

NOAA's NWS Weather Event Simulator (WES) Implementation and Operations Plan

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1.0 Directive: The WES directly supports NWS Instruction 20-101, which specifies that all Weather Forecast Office (WFO) staff with forecast and warning responsibilities complete at least two appropriate WES simulations prior to the start of each significant weather season.

2.0 WES Purpose: The primary function of the WES workstation is to support weather event review and training simulations using the Weather Event Simulator. The Warning Decision Training Branch (WDTB) develops, maintains, and supports the WES to provide these AWIPS-based capabilities for the NWS and its collaborators. The WES is an interim solution for AWIPS training capabilities until the requirements for AWIPS training functionality are completed in the AWIPS baseline.

3.0 WES Configuration: These configuration requirements apply to the primary WES workstation at each location. The 2006 WES workstation is a replacement for existing WES workstations. Sites should move their existing WES monitors and operating systems license to the new 2006 WES workstation as directed to in the Regional WES policy available on the WES website at <http://www.wdtb.noaa.gov/tools/wes/admin.htm>. The machine specifications are based off the AWIPS Hardware Refresh specifications.

3.1 Hardware. The 2006 NWS WES workstation will include the following hardware and warranty:

HP Workstation xw6200
Dual Processor - 2 Intel® Xeon® 2.80GHz/2MB 800FSB
Graphics Card #1 - NVIDIA Quadro NVS 285 128MB TC PCIe
Note 1 Graphics Card #2 - NVIDIA GEFORCE 7600GT 256MB PCIe
Memory - 2GB(4x512) DDR2-400 ECC reg
Hard Drive #1 - 36GB U320 SCSI 15K (1st)
Note 2 Hard Drive #2 - HP 250GB SATA 3Gb/s NCQ 7200rpm
Note 2 DVD Writer- HP 16X DVD RW DL, LightScribe
CD Writer - 48X CD R/W
Controller - U320 SCSI Controller - No RAID
Floppy drive - Floppy disk drive
Keyboard - HP PS/2 Standard keyboard
Mouse - HP PS/2 Scroll mouse
Sound card - Integrated AC'97/16-bit stereo full-duplex
Country kit - HP xw6200 Localization kit
Warranty - 3 year next business day onsite

Notes:

Note 1: The NVIDIA GEFORCE graphics card will arrive in a separate shipment. It should be installed into the x16 PCIe slot. The NVIDIA Quadro graphics card that is shipped with the workstation is also a x16 PCIe card but will function in the x8 PCIe slot.

Note 2: For the first twelve sites on the purchase, the SATA hard drive and DVD writer will arrive in a separate shipment.

- The DVD writer should be installed in the 2nd 5.25" bay in the chassis, and it should be connected to the secondary IDE port as the SLAVE device.
- The 250GB SATA hard drive should be installed in the 1st 3.5" Hard Disk Drive (HDD) bay above the SCSI Drive.

The remaining WES workstations will be delivered with these two devices already installed.

The WES machines should be upgraded in synchronization with future AWIPS workstation replacements. Any future machine upgrades and parts replacements funding sources will be identified in the NSTEP Training and Implementation Plan. Additional resources may be provided at the local or regional levels. Significant departures from the standard WES hardware may result in loss of effective troubleshooting support.

3.1 Software. The WES will be designed for the same Operating System that is used by the operational AWIPS platform, though it will be patched to provide necessary security. An Operating System was not included in the purchase, so the existing WES OS license will need to be transferred to the new machine according to the Regional WES Policy (see section 3.0). The initial Operating System for the new machines will be Redhat Enterprise 4 Update 3. Significant departures from the standard WES software may result in loss of effective troubleshooting support.

3.2 Network Connectivity. The networking of the WES boxes is outlined in the Regional WES policy (see section 3.0), available on the WDTB WES website. The trade off for WES location is a function of security and convenience for data transfer. The two supported configurations for WES networking are:

- 1) connect WES to the local office network on the internet (allows OS patches to be downloaded, but data has to be transferred from the archiver via DVD burning), or
- 2) connect WES via non-routable IP to the archiver (harder to download OS patches, but easier to transfer data by copying).

3.3 Archiving and Case Storage. The local AWIPS Archiver is the primary case generation tool to build cases for use with WES. Other cases are available from the National Case Study Library on the SOO/STRC web page, or from course developers, such as the WDTB for the Advanced Warning Operations Course.

