SAP – Microsoft Technical Brief
Duet Enterprise

Connecting and Extending SAP® Software with Microsoft SharePoint

Quick Facts

Summary

With Duet® Enterprise software, you can rapidly compose solutions that blend process and collaborative work. The software supports the foundation for technical interoperability between SAP® applications and Microsoft SharePoint and provides the building blocks, templates, and tools you need to use SAP applications with Microsoft SharePoint 2010.

Business Challenges

- Demand to integrate SAP applications with Microsoft SharePoint
- Need for solutions that improve worker productivity and facilitate collaboration
- Difficulty integrating custom applications with enterprise software

Key Features

- **Interoperability layer** – Use an interoperability layer that automatically builds in the basics for SAP role-based authentication and security, support for application lifecycle management, offline access to SAP software, and much more
- **Ready-to-use functionality** – Leverage tools to jump-start projects and accelerate time to value
- **Standard development tools** – Assemble composite solutions using standard tools from SAP and Microsoft

Business Benefits

- **Get more value from IT investments** by empowering employees to use more of your key applications
- **Increase productivity** by providing solutions that let employees work intuitively
- **Respond rapidly to evolving business needs** by enabling developers to quickly create new solutions and equipping business analysts to make configurations independently
- **Accelerate development of solutions** using ready-made functionality and an interoperability platform
- **Reduce costs and simplify application maintenance** by minimizing the impact on the existing IT landscape and connecting to your existing systems

For More Information

To learn more, visit us at www.sap.com/duetenterprise, www.microsoft.com/duet, or www.duet.com.

With Duet® Enterprise software, you can blend SAP® applications and data with Microsoft SharePoint 2010 collaboration and productivity tools to build solutions that boost business agility. The software delivers the interoperability, building blocks, templates, and tools so you can execute quickly and affordably.

IT departments are seeking ways to go beyond the delivery of reliable enterprise software that supports core processes and business productivity. Your internal customers – whether C-level executives or line-of-business managers – need to enhance employee productivity and effectiveness. This means connecting the worlds of process and productivity software to deliver a unified, personalized view of data, tasks, and business status to employees.

What is the best way to do this from a technical perspective? One option is to develop custom software and interfaces that link existing SAP applications with Microsoft collaboration and office tools. But this usually involves a costly development and maintenance cycle as well as addressing complex interoperability issues such as security, administration, upgrades, and support.

Alternatively, you can use Duet Enterprise software, developed jointly by SAP and Microsoft to enable interoperability between SAP applications, Microsoft SharePoint, and Microsoft Office. It dramatically simplifies the process of creating and maintaining solutions that are based on these applications. Ready-to-use functionality lets you build new solutions that empower people to collaborate with information, reports, and workflows from SAP applications, and you can configure Microsoft SharePoint My Site to use SAP data.

BUILDING SOLUTIONS THAT BLEND PROCESS AND COLLABORATIVE WORK

With Duet Enterprise, you can rapidly compose solutions that integrate SAP application data and processes into the Microsoft SharePoint and Office user experience – and do it using the SAP and Microsoft tools that your development team is already familiar with. In addition, the software provides:

- Building blocks and templates to simplify and accelerate development
- Prebuilt services that relate to business objects in SAP software, helping you jump-start development projects
- Ready-to-use functionality supporting collaboration, workflow, reporting, and integration of SAP data with Microsoft SharePoint sites

Equally important, Duet Enterprise provides the foundation for technical interoperability between SAP software and Microsoft software, enabling developers to focus on creating innovative solutions rather than addressing integration "plumbing." This interoperability is designed at an engineering level, so it is far more comprehensive than if you had to build it on a project-by-project basis.

Duet Enterprise lets you take advantage of the SAP and Microsoft architectures that are already part of your IT landscape. Deploying solutions based on Duet Enterprise does not require any change to your landscape, and your existing SAP and Microsoft applications can be used. As a result, solutions can be built and deployed quickly.

Interoperability Enabled by a Simple, Powerful Architecture

The architecture of Duet Enterprise reduces complexity by leveraging the core platforms of SAP and Microsoft. In the SAP environment, the Duet service consumption layer is an add-on to the familiar ABAP™ programming language within the SAP NetWeaver® technology platform. This layer simplifies access to SAP software and data models from any device or environment using standard protocols. It does this by "flattening" complex SAP enterprise services, BAPI® programming interfaces, and remote function calls (RFCs), making them compatible with Web-service standards so they can be consumed by Microsoft SharePoint. The Duet service consumption layer lets you aggregate and orchestrate multiple data objects, services, and SAP applications in a way that is unified for users. It is designed to connect to any release of SAP software (SAP R/3® 4.6c software and above). This connectivity retains SAP security, authorizations, and roles to help ensure that there is no impact on systems running SAP software.

