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On Basis

A Solution in Transition: Installing SAP®'s Solution Manager 4.0

By Eric Walter, SAP Consultant

Editor's Note: *You've probably read the low-down on "why" you'll need to install SAP Solution Manager 4.0. Not only are there some great benefits and uses, but it's becoming a must-have for future SAP landscapes. So now, the question remains "how" do you install it? Eric Walter returns to provide you with the detailed steps to get up and running with SM. This is a don't-miss article if there is a Solution Manager upgrade in your IT future!*

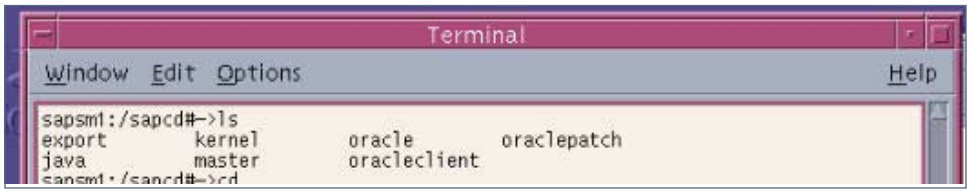

Figure 1: The Local Staging Area for Files from SAP Solution Manager Media

Why Solution Manager?

Several months ago (August, 2006), I wrote an SAPTips article titled SAP's Solution Manager: How Do You Get It, and How Do You Use It? (in the Basis Category in the SAPtips Document Library), outlining the detailed process for preparing to install Solution Manager (SM), including a discussion of its uses, benefits, and the importance of SM, as SAP is mandating it for all SAP landscapes beyond 4.7 R/3 Enterprise. In fact, SM is a prerequisite for installations or upgrades, as SAP will require key generation from Solution Manager for your entire landscape. Therefore, we can safely say that SM is "step one" to any planned landscape with NetWeaver™.

This article will cover the specific step-by-step installation procedures that you may use in conjunction with the SAP installation guide, which is downloaded from **http://service.sap.com/instguides** (SAP Components‡Solution Manager) or **http://service.sap.com/solutionmanager** (Installation guides). If you do not have the media from SAP on DVDs, you can download the software from **http://service.sap.com/swdc**.

Now that you have the software and the installation guide provided from SAP, we are ready to begin installation. The installation described in this article is accomplished using the SAP installation for Solaris and Oracle.

We can safely say that SM is "step one" to any planned landscape with NewWeaver.

Transferring Media to Local Disk

First, it is important to transfer your media to local disk on the SAP host. If you downloaded the media from the Service Marketplace, you will have a handful of zip files that will need to be extracted into a file system, where you can access them during install. I organized the files in one central directory I call /sapcd. You can see the unzipped and newly labeled directory structure as illustrated in Figure 1.

The Installation Process

Once the media is copied to the host, and the preliminary "preparation" and "planning" tasks have been satisfied (using the SAP guide), installation can begin. If you are using a UNIX environment, you must export your DISPLAY variable Installation begins from the master directory. From there, you can see all flavors of operating systems. Navigate to the correct directory, and begin the installation, using SAPinst. The entire process for launching SAPinst is shown in Figure 2.

Choosing Your Database Vendor

Once SAPinst is executed, the rest of the SAP installation process will be GUI driven. Figure 3 shows the initial installation menu screen. This is the point that you will choose your

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database vendor for the central system installation.

Define Parameters

The following are the parameters you must set up for your system.

Defining Your Java Component

As you continue through the installation (after choosing your flavor of database), you will be asked by SAPinst if your installation is a "new installation" or "continued installation"; the latter is only asking if you started an installation and cancelled it. Once you pick your option here and continue with the "OK" button, you will be prompted for the directory location of the media for the SAP Java Component. From this point, use the "Browse" button in the GUI, and navigate to the directory where you have copied the "Java media". Figure 4 illustrates this.

