

About This Book

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Overview

The purpose of this book is to:

- ▶ Describe the features of SAP™ Employee Self-Service in R/3 Release 4.6C
- ▶ Provide clear, organized, step-by-step instructions for implementing and configuring SAP Employee Self-Service (SAP ESS)

Note: The focus of this implementation guide is SAP R/3 Release 4.6C and SAP ESS in the mySAP Workplace 2.11 environment. For information on services offered in previous releases, please see our installation guides for R/3 Releases, 2.0, 4.5 and 4.6B.

Intended Audience

This implementation guide is intended for knowledgeable end users who are involved in installing SAP ESS including:

- ▶ Basis specialists
- ▶ R/3 application specialists (HR and CATS)
- ▶ NT and Web server administrators
- ▶ R/3 System administrators

What This Document Includes

- *Chapter 1: What Is ESS?* describes the SAP ESS 4.6C applications, and gives an overview of the product architecture.
- *Chapter 2: System Landscape* describes the mySAP Workplace architecture and the requirements for installing SAP ESS: hardware, software, and skills.
- *Chapter 3: Getting Started* describes the system landscape for SAP R/3, ITS and mySAP Workplace. It also provides information on project planning, plus considerations to bear in mind when rolling out SAP ESS at your company.
- *Chapter 4: Sizing the SAP ESS Environment* provides procedural information on sizing the system landscape, installing the Internet Transaction Server and tuning the SAP ESS applications.
- *Chapter 5: Role Customizing for SAP ESS* gives an overview of the Role concept, MiniApps and the R/3 customizing necessary for SAP ESS. It also describes installing or upgrading to SAP ESS 4.6C.
- *Chapter 6: Installing and Maintaining SAP ESS Users* details the SAP ESS user creation and management procedures.
- *Chapter 7: Customizing R/3 for SAP ESS Applications* describes the customizing procedures for various SAP ESS applications.
- *Chapter 8: Customizing R/3 for Life & Work Events* describes the new Life & Work event framework and procedures for customizing it.
- *Chapter 9: Workflow in the ESS Environment* describes the workflow templates delivered with SAP ESS as well as procedures for triggering workflow processes.
- *Chapter 10: Add-On Components within SAP ESS* describes other software components that can be used within SAP ESS.

About This Book

What This Document Includes

- *Chapter 11: Troubleshooting* details ways to troubleshoot both your ITS and R/3 installations.
- *Chapter 12: Changing the Design of SAP ESS Services* describes the methods for modifying the visual appearance of SAP ESS services.
- *Chapter 13: Enhancing SAP ESS* explores developing new services and/or modifying existing ones.
- *Appendix A: System Response when Using Personal Information Services* describes the system responses to different time constraints and how these responses affect SAP ESS.
- *Appendix B: SAP ESS and R/3 HR Infotypes* lists the different HR infotypes available within SAP ESS.
- *Appendix C: Availability of SAP ESS Services* details the country availability of each service.
- *Appendix D: Internal SAP Naming Convention and SAP ESS Tables* lists the country codes needed to use SAP ESS tables and information in the R/3 system.
- *Appendix E: SAP ESS Services and R/3 Transactions* lists all SAP ESS services and their respective transaction code.
- *Appendix F: Features of ITS Implementation Models* lists the types of implementation methods and their characteristics.
- *Appendix G: Single Roles and Services in 4.6C: a comprehensive list* details the various single roles, services and MiniApps which comprise the composite roles for SAP Employee Self-Service.
- *Appendix H: SAP ESS Services and Programming Models* gives an overview of all the services and which programming model they are based on – FlowLogic or SAPGUI for HTML.

Terminology

SAP uses the phrase Internet Application Component (IAC) to describe all services that have been developed for the Internet. The SAP ESS services form part of this group. In this book, the terms are used interchangeably.

