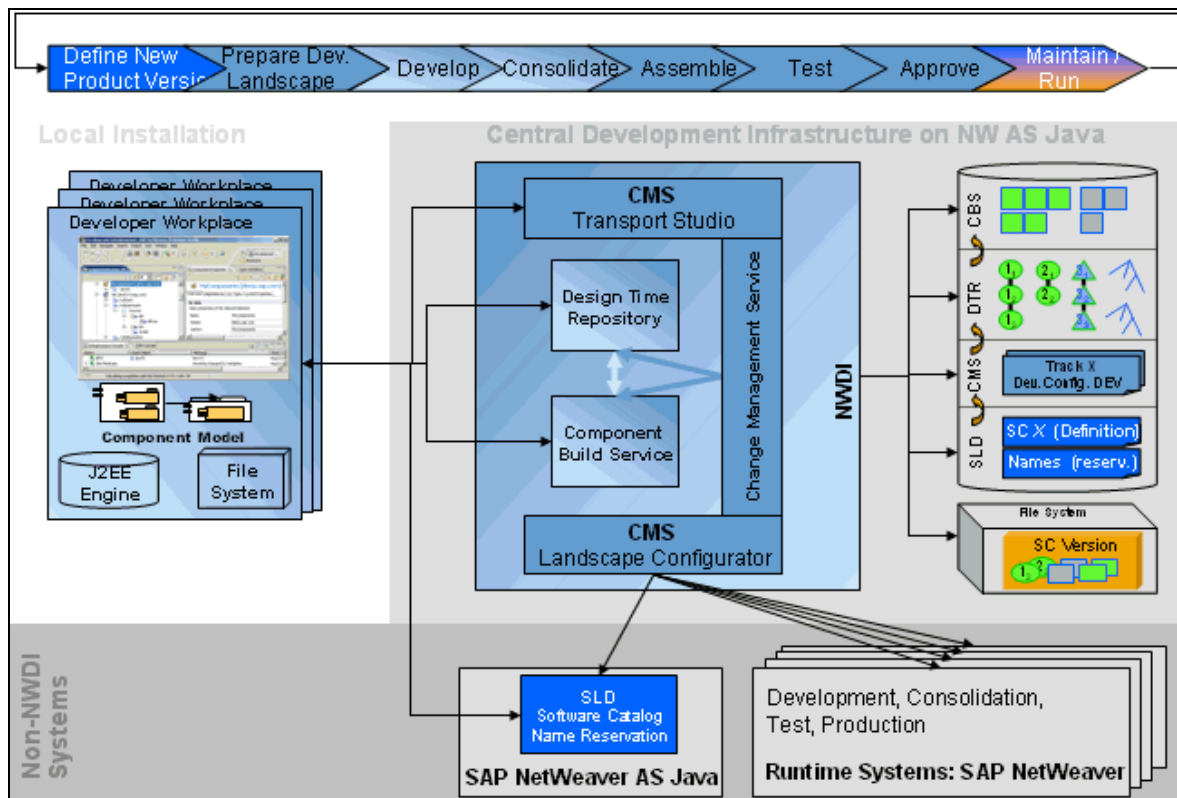


SAP NetWeaver Development Infrastructure

Enhancing J2EE Development with proven Software Logistic Concepts

Project Summary

SAP NetWeaver Development Infrastructure, shipped as usage type DI of the SAP NetWeaver – or shortly NWDI – is bringing the powerful SAP software logistic concepts to the Java world. Its advantages are evident for medium and small teams, but are obvious especially during the creation of extensive server-based business application that require large developers teams.



