The Next Step for Visual System Management

By Kenneth R. Banning

This article provides an overview of the new features of Visual System Management (VSM) in AIX 4.1. Key among these changes is the addition of VSM applications to support software installation, configuration, and maintenance.

The Visual System Management (VSM) runtime option of AIXwindows was introduced in AIX Version 3.2.5 and described in *AIXpert*[1].

Several enhancements and additions have been made to VSM in AIX 4.1 to improve its usability and extend it into software installation, configuration, and maintenance. In addition, VSM can now support the AIX 4.1 desktop.

Applications for Installation and Configuration

The primary change to VSM was the addition of applications to support software installation and the initial configuration of RISC System/6000s. The task of supporting installation was divided into three applications: Install Assistant, Install and Update Software Manager, and Maintain Installed Software Manager.

Install Assistant

Install Assistant is a unique application of the Help Manager, which can present hypertext-linked online information with graphics and provides links to applications. This technology, derived from Common Operating System Environment (COSE), was first introduced with VSM and now enables Install Assistant to use VSM applications. Install Assistant is displayed upon startup and walks users through all tasks needed to install options and configure the system for use. Install Assistant also details the steps that should be performed by users to ensure that their systems contain all the software needed to complete their configurations. Figure 1 shows a sample Install Assistant screen.

To make changes to the system configuration during installation, the Install Assistant can choose either of two paths. The first option, through the information path ("i" icon before each task in the task list), explains why each task should be executed and then provides step-by-step instructions. The second path is a fast channel that leads directly to the application (the second icon preceding each task). Using this path, the application related to the selected topic can be started and displayed beside the Install Assistant. This second path enables the user to simultaneously read and execute instructions step-by-step. Figure 2 shows an example.

The Install Assistant can also be used to change the system after the initial installation. When making changes, the application provides task descriptions with detailed information that helps users to understand why and how to make the changes.

Install and Update Software Manager

The Install and Update Software Manager provides users with a VSM application to execute the `installp` command. Figure 3 shows the Install and Update Software Manager primary window. The Install and Update Software Manager can perform many tasks.

AIX 4.1 uses bundles to simplify the install task. *Bundles* are collections of software filesets

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[1] Gibson, Georgia A., "AIX Visual Systems Management: A User's Perspective," *AIXpert* (November 1993).

Figure 1. Install Assistant

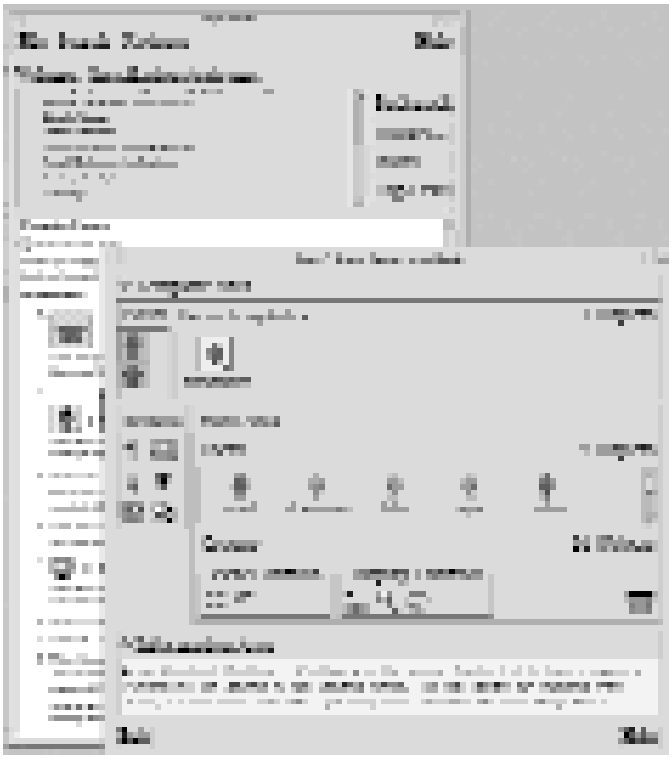

Figure 2. Install Assistant with application

or applications that would be required in a system to perform specific types of jobs. Bundles are given different names, depending on what they include. For example, software for client bundle would refer to the desktop and client versions of common applications, while the server bundle would include the server versions of software in addition to everything in the client bundle. Applications such as spreadsheets and editors would be considered a part of the personal productivity bundle of software. The Install and Update Manager helps users select the correct install device and bundle for installation.