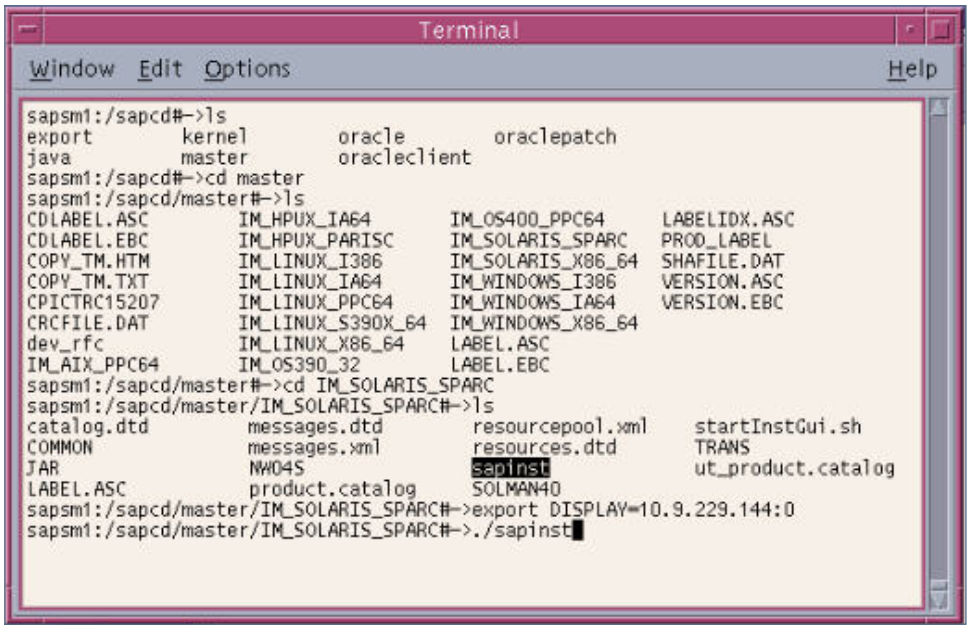

Figure 2: SAPinst Navigation from the SAP Solution Manager Media

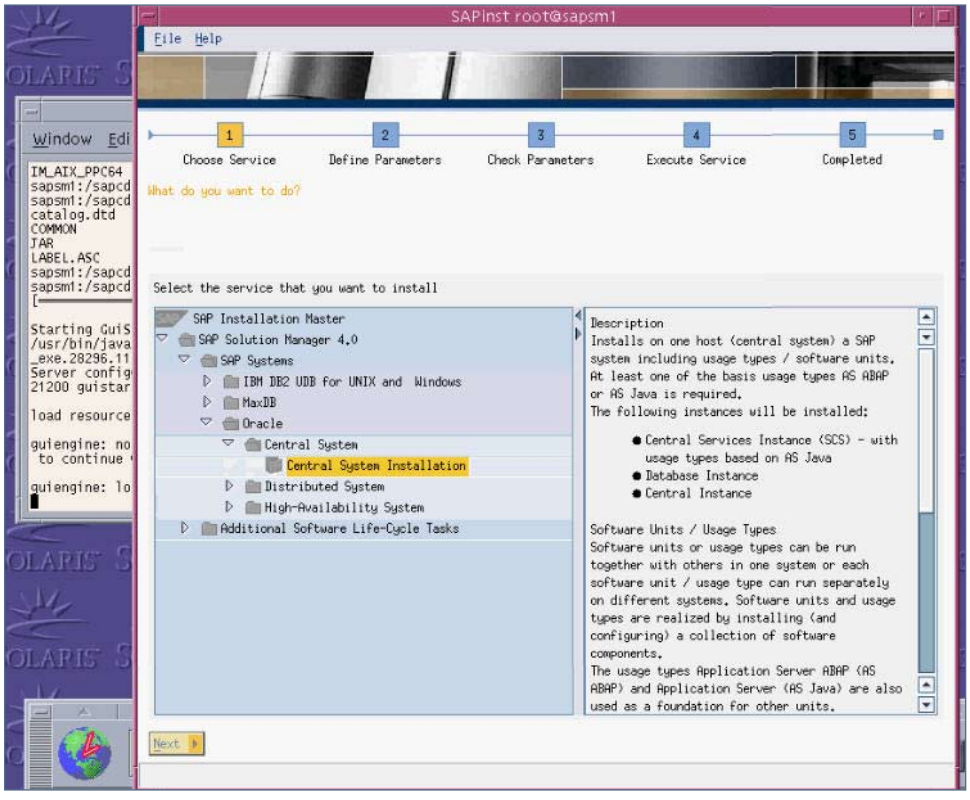

Figure 3: Initial SAP Solution Manager 4.0 Installation Screen

Next, you will be prompted for the location of the Java executable. The minimum versions to be used must be 1.4.2_09 or 1.5.0. Due to the changes in US Daylight Savings Time, however, it is advisable to use at least 1.4.2_12 (if you are not yet using 1.5.0). You can also see the native location of Java being used in your operating system (if you are using UNIX) with the command, "which java". You can see the version of any Java installation with the command, "java –version".

Once you have confirmed your Java version and continued the installation, you will need to define the location for the Java Cryptography Extension (JCE) Policy. The JCE provides the encryption, key generation, and key assignments to make your system secure for use with other providers. More information on this topic may be found at http://java.

sun.com/products/jce/javase.html . This link also offers links to third-party providers, and the location to download the zip file needed to continue installation for JCE. Figure 5 shows what the JCE input (with the proper zip file) may look like.

