

# **Generic software application enhancement and development framework**

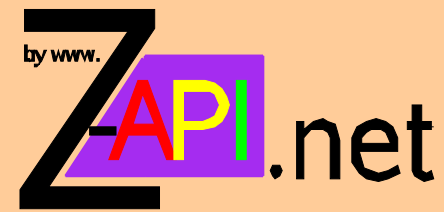
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## **service oriented architecture (SOA)**

Technical concept of a generic 4 layer data model based on Organizational Data, Characteristics Data, Product List View and Basic View.

Products and or Service are represented by dynamic runtime objects.

# 1 SOA - Scope



shared software services associated with high complex organizational structures and usage types

## **Enhancements of complex used standard components**

- preconfigured processes / applications
- parallel development on same enhancements / components
- remove of “hard-coded” organizations, characteristics etc.

## **general development of configurable applications**

**generic, efficient and high flexible customizing and configuration framework**

**Development of reusable, redefine able, version able software applications**

**Process / Service related approach (SOA)**

# 2 SOA Layer model

## - **Process view**

Keys: Organizational Structure  
Company Code + Sales Org.

Which Organization is using that Process?  
Which Service is assigned to that Organization?

## - **Service view**

Keys: Application Characteristics  
Order Type + PM Activity Type

Which Characteristic is using this Service?  
Which Product List represents this Service?

## - **Product list view**

Which Products represents the Product List?  
How is a Product defined?

## - **Basic view**

Runtime Objects + Configuration  
Settings

# 2 SOA Layer model – Process View



## - Process view

**Keys:** Free defined Organizational Structure (hierarchal)

Company Code + Sales Org.

Which Organization is using this Process?  
Which Service is assigned to that Organization?

| Process ID | Org. 1 (free) | Org. 2 (free) | Service ID | Active? |
|------------|---------------|---------------|------------|---------|
| P10001234  | *             | *             | S10001234  | X       |
| P10001234  | 1000          | *             | S10001235  | X       |
| P10001234  | 1000          | S101          | S10001236  | X       |
| ...        |               |               |            |         |

**simplified Process view – Service Filter conditions based on Organizational Structure**

-> highest Priority of that record with the most details

# 2 SOA Layer Model – Service View

## - Service view

**Keys:** Free defined Application Characteristics

Order Type + PM Activity Type



Which Characteristic is using this Service?  
Which Product List represents this Service?

| Service ID | Char. 1 (free) | Char. 2 (free) | Product List ID | Class Name | Tabname | Srtfield |
|------------|----------------|----------------|-----------------|------------|---------|----------|
| S0001234   | *              | *              | L0001234        | Z_GEN_S    | ZTAB_0  | 100000   |
| S0001234   | YZZZ           | *              | L00012341       | Z_GEN_S1   | ZTAB_1  | 100001   |
| S0001234   | YZZZ           | ZS             | L00012342       | Z_GEN_S2   | ZTAB_2  | 100002   |
| S0001235   | YXXX           | ZM             | L00012341       | Z_GEN_S1   | ZTAB_1  | 100001   |

**simplified Service view – Filter conditions based on Application Characteristics**

-> highest Priority of that record with the most details

# 2 SOA Layer Model – Product List View



## - Product List view

Which Products represents the Product List?  
How is a Product defined?

| Product List ID | Product ID | Sequence | Service type | Dest.  | Class Name | Tabname | Srtfield |
|-----------------|------------|----------|--------------|--------|------------|---------|----------|
| L0001234        | PR0012340  | 1        | RFC          | LOCAL  | Z_CLASS_1  | ZTAB_0  | 200000   |
| L0001234        | PR0012341  | 2        | ABAP         | LOCAL  | Z_CLASS_2  | ZTAB_1  | 200001   |
| L0001234        | PR0012342  | 3        | HTTP         | DEST_C | Z_CLASS_3  | ZTAB_2  | 200002   |
| L0001235        | PR0012350  | 1        | RFC          | DEST_X | Z_CLASS_1A | ZTAB_0  | 200000   |
| L0001235        | PR0012351  | 2        | FTP          | DEST_Y | Z_CLASS_5  | ZTAB_1  | 200001   |

## simplified Product List View – sequence of Products

# 2 SOA Layer Model – Runtime objects

## Application Enhancements Points

### - Workbench Objects

Bundling of required Enhancements into 1 Object

Mandatory Usage of inherited Objects and or Interfaces to create dynamic runtime objects

| ZCLASS 0    |               |
|-------------|---------------|
| METHOD_PRE  | Enhancement A |
| METHOD_DO   | Enhancement A |
| METHOD_POST | Enhancement B |

ZCLASS\_1:  
inherited from ZCLASS\_0,  
redefining METHOD\_POST

| ZCLASS_1           |               |
|--------------------|---------------|
| METHOD_PRE         | Enhancement A |
| METHOD_DO          | Enhancement A |
| <b>METHOD_POST</b> | Enhancement B |

# 2 SOA Layer Model – Configuration



## - detailed Configuration in Cluster Table

Process related configuration data can be stored in database  
(TABNAME, SRTFIELD)

IMPORT FROM DATABASE ...

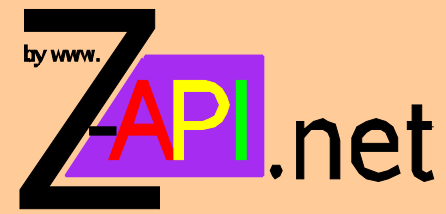
preconfigured business scenarios

use that order type, replace value,  
don't process step A, ...

configured user interfaces

normalized structure for field  
properties processing

# 2 SOA Layer Model – Options



## **Data Model Enhancements**

Implementation of exception processing  
-> Process and Service replacement

Dynamic field Lists for Filter Processing  
-> Use of “Select-Options”

service selection UI

True Hierarchy Resolution

Licensing, Valid to ...

# 3 SOA Implementation

## **Each Process implementation requires a separate Specification.**

- LUW, Locks, Interfaces, Structures, Organizational View, Characteristic View, Methods, global Data, Enhancement Points, Protocols ...

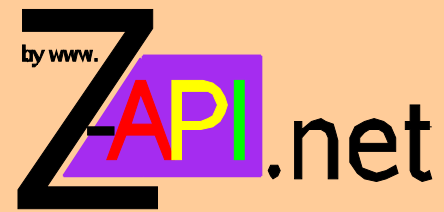
## **Don't:**

- Maintain Master-Data (or similar Attributes) in the Configuration Cluster. This would reduce the Reuse ability.
- It seems to be better to separate the processes for Header and Items (Don't mix up different processes).

## **Restrictions:**

- Active Standard Enhancements with filter Functionality, Menus, multiple Use

# Thank you for your attention!



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