

*software*



*Whitepaper*

## **REALTECH ChangePilot 1.0**

**(Version 2/2009)**

### Introduction

In times of globalization and rapid change, it is crucial for companies to adapt to changing conditions. Their agility is more and more determined by the ability of their IT departments to efficiently satisfy new requirements that arise from business operation. The required know-how or resources can often be purchased; IT processes, however, have to be deeply rooted in an organization.

Change and release management is an integral part of these IT processes. It controls how functional requirements that arise during business operation make their way from quality assurance and approval to the production system. It is essential that these processes are well-defined, documented, and consistently applied. This supports the operation of complex IT environments, guaranteeing a consistent level of quality in software development, minimizing the risk of error, and ensuring that services can be delivered again and again. It is the only way to make sure that the requirements posed by business operation can be assessed, prioritized according to their business benefit, and efficiently met.

Against this backdrop, change and release management becomes an integral element of IT governance. It is never enough just to focus on the provision of systems while neglecting the need to consider the operation of the solution until it is time for the go-live. An efficient change and release management process greatly influences the agility of a company and can therefore result in a significant competitive advantage.

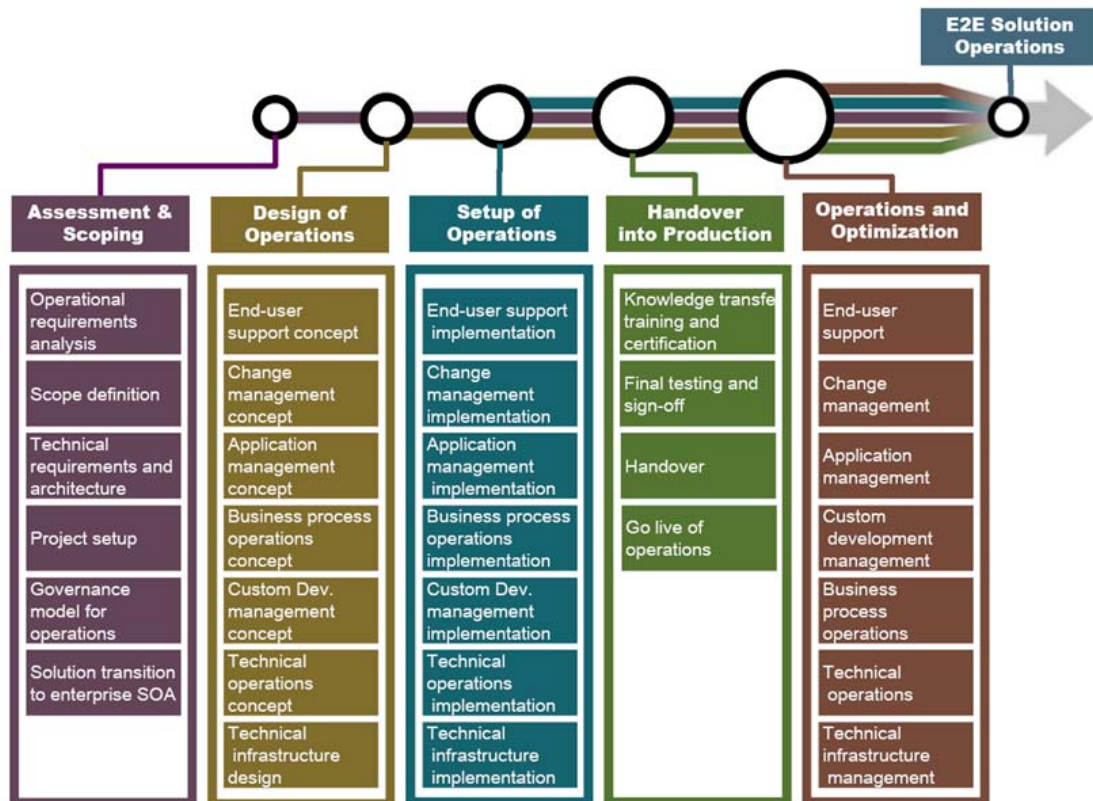


Figure 1: RunSAP Roadmap



The ASAP Roadmap is a step-by-step guide developed by SAP that helps companies successfully tackle SAP implementation projects. SAP's Active Global Support expanded this guide to include the Run SAP methodology. It defines the individual steps and processes that are essential to the successful and efficient operation of a SAP landscape. An integral part of this roadmap is dedicated to change management.

