



Tuning Your Workstation for Optimum NX Performance

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Customers Requirements for PTF



- Customers asking for additional productivity gains
 - Need shorter development times
 - Go beyond leadership hardware performance
- Getting correct graphics drivers is time consuming
 - Staying current improves performance/ but need CAD application tested drivers
 - #1 customer support problem for CAD software vendors
 - #1 customer support issue for workstations
 - Need to determine which driver if 2 or more applications are present
- Opportunity to leverage HP application expertise
 - Application tuning to improve user performance
 - Windows operating system tuning for CAD users
 - Windows commonly preferred settings for CAD users
 - Additional productivity enhancements
- Memory growing as a customer concern
 - Understanding type, speed, matching for expansion
 - 32-bit -- complexity of setting 3 GB switch
 - 64-bit – understanding memory needs – growing percentage of hardware costs

HP Application Competency Centers

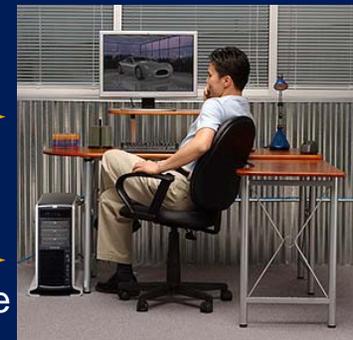


HP testing and certification

Reliable Solutions



Performance Tuning Framework



Certified Driver Data Base by Application

Performance Tuning Framework



+

hp

HP's New Customer PTF Experience



Previous – Static Event

New – Stay connected to HP



Hardware, Application, OS



Hardware, Application, OS

+

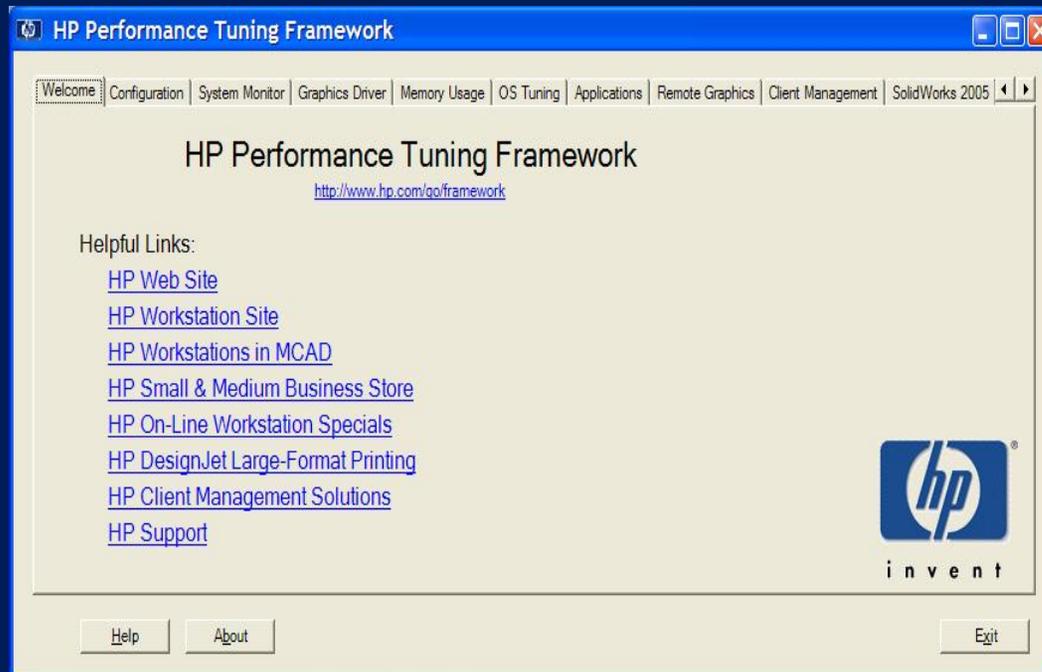
PTF Productivity Enhancers

Opening Screen



During each initialization

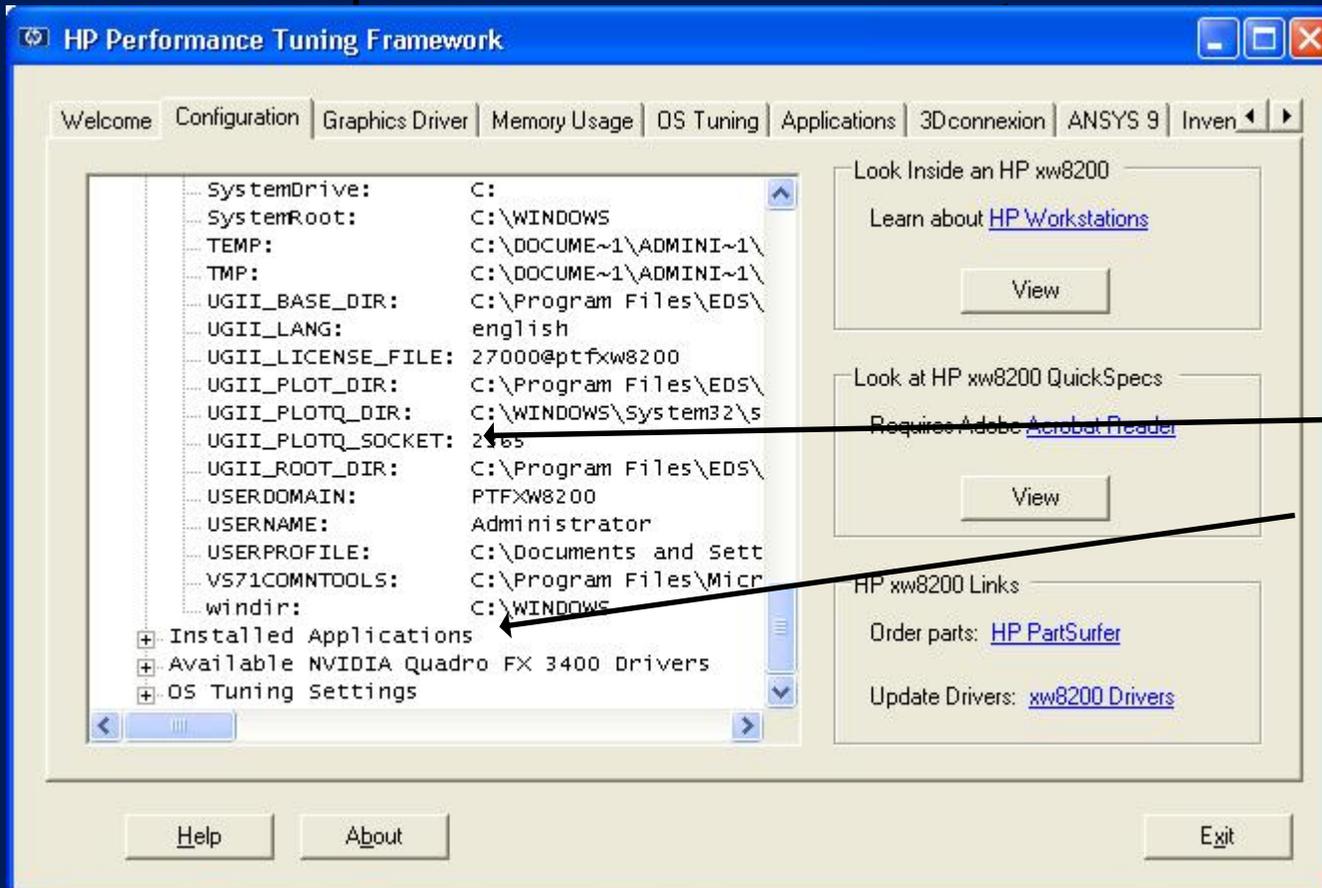
- Goes to HP's database to find the very latest driver/application data
 - Scans the system and loads information for installed applications only
 - Collects detailed electronic system data unique to HP workstations
 - Dynamically updates PTF
- Usage requires administrative privileges on the workstation



Features for Rapid IT Support



Complete Electronic Information ex. processor with EM64T



Visuals
& Specification

Application Environment
&
Installed Applications
Part Surfer

Right click and save information to send to IT,
eliminate searching for data/settings.

