System Landscape Directory of SAP NetWeaver®

Boris Zarske
Senior Product Specialist, SAP AG
Learning Objectives

As a result of this lecture, you will have learned:

- Learn about the role of system landscape directory (SLD) of SAP NetWeaver®, its functions and new features
- Basic concepts and features of SLD
Introduction to SLD
Introduction to SLD

Motivation

Summary
**SLD: The Basic Idea**

**Applications and Tools**
- SAP NetWeaver PI
- Software Lifecycle Manager
- Web Dynpro Runtime
- SAP Solution Manager
- SAP NetWeaver Administrator
- Partner Applications, ...

**Customer Landscape**
- Landscape description
- Component information
- 3rd-Party / Customer Component Types
- CIM*

**Master Component Repository**
- Applications
- Scenarios
- Software Units
  - Usage Types
  - Appl. Comp.
- Landscape Patterns
  - Possible Combinations

**Update**
- Regular manual task ➔ SAP Note 669669

**Synchronize, XML**
- PPMS System

*Common Information Model – Object-oriented industry standard of the DMTF*
**Motivation (cont.)**

**Approach:**

Provide one **central provider of landscape information**:

- **Catalog of installable software:**
  All components that can – theoretically – be installed
  → *Component information repository*

- **List of installed software** (including technical details)
  → *Landscape description*

**Result:**

- Landscape data is gathered + updated automatically
  - No manual gathering (from SAP Service Marketplace + every system, …)
  - Data stored centrally + consistently (not in Excel sheets, for example)

- Stored information can act as **basis for different tools and services**
Key Features of SLD

- SLD is a component of SAP NetWeaver® and completely implemented with Java technology.

- Based on proven industry standards of DMTF*:
  - Common Information Model (CIM):
    - Object-oriented modeling
    - Extensibility
  - Web-Based Enterprise Management (WBEM):
    - Mapping of CIM operations onto HTTP
    - Access to CIM data in an open and standard way

- Openness:
  - 3rd-party software as data provider
  - 3rd-party software as data consumer

* Distributed Management Task Force – www.dmtf.org
Key Features of SLD (cont.)

How to get it?

- SLD contained in Application Server Java (AS Java) systems
  - As of SAP Web Application Server Java 6.40
  - No further installation required, only quick configuration to activate SLD in a system

- Easy configuration to connect existing systems to SLD (data suppliers)

- For newer SAP products, configuration of SLD and data suppliers already included in standard implementation procedure (SAPinst)

How to access it?

- http://<hostname>:<HTTP port>/sld
SLD Web-Based User Interface: Initial Page

The System Landscape Directory (SLD) maintains information about all installable and installed elements of your system landscape.

- **Landscape Description**
  - Technical Landscape
  - Landscapes
  - Business Landscape

- **Component Information**
  - Reservation for Java Development

- **Software Catalog**
  - Products
    - View products in the SAP Software Catalog.
  - Software Components
    - View software components in the SAP Software Catalog.

- **Development**
  - Name Reservation
    - Manage name reservation for NetWeaver development.
Information Stored in SLD: Component Information

- **Software catalog provides information about all available SAP software**

- **Includes available version numbers and patch levels**

- **Dependencies between components and other relations:**
  - Supported platforms and releases for OS, DB, ....
  - Allowed combinations (integration matrix – inter-product dependencies)

- **Data provided by SAP** (regular update from SAP Service Marketplace)

- **Basis for the description of the system landscape**
**Installed systems** with comprised products and components

- Includes **installed** versions and patch levels

- System **topology information** (addresses and links)

- Data by/for **SAP NetWeaver Process Integration**:
  - Application business system names
  - Transport targets for directory content transports
  - Software component versions
Landscape Description (cont.)

Customer Landscape

View and define systems and servers.

Technical Systems

Technical System Type: Web AS ABAP

<table>
<thead>
<tr>
<th>Name</th>
<th>Host</th>
<th>Version</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB0 on db_host_00</td>
<td>db_host_00</td>
<td>46C</td>
<td>07/28/2005 15:46</td>
</tr>
<tr>
<td>AB1 on db_host_1</td>
<td>db_host_1</td>
<td>46D</td>
<td>07/28/2005 15:46</td>
</tr>
<tr>
<td>BW5 on localhost</td>
<td>localhost</td>
<td>46D</td>
<td>08/06/2005 15:17</td>
</tr>
<tr>
<td>BW6 on bw6_host</td>
<td>bw6_host</td>
<td>46D</td>
<td>09/05/2005 13:59</td>
</tr>
<tr>
<td>BW0 on bw0_host</td>
<td>bw0_host</td>
<td>46D</td>
<td>05/23/2005 13:49</td>
</tr>
</tbody>
</table>

ABAP Technical System Details for: AB0 on db_host_00

- System Name: AB0
- System Home: db_host_00
- Installation Number: 0123456789
- Release: 46C
- Description:
- Administrative Contact:
- TMS Domain:
- TMS Transport Group Name:
Landscape Description (cont.) – Installed Products