4.0 WES Support Responsibilities. WDTB will develop, maintain, and support the WES. Management of the WES Program will be under the direction of the WES Program Manager, Michael Magsig (Michael.A.Magsig@noaa.gov). The webpage for the WES is located at <http://www.wdtb.noaa.gov/tools/wes/index.htm>.

4.1 WDTB Support. WDTB will provide primary WES centralized support through the WES email list, wes@infolist.nws.noaa.gov, located on the Lyris List Manager. To subscribe to this list, refer to the following webpage: <http://www.weather.gov/ndm/joinlist.html>. Regional WES focal points and other experts in the field are encouraged to assist in participating in the discussions and troubleshooting. The centralized troubleshooting and communications list will help ensure problems are expeditiously resolved, and important troubleshooting information is distributed to all users.

WDTB will respond to each request within one working day if the request is not resolved by others on the email list. All requests for support will be tracked with an internal trouble ticket system until the issue is resolved. It is important for the requestor to notify the WDTB support person who answers the request (or the email list) when the issue is resolved. This will ensure all trouble tickets can be adequately tracked and closed, and the results are shared with the WES email list.

To aid the WES support and better understand when WES is being installed at the WFOs, the Local WES Installation Focal Points will fill out a short post-installation survey on the OCWS Survey system after installation is complete at <https://ocws.weather.gov/intranet/survey/index.php>. The survey will document the date and latest build information, and it will provide feedback on any problems encountered and areas for improvement.

To address the requirement for AWIPS Delta Training, WDTB will release a version of WES with a stable beta version of AWIPS before the final AWIPS Operational Build (OB) is released. A WES beta test period will occur immediately before the release to ensure all bugs have been detected and fixed. AWIPS Maintenance Releases (MR) and Emergency Releases (ER) will be addressed on an as needed basis. WDTB will announce updates and patches on the WES email list.

The WES Program Manager at WDTB is leading the Integrated Working Team for the AWIPS Software Training Capability 05-081 in the Operations and Services Improvement Process (OSIP). Contact Michael.A.Magsig@noaa.gov for more information.

4.2 CIMMS Developers. The primary WES development will be through WDTB collaboration with the Cooperative Institute for Mesoscale Meteorological Studies (CIMMS).

4.3 AWIPS Developers. To facilitate the incorporation of AWIPS builds into the WES development, WDTB will work with the Office of Science and Technology (OS&T) and the AWIPS contractor to provide WDTB with all alpha, beta, and final releases and release information.

4.4 Regional WES Focal Points. Each region will designate a regional WES focal point for deciding regional WES policies, such as security and network connection issues. The Regional WES Focal Points will:

- be responsible for creating the Regional WES Policy for their region. The Regional WES policies will be available on the NWS WES web-page managed by WDTB.
- participate in WES beta testing. This requires the regional WES focal points to install and test the WES beta versions before it is released to the operational locations. This added level of testing will help ensure WES release problems are detected early enough to fix before the final version is released.

4.5 Local WES Focal Points. Each NWS office will designate a WES Installation Focal Point (usually the local Information Technology Officer) and a WES Training Focal Point (usually the Science and Operations Officer). Both local WES focal points will:

- subscribe to the WES email list (wes@infolist.nws.noaa.gov)
- complete the WES training modules via the DOC Learning Management System (LMS) for each WES build. This training is a critical component of the new centralized support, and it is important for both WES Focal Points to understand how to install, troubleshoot, and effectively use all versions of WES..

5.0 WES Training and WES Program Needs Assessment: WDTB will develop a short presentation of what is new in WES for each WES build, including any critical information about WES program issues. The training presentation is for the WES Installation Focal Point and the WES Training Focal Point to understand how to install, troubleshoot, and effectively use the latest version of WES. The training will reside in the Department of Commerce Learning Management System, and the completions will be tracked and reported to training management. A short level 1 evaluation will be used to measure Local WES Focal Point satisfaction with the training and to provide a mechanism to ensure the training is responsive to the needs of the Local WES Focal Points. The evaluation will also contain a limited number of questions over current needs for improving the WES program that will be factored into WES development planning. This regularly measured and coordinated feedback is critical to the success of the WES Implementation and Operations Plan.