Understanding your system configuration



HP PartSurfer - Microsoft Internet Explorer

Address: http://partsurfer.hp.com/cgi-bin/spl/main?sel_flg=picture&model=XW8200&HP_model=&modname=Workstation+XW8200&template=main&plist_sval=&plist_styp=&dealer_id=

Workstation XW8200

xw8200 Series Workstation Exploded View
Move the mouse pointer over the diagram for more information, then click on any of the pop-up boxes or objects on the diagram for more detail.

Click here for a printable version of this diagram with a list of displayed parts

Graphics (Product)
DY850A
PB329A
PB330A
PB331A
PB332A
PE949A

Interface (Product)
AA660A
DZ554A

PC Board (Graphics)
365934-001
366494-001
366495-001
366650-001
367721-001
367722-001

Printable version

Privacy statement Using this site means you accept its terms Feedback to HP PartSurfer

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Inside of PTF link to Parts Surfer

- Your system configuration appears on HP's web page.
- Scroll over and your part numbers appear with other choices below
- Can price and order through links on this page

Configuration tab Benefits



- One location for all the systems and application data
- Can easily be sent to support group
- Provides comprehensive detailed system information
- In a typical support call searching for this data takes 20 minutes or more
- Specs and Part Surfer allows easy identification of part numbers and ordering.

Managing Graphic Drivers



Graphic Driver Knowledge Improvement

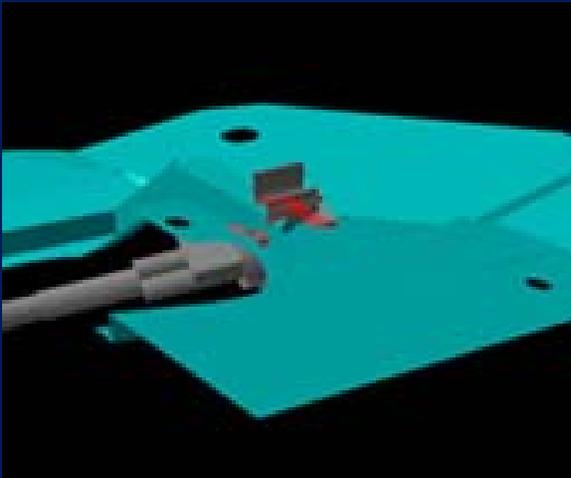


- Avoid potential issues by using only tested/certified drivers.
- Can load the latest driver, and revert back to the certified driver if issues arise. Have more knowledge about drivers.
- Resolve driver revision conflicts when 2 or more applications are run on one workstation.
- For 64-bit new drivers are needed
 - Download a 64-bit driver certified for your specific application.
- Simple to do— a few clicks. Without PTF it typically takes 30+ minutes on the web, if you are experienced.

Example of graphic driver improvements



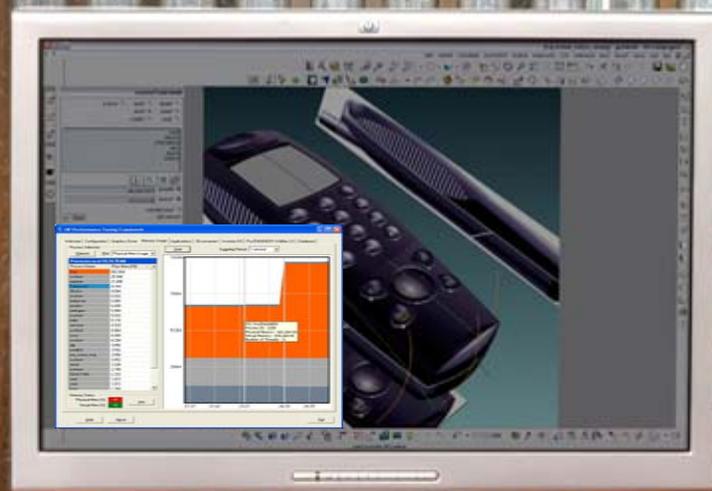
- Untested drivers can provide misleading images.