ABAP Technical System Details for: AB0 on db_host_00

- **Product**
  - SAP R/3, 4.6C

- **Product Name**
  - SAP R/3

- **Product Version**
  - 4.6C
Introduction to SLD

Data Suppliers

Summary
Data suppliers collect and send data of systems to SLD:

- Must be set up once per landscape element
- After that, they send reliable and up-to-date data automatically:
  - At the system startup
  - Periodical reporting (batch job)
The architecture of the data supplier for ABAP-based systems:

- The data supplier within an ABAP-based system periodically delivers collected system information to SAP Gateway (required additionally).
- SAP Gateway routes information to SLD bridge (part of SLD).
- SLD bridge transfers this information (as CIM-compliant data) to SLD.
- Data suppliers are available for ABAP-based systems as of release 4.0B (SAP_BASIS/SAP_ABA).
Data Supplier – ABAP-Based Systems

System Landscape Directory: Local Administration

Global Settings
- Transport Information
  - Automatic RFC Destination
  - Explicit RFC Destination
- Other Settings
  - Schedule background job?
    - 726 Minutes

SLD Bridge: Gateway Information
- Host: sickmain
- Service: sappgw47

Data Collection Programs
- Active
- Sequ
- Program Name
  - SLD_APPL_SERV
  - SLD_ASSOC
  - SLD_BCSYS
  - SLD_CLIENT
  - SLD_COMPsys
  - SLD_DSYS
  - SLD_GWSRV
  - SLD_INSTSC
  - SLD_INSTSP
  - SLD_IPSERV
  - SLD_MSGsrv
  - SLD_RFC

Transaction RZ70
Architecture of data supplier for Java-based systems:

- **SLD bridge** (part of SLD) serves as an HTTP servlet which receives system data reported by Java data suppliers and forwards them to SLD

- Data suppliers are available for Java-based systems as of SAP Web Application Server Java 6.30
Architecture of data supplier for non-ABAP, non-Java-based systems:

- SLDREG, available as of SAP NetWeaver 7.0
- Can be used for SAP (such as TREX) or non-SAP components
Introduction to SLD

Overview of Data Consumers (SLD Clients)

Summary
Information in SLD as Foundation for SAP Applications

Software Lifecycle Manager of SAP NetWeaver

Web Dynpro Runtime

SAP NetWeaver Development Infrastructure

Partner applications and other clients

SAP NetWeaver Process Integration

SAP NetWeaver Administrator

Adaptive Computing Controller

SAP Solution Manager

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Your SLD Topology – A question of Your Requirements

Different topology options with different advantages and disadvantages

→ No general recommendation that fits all use cases

→ Depends on your requirements + your landscape

For more information, see the Planning Guide – SLD (available in SAP Service Marketplace at service.sap.com/sld)
Introduction to SLD

Summary
Summary

SLD:

- SLD acts as central information provider in your system landscape
  - Using the SLD helps to reduce the redundancy of system landscape information
  - SAP systems inside a landscape report data automatically to the SLD
- SLD serves as the landscape data foundation for applications based on it
- Based on your requirements, we offer different options how and where to run SLD in your landscape
  - Plan your SLD landscape strategy well in advance
  - Starting point: Planning Guide – SLD
Further Information

Public Web:
www.sap.com
SAP Developer Network: www.sdn.sap.com → IT Practices and IT Scenarios → Software Life-Cycle Management

SAP Service Marketplace:
SAP Service Marketplace: service.sap.com/sld
(How to plan your SLD system landscape)
(How to set up SLD in an AS Java system)
Master Guide – SAP NetWeaver available under service.sap.com/installnw70
(Information about shared services + how to run them together with SLD)
## Further Information – List of Important SAP Notes for SLD

<table>
<thead>
<tr>
<th>SAP Note Number</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>935474</td>
<td>Grouping SLD instances</td>
<td>Describes how you can merge two SLDs by importing the content of one SLD into another SLD.</td>
</tr>
<tr>
<td>936318</td>
<td>Splitting an SLD instance</td>
<td>Describes how you can split an SLD into two or more instances.</td>
</tr>
<tr>
<td>935245</td>
<td>Importance of “Object Server” SLD parameter</td>
<td>Describes the consequences of changing the object server, which could be required to split or merge SLDs.</td>
</tr>
<tr>
<td>720717</td>
<td>Reduce the number of System Landscape Directories (SLD)</td>
<td>Describes manual actions you have to perform for SAP NetWeaver Process Integration if you merge multiple SLDs.</td>
</tr>
<tr>
<td>954820</td>
<td>Compatibility of SLD in the system landscape</td>
<td>Gives information about released combinations of SLD server and SLD client releases.</td>
</tr>
<tr>
<td>764393</td>
<td>Configuration of the SAP System Landscape Directory</td>
<td>Contains further information about the required number of SLD instances in a landscape and how to synchronize them.</td>
</tr>
<tr>
<td>669669</td>
<td>Updating the SAP Component Repository</td>
<td>Describes how you can perform the manual update of the component information and of the CIM model</td>
</tr>
</tbody>
</table>
THANK YOU FOR YOUR ATTENTION!