In the past, transport requests were often imported into the different systems one by one, it was not possible to combine transport requests into change requests, which in turn required considerable time and effort. Customer requirements that necessitate changes to various system landscapes (e.g. ERP, BI, CRM) in particular create an enormous administrative overhead. The resulting transport requests often have to be put in the right order and imported into the various systems in a synchronized manner, which drastically increases the need for communication.

The solution recommended by SAP, SAP Solution Manager with the ChaRM component, is barely able to meet these requirements because its change management is primarily focused on SAP systems. Change and release management, however, should be seen as a process that crosses the boundaries of teams and systems and needs to be deeply rooted in the entire company. CIOs place particular emphasis on being able to set company-wide standards for software changes and to map these standards for each development with the help of tools. This measure is, for example, also an element of the Capability Maturity Model Integration (CMMI) requirements. For organizations to achieve CMMI Level 3, all of their business units must conform to the standard process framework; it is not possible for an individual software team to become CMMI Level 3 certified.

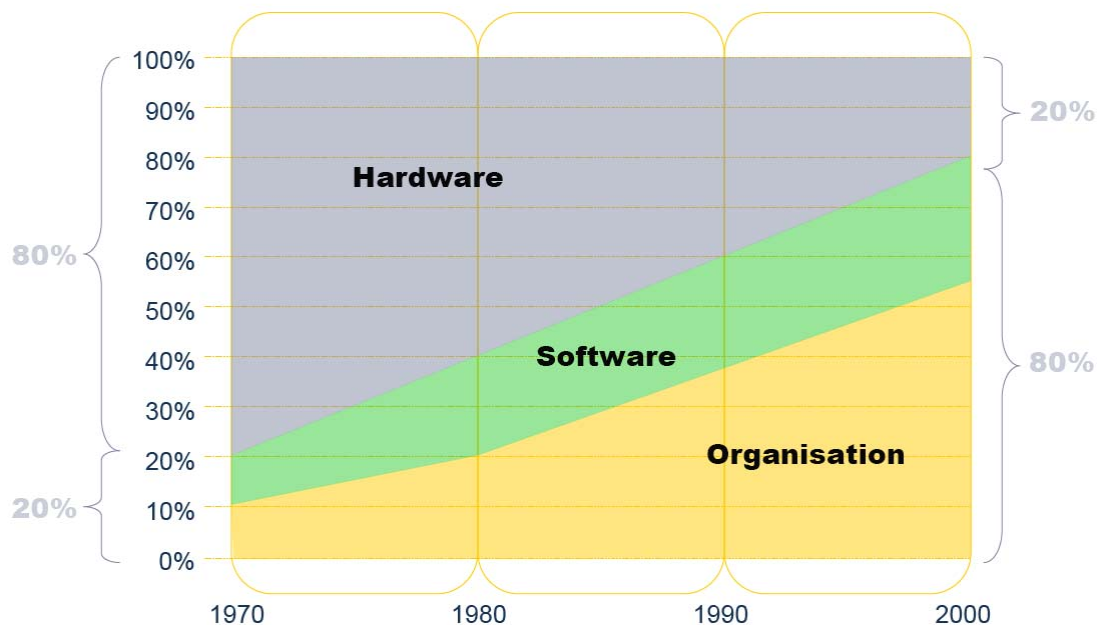


Figure 2: IT budgets over time

When comparing past IT budgets with those of today, one can not help but notice that companies spend less and less money on hardware and software while organizational costs have skyrocketed. By now, compilers, development environments, and work-related software have become a commodity. The main cost associated with software development and the



maintenance of complex IT systems is staff time. IT budgets were reduced and cut as a result of the financial crisis. According to several studies, CIOs have indicated that further budget reductions will not be possible without sacrificing service quality or cutting back on IT systems. However, it is still possible to generate savings by making processes and the organization more efficient. Here, every IT department should ask itself whether it is delivering the services that are possible or the services that are actually needed and how it determines and evaluates service requirements. It is also worth asking if its effort is justified. Is the IT department aware of its cost structure and what are cost drivers? The answers to these questions are key to a successful optimization strategy. Especially when looking at change and release management processes, it is essential to ask whether the IT department is trying to save money in the wrong places and what the cost of inferior IT services actually is. The collection of such data for software change management purposes can only be carried out in a meaningful and accurate way, if a change and release management tool is available.