Entering the SAP System ID

The next step is to input the SAP System ID, which is generally referred to as "SID", along with the sapmnt directory. If you are not familiar with the /sapmnt filesystem, it is a file system that is linked symbolically to the SAP system files. The SAP files physically reside in the /sapmnt/SID directory; however, they are linked to /usr/sap/SID/. This is especially useful when using external application servers that connect to the central instance. This is what allows for the kernel to be installed only one time on the central instance; however, when SAP is restarted, it is seen on all application servers as well. This concept is illustrated in the telnet screen shown below in Figure 6, along with the SAPinst entry, to define these directories.

Password, Database ID, and Host Name

The next screen will prompt for a password for future use of keystore generation; commit this to memory. Once this is done, you will need to enter the information for the Database ID. I would recommend using the same SID you defined earlier for your instance parameter. This will avoid much confusion later when your SAP system is up and running. You will also need to input the database hostname here. In this example, the database will be installed on the same machine as the central instance. Figure 7 shows the parameter screen.

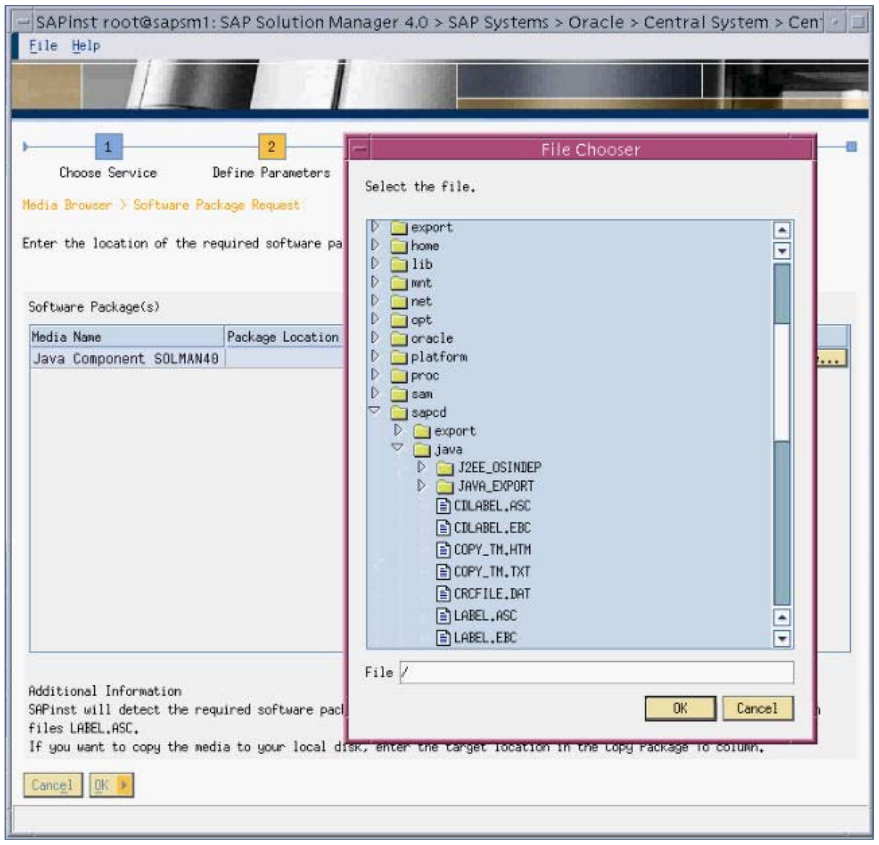

Figure 4: Defining the Location for Installation of the SAP Java Components

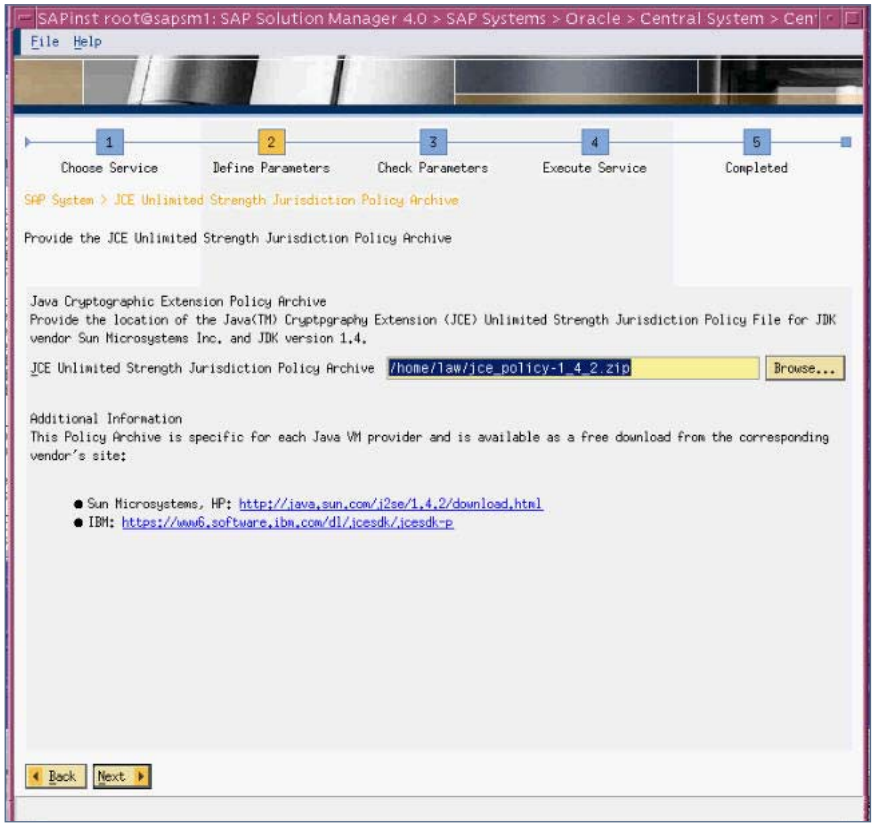

Figure 5: Java Cryptographic Extension Input Screen for SAP SM 4.0the SAP Java Components

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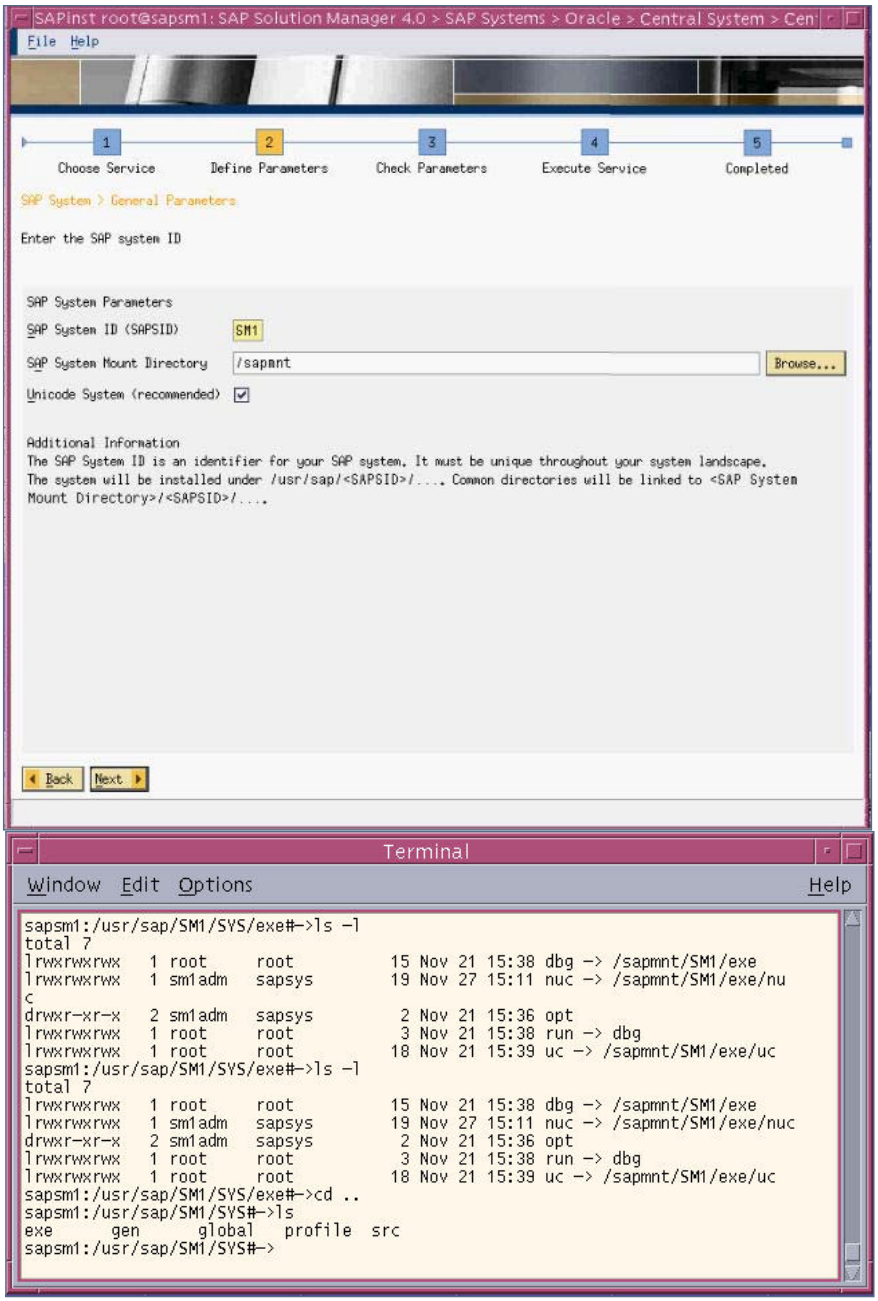

