

Introduction to SAP Application Platform (AP)

Contents

- SAP Variant Configuration (VC)
- Internet Pricing and Configuration (IPC)
- IPC History
- What is SAP Application Platform (SAP AP)

SAP Variant Configuration (VC)

Before we can fully explain what SAP Application Platform is, let us take a quick trip back in time to the early 1990s. At that time, SAP had good success with its R2 (release 2) product, which only ran on mainframes. The industry and business requirements were rapidly changing and making the R2 release quickly obsolete. SAP's response was the R/3 release, which introduced a 3-tier architecture (database server, application server and client, that's where the 3 comes from) and many new enhancements to the ABAP stack.

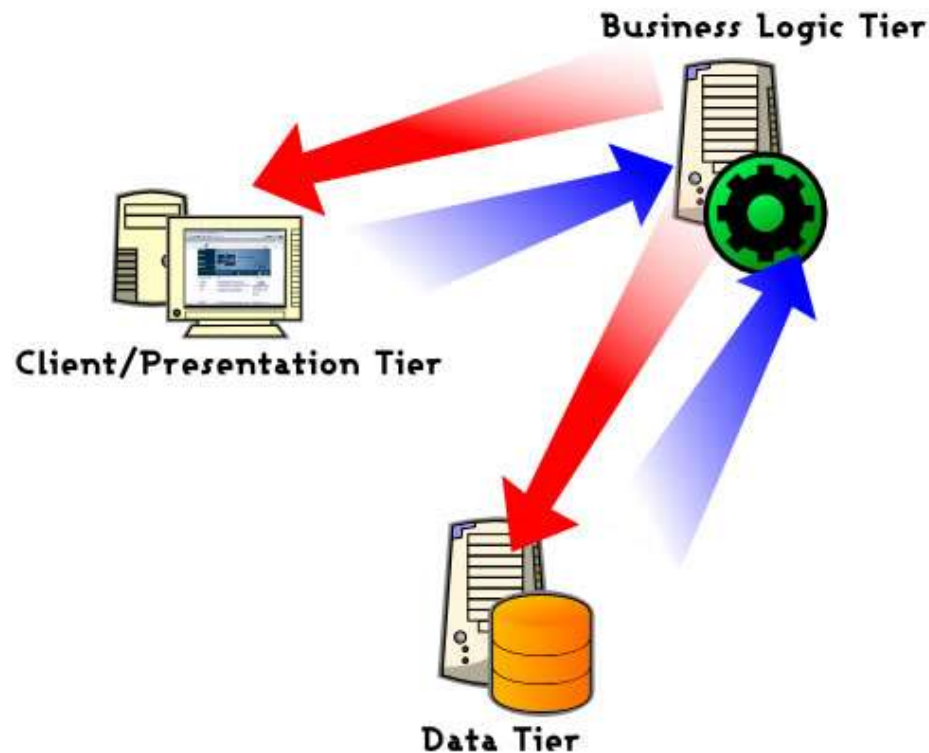


Figure 1: 3-tier application architecture

At about the same time, competition in several industries (notably industrial machinery, automotive and high-tech) intensified and called for a pervasive ability to provide complex products to customer specifications. As it was impossible to support these new configure-to-order (CTO) processes efficiently, SAP embarked on a journey to provide the capability to process **configurable products** natively and so the **KMAT** (configurable material) concept was born.

The effort to upgrade the existing R/3 codebase to work with configurable products was daunting, as it had repercussions in almost every existing module of SAP R/3, most notably in MM (material management), SD (sales & distribution), PP (production planning) and FICO (finance & controlling) to name only a few.



Figure 2: SAP Modules and VC

In addition, it quickly became clear that a dedicated “engine” of sorts needed to be developed that could enforce constraints of completeness and consistency on the customer configuration and help guide the user if they picked mutually incompatible options. A large portion of computer science research in the 80s was dedicated to efforts to build “artificial intelligence” (AI), systems capable of capturing knowledge and some sort of reasoning. Even though the computer industry at large was quickly becoming disenchanted with the limited practical results of AI research, the AI concepts of **production systems** and **constraint-based reasoning** did find a fertile ground in the new configure-to-order world order.

