the *.Cal and *.Geo files into the c:\winsla\Config directory, the calibration.ini, viper.ini and viperupgrade.ini to the c:\winsla\Data directory and the license.dat, params.dat and mfs.dll to the c:\winsla\Bin directory

Restoring the Registry Key (if saved from a previous O/S)

- From the "Start" button click on the "Run" button
- Type "Regedt32" in the Run window and hit "OK"
- Select "HKEY_LOCAL_MACHINE\Software\3D Systems"
 - **Caution: Make sure you have the 3D Systems key selected, this process will overwrite whatever you have selected!!!**
 - From the menu on top of the Registry Editor window select "File". Then "Import" then select the 3D registry key (named 3d.reg) you backed up on the old installation (even if it was under NT 4.0) from the A: drive. Select "Open".
 - Under the 3D Systems key select "Buildstation 5" then "Files"
 - Ensure that the paths all list C:\Winsla or a subdirectory under it (if the installation you backed the key up from had Buildstation software in a different directory structure the Buildstation application won't launch)

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- (If any paths are different than C:\winsla, double click the item in the right hand pane and change the path)
- Click the Apply button, then the Ok button

Setting the Registry permissions

- Note – if you skipped Restoring the Registry Key above, before completing the following steps first perform the first 4 bulleted steps in Restoring the Registry Key above
- Select "Edit" from the menu at the top of the screen then select "Permissions"
- Scroll down in the "Group or user names" window and select "Users" (sometimes it appears as "Everyone", not sure why it isn't consistent)
- In the "Permissions for Users" window across from "Full Control" select "Allow"
- Click the "Apply" button, then the "OK" button

Disabling Media Sense

- Select HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Tcpip\Parameters
- Make sure "Parameters" is selected on the left side of the screen
- Select "Edit" from the menu then "New" then "DWORD Value"
- Type "DisableDHCPMediaSense" hit the enter key
- Double click the new "DisableDHCPMediaSense" key
- Change the "Value Data" to "1" choose hexadecimal (doesn't really matter)
- Click OK

Disabling Low Disk Space Errors (Which are Caused by the Swap File)

- Select HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Policies\Explorer
- Make sure "Explorer" is selected on the left side of the screen
- Select "Edit" from the menu then "New" then "DWORD Value"
- Type "NoLowDiskSpaceChecks" hit the enter key
- Double click the new "NoLowDiskSpaceChecks" key
- Change the "Value Data" to "1" choose hexadecimal
- Click OK
- Close Regedit
- Close all applications so that you can see the desktop

System Permissions

- Right click the "Start" button then "Explorer"
- Navigate to and select "Winsla" on the C: partition
- Right click on "Winsla" select "Sharing and Security"
- Select "Share" this folder then select the "Permissions" button (if you don't have a permissions button see the section above on Un-checking Simple File Sharing)
- Select permissions then "Everyone" then in the lower window select "Full Control"
- Select "Apply" and OK
- Choose the "General" tab at the top of the screen and un-check the "Read-only" check box
- Select "Apply"
- From the "Confirm Attribute Changes" select "Apply changes to this folder, subfolders and files" and hit "OK"
- Select the Security tab
- Select "Users" then in the lower window select "Full Control" then select "Apply" then "Ok"
- Close all applications so that you can see the desktop

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Turning Off Windows Security Updates

- Note – it is important to turn off any downloading, installation or execution of updates to Windows and any anti-virus software you may choose to load. Otherwise you will have build crashes. You can manually check for, download, install and execute updates between builds.
- Click on “Start” then click on “Settings” then “Control Panel”
- Click on “Automatic Updates”
- Select the “Turn Off Automatic Updates”
- Close all applications so that you can see the desktop

Disabling Buildstation Software Error Reporting to Microsoft

- From the “Start” button click on the “Settings” option
- Select “Control Panel” then “System”
- Click on the “Advanced” tab
 - Select the “Error Reporting” button towards the bottom of the window
 - Select the “Enable error reporting” radio button
 - Select the “Choose Programs” button
 - Below the lower window titled “Do not report errors for these programs:” click the “Add” button
 - Click the “Browse” button
 - Verify that the “Look in” dialog at the top of the window displays “Local Disk C:”.
 - Double click the winsla directory
 - Double click the bin sub-directory
 - Double click the winsla.exe file
 - Hit OK, OK, OK, OK then close the Control Panel

Finishing up the Root account

- Reboot the computer (Select the “Start” button then “Turn off Computer” then “Turn Off”)
- Start the computer and login as “3dsys” (password is “3dsys”)
- Start the Buildstation application, and ensure that it starts correctly

XP Configuration for the 3dsys account

- Right click on the “Start button” and then click on “Properties”
 - Select the “Classic Start menu” radio button
 - Select the “Taskbar tab” at the top of the screen and un-check the “Group similar taskbar buttons” then click Apply and OK
- Click on “Start” then click on “Settings” then “Control Panel”
 - Click the “Appearances and Themes” icon
 - Click on “Change the computers theme” button
 - Select the “Themes tab” and in the Theme drop-down select “Windows Classic”
 - Select the “Screen Saver” tab in the Screen saver drop-down choose “None”
 - Select the “Appearance” tab then in the “Windows and buttons” drop down select the “Windows Classic” style
 - Click Apply then “OK”
- Select the Back button in the upper left corner of the screen.
 - In the Control Panel screen select “Switch to Classic View”
 - Double click on the folder “Folder Options” icon
 - Select the “Use Windows classic folders” radio button
 - Select the “Open each folder in its own window” radio button
 - Select the “View” tab

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- Un-check "Hide extensions for known file types"
- Un-check "Use simple file sharing" at the bottom of the list
- Click "Apply" and "OK"

Explorer Setup

- Close all applications so that you can see the desktop
- Right click the Start button then left click on Explorer
 - Click on the C:\Program Files directory
 - In a blank area of the right hand pane, right click
 - Select "View" then "Details"
 - Select "Tools" from the menu at the top of Windows Explorer
 - Select "Folder Options" then the "View" tab
 - Verify that "Hide extensions for known file types" and "Use simple file sharing" are unchecked
 - Click the "Apply to All Folders" button
 - Click "Yes"
- Close all applications so that you can see the desktop

Finishing up

- Reboot the computer (sometimes Buildstation software will fail to start or initialize the DSP etc if you don't reboot)
- Start Buildstation software, ensure that it starts correctly
- When everything seems to be working correctly log in as Root then double click on the pair of keys icon next to the clock (lower right corner of the screen) and follow the steps to register XP