Figure 6: Definition of the SAMNT Directory in SAPinst

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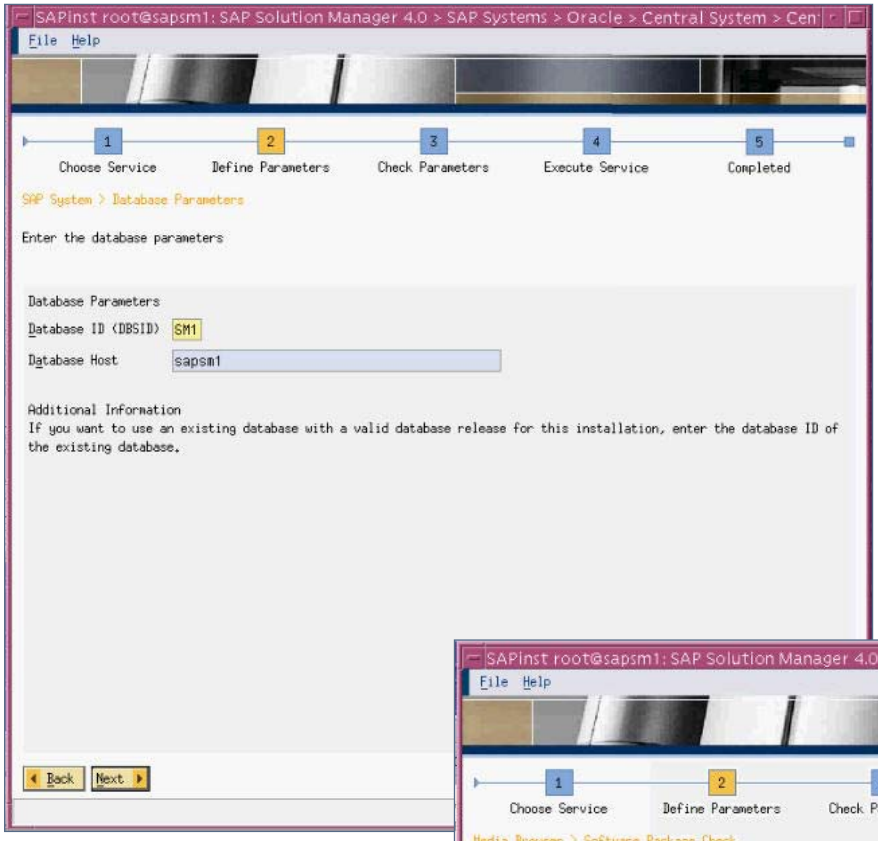