This will also allow IT departments to deliver software-based strategic IT service management and to use balanced scorecards to make sure that the IT department has the right emphasis.

A software solution that supports change and release management processes has to be able to support binding processes and to enforce compliance – if this is necessary for the company in question.

ChangePilot is a change and release management solution for complex IT environments that integrates seamlessly with existing tool environments. The service-oriented architecture of the software allows for the rapid integration of external tools such as a service desk or configuration management tools.

Project managers define their projects in ChangePilot and manage or monitor the success of those projects using the integrated management dashboard. This allows them to identify project delays ahead of time and to take countermeasures.

Change managers use ChangePilot to capture or classify change requests and to assign components. Change managers are usually also the ones who link the change request to a specific release and approve the change request. A graphical user interface that allows for the definition and modification of the change processes defined in ChangePilot enables administrators to easily adapt those processes to changing legal or organizational requirements.

Release managers plan releases using ChangePilot; here, each change request has to be assigned to a release. Releases can have different types (e.g. project release, maintenance release) and are given a release number. It is possible to build release hierarchies in order to create complex tree structures with a basis release and the subsequent releases. The release manager will establish this release hierarchy, define different release types, if required, and determine processes for these release types. The dates of the individual releases (e.g. beginning of testing, code freeze, feature freeze) are set in a release schedule.

ABAP developers use the SAPGUI interface of ChangePilot to link a transport request to the change request that was assigned to them. Developers are also given an overview of all the change requests that were assigned to them and of the corresponding release. They can use a search feature to help them find change requests. Depending on the respective authorization model, they can search for their own change requests or search all change requests. Any activity associated with a change request (e.g. marking a change request as completed) is also performed in this interface. The SAPGUI interface can also be used by SAP consultants who are executing customizing tasks and are thus creating changes that also need to be linked to a change request. Software developers for SAP Java technologies



(process infrastructure, Java, Enterprise Service Repository) do this in the ChangePilot Web interface.