Colors such as red need to be valid, not artifacts

Sometimes colors that should be red, or blue such as welds won't appear as a differentiated color

Memory management and other features

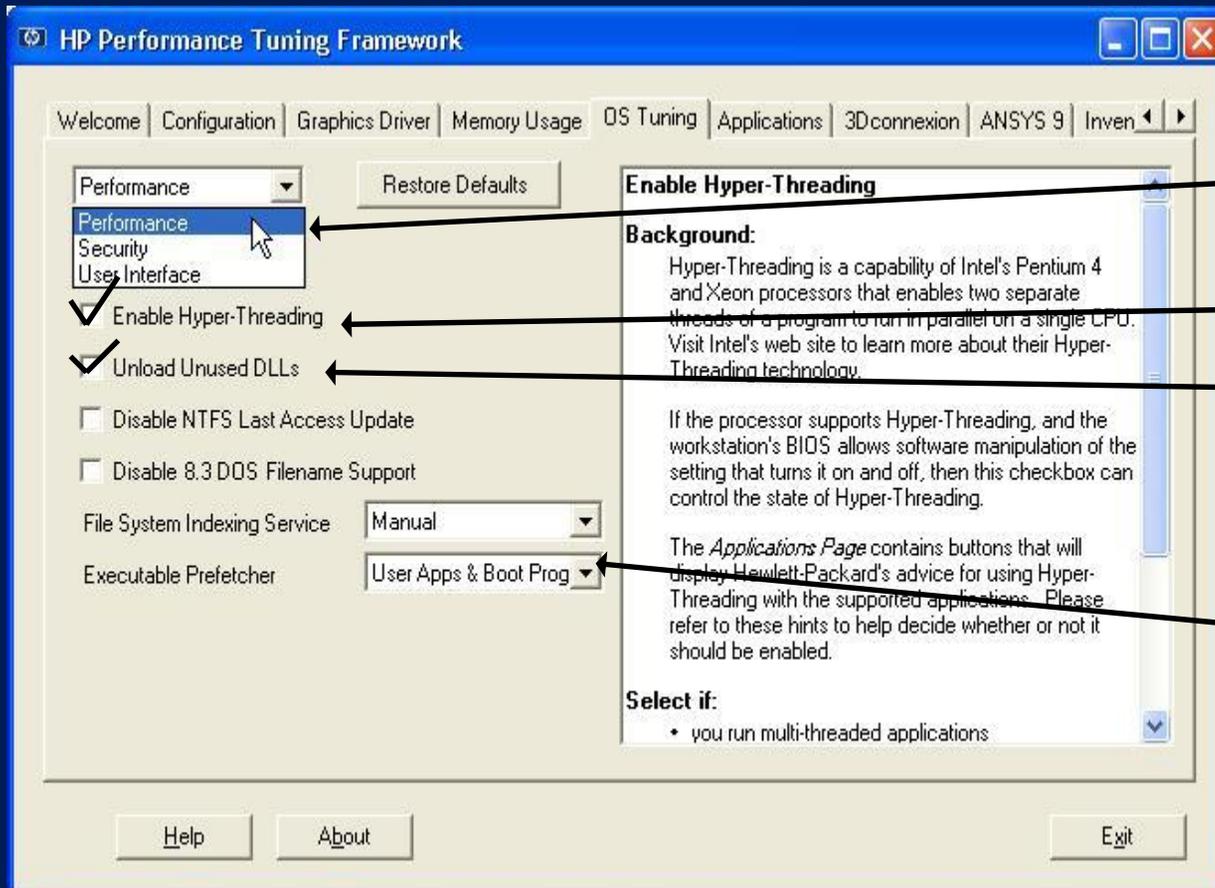


Memory sizing importance- renewed awareness



- For CAD/CAE applications memory usage varies with
 - Initial file size
 - Loaded model size
 - Number of components with data loaded
 - CAD commands chosen – some (Ex. hidden line removal) can duplicate files
 - Number of applications or instances of an application running
 - Graphic card selection
- Correct memory sizing can improve productivity, as operations in memory are a minimum of 53 times faster than pulling data from the disk. (depending on size and how much is swapping, disk times can be much, much larger)
- The Goal should be to NEVER run out of physical memory,
- Memory will take a higher percentage of the total costs.
- PTF helps users understand/manage their specific memory needs.