Conventions

Highlight Style	Used for
<i>Italics</i>	<ul style="list-style-type: none">▪ Items you can select, such as menu items▪ Items that appear on the screen, such as field names▪ Steps in paths such as IMG settings
Bold, monospace format	<ul style="list-style-type: none">▪ Code▪ Text you can enter
Bold	Special emphasis
"..."	<ul style="list-style-type: none">▪ References to other sections within this book

Feedback

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Feedback

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Overview

This chapter provides an introduction to the services provided by SAP™ Employee Self-Service (SAP ESS) and the SAP ESS architecture.

This solution provides information and tools that allow users to actively manage their work life. Our 70+ ready-to-use services allow employees to view and maintain their own personal data and easily access internal and external information via their browser. This do-it-yourself approach boosts accuracy while streamlining and condensing routine information flow.

Our solution empowers users by giving them direct control of data and communications previously managed for them. This enables them to make more informed decisions and play an active role in business processes.

SAP ESS can be tailored to company requirements and corporate style. Additionally, it can play a vital role in corporate intranets and serve as a gateway to the Internet.

Starting with R/3 Release 4.6C, SAP ESS is completely integrated into the mySAP Workplace, SAP's unique role-based enterprise portal.

Note: This implementation guide pertains solely to SAP R/3 Release 4.6C in combination with the mySAP Workplace 2.11. For information about SAP ESS in R/3 Releases 4.6A and 4.6B, please consult the SAP ESS Installation Guide for 4.6.

What's New in R/3 Release 4.6C?

The table below gives a quick overview of the new services and improved functionality in SAP ESS Release 4.6C. For further details, have a look at the SAP ESS 4.6C delta kiosk presentation, which can be found at <http://service.sap.com/ess> → *Media Center* → *Presentations*.

Service	New / Improved Functionality
All SAP ESS applications	New visual design
	New role-based navigation through the mySAP Workplace
	mySAP Workplace replaces the ESS portal used in former releases
	Extensive new country availability. For details, see http://www.sap.com/ess
Office	Change Own Data enables employees to maintain their own company data and to include a personal photo for the Who's Who service
	Internal Service Request offers in-house support for your employees
	My Assets allows employees to view and change their asset data as well as report asset retirement

Chapter 1: What Is SAP Employee Self-Service?

What's New in R/3 Release 4.6C?

Service	New / Improved Functionality
Working Time	Display Time Statement and Display Work Schedule were reworked to provide easier navigation
	Display Time Sheet was improved by including further search options for the accounting fields
Business Trips	Complete travel management functionality includes travel request, travel planning and travel expenses
Benefits	Retirement Benefits displays an employee's projected retirement benefits
	FSA Claims enables employees to submit claims and display the status of their flexible spending account
	Participation Overview allows employees to view the benefits confirmation letter as a pdf file
	Enrollment offers hypertext links to benefits plan providers and doctor search functionality as well as to other useful information on the intranet or Internet
	A paycheck simulation shows how the selected plans affect the employee's pay
Jobs	Employment Opportunities enables employees to submit an electronic attachment with their application form

Service	New / Improved Functionality
Payment	Exercising Employee Options enables employees to view and exercise their awards
	Display Total Compensation Statement enables employees to view their total compensation statement
Training	Training Center contains extended search functionality, workflow support, enhanced business event detail screen with Web links and shopping basket functionality
	My Bookings provides employees with an overview of booked, cancelled and rebooked events. Employees can also use it to appraise an event
Appraisals	My Appraisals enables employees to view the appraisals in which they are the appraisee
Skills	Display Skills Profile allows employees to view the skills they have entered themselves or which have been entered for them
	Display Requirements Profile enables employees to view the requirements of their current position
	Profile Match-up with Own Position enables employees to compare their own skills profile with the requirement profile of their position

Service	New / Improved Functionality
	Carry Out a Survey serves to surveys, questionnaires or evaluations
Life & Work Events	This set of solutions guide employees through a number of life and work changes, from the birth of a child to beginning work at a new company (More details are offered later in this chapter)

SAP ESS in the mySAP Workplace Environment

Starting with R/3 Release 4.6C, SAP Employee Self-Service is fully integrated in the mySAP Workplace. You can navigate through SAP ESS and access services through the mySAP Workplace, as the old SAP ESS logon and menu from previous releases, has been eliminated.