Figure 7: Example Database Parameters for Solution Manager Installation

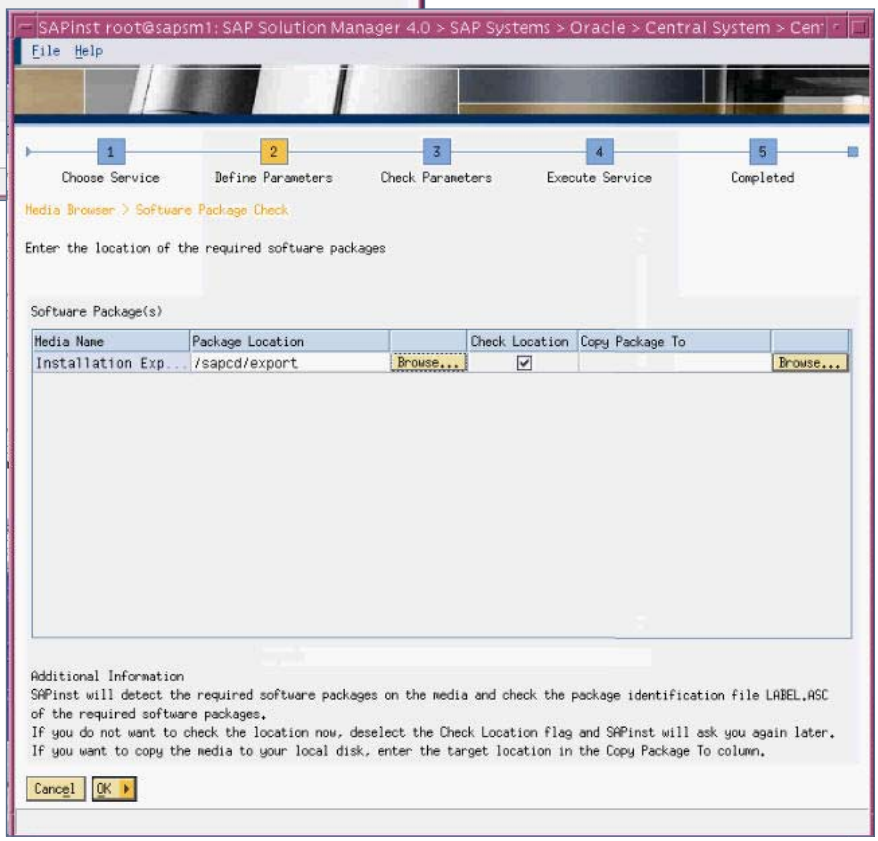

Figure 8: Parameter Definition for the Export Media Provided from SAP

Installing the Database Files

Once you confirm these parameters, SAPinst will begin to install the database files. In addition, this process will also update user parameters at the operating system level. In this installation with UNIX and Oracle, the two SAP users are SIDadm and oraSID, where SID=System ID defined in the previous screens. These two users will have their environment variables set and file permissions will be updated so SAP can be run when the installation has completed.

After these files have been updated, the SAPinst utility will be ready to install the database binaries and build your Solution Manager database. You will then be prompted for the location of the export media. You can use the "Browse" button again to locate the /sapcd/export directory, as shown in Figure 8. This will check the label and note the data directory for population once the Oracle binaries are installed.

Once the export CD directory is noted, SAPinst will prompt for the location of the Oracle installation binaries.

Note: All of this media should be from SAP, not a third-party database vendor. Whether you are installing Oracle, DB2, or SQL server, do not use the media provided by Oracle, IBM, or Microsoft for this installation. Figure 9 shows the entry screen for the Oracle software installation.

Entering the Database Client Software and the SAP Kernel Software

Soon after the RDBMS input, you will be prompted to enter the final two components for the SAP installation. These are the database client software and the SAP kernel software. Figure 10 shows the screen you will use for this entry.

We are almost there! The next screen will prompt you to unpack some SAP "SAR" files. Continue by clicking "Next"; you will be prompted for information regarding your System Landscape Directory. You should select the default here as well for "Register in existing SLD". Next, enter the information you would like to use for your host and port numbers for this SLD.

...the final two components for the SAP installations... are the database client and the SAP kernel software.

