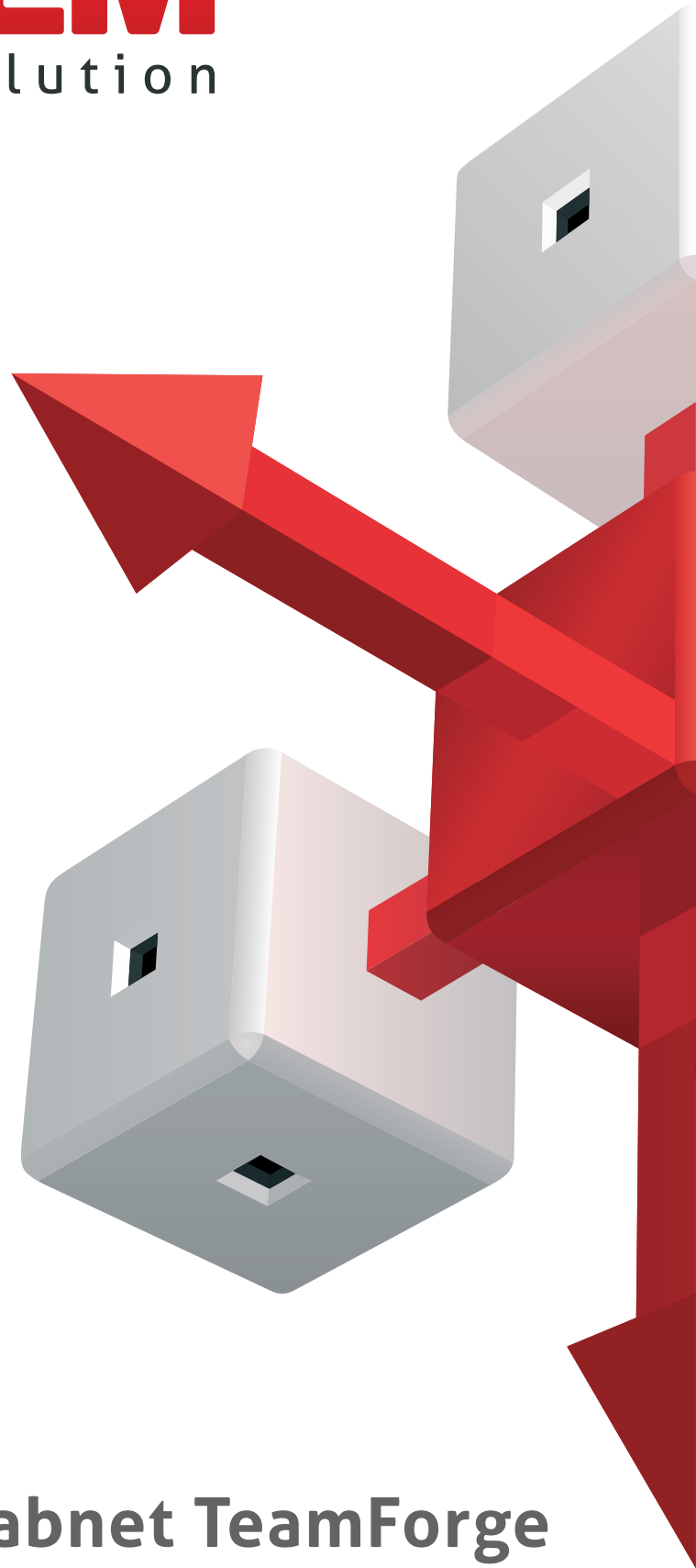# IKAN**ALM**

ALM through evolution

IKAN ALM and Collabnet TeamForge

Where Development, Testing and Operations meet
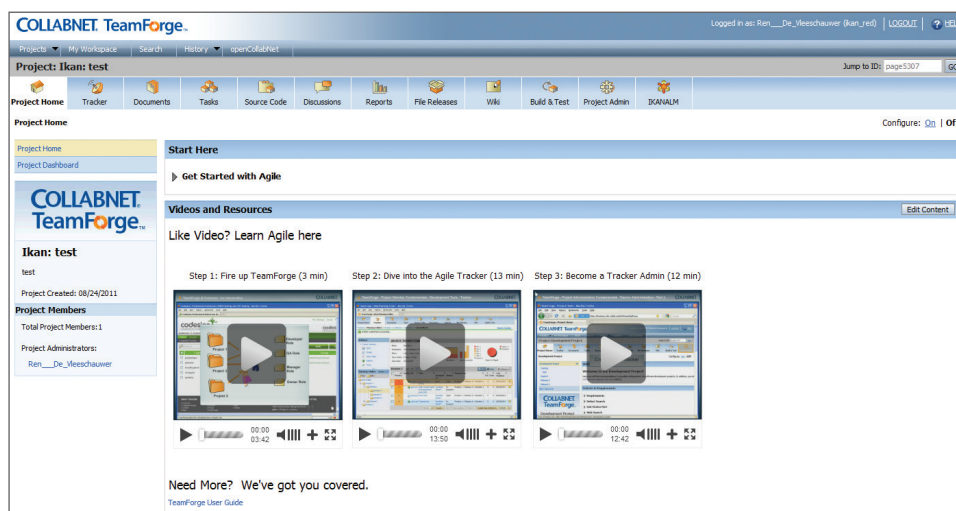
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Executive summary

Application Lifecycle Management (ALM) is a key discipline aiming at managing the entire software development process from requirements through deployment, involving Business Analysis, Project Management, Development, Quality Assurance (QA) and Testing and, finally, the delivery of the results to Operations.

The trend toward globalization (distributed teams), the evolving methodologies (from Waterfall to Agile), the omnipresent budget restrictions and the necessity to deliver more and faster, increase the need to automate the complete ALM process in order to:

- make it enforceable,
- improve communication between all stakeholders,
- enhance close collaboration and teamwork,
- more efficiently allocate the appropriate resources,
- deliver faster and with higher quality
- and, as a result of the previous, to reduce the overall cost and increase the efficiency.

The CollabNet Platform is the most widely used platform for distributed software development. CollabNet transforms the way software is developed by simplifying distributed development and enabling organizations to leverage global development talents to deliver better products and innovate faster.

Collabnet TeamForge – TeamForge radically simplifies management of software projects, by automating controls for commits, approvals and releases. You gain real-time visibility into project progress, documents and tracker artifacts, and ensure predictability with integrated and agile planning. Also, distributed teams collaborate closer and deliver faster with social coding.