The mySAP Workplace is a role-based enterprise portal providing users with fast, convenient Web-based access to internal and external information, applications, business content and services. To further streamline this functionality, each of these features is shaped to suit the individual mySAP Workplace user by presenting only the services and information required by that user's role(s) within the company.

Note: SAP no longer supports the old SAP ESS portal (service PZ 12) for this or future releases.

The mySAP Workplace

The mySAP Workplace is divided into two main areas: the LaunchPad and the WorkSpace. For a diagram of this structure, see the screenshot below.

The screenshot shows the mySAP Workplace interface. On the left is the **LaunchPad**, which provides personal, role-based navigation. On the right is the **WorkSpace**, which contains mini-apps, applications, and content. The interface includes a navigation menu, a welcome message for Chris Anderson, news articles, a competitor sales table, and a workflow inbox.

Market	Competitor	May 2000 Sales	April 2000 Sales
	Home Care, Inc.	\$ 499,200,000	\$ 416,000,000
	Linwood, Ltd	\$ 632,700,000	\$ 666,000,000
	Others	\$ 330,000,000	\$ 333,000,000
	United Home	\$ 913,000,000	\$ 830,000,000
	Overall Result	\$2,374,900,000	\$2,245,000,000

The **LaunchPad** is the navigation area which presents users with all the activities relevant to their individual role(s). For example, users may access news, make travel plans using ESS Travel Management, or run a report in the SAP Business Information Warehouse. In addition, an open architecture allows users to access SAP and non-SAP information and applications from the LaunchPad.

Chapter 1: What Is SAP Employee Self-Service?

The SAP Employee Self-Service Role

MiniApps are small applications containing content-based information based on the user's role(s) and shaped by their preferences. The content of a MiniApp can be drawn from internal sources such as company information, as well as external sources such as news providers. MiniApps could include Microsoft Outlook or Lotus Notes Inbox, workflow-based activities, company news, search engines, document alerts or reports.

Any application or service opened from the LaunchPad or a MiniApp appears for use in the **WorkSpace**.

Each company also has the option of creating and including their own company-specific or third party MiniApps in the roles they provide for their users. When a user selects a service from the role-based menu, this service appears in their WorkSpace, replacing their personal homepage of MiniApps.

Note: When implementing SAP ESS Release 4.6C, we strongly recommend using at least mySAP Workplace 2.11. MySAP Workplace 2.11 will be available by the end of November 2000. Upgrading to this release is required.

For further information about the mySAP Workplace, please refer to <http://www.sap.com/workplace> or, for partners and customers, <http://service.sap.com/workplace>.

The SAP Employee Self-Service Role

SAP Employee Self-Service in the mySAP Workplace environment is referred to as a role. It is one of approximately 200 roles, or service

groups, offered by this enterprise portal and consists of numerous services.

When using SAP ESS, each employee within the company assumes the generic status, or role, of an employee. On top of this base role, each user can assume additional roles specific to his or her position and responsibilities within the company.

Services in Detail

Some SAP ESS services enable employees to display their data, while others enable them to change their data. Certain services trigger approval steps and make use of SAP WebFlow functionality – the SAP Internet workflow – to route approval requests to the correct person. Some of these services are country-specific, but all can be easily adapted for use in other countries as well.

Within SAP Employee Self-Service, services are grouped into service areas for ease of navigation and orientation.

Office

- **Inbox**

Employees can access their SAP Office Inbox with e-mail and SAP WebFlow functionality. They can display and process the work items to be executed as workflow steps, allowing employees to take part in workflow-driven business processes.

- **Calendar**

Employees can maintain their own calendar and view the calendar of other employees.

- **Who's Who**

This service supports internal communication by enabling employees to quickly locate basic information about their colleagues. It works like an online phonebook. Users can also view each employee's position in the Organizational Chart or check their availability by viewing their schedule in the shared Office Calendar. Users can also maintain a photo of themselves from their computer.