Optimize Windows XP For Professionals



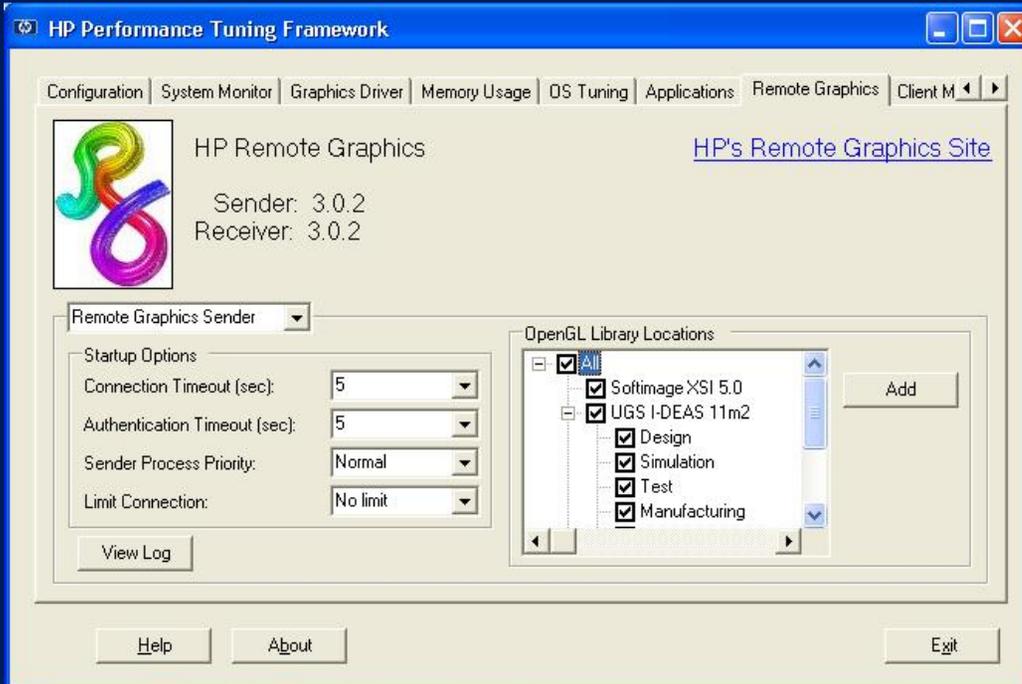
Select Performance

Enable Hyper-Threading

Unload Unused DLLs

Executable Prefetcher

PTF and Remote Graphics

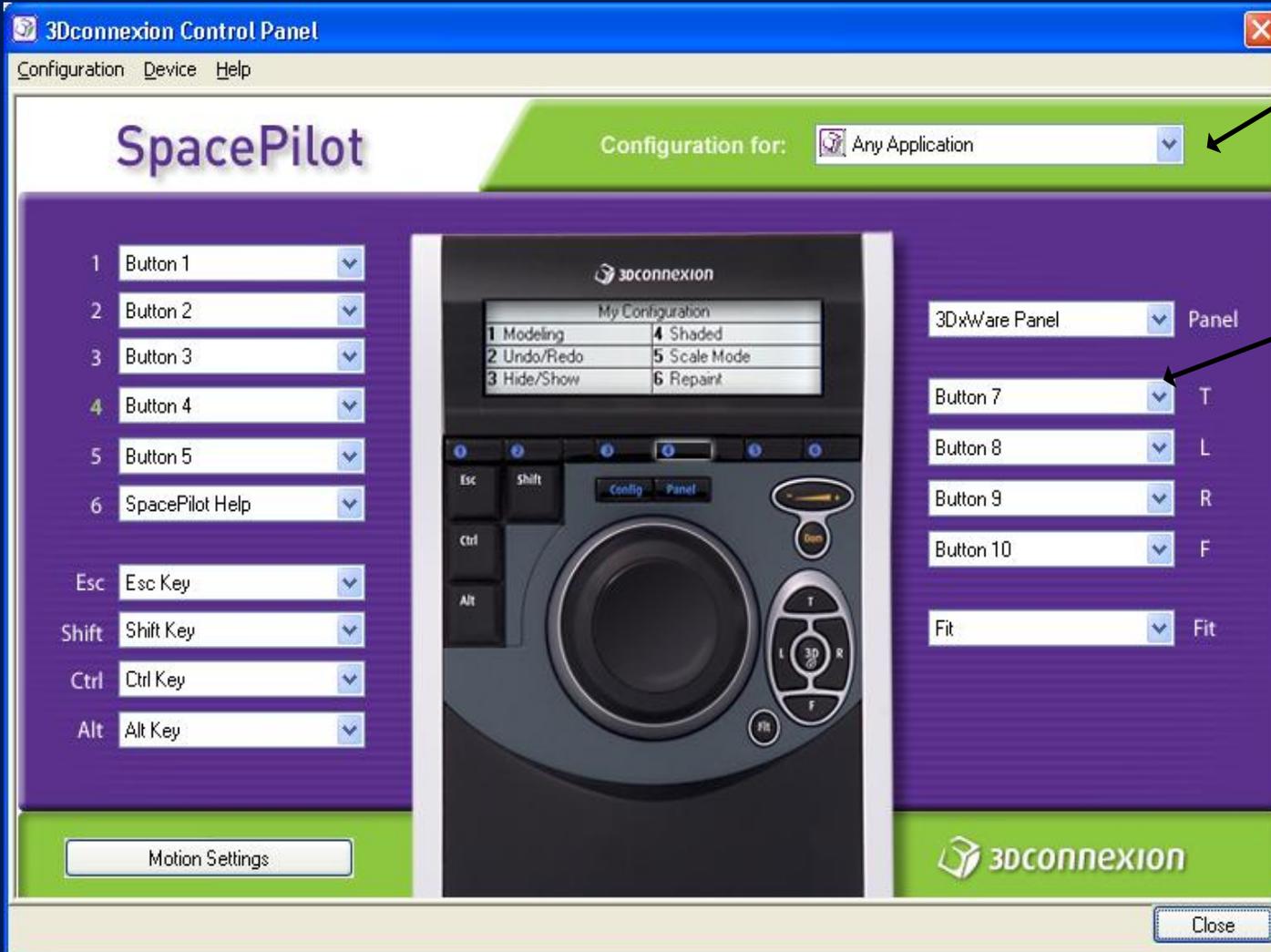


Download Remote Graphics

Network performance testing

Simplify application setup

Improving Productivity – 3D Motion Controller