IKAN ALM – leverages TeamForge by concentrating on what happens after the actual software development stage: the Build process, the lifecycle and the Deployment into Production. More specifically, IKAN ALM offers the following functions: commit to versioning (if not standard available), build process, creation and management of the lifecycle (Development, Test & Acceptance and Production) and an approval process.

IKAN ALM complements the ALM process as designed by CollabNet TeamForge whilst adding value to the Build, Test and Deploy steps by adding specific features and functions.

The integration between Collabnet TeamForge and IKAN ALM makes sure that relevant TeamForge information is presented within IKAN ALM by giving a list of artifacts per related Build or Deploy and does the same in TeamForge by updating the status of the artifacts and by telling what IKAN ALM Builds or Deploys are related to the artifact. Hyperlinks allow you to go from IKAN ALM into Teamforge or the other way around.

This White Paper targets all parties interested in ALM solutions that cover the actual development process (by TeamForge) with a focus on software development and the next steps in the lifecycle with a focus on Build management, Deployment to test and production levels, be it executives, technical managers, software architects, operations people or developers.

Problem statement

- Collabnet TeamForge provides a complete set of integrated, modular capabilities for application lifecycle management with a focus on developers. However, the application lifecycle management process has other stakeholders than developers and a good application lifecycle management process pays also attention to the process steps after pure development, being build, testing and finally deploy to production.

- Developers also like to know if Builds and Deploys were successful and, if there are issues they would like to know with what Build these issues are associated.

Solution Description

The integration of IKAN ALM with CollabNet TeamForge.