Once users select the install device, the media is read to determine what is available on that media. The list of software available on the media is displayed in the work area. When a user selects a bundle, the Install and Update Manager selects all the software titles in the bundle that are also on the install media. This method enables users to quickly select the software they want to install. Users can select or deselect additional software titles, or specify any of the following actions for the selected titles:

- Install the selected software
- Schedule the installation to occur later
- Preview the selected software for size
- Save the selected objects as a new bundle

Hierarchical information (filesets, files, fixes, and so on) is presented to users in a tree view. Users can modify the list; they can expand or contract the tree as needed, or specify that only special sets of information—such as fileset, maintenance level, and fixes—be displayed for each object.

Users can also specify any of the following actions for the installation task.

- Show the following install settings:
  - Apply and commit
  - Install requisite software
  - Extend the filesystem if needed
  - Include language packages
- Show or change the scheduled activities
- Delete the bundle or object

Maintain Installed Software Manager

The Maintain Installed Software Manager manages software that has already been installed. With this application, users can select objects for the product list and specify any of the following actions: commit the selected software, reject the selected

software, or verify that the selected software is complete.

Again, as with the Install and Update Software Manager, users can customize the hierarchical information presented in the Maintain Installed Software Manager. In addition, they can also find specific objects by name and delete software (de-install). Figure 4 shows the Maintain Installed Software Manager primary window.

Changes to VSM Applications

The primary change to VSM visuals in AIX 4.1 is the introduction of contextual (pop-up) menus for all objects and areas. These menus enable users to view the entire range of actions that can be performed on a specific object with a click of the mouse. The VSM areas—template, action, work, and information—also have contextual menus that list the available actions in each area. These menus may include display controls, view controls, object selection, or object creation.

In addition, the shared library has been modified to improve performance. Other minor changes ensure continued conformance to OSF/Motif. These changes provide a path for future changes in Motif®, in anticipation of the forthcoming Common Desktop Environment from COSE.

Changes to Storage Manager

Storage Manager now has a more granular backup and restore action, which enables users to specify backups at the directory level and then choose to restore at either the directory level or the file level. This new version of Storage Manager still maintains support to the filesystem and volume group backup and restore.

Changes to Device Manager

Two changes were made to the Device Manager in AIX 4.1. First, the System Support Components pane was removed from the work area because the operating system will no longer support virtual terminals. The console control has been placed in a window button action and provides the same function as in AIX 3.2.5.

The second change in Device Manager resulted from the packaging changes in AIX 4.1. AIX 4.1 will no longer automatically install all device drivers on the install media; device drivers on the install media will be installed only if the system detects a need for the specific driver. The immediate effect on Device Manager is that only installed device drivers can appear in the template area, which reduces the number of templates available. If no templates for a specific class are installed, the template type button is grayed and unavailable. Also, if the Hardware Diagnostics bundle is not installed, the command to support the Create Report action may not be valid, as shown by the grayed (unavailable) state of the action icon.