Elements of the NWDI

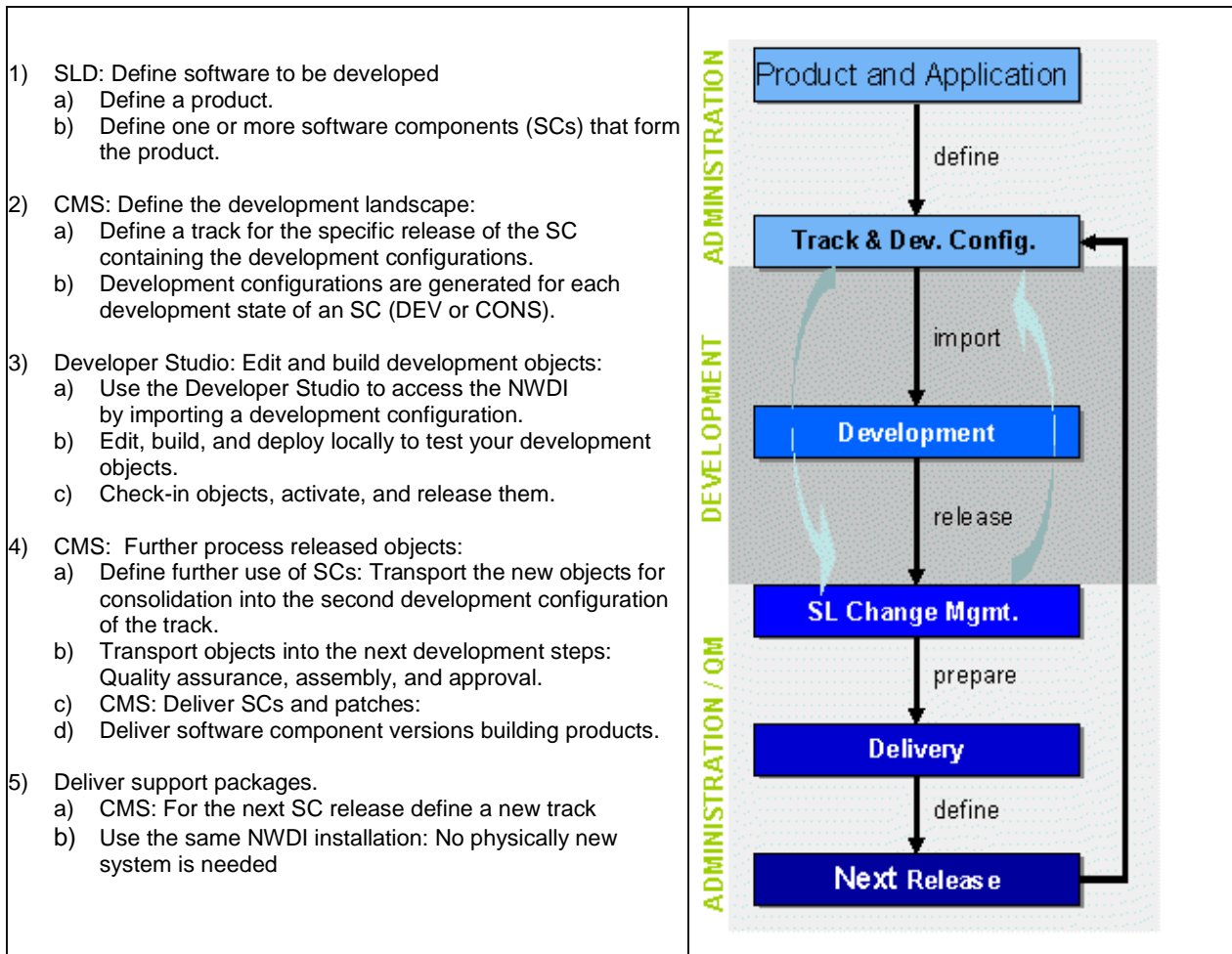
Development Infrastructure – Overview

SAP Development Infrastructure consists of a set of closely coupled central services for the design, implementation, build and test, both in a local and in a central environment. All units are considered as the well defined components according to SAP's component model, improving software reusability and management of the various dependencies on application modules.

- **Design Time Repository (DTR):** Central storage, versioning and management of java sources and other resources with an automated conflict detection and resolution. The DTR-workspace concept separates development tasks from each other, defining project-specific access for different development tasks. Its versioning mechanisms allow the synchronization of different DTR servers - this is the basis for distributed development and a modification and update concept for customers.