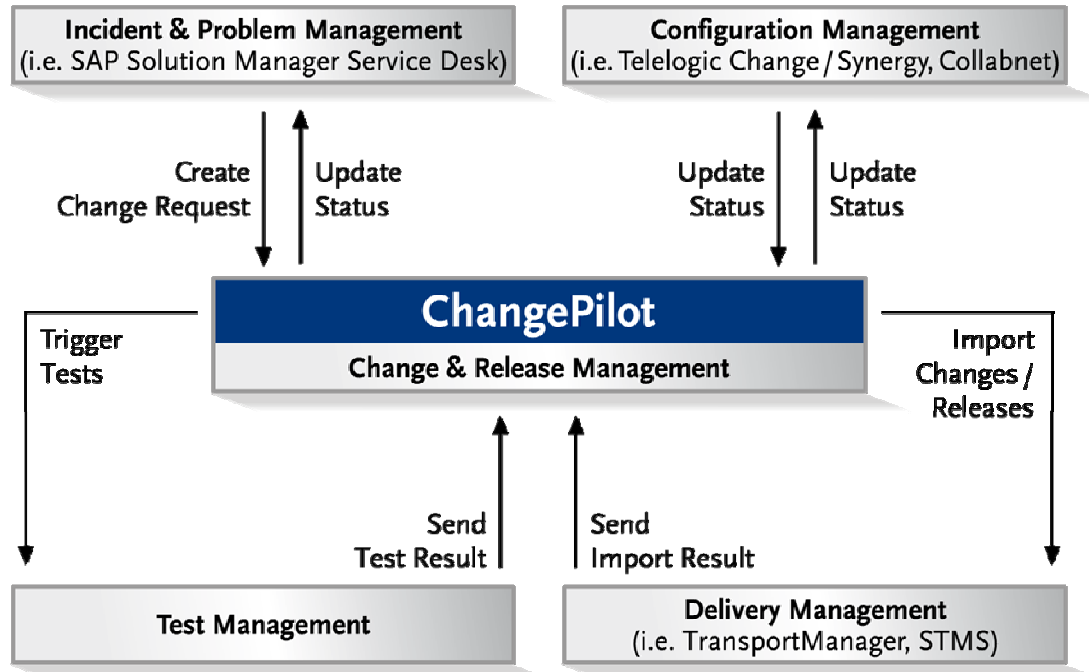


Figure 2: ChangePilot

This figure shows the different options for integrating ChangePilot into existing system environments. The Solution Manager Service Desk can be used as an incident and problem management solution with which to create changes in ChangePilot. ChangePilot can update the status of a change request in the Service Desk ticket at any time. The integration of non-SAP developments can be achieved with the help of various configuration management tools. Configuration management tools assign version numbers to non-SAP software developments to keep track of the different versions. The resulting source artifacts can thus be linked to a change request in ChangePilot.

ChangePilot offers an intelligent delivery logic that allows for the go-live of releases or changes. Depending on the import result, the next steps of the workflow can be controlled.

## Change Management

The dashboard is the first page that users see when opening ChangePilot. It can be freely defined depending on the respective user roles. The individual elements can be freely configured and combined on the dashboard in the form of mashups.



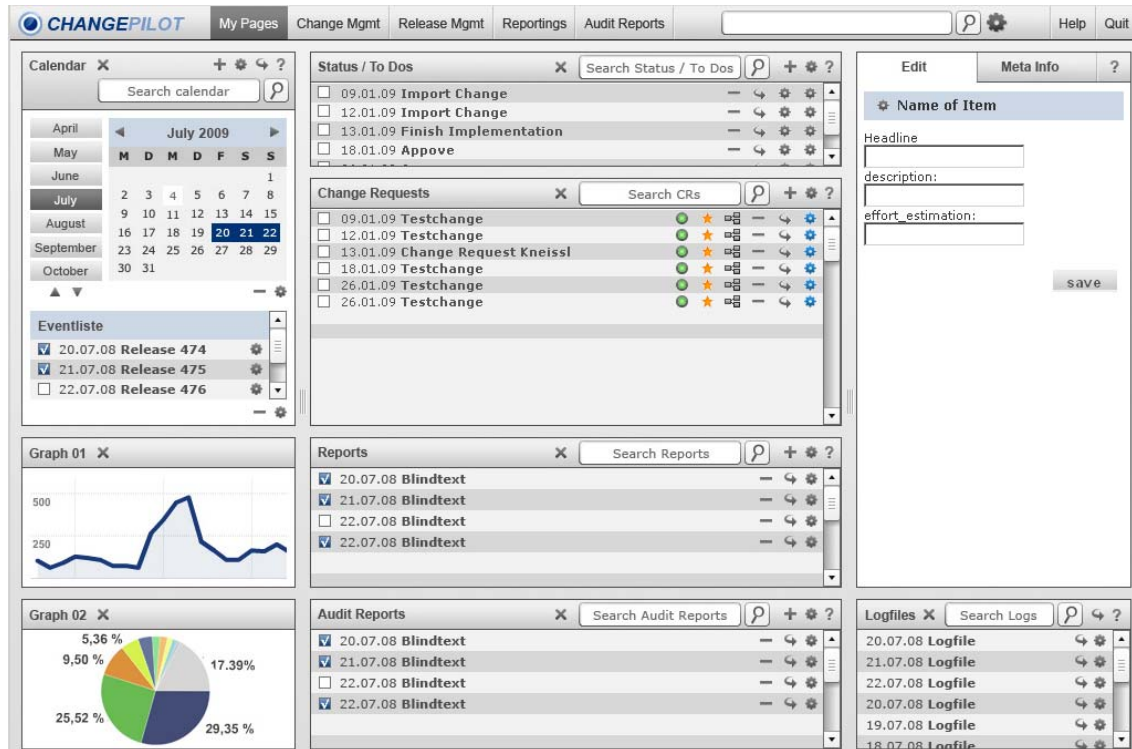


Abbildung 3: Dashboard

The change management tab is where change requests are processed and created and where activities are completed.

Change managers use the configuration interface to define different change request types that can then be assigned to different release types. Each type of change request can have user-defined attributes and individual workflows. The workflow can be easily defined using the graphical workflow editor. Building blocks for a test integration, for imports, and notifications are delivered with the system. An expert view allows for the easy configuration of Web service calls to external software tools. All workflows are versioned and are not activated before the approval process is completed. This makes sure that changes to the software development process are approved by the Change Advisory Board before these changes are actually implemented and affect the system. A new workflow version is valid exclusively for new change requests; preexisting change requests continue to be handled according to the version that was used to create the request. Subsequent releases will include additional standard building blocks for the configuration of workflows.



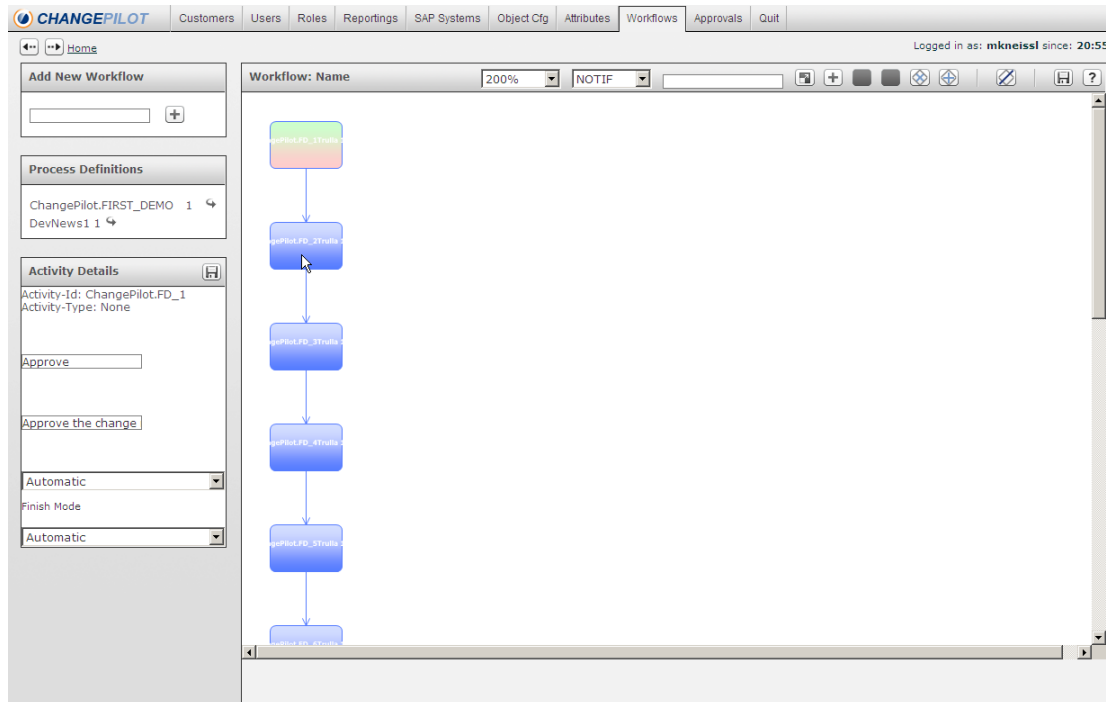


Figure 5: Graphical Workflow Editor

## Release Management

ChangePilot enables release managers to define and schedule releases in the release schedule. Here, it is also possible to define different release types and to show the interrelations between releases using release hierarchies. The definition allows release managers to determine which change request types can be assigned to a release type. Just as change requests, releases are subject to a workflow, which can be defined using the graphical editor. The corresponding approval workflow makes sure that changes to the release definition have to be approved by the Change Advisory Board (CAB) before these changes can be applied to newly created releases.