SAP developers had been researching the topic constraint-based reasoning for several years by then and successfully implemented those concepts in ABAP, calling the resulting configuration engine the **Variant Configurator (SAP VC)**. In hindsight, the meteoric success of SAP in the 90s was due to multiple factors, but within industries dealing with configurable products, SAP VC was a true “killer application”.

SAP VC remains in broad use to this day, however its code is so intertwined with the rest of SAP ERP and the risk in making any changes to it so great, that SAP has largely given up on enhancing it.

Internet Pricing and Configuration (IPC)

Continuing in our trip back in time, we now reach the mid 1990s. SAP VC is getting deployed at first customer production sites and some of its inherent limitations of it are starting to show. It is inextricably tethered to the ABAP environment. It is rather slow and does not handle complex products (well or at all). Exposing it to the internet (starting to be all the rage in those days), is practically impossible.

SAP management recognized this very early on (to their credit) and work on a new generation configuration and pricing engine began in the earnest. The goals for this new platform were:

- Ability to run standalone, disconnected from SAP R3
- Support for complex configuration scenarios

SAP bet on an emerging Java platform as their technology of choice for this development and called this new product the Sales Configuration Engine (SCE). Initially, the SCE was only offered as a Java library (to be integrated into customer applications), but gradually additional features were added, resulting in the Internet Pricing & Configuration module.

**IPC = Sales Configuration Engine (SCE) +
Sales Pricing Engine (SPE)**

IPC History

- **1996 - SAP starts development of SCE (SPE in 1997)**
- **1998 - SCE 1.0**
 - initially without pricing engine, breaking ground work with Java
- **2000 - IPC 2.0**
 - with Sales Pricing Engine, offered for standalone scenarios only
- **2002 - IPC 3.0**
 - IPC released as CRM 3.0 component, support for Java 1.3.x
- **2004 - IPC 4.0**
 - Part of CRM 4.0 also “ISA R/3 Edition”, support for Java 1.4.x
- **2006 – IPC 5.0**
 - integrated as part of the 2004S / 7.0 SAP NetWeaver platform
 - IPC only supported on SAP Virtual Machine Container (VMC)



The most recent version of IPC is no longer marketed under this name as explained in the next section.

What is SAP Application Platform (AP)

Starting with the CRM 5.0 and ERP 6.0 releases (mySAP ERP 2005), SAP no longer offers IPC as a standalone component. Even the IPC acronym is being decommissioned in favor of a new one – AP (Application Platform). In this training however, we will continue to use the IPC acronym to refer to the configuration engine as it's widely understood and easier to use.

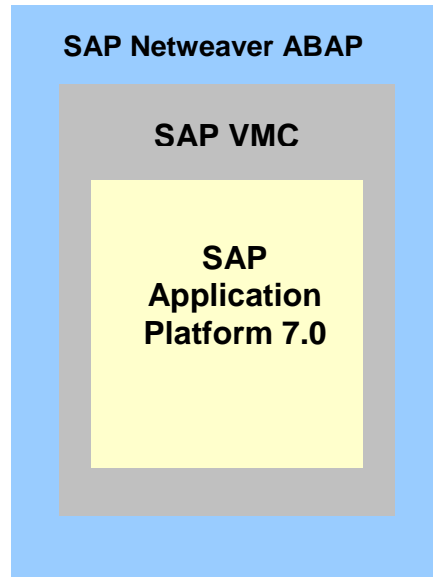


Figure 3: SAP Application Platform

**SAP AP = AP – Configuration Engine +
AP – Pricing Engine +
AP – Tax Engine**

You might be wondering about the VMC acronym. As we saw in chapter on NetWeaver, SAP application platform supports both Java and ABAP applications, on the Java EE and ABAP application server respectively. This could lead you to think that IPC (being a java application) would likely run on the Java EE application server. You are in for a surprise in the next chapter.

Where is AP used?