- **Change Own Data**

Employees can maintain their company data, such as office number, telephone extension, or e-mail address. They can also upload a photo of themselves from their personal computer. This information can be made available company-wide through the Who's Who service.

- **Internal Service Request**

Employees can submit requests for service, such as a courier transport or computer repair. Where appropriate, the employee can be presented with a solutions catalog. If necessary, employees can send their service request on for further processing using SAP WebFlow. Employees can check the status of their request(s). The costs of performed services can be tracked.

- **My Assets**

Employees can display all the assets assigned to them. They can change the asset data, register the new location of an asset or report an asset retirement.

Working Time

- **Record Working Time (CATS)**

This service supports the decentralized recording of working time. Employees can enter their own working times and allocate the

time to work breakdown structure (WBS) elements such as cost centers. They can display a worklist, enter and save their time sheet, and release the times for approval. The Record Working Time service automatically calculates hours worked from clock times, and provides detailed information. Upon releasing the time for approval, this service can trigger SAP WebFlow-driven workflows to route the entered time to the responsible person for approval.

- **Create Leave Request**

Users can check how much leave they have available and request leave. The responsible manager then approves or rejects the request through their integrated SAP WebFlow inbox which automatically notifies employees.

- **Leave Request - Overview**

Users can display an overview and the current status of their leave entitlements. For example, they can check specific leave remaining and the status of requested leave. Employees can also cancel their leave requests and send a notification to their manager.

- **Display Leave Information**

Users can display an overview and the current status of their leave entitlements.

- **Display Work Schedule**

Users can view their current work schedules.

- **Display Time Statement**

Users can display an overview of their evaluated time balances. They can see how many hours they have worked in current or previous payroll periods.

Business Trips

- **Travel Management**

Users can create travel requests and submit these to their manager or to the department that coordinates travel. Users can also plan travel services for their trips. Upon completing a trip, travel expenses can be recorded and assigned to cost centers or customer sales orders.

Life and Work Events

- **My First Days**

New employees are guided step-by-step through personal, payroll, benefit and professional information, and are prompted to enter personal and other necessary data. Furthermore, the service provides new employees with consolidated access to all needed information.

Benefits

- **Participation Overview**

Users can check which benefit plans they are currently enrolled in, set key dates and view their previous benefit plans. Plan details including costs, contributions, investments, dependents and beneficiaries can be displayed. Users can also consult online benefit services and print enrollment confirmation forms.

- **Enrollment**

Users can consider their benefit plan enrollment options and enroll. This includes selecting plans, choosing options, coverage and contribution amounts, and registering dependents and beneficiaries. They can determine whether their selections are consistent with company policy, find out if evidence of insurability is necessary and consult online benefit services. Users can print an enrollment form for a benefit offer and can simulate a payslip to check the effect of their plan choices on their pay prior to completing enrollment.

- **FSA Claims**

Users can display the balance of their flexible spending account(s), display and create claims, and change or delete claims that have not yet been approved. They can register their acceptance or rejection of claims.

- **Retirement Benefits**

Users can display their projected retirement benefits and service data. This includes total length of credited service, vesting percentage and estimated benefit amounts.

Purchase

- **Purchase Order**

Users can purchase the goods and services they require for maintenance, repair and operations (MRO). The procurement functionality includes creating a requisition, confirming receipt of goods and services, and approving an invoice for payment. In the role SAP Employee Self-Service, purchasing functionality is provided by SAP Business-to-Business Procurement. Please note that SAP Business-to-Business Procurement functionality is not part of the SAP R/3 core component delivery.

Jobs

- **Employment Opportunities**

This service provides a list of open positions in your company. Users can apply for one of these positions at the click of a button. They can also create an attachment containing their application documents and photograph.

- **Application Status**

Users can view the status of their application(s).