- Gives you access to IKAN ALM from within CollabNet TeamForge as IKAN ALM is available as a linked application within TeamForge.
- Uses TeamForge Subversion as versioning tool.
- Automatically updates TeamForge artifacts when source code is committed.
- Automatically launches software builds after a commit.
- Ensures a fully integrated deploy process to test and production environments.

TeamForge and IKAN ALM

As a user you can perform all relevant actions from within the TeamForge environment. IKAN ALM has been defined as a linked application and can be started easily from within TeamForge subject to having access rights to IKAN ALM

IKAN ALM as linked application within TeamForge.

Versioning

IKAN ALM offers source control integration with Subversion; in fact IKAN ALM gives a developer the freedom to use the IDE and language of his choice. The only thing we expect a developer finally to do, is to commit his code to Subversion.

IKAN ALM comes, for example, with a full solution for SAP, where developers use the ABAP Workbench or NetWeaver for JAVA.

Commit to TeamForge Subversion from SAP ABAP Workbench.

TeamForge Tracker

When a developer commits his code to Subversion, he can add in the comment statement the artifacts that have been solved by his work. Solved artifacts can be new requirements, enhancements, bug fixes,... TeamForge has a standard feature that will allow to update the Teamforge artifacts automatically.

IKAN ALM Build info with related TeamForge artifact.

The IKAN ALM plugin for Teamforge will also make sure that the artifacts are listed within IKAN ALM with the related Builds and Deploys. IKAN ALM will provide the artifact number, a description, the status (open, closed,...) , the owner and the priority. A simple click on the artifact number will lead to the related TeamForge artifact:

TeamForge artifact with IKAN ALM info in the comment.

IKAN ALM will update the artifact and in the artifact comment you will find the link to the related IKAN ALM Build or Deploy.

Integrated Build and Deploy Process

Where Teamforge has a focus on development activities in the large sense of the world, IKAN ALM has a focus on the process steps that come after pure development. IKAN ALM offers a centralized and therefore easy-to-manage Build/Deploy Process. We will illustrate this by describing the ALM Development and Lifecycle process for SAP. TeamForge plays an important role as the central place, while IKAN ALM has a focus on how to manage the SAP ALM process, using TeamForge and by providing a Build and Deploy process for SAP ABAP and JAVA components.

Today in SAP:

- For ABAP, there is no available Build/Deploy Process. Instead, a Transport Request is generated. The disadvantage is that you cannot see or track the changes in the Transport Request.

- For Java, there are two different ways to build. The first way is to do the Build locally, on the developer's machine and, next, to do an import on the target server. An alternative is to use the NetWeaver development infrastructure: Java developers add their code and the Release Manager will initiate the Build process.

IKAN ALM adds value to the SAP environment by tracking both the ABAP and JAVA changes and by synchronizing those changes in one Transport Request.

IKAN ALM offers automated and centralized Release Management for a whole project.

Notification

For each Level Request (Build or Deploy), a notification can be sent. Possible parameters are: on success, on fail, by warning or always.
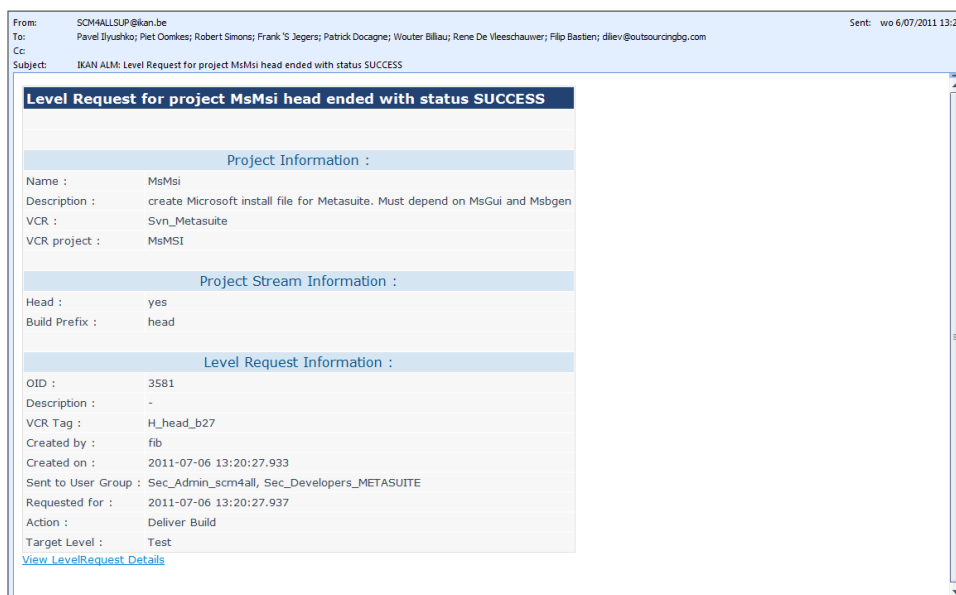
Email notification for a successful Build.

Short description of IKAN ALM

Lifecycle
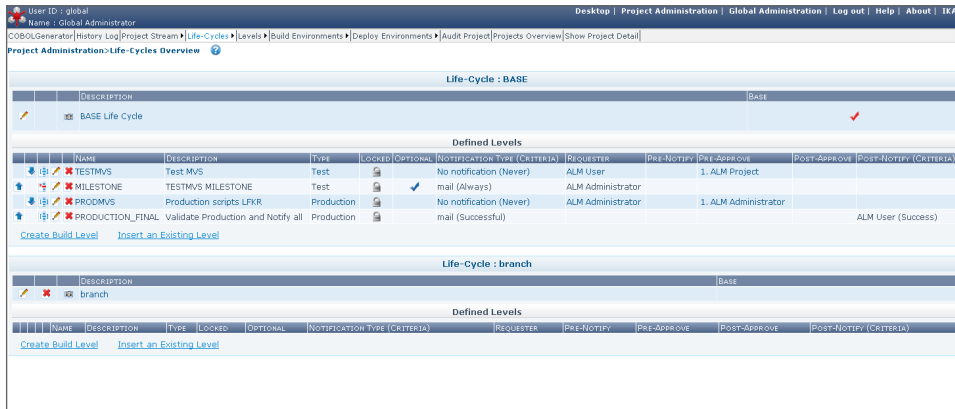
IKAN ALM offers the possibility to implement a Lifecycle. A Life-Cycle defines the logical steps of the ALM process. Such a logical step is called a Level in IKAN ALM. A Level consists of one (or more) Build and/or Deploy Environment(s) which are physical environments.

Example of an IKAN ALM Lifecycle.

IKAN ALM has three Level Types: Build, Test and Production.

- A Build Level must have at least one Build Environment.
- A Test Level must have at least one Build or Deploy Environment. A typical Test Level may have one or more Build Environments for Rebuilds, and one or more Deploy Environments for Deployment and Testing.
- A Production Level must have at least one Build or Deploy Environment. A typical Production Level has one or more Deploy Environments.

Build Process
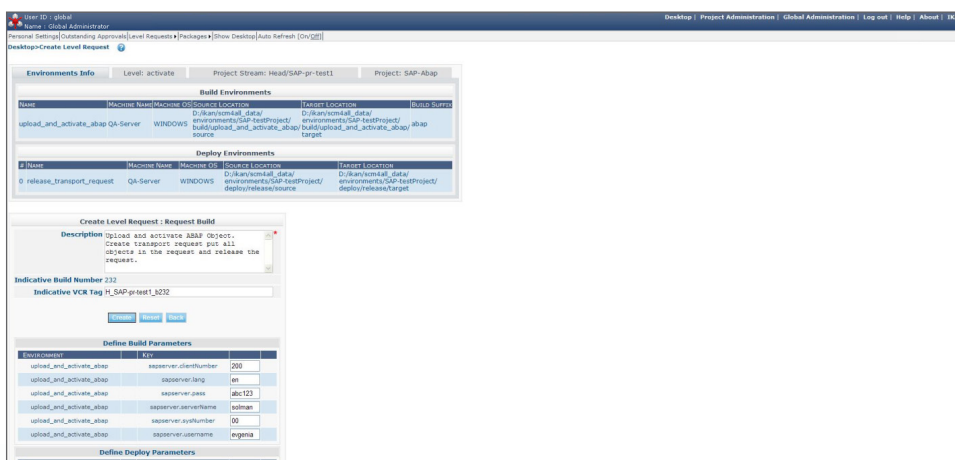
Example of an IKAN ALM Build to activate ABAp code.

Once the code has been committed to or referenced in the versioning system, IKAN ALM can DEPLOY and ACTIVATE the respective ABAP objects and JAVA code or NetWeaver projects.

The IKAN ALM Build process supports both traditional and Waterfall development methods. Builds can be launched automatically at predefined moments (daily, weekly, …) or will be launched automatically every time a COMMIT occurs in Subversion. A Build can also be launched manually by an authorized user.

IKAN ALM offers a centralized and fully automated activation and build process for both ABAP and JAVA components, and also takes care of the synchronization of the ABAP and JAVA components.
The IKAN ALM Build process will also create and release SAP Transport requests and IKAN ALM is fully integrated with SAP TMS and CTS+. Non-SAP objects will also be integrated in the generated Transport Requests.

Test Process

With IKAN ALM you can define as many Test Levels and Environments as you want. Deploys from one Level to another can be approval-based. This to ensure that there is always a trace of who, when and why a Test Level has been approved and deployed to a next Level.

Note: IKAN ALM is also fully integrated with HP ALM 11.0 (formerly called HP Quality Center). For more information, refer to: http://www.ikanalm.com/whitepapers/HP_IKAN_integration.pdf

Deploy Process

The Deploy step moves a project to the next Level. The Deploy gives you a centrally controlled, automated Release Management for a complete project. The delivery to all systems in a project landscape is fully automated and all relations between the different projects and sources (particularly between JAVA and ABAP) are guaranteed. IKAN ALM not only has the ability to deploy new releases, it can also revert to previous versions (rollback).

Example of an IKAN ALM Deploy.

Benefits

The integration of Collabnet with IKAN ALM provides the following benefits:

Benefits for Collabnet customers:

- Build process covered by IKAN ALM.
- Deployment to QA or production environments.
- ALM versioning, build and deploy Solution for SAP.

Benefits for IKAN ALM customers:

- **Planning and Tracking:** planning for defects, releases, iterations, and code changes.
- **Versioning:** software configuration and change management (SCCM) capabilities, optimized for Subversion.
- **Desktop and application integration:** Access TeamForge functionality directly from within your favorite integrated development environment (IDE) or productivity tool.
- **Document Management:** Manage documents for your entire projects, with check-in, check-out and versioning.

Summary/Conclusion

Combining Collabnet and IKAN ALM brings together the best of both worlds..

IKAN Development provides an integrated web-based Application Lifecycle Management (IKAN ALM) platform for both Agile and traditional software development teams.

It combines Continuous Integration and Lifecycle Management, offering a single point of control and delivering support for build and deploy processes (manually generated or automated), approval processes, release management and software lifecycles.

Through the integration with TeamForge, IKAN offers a more complete solution by addressing better the needs of software developers. This results in being a unique cross-platform ALM solution.

More than 2500 companies rely on CollabNet for their distributed development, offshoring, outsourcing and partner co-development efforts.

In April 2007, CollabNet acquired SourceForge Enterprise Edition from SourceForge.com, bringing under one roof the two leaders in distributed software development.

Founded upon open source principles, CollabNet is also the company behind Subversion, the next-generation Software Configuration Management (SCM) solution. Subversion was named sole leader in standalone SCM by Forrester.

IKAN Development together with COLLABNET create an integrated ALM solution which establishes an environment where developers, testers and operations resources seamlessly work together, each of them doing what he is best at without having to waste time in figuring out what he needs from another stakeholder or what he needs to deliver.

Our solution fully synchronizes all Development, Test, Build and Deploy activities, and will obviously lead to enhanced collaboration, higher quality, faster delivery times and reduced costs.

For more information

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