Imports into the systems and systems or clients are always defined in the release definition. Also, an import into SAP systems should always be carried out on the basis of a release and on a specified date; it is, however, also possible to import individual change requests into a system. In this case, however, the target systems and imports are also determined by the release assigned to the change request.

## Delivery Management

The import into SAP systems can be carried out using a STMS integration or through TransportManager. If TransportManager is used, it will be remotely configured through the definition of the change and release processes in ChangePilot. Imports and approvals are realized on the ChangePilot level. SAP Basis consultants who used to work with TransportManager now manage the import of releases or changes through ChangePilot. The familiar collision check can be integrated into the workflow in order to make sure that, for example, releases can only go live if no collisions are detected.



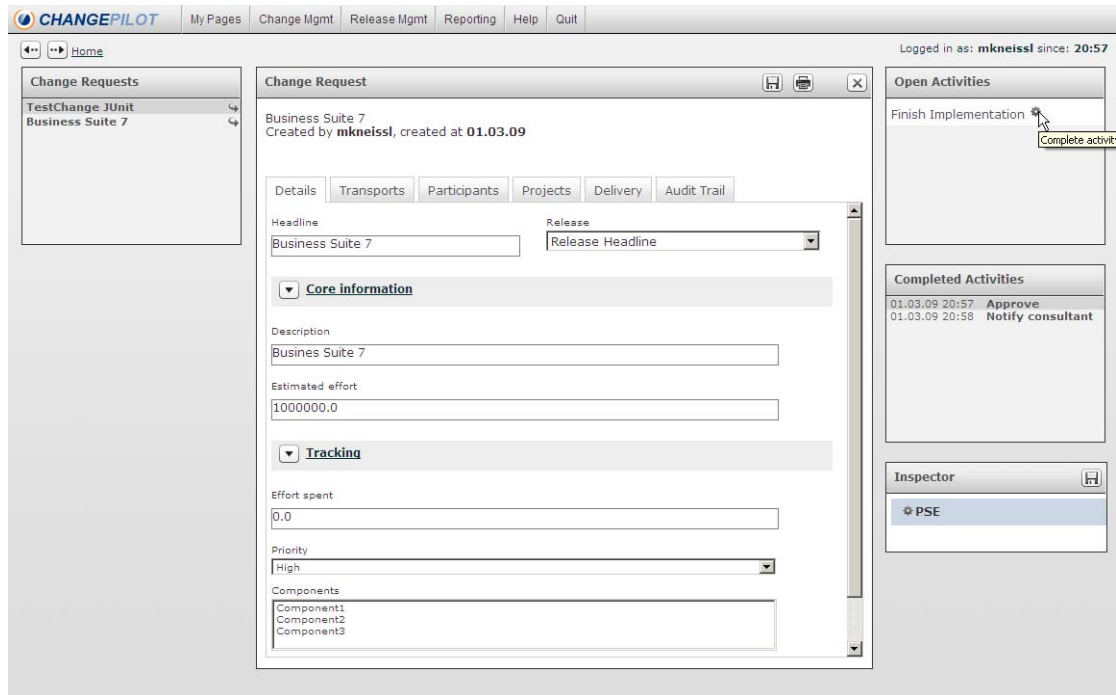


Abbildung 4: Change Management

## The Advantages of ChangePilot

- Definition von verbindlichen Entwicklungsprozessen (IT-Governance und IT-Alignment)
- Definition of binding development processes (IT governance and IT alignment)
- Enforcement of compliance requirements for changes to the system
- Efficient management of IT environments
- Simple reporting on the project status
- Analysis of changes for strategic IT service management purposes
- Management of key performance indicators (KPI)
- Support for IT service providers

## Architecture

REALTECH's ChangePilot is a change and release management solution for complex SAP environments that integrates seamlessly with the existing enterprise IT. The solution comprises several components.