Payment

- **Paycheck Inquiry**
Users can display their past and current remuneration statements.
- **Exercising Employee Options**
Users can display an overview of the awards they have been granted and exercise those which are vested.
- **Display Total Compensation Statement**
Users can display and print their total compensation statement(s).
- **Employment and Salary Verification**
Users can request that a report verifying their employment and/or salary details be faxed directly to a third party, such as a bank or mortgage company. This service is designed to serve US employees, but can be adapted for other countries as well.
- **Various Country-Specific ESS Payment Services**
For a complete list of all country-specific ESS payment services, please visit <http://www.sap.com/ess>.

Personal Information

- **Address**
This service allows users to maintain their addresses, such as permanent, temporary, and home addresses.
- **Bank Information**
Users can maintain their bank information for the direct deposit of paychecks and expense reimbursements.
- **Emergency Address**
Users can maintain a contact address for emergency situations.
- **Emergency Contact**
Users can maintain the details of an emergency contact person.
- **Family Member/Dependents**

Users can maintain information about their dependents and family members. These can be referenced within the Benefits Enrollment service.

- **Personal Data**

Users can maintain their personal data, such as marital status and number of children.

- **Previous Employers**

Users can maintain information about their previous employers.

- **Various Country-Specific ESS Personal Information Services**

For a complete list of all country-specific ESS personal information services, please visit <http://www.sap.com/ess>.

Training

- **Training Center**

Users can display the current training classes and business event offerings. Moreover, employees can book their attendance for events or submit attendance requests for a supervisor's approval. Integrated SAP WebFlow features enable a supervisor to convert an attendance request into an actual event booking and notify the employee automatically. A shopping basket feature allows employees to make or request multiple bookings.

- **My Bookings**

Users can display and check the status of all of their bookings and view their attendance history. They can also re-book or cancel bookings or submit rebooking or cancellation requests to their superior for approval. Automatic WebFlow-powered approval workflows are triggered when requests for re-booking or cancellation are submitted. Using this service, users can also appraise events they have attended.

Skills

- **Edit Skills Profile**

Users can maintain their skills (qualifications, talents, knowledge) profile, including the proficiency level and validity date of each skill.
- **Display Skills Profile**

Users can display their skills profile – which they have maintained or which has been maintained for them.
- **Display Requirements Profile**

Users can display the requirements of the position to which they are assigned. The necessary proficiency of each requirement is displayed.
- **Profile Match-up with Own Position**

Users can compare their skills profile with the requirements profile of the position to which they are assigned. Qualification and proficiency deficiencies are marked and a link to the Training Center service proposes appropriate training courses.
- **Carry Out a Survey**

Presented as a template, this is a flexible tool for creating individual surveys, questionnaires, evaluations and appraisals. It is provided as a copy template, and enables you to work through individual surveys directly from your mySAP Workplace, or via a link (to your homepage, for example).

Appraisals

- **My Appraisals**

Users can display the appraisals they have received.

MiniApps

The role Employee Self-Service includes the following MiniApps:

- **Who's Who**
Who's Who serves as a telephone book for your organization. It is the corresponding MiniApp for the Who's Who service.
- **Display/Change Picture**
This MiniApp lets employees include a photo in their mySAP Workplace, thus enabling them to personalize their work environment. Birthday greetings can also be created and displayed here.
- **Worklist Overview**
Worklist Overview lets users display their current work items from all SAP component systems.
- **Unread Messages**
This MiniApp lets employees display unread messages that are currently in their SAP Office inbox.
- **Deadlines**
This allows users to display appointments currently maintained in their SAP calendar.
- **SAPterm Dictionary**
The SAPTerm Dictionary lets the user display entries in the SAP terminology database.
- **Search the Web**
This MiniApp allows a user to enter any string and select a search engine. This service can be personalized to include a search engine and set a default search engine.
- **SAP Workflow Inbox**

This MiniApp displays the employee's current SAP WebFlow work items.

- **System Messages**

System Messages displays the current system messages to the user.

- **Microsoft Exchange Inbox**

Output Inbox enables users to access their Microsoft Outlook Inbox.

- **Microsoft Exchange Calendar**

Outlook Calendar allows users to access their Microsoft Outlook Calendar.