The AP is used in various SAP business scenarios, including but not limited to:

- SAP CRM 5.0 Online
- SAP CRM 5.0 E-Commerce
- SAP CRM 5.0 E-Commerce ERP Edition
- SAP CRM 5.0 Mobile Sales
- SAP SRM 5.0
- SAP ECC 6.0
- SAP SCM 5.0
- Vehicle Management Solution

What is notably missing is support for scenarios with which the IPC originally started – standalone, embedded in customer applications (so called “ready to integrate” scenario). A detailed description of these usage scenarios is provided in the respective chapter.



In most scenarios, IPC is already installed as part of your R/3 or CRM server, so this training will not cover how to install SAP AP as an add-on, instead it is included as a bonus chapter in the back of the training. For more information also see OSS note 848412.

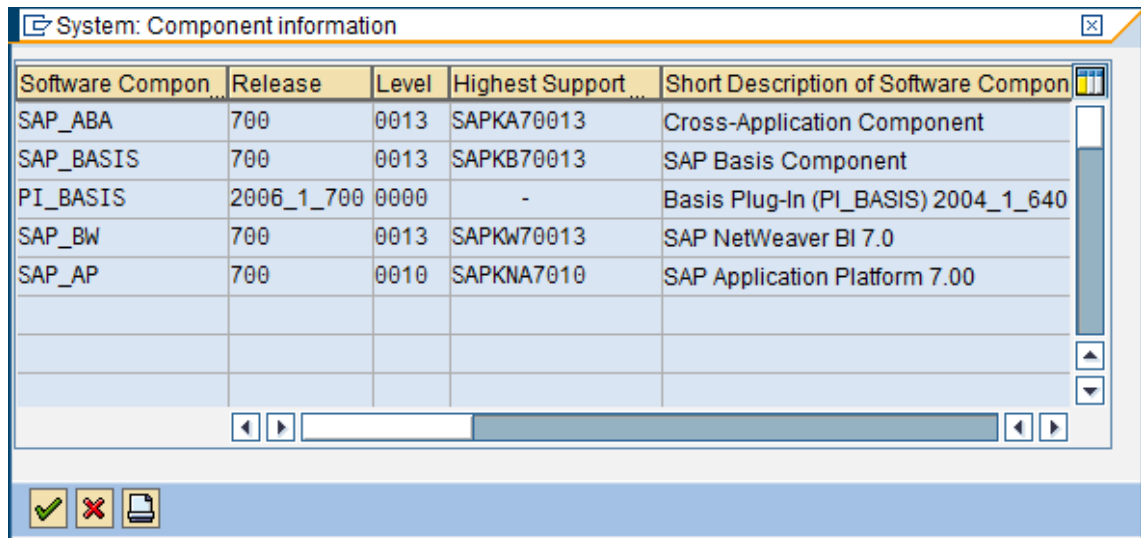
Exercises

Check installed SAP AP version

Exercise steps:

1. Determine the installed version and support pack level of SAP Application Platform by going to System/Status and note them below:

AP version: AP Support pack level:



The screenshot shows a window titled "System: Component information" with a table of software components. The table has five columns: Software Compon..., Release, Level, Highest Support..., and Short Description of Software Compon... The rows are as follows:

Software Compon...	Release	Level	Highest Support...	Short Description of Software Compon...
SAP_ABA	700	0013	SAPKA70013	Cross-Application Component
SAP_BASIS	700	0013	SAPKB70013	SAP Basis Component
PI_BASIS	2006_1_700	0000	-	Basis Plug-In (PI_BASIS) 2004_1_640
SAP_BW	700	0013	SAPKW70013	SAP NetWeaver BI 7.0
SAP_AP	700	0010	SAPKNA7010	SAP Application Platform 7.00

Figure 4: SAP AP Version in the Status

At this point we would have liked to take IPC for “a spin” but sadly we will have to wait a few more chapters, until we know what SAP VMC is and deploy the IPC JSP UI.

2. Run the VMC Administrator (transaction SM53) and determine the patch level of the IPC application

IPC Patch level: