

Distributing Development Tools Made Easier: The New Update Server for SAP NetWeaver Developer Studio

Applies to:

SAP NetWeaver; SAP NetWeaver Composition Environment; SAP NetWeaver Developer Studio

Summary

According to our strategy of leveraging the Eclipse platform for our development and modeling tools as much as possible, we are now adopting Eclipse's Update Server technology for the SAP NetWeaver Developer Studio. The article explains how this changes the Studio's delivery process and tells you how you can benefit when distributing SAP's development tools in your organization.

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The New Update Server for the SAP NetWeaver Developer Studio

Providing a team of developers with the right set of development tools can be a tricky task, especially if the set of tools comes from different vendors, or even contains freeware or open source ingredients. There is a related task, however, that can be even harder, although it needs to be done much more frequently: Making sure that the team members get equipped with new versions of their tool sets whenever they need them.

An Update That Works by Features

Much of this task depends on the installer that is available for the job. Up to SAP NetWeaver 7.0, our Eclipse-based Java development environment SAP NetWeaver Developer Studio (NWDS) had an installer that followed a very simple scheme. It more or less deleted any existing version of NWDS and installed the new one with full functionality from scratch. This simple scheme worked well, because the NWDS was used mainly by smaller development teams, consisted of only a moderate number of individual plug-ins, and did not tolerate any third-party tools to co-exist with it in the same instance of Eclipse.

But now, all this is changing: Large teams are developing Java applications with NWDS in many customers' projects, the number of tools that the NWDS offers is growing steadily, and finally openness towards third-party offerings has become a pillar of SAP's tools strategy. It's about time for a new approach that handles issues such as customized configurations, the upgrade of existing installations, and third-party Eclipse plug-ins with much more sensitivity.

The new installation procedure for the SAP NetWeaver Developer Studio 7.1 takes care of all this. As of SAP NetWeaver Composition Environment (CE) 7.1, the Studio's functionality comes nicely packaged into separate features, with each feature bundling the tools for a specific task, e.g. developing user interfaces, composite apps, or Java EE artifacts. Now that we are about to ship service pack SP03 for SAP NetWeaver CE, we extend on this modularity by using the feature concept also for NWDS updates. For this purpose, we introduce a new mechanism: The Update Server for SAP NetWeaver Developer Studio.

The Eclipse Update Server Explained

If you are already familiar with the Eclipse environment – beyond using it as a basis for SAP NetWeaver Developer Studio – then the Update Server will be nothing new for you. What is new, however, is that the SAP NetWeaver Developer Studio is now modeled after the Update Server's notion of "features", so that it can utilize the technology's capabilities for its own benefit:

- First of all, the plug-ins that the SAP NetWeaver Developer Studio brings into Eclipse are entirely grouped into features. Overarching "top-level" features collect all the features that you will need for a specific type of development work. These top-level features constitute the installable units.
- SAP provides an Eclipse Update Server that comes pre-filled with all our feature content. The Update Server knows the top-level features and all the dependencies among features. Based on this information, the Update Server makes sure that no dependent feature gets installed or updated without installing or updating every other feature it depends upon.
- Eclipse comes equipped with a built-in client, the so-called Update Manager, which can access the Update Server. In the Update Manager you specify which top-level features you want to have installed in your instance of the SAP NetWeaver Developer Studio. The Update Manager will then retrieve the contents of each top-level feature and install it on your computer.
- Later on, you can always return to the Update Manager to search for new versions of the features you installed earlier and to have them updated accordingly. And of course, you can always add new features or features that you chose not to install earlier.

To deliver the SAP NetWeaver Developer Studio to individual developers, SAP now provides two installers:

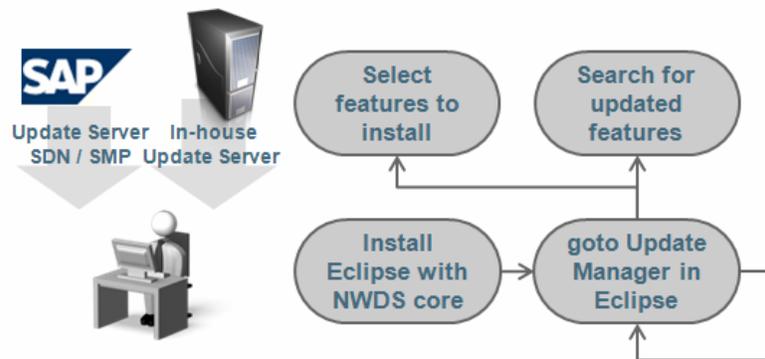
- One installer can create an instance of the Update Server, fully equipped with all the pre-filled NWDS content, which runs on an SAP NetWeaver Application Server inside an organization.
- Another much smaller installer is used to set up an instance of Eclipse on a developer's computer that has a pre-configured connection to a given Update Server and a small NWDS core component inside.

When the new instance of Eclipse starts the first time around, the NWDS core will make the Update Manager connect to the Update Server and let the user choose which top-level features to install. From then on, the developer can individually control the life-cycle of the NWDS features in the Update Manager. Only a major version update of Eclipse will demand a fresh installation of NWDS on the developer's computer.

SAP Global and In-house Update Servers

Apart from the finer granularity of units that you can install or update, the introduction of the Eclipse Update Manager brings another, probably even more important advancement: We can now use the Update Manager technology to ship new versions of SAP NetWeaver Developer Studio to our customers! With the release of CE 7.1 SP03, we will set up an instance of the Eclipse Update Server in the SAP Service Market Place, which will always offer the latest available version of SAP NetWeaver Developer Studio for customers to install. For the rest of the outside world, we plan to set up a similar Update Server in the SAP Developer Network that delivers trial versions of our software.

Every developer in the world could then configure his or her individual installation of NWDS to go to one of SAP's central Update Servers and check for available updates. Whenever the Update Manager identifies a new version of any feature that is locally installed, it would download this new version from the Update Server and install it on-the-fly.



Please note, however, that the new technology also allows for a staged scenario: Many customers will want to run their own copy of the NWDS Update Server – either for the sake of better network bandwidth or for better governance of the NWDS version that is available to individual developers. Since NWDS updates often have to be synchronized with updates of the SAP NetWeaver Application Server (AS), we offer the possibility to automatically update an NWDS Update Server together with the instance of SAP NetWeaver AS that it runs on. In this way, the administrator can make sure that the NWDS Update Server always offers exactly the version of the NWDS feature content that matches the release version of SAP NetWeaver AS.

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