Figure 3. Install and Update Software Manager

Although this restriction on installing device drivers may never impact users, users may need to add a new device after initial installation and configuration. In this case, the driver may need installation. Users can ensure that Configuration Manager will install the needed software on a system initialization by using any of the following methods:

- Inserting the appropriate install media in the install media location
- Selecting the Add Devices Automatically button
- Choosing the Add Device Software button to invoke the install from media

Changes to Print Manager

Changes to the device driver packaging also required some changes to the Print Manager. A new function button, Install Printer Software,

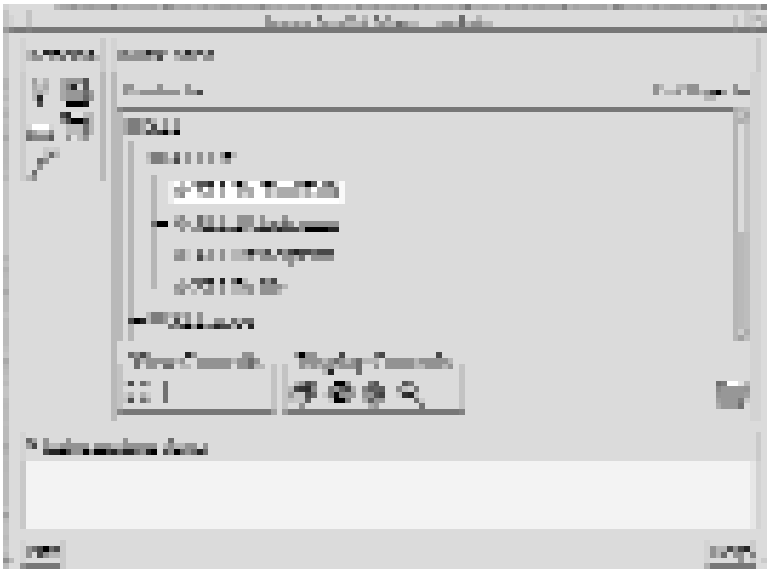

Figure 4. Maintain Installed Software manager

enables users who have added a new printer type to install the printer driver from the install media. Users can also install this media when a new printer is added by specifying Install New Printer Type in the dialog (or selecting it from the list).

Changes to Users and Groups Manager

The Users and Groups Manager experienced the following changes in AIX 4.1:

- Removal of the Set Initial Interface action, which is not supported in AIX 4.1
- Introduction of the Set Language action, which provides a dialog to set the language environment for a user (This language environment includes the cultural convention and the first three language choices for the interface.)
- Improvement of the set password dialog

Integration with the AIX Desktop

Considerable effort was made to integrate VSM with the AIX desktop being introduced in AIX 4.1. This desktop, based on COSE technology, provides a sound user interface for general system interaction. Although VSM will continue to operate fully with AIXwindows, VSM can utilize user interface technologies—such as the desktop help system and controls, desktop widgets for check boxes and radio buttons, and font and color controls—when it detects the AIX desktop. The following sections describe some of the steps that were taken to provide integration.

Display Characteristics

Because VSM has integrated with the AIX Desktop Style Manager, users can choose from a variety of font sizes and styles to specify the AIX desktop fonts and colors in their VSM applications. The color tool provides common palettes for applications; users can also personalize their displays by changing the color values within their individual palettes. The use of color can also be altered to provide additional user control by specifying selected colors to use for specific parts of the windows and dialogues.

Desktop Technology

In addition to supporting themselves as desktop objects, VSM applications use several technologies from the AIX desktop. For example, VSM uses the desktop extensions to the Motif libraries, including the drag-and-drop widget, the radio button widget, and the check box widget. VSM also uses the AIX desktop help system, which provides a superior hypertext information system.

Application Manager

VSM applications will install themselves into the AIX Desktop Application Manager. With these applications in the system management toolbox of the Application Manager, users will have a standard path for finding all VSM applications.

Summary

AIX 4.1 introduces three new applications—Install Assistant, Install and Update Software Manager, and Maintain Installed Software Manager—to the VSM family. These applications provide primary graphical software installation and configuration methods for a graphics system user. The existing applications were enhanced to provide a graphical interface for function changes. Changes also made to existing VSM applications provide better integration with the AIX desktop and also provide the original AIX 3.2.5 and new applications with a step toward full integration in the AIX version of the COSE desktop environment.

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