- **SAP's component model** adds information about the structure of applications to pure Java-based development. All objects of development such as Java classes stay the same but there is additional meta data added. All objects are developed in development components which define the visibility of objects and define the way objects can be reused. The component model is the basis of the new build process with the CBS.
- **Component Build Service (CBS):** Central archive management and build processes. The developer can initiate the central build process directly via the SAP NetWeaver Developer Studio. The CBS performs the build based on development components on the developers' requests and automatically rebuilds dependent components requesting the required resources automatically from the DTR creating corresponding runtime objects. Besides the build process, the CBS manages all archives needed during development. Like the DTR the CBS hosts buildspaces, which are set up specifically for each development phase. The developer accesses the CBS directly via the SAP NetWeaver Development Studio.
- **Change Management Service (CMS):** The CMS is used at the beginning and the end of development. 1st, the development environment is configured in the *Landscape Configurator*. This defines the developers' access to the central systems (DTR workspaces and CBS buildspaces). When implementation has been tested successfully, the 2nd phase starts: CMS takes the results of the CBS build process and starts the consolidation, assembly, and approval of the newly developed software. The result of this is an software component archive for distribution and deployment into the J2EE server environment.
- The CMS is linked to the **System Landscape Directory (SLD)**. The SLD is not directly part of the NWDI but contains the software catalog: All new products to be developed in the NWDI have to be defined here first. The Software Deployment Manager (SDM) resides in the SAP Web Application Server. An SLD can also be used as a name service that guarantees the the uniqueness of object's names created using the NWDI.
- **SAP NetWeaver Developer Studio:** The common front-end connection to the Java Development Infrastructure of SAP NetWeaver. Application developers can easily develop, build, configure, deploy, execute and (remotely) debug applications centrally from the SAP NetWeaver Developer Studio. The Developer Studio fully supports development of components and integrates the developer's access to all services of the NWDI.
- **Deployment Tool as of SAP NetWeaver 7.1 CE** as a successor of the **Software Deployment Manager (SDM)** resides in the SAP NetWeaver Application Server. These tools are responsible for installation and updating of software components in the J2EE server. It also provides modification support on demand. Each time a new component version has to be deployed, the CBS consults the SDM on the target system. This process can be initiated via the SAP NetWeaver Developer Studio. SAP Java Test Tools consist of several test and debug plug-ins within the SAP NetWeaver Developer Studio. You can easily test, debug, start and stop a component running inside a local or a remote instance of the SAP Web AS. The **JVer** is SAP's Java Unit Test and Verification Framework. The **JLin** tool provides with static Java code analysis.
- **Java Dictionary** supports the global definition of tables and data types
- **SAP Java Test Tools** consist of several test and debug plug-ins within the SAP NetWeaver Developer Studio. You can easily test, debug, start and stop a component running inside a local or a remote instance of the SAP Web AS. The **JVer** is SAP's Java Unit Test and Verification Framework. The **JLin** tool provides with static Java code analysis.

The services named above take care of all aspects of development and software production. They are seamlessly integrated into one development process, which guarantees a consistent development environment and provides a clearly defined way for administration and quality management of all phases of development:



Comprehensive software life-cycle management for Java applications with SAP NetWeaver

Feature List

The SAP NetWeaver Development Infrastructure brings support for all phases of the software life-cycle:

- Fully integrated services for the complete software life-cycle running on SAP NetWeaver
- Centralized administration of the development environment
- Access to all objects stored in the NWDI for developers in the SAP NetWeaver Developer Studio
- Synchronization of development on sources *and* archive level
- Versioning across repository boundaries, allowing for a customer modification concept
- Development environment used by SAP's customers, partners and SAP's own development
- As of SAP NetWeaver 7.0 integration of the transports in the NWDI with the ABAP Change and Transport System is available

Related Content

- Design Time Repository
- Component Model & Component Build Service
- Change Management Service

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