- **Microsoft Exchange Tasks**

This MiniApp allows users to access their Microsoft Outlook Tasks.

Life & Work Events

Employees face many life and work changes during their time with a company. In response to these common events, both employees and employers must often take certain actions, such as updating personal information or making choices about benefits options. These life and work events may include:

- ▶ Changed job status (full-time/part-time)
- ▶ Start of a new job
- ▶ Termination of employment
- ▶ Marriage
- ▶ Divorce

- ▶ Birth/adoption of a child
- ▶ Annual benefits enrollment

In response, SAP ESS is currently launching a dynamic innovation: functionality fueled by life and work events. SAP ESS now includes a suite of services designed to guide users through these life and work changes.

Event-driven ESS means applications related to each life or work event are automatically accompanied by relevant information. Such background information guides the user through important decisions and necessary steps, such as filing information in various departments or choosing benefits. This functionality is implemented with a new framework based on SAP R/3 Release 4.6C and HR Support Package 8. The framework is flexible, allowing companies to either build their own life and work events or to model pre-configured ones delivered by SAP.

SAP and ProAct Technologies Corp., a provider of advanced HR Knowledgebase Solutions for corporate intranets, have joined forces to provide this new solution. Armed with an extensive background in knowledgebase systems featuring benefits, payroll, compensation and HR policies/procedures, ProAct Technologies Corp. creates and shapes content around company-specific requirements. Together we offer a unique combination of information, Web services and state-of-the-art SAP applications.

The interface within the Life & Work Event framework is based on open Internet standards. You can include content in the form of simple, static HTML pages housed in any Web-based knowledgebase ranging from SAP's Knowledge Warehouse or third party providers. ProAct Technologies Corp. is SAP's first partner for third party content delivery within this framework.

The first available life and work event-driven solution is **My First Days**. New employees navigate step-by-step through personal, payroll, benefit and professional information to provide their personal data and access relevant information. This service is branded to include your company's name so that, for example, Great Enterprises, Inc. employees will be greeted by My First Days@GreatEnterprises.

Note: Additional pre-configured life and work events will be delivered on an ongoing basis.

Life & Work Event Product Structure

The new life and work event solutions can be fully customized. Within the menu you can link to:

- ▶ SAP ESS services
- ▶ External services and information (i.e. non-SAP services)
- ▶ Internal company information

As delivered, the Life & Work Event templates can include any kind of information, ranging from SAP guidance content to help with online forms and applications. The templates can also be:

- Used as a starting point for customizing the text and design
- Dynamically driven by data from ERP systems such as SAP R/3 (e.g. forms can be pre-populated with the employee's name and address)
- Displayed in a print-ready format and printed

Note: The SAP Employee Self-Service interface for integrating a Web-enabled knowledgebase is generic. This means that while ProAct

Technologies Corp. is SAP's first partner for providing content, others, including the mySAP Knowledge Warehouse, can be used as well.

Work Event: My First Days

The work event My First Days is the first step towards life and work event management in SAP Employee Self-Service.

Objectives & Benefits

- All new hire information (personal information, compliance, I-9, W-4, code of conduct, etc.) is gathered
- Human Resource department responsibility for providing the new employee with information and related transactions is reduced
- Company programs and policies can be 'marketed'
- New employees have a positive experience and are in a position to contribute to the company sooner
- Hiring-manager spends less time on new employee administration and follow-up
- Need for printed materials is reduced

Note: The Life & Work Event framework is available with SAF R/3 4.6C HR Support Package 8.