In the Microsoft environment, the Duet Enterprise add-on for SharePoint lets you map and bring data from SAP applications into Microsoft SharePoint and Office. It uses a common SharePoint component called Business Connectivity Services that delivers services and tools for accessing external sources from SharePoint and Office. Users can interact with and modify this data and write it back to the SAP software. The add-on provides data models that enable code-free generation of user interfaces (UIs) that support key user actions. For example, UIs supporting create, read, write, and update operations for a business

object, such as a product, can be generated in SharePoint. The add-on offers a set of runtime services for connecting the security functionality and messaging flow between systems running SAP and Microsoft applications.

By leveraging the core platforms of SAP and Microsoft, this architecture enables Duet Enterprise to create a bridge that supports interoperability in the areas of:

- **Security and single sign-on** – Automatically connect to SAP software while preserving authorization definitions; automatically synchronize information about user credentials, access rights, and roles.
- **Support and monitoring features** – Enable tracing of a message throughout its communication path using standard Microsoft and SAP monitoring and support tools; monitor the status of the application, deployment components, and user logon and logoff activity.
- **System and lifecycle management tools** – Administer and manage SAP and Microsoft software to maintain an optimized IT landscape; enable the connection of Microsoft SharePoint to multiple systems running SAP software (even different versions of SAP software).
- **Application lifecycle support** – Enable support for the entire lifecycle of deployed solutions using standard SAP and Microsoft SharePoint tools; deploy content to software clients using "click once" functionality.
- **Offline support** – Enable users to access information retrieved from SAP applications when they are using Microsoft SharePoint or Microsoft Office and are disconnected from the network. Offline access is available through Microsoft SharePoint workspaces or by using Microsoft Outlook functionality.

This architecture enables your employees, suppliers, customers, and other authorized people to use a browser to access Microsoft SharePoint and, in turn, Duet Enterprise solutions. Optionally, Microsoft Office can be used as a front-end access point. No installation is required on the client, and content is pushed to users automatically.

Enabling a Rapid Approach for Solution Development

With Duet Enterprise, there's no need to leverage middleware or acquire new skill sets. You can assemble Duet Enterprise composite solutions using standard tools from SAP and Microsoft, such as the ABAP workbench, Microsoft SharePoint Designer, and Microsoft Visual Studio. Moreover, these tools are designed to cater to the needs of different roles involved in the development process: ABAP developers, business "power users," and Microsoft .NET developers. By offering tools for different roles, Duet Enterprise makes it easier for different types of users to engage in solution composition.

To make it easier to access data in SAP applications, Duet Enterprise provides developers with application programming interfaces (APIs) that flatten and simplify business functionality. This simplification enables even power users without technical expertise to compose solutions. For simple solutions that require no coding, business professionals familiar with Microsoft SharePoint Designer can create solutions using SAP business functionality surfaced in Microsoft SharePoint. For more advanced solutions, an ABAP developer or a .NET developer is required.

Duet Enterprise provides tools and ready-to-use functionality that you can layer into solutions to jump-start development projects and accelerate time to value. For instance, the Business Data Catalog (BDC) Publisher enables you to quickly generate the services and data models for Microsoft SharePoint consumption. You can use prebuilt functionality to surface an SAP workflow in SharePoint or Outlook, collaborate on an SAP application object, bring a report catalog into SharePoint, retrieve reports from SharePoint, and interact with SAP data through lists in SharePoint and Office. The software also delivers building

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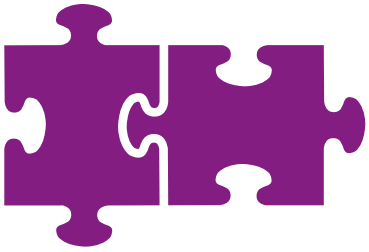

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blocks to accelerate the development process and enable "most asked for" scenarios, such as calendar-based scenarios (time management) and contact-based scenarios (customer relationship management).

KEY BENEFITS

With Duet Enterprise, you can significantly accelerate the development of custom applications linking SAP software and Microsoft SharePoint. At the same time, you can:

- Expand the value of your IT investment by having more employees using your systems
- Drive people productivity by offering solutions that give your employees intuitive access to their key business information and by blending the worlds of collaboration and process
- Enable your developers and business analysts to effectively respond to business needs by quickly composing solutions
- Develop and deploy solutions integrating SAP applications and Microsoft SharePoint with minimal impact on your IT landscape and connecting to your existing systems

LEARN MORE

Are you ready to take innovation to the next level by rapidly creating custom solutions that blend process and collaboration? Then you're ready for Duet Enterprise. To learn more, contact your SAP sales representative or visit us online at www.duet.com, www.sap.com/duetenterprise, or www.microsoft.com/duet.