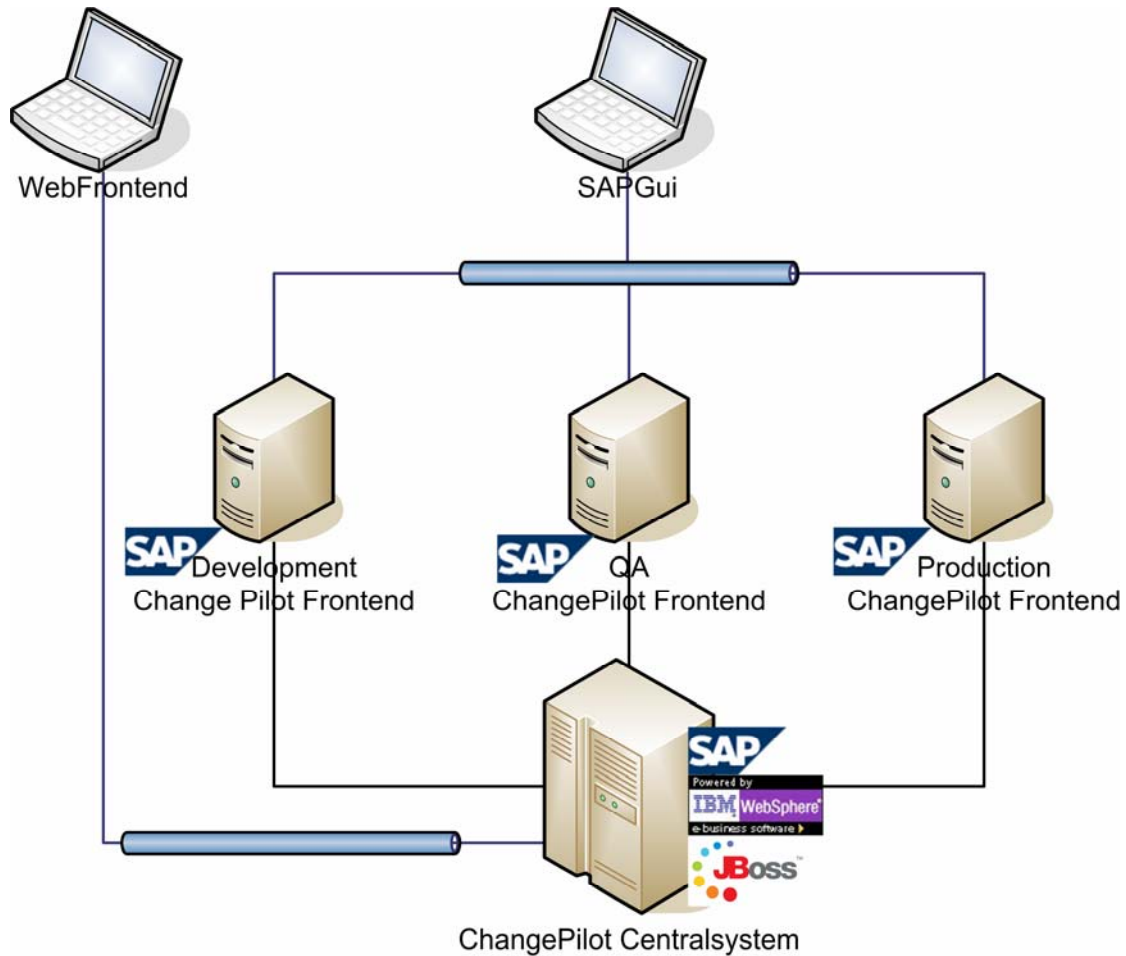


Figure 5: ChangePilot Architecture

The central system controls the data storage, Web interface, and the core processes. The front-end components allow users to access REALTECH ChangePilot through the SAPGUI.

The central system is installed as an add-on on a Java-enabled Web server (EJB 2.0 or later). This is usually the Java stack of SAP Solution Manager 7.0, but it is also possible to use any other EJB-enabled Web server. A Software Deployment Archive (SDA) is included for deployment on the WebAS Java stack; it can be easily installed using the SAP Software Deployment Manager (SDM).

The front-end components are installed as an add-on in the SAP system. The installation is carried out by importing a number of transport files. The different transports are distributed throughout the entire system environment. The distribution is determined by the structure of the system.



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