Chapter 2: System Landscape

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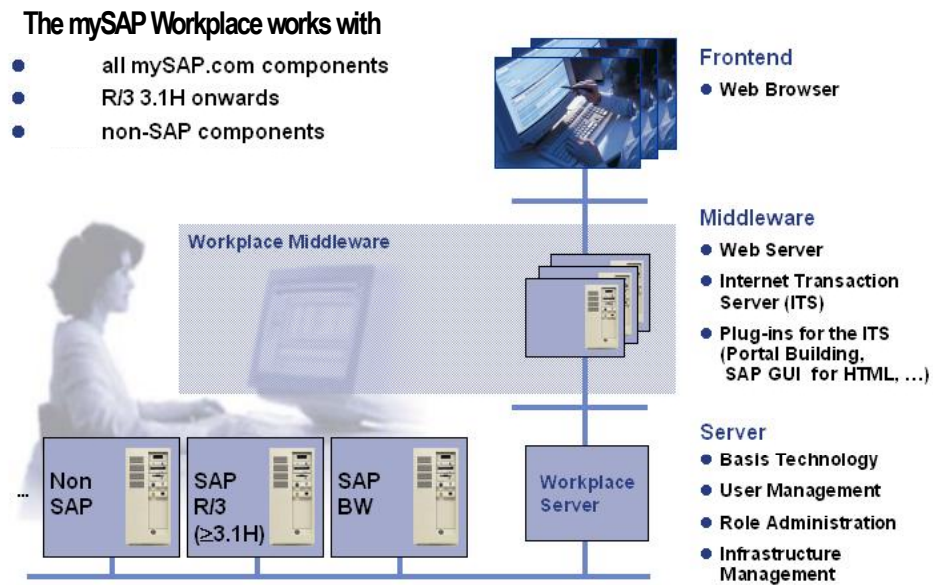
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Overview

This chapter describes the mySAP Workplace system architecture. It contains an introduction to the individual system components and explains how they function and interact as an integrated enterprise portal. You will find a simplified system chart below, followed by a more detailed description of the layers and components within the layers.

mySAP Workplace Architecture

The mySAP Workplace has a multi-tier architecture consisting of several layers and components. The major layers are the mySAP Workplace frontend, middleware and backend systems.



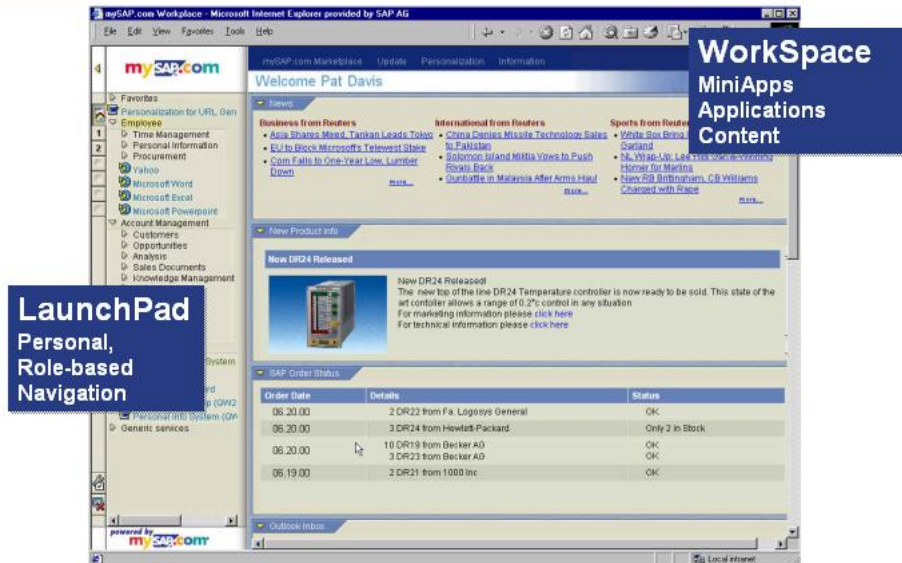
mySAP Workplace Frontend

The Workplace User Interface

The WorkSpace is the large area on the right side of the user's screen, where applications and Web pages are displayed. (See screenshot below). The initial WorkSpace page, containing a number of MiniApps, is displayed by selecting the *Home* icon. At the left you see the LaunchPad, used to start the applications and URLs. The mySAP Workplace only runs in the browser.