Select Application

Get the latest drive

Set the button to your most used CAD commands

User Productivity Improvement



- Productivity studies show
 - 30% user productivity gain on average
 - 50% fewer mouse clicks
- Gains are dependant on button settings
- PTF makes it simple to set.

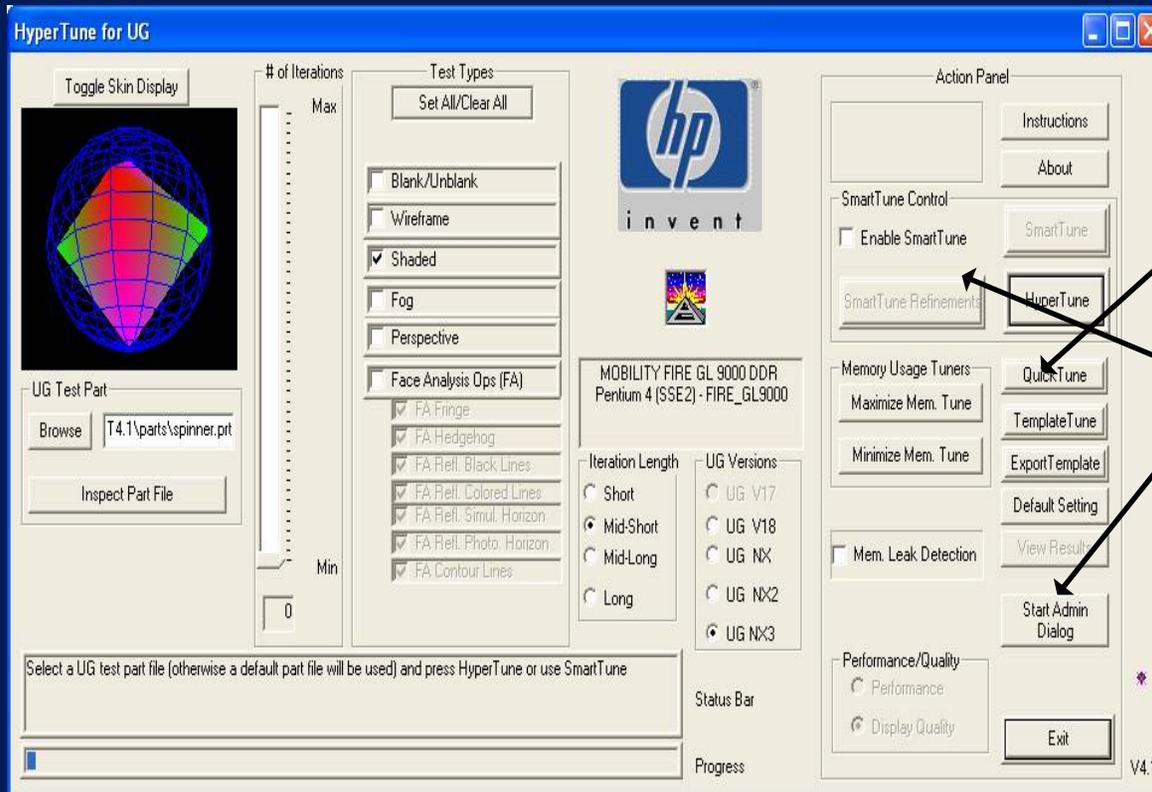
PTF Application Performance & Assistance