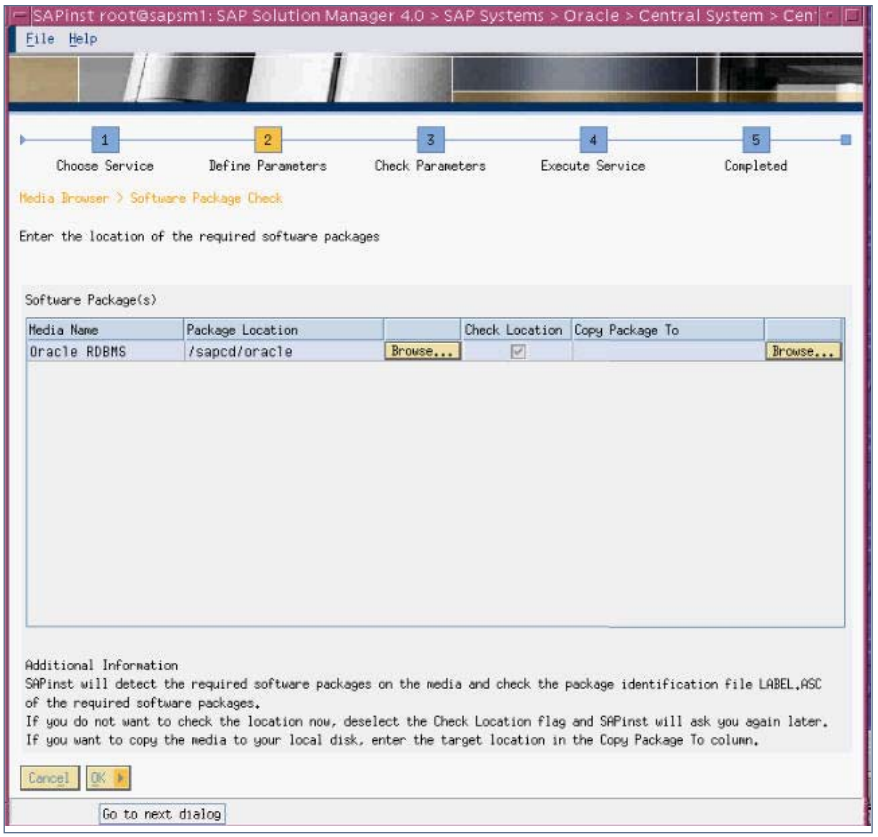

Figure 9: RDBMS Software Installation Input

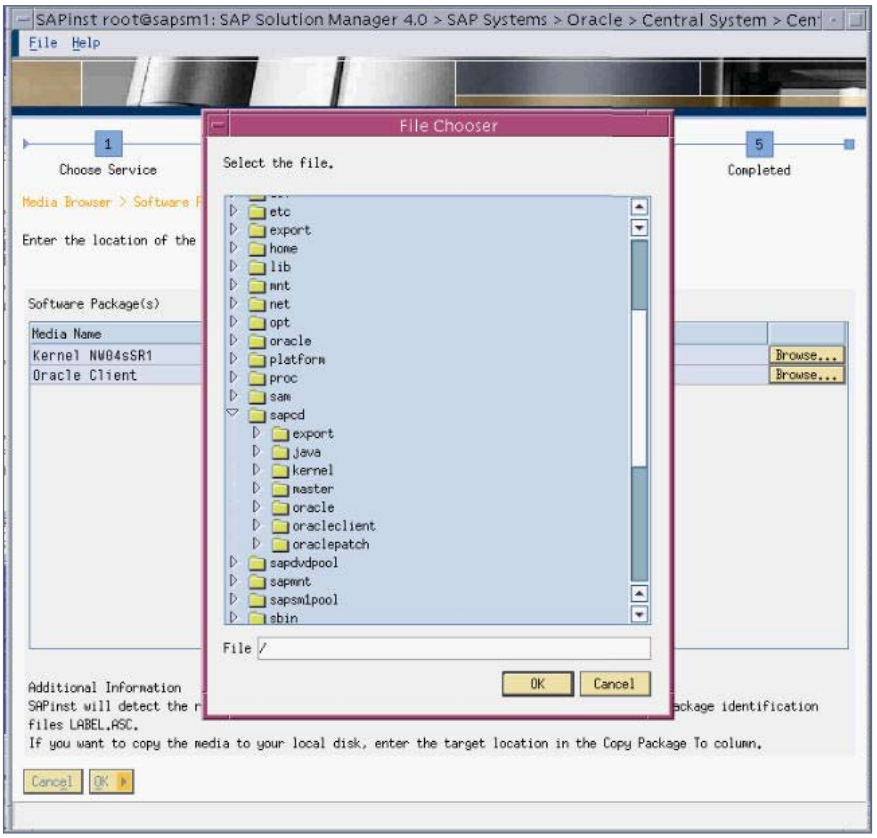

Figure 10: SAPinst Screen for Kernel and RDBMS Client Input

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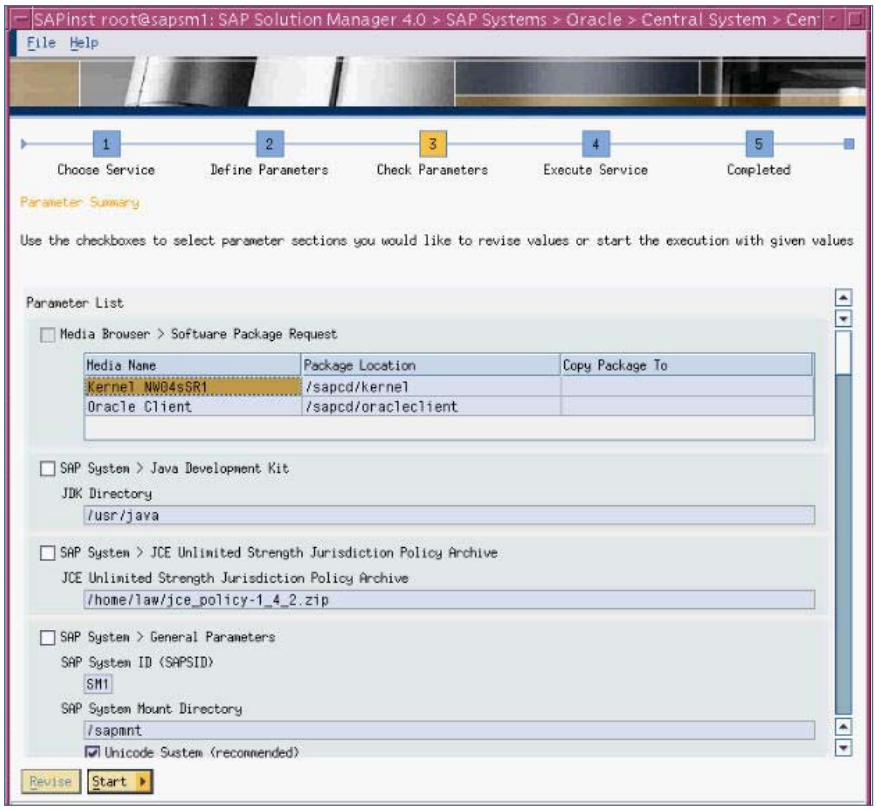