Chapter 2: System Landscape

mySAP Workplace Architecture



The Browser

As a typical “casual user” application, SAP ESS was engineered to rely on the browser as the user interface. All SAP ESS services are available through the browser.

With the advent of the mySAP Workplace and SAPGUI for HTML, the browser is also the standard SAP user interface.

mySAP Workplace Release 2.1x is available for the Microsoft IE4.X and IE5.X browsers. Browser support for Netscape 6 is planned for the end of 2000.

SAP GUI for Windows

Frequent users of non-ESS applications with detailed and complex data entry might prefer to use the SAP GUI for Windows for some or even all applications. Such applications are started in the WorkSpace of the mySAP Workplace and run in the browser. A user can define which applications should use which frontend when the mySAP Workplace is personalized. A local installation of SAP GUI for Windows is required if you want to use the SAP GUI for Windows.

SAP GUI for JAVA

The SAP GUI for JAVA is a platform-independent alternative to the SAP GUI for Windows for MacOS, Linux and other UNIX derived systems. It can also be used for Windows, which means that a local installation is not required. In general the SAP GUI for Java is not relevant for SAP Employee Self-Service.

SAPGUI for HTML

The SAP GUI for HTML is part of the ITS and is responsible for the dynamic visualization in HTML of most of the SAP applications in the browser. The SAP GUI for HTML dynamically converts any given SAP screens into HTML using the General HTML^{Business} Function Library.

SAP GUI Selection

Each SAP application is delivered with a transaction classification that defines the GUIs with which it can run. There are two classes of applications: Professional User Transactions and Internet Application Components (IAC), targeted towards casual users.

Professional user transactions are started with the “thinnest client” available for the transaction according to the classification, such as with the SAP GUI for HTML. If an application does not support this GUI, the

transaction is started with the SAP GUI for JAVA or with the SAP GUI for Windows.

IAC's are always executed within the browser. All SAP ESS services are classified as IACs.

You can find more information about the available SAP GUIs under <http://service.sap.com/sapgui>.

mySAP Workplace Middleware

The middleware links the backend systems to the frontend. It consists of the following two components:

- ▶ Portal Builder
- ▶ SAP Internet Transaction Server

The Portal Builder

The Portal Builder is based on an ITS instance with a specific set of services. It communicates with the mySAP Workplace server to receive information about the role of the current user. Using this information, the Portal Builder creates the structure of the mySAP Workplace (LaunchPad and Workspace) for the current user and sends the page to the user's browser using the HTTP server.

SAP Internet Transaction Server

The Internet Transaction Server (ITS) enables Internet and intranet users to communicate with an underlying SAP R/3 System by starting services and transactions directly from a Web browser.

The ITS thus provides the basic infrastructure for all SAP Internet applications, including key components such as the mySAP Workplace, Employee Self-Service (SAP ESS), Business-to-Business Procurement (BBP), and Business Warehouse (BW).

For detailed information about the key elements of the ITS and how they work, please check the sources referred to in “Additional Information” at the end of this chapter.

Inside-Out Development

The ITS solution for deploying Internet applications is based on the premise that there is already a suitable business application system which has a stock of transactions, function modules and reports, as well as its own integrated development environment. The business application system is SAP R/3 and the development environment is the ABAP Workbench. All that is needed to enable Internet users to access and run these applications from a Web browser is an interface to the Internet. This interface is provided by the ITS.

Developing Internet applications driven by the ITS is a two-stage process with a clear separation between business logic and presentation. You define the business logic by creating dialog transactions, function modules or simple reports with the ABAP Workbench in R/3 and then design the look and feel of these services in the SAP@Web Studio or the Web Application Builder. The ITS is then responsible for the link to the Internet. The definition of the dialog flow of an application depends on the ITS implementation model chosen and on the type of application you are developing.

It is desirable to separate programming tasks from the visual design because these two steps require different skills. Programmers who understand the business requirements write the business code, while graphic design or user interface specialists create an intuitive user interface with design languages such as HTML and DHTML.

SAP provides different implementation models based on the various ways of developing ITS-driven applications. As shown in the table and diagram in