PTF Application Specific Performance Tuning



HyperTune fox NX



Detailed setting to tune
Select HyperTune to
to your needs
tune NX to your

Unique usage

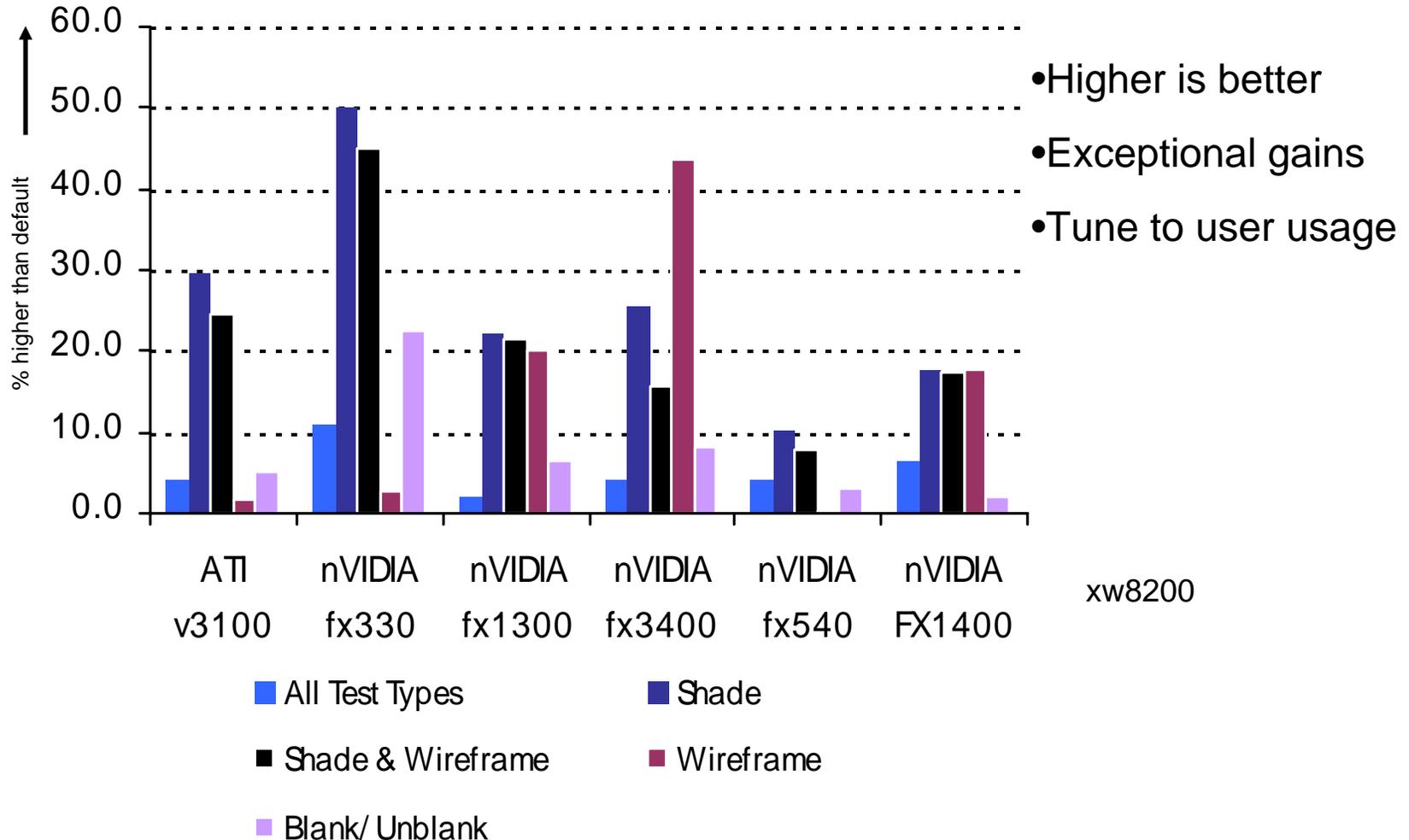
Enable SmartTune
Analyze runtime logs for
performance problems