Figure 11: Final Confirmation for System Installation Parameters

Once you pass the "Create Users" portion of this process, you are most likely home free. You can continue to monitor its progress, but SAPinst should take care of putting everything in place. Figure 12 shows a snapshot of the GUI while it is running. This will take quite some time, so you should get a cup of coffee, or put this in the background and work on something else while occasionally monitoring it.

Once SAPinst is completed, you should be ready to start your new SAP system. You can login to your OS environment as SIDadm and run the command startsap. The system should startup like any other SAP system. Next, configure the SAPGui with an entry for your new Solution Manager. You can then log in to the SAP system as SAP* with password "pass", to install a valid license key.

Check Parameters and Execute Services

Finally, your input parameters will be displayed for your final confirmation. You can then click on the "Start" button, as shown in Figure 11.

Once you click "Start", SAPinst will build the entire SAP environment. You can track the process of this "Execute Service" phase by monitoring the GUI, as shown in Figure 12. If you encounter any errors along the way, a pop-up box will give a brief description of the error. You can click on the "View Log" button (that will be in the bottom of the pop-up box) for a detailed explanation of the error.

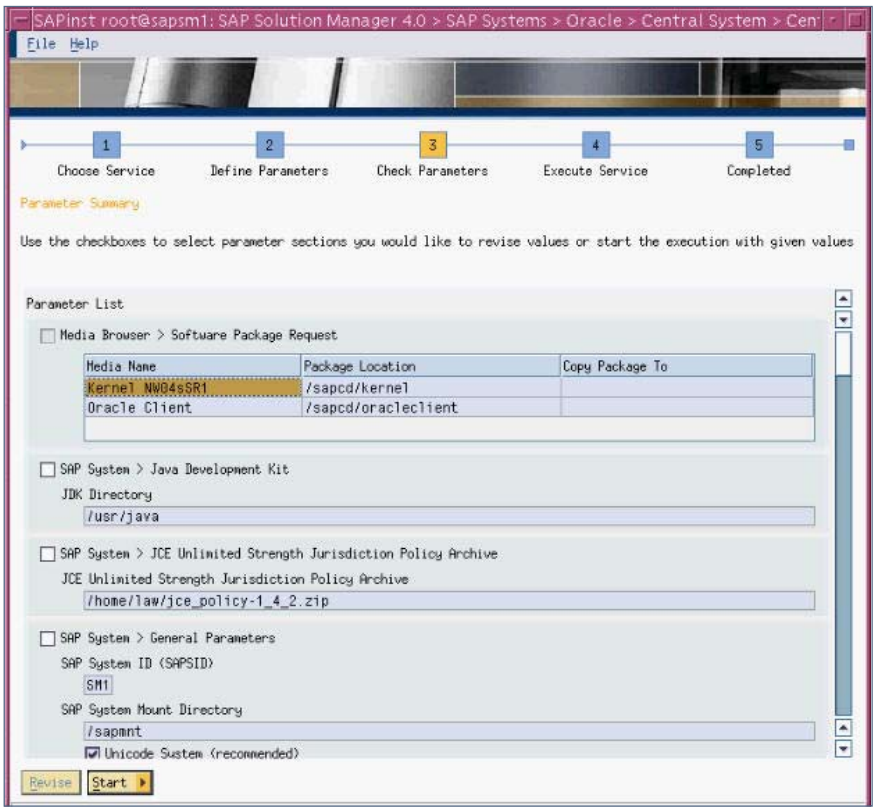

Figure 12: Execute Service Phase of SAPinst for Solution Manager.

Your system is now ready to perform the post-installation procedures, as outlined in the SAP Installation guide. Once completed, you can hand the system over to the functional team for productive use.

Conclusion

It may take a few steps to install, but SAP Solution Manager 4.0 is necessary and mandatory in the future of your SAP landscape. Keep this article handy—you may be ready to pull it out sooner than you think!

Eric Walter *is a senior consultant specializing in SAP Basis technologies along with J2EE and Java integration with SAP.* He has eight years of experience with SAP R/3 Basis and security, UNIX administration, Oracle database administration, and five years with Java technologies, integration servers, and portal environments. In this time, he has led and supported numerous public and private implementations of these technologies along with developing and implementing architecture at all levels, from programming interfaces to hardware improvements and upgrades. Contact Eric at: Eric.Walter@SAPtips.com.