Scroll for other functions

Hypertune for UG NX -- SmartTune Button



UG NX Performance Improvements with SmartTune



NX Syslog Analyzer



Captures Valuable Data from syslog file for Display

HP's UGNX System Log Analyzer

Current System Log File: C:\Documents and Settings\pst\My Documents\Administratorb23.syslog

Date Created: Sun Aug 07 22:12:58 2005 Eastern Standard Time

Current Part: ..

3GB Capability: Not Enabled or Undefined

UG Version: NX 2.0.3.1

Parasolid Version: 15.0 build 245 on 19:45:3 27-2-2004

UG/Manager Version: Not Used

Node Name: hpone

System Type: Intel x86 Level 15 Revision 050a

OS Type: [Windows XP] Windows NT 5.1 (Build 2600; Service Pack 2)

Num Processors: 2

SMP: OFF

Physical Memory: 3327 MBytes

Swap: 4095 MBytes

Total Mem: 7422 MBytes

Max Mem Used: Undefined

Cur Mem Used: Undefined

Free Swap: 4095 MBytes

Graphics Device: Quadro FX 3400/PCI/SSE2/3DNOW!

Driver Version: 6.14.10.7078 23-Nov-2004 12:56

Graphics Driver: OpenGL

H/W Acceleration: ON

Load Options: Load from directory

Load Status: Partial Loading

Graphics Storage Mode: Mixed Mode

License Server Connection Error Status: -5,357

Analyzing

HP Invent

Version 3.2

- Can be used to compare two syslogs
- License errors identified
- Error Diagnostics

Error Diagnostics



The screenshot shows the HP Diagnostics application window. At the top, it displays system information: License Server (27000@cysun250), Local/Remote (REMOTE), Connected (TRUE), UGII_LICENSE_FILE (27000@cysun250), Server ID (server module), Web Key (For Internal UGS PLM Use Only), and License File Issuer (UGS PLM Solution, Inc.).

The main section is titled "Error Detection" and includes controls for "Number of Errors" (set to 5) and "Error Displayed" (set to 1), with "Display Prev Error" and "Display Next Error" buttons.

The "Error Text" section displays: "Run out of space whilst trying to allocate block of 33554432 bytes".

The "Error Interpretation" section provides a detailed explanation: "Ran out of virtual memory. If this is a 32 bit system consider moving up to a 64 bit solution. If a 64 bit system consider increasing virtual memory."

The "Traceback" section shows a stack trace starting with: "EXCEPTION: Error code 903 in line 132 of O:\ugnx301\ip3\src\sys\sm\ind\sm_init.c at Fri Mar 25 11:43:38 20...".

On the right side, there are two panels: "Error Types Detected" with a list including License, Graphics Driver, UI, Memory (highlighted with a pink bar), System, Definition Files, and Indet Signals; and "Error Processing" with buttons for "Licensing Error Checker" and "General Error Checker". A "BACK" button is located at the bottom right.

Provides details on exceptions and errors captured in the system log file

Summary



- Don't do it alone – Stay connected to HP through Performance Tuning Framework
 - Simple to use
 - Beneficial
 - Productivity improving
 - Direct performance gains
- HP – improving productivity beyond the box

Where to find PTF



- Ships on each HP Workstation. Look in HP Cool Tools Folder.
- Or download at
 - www.hp.com/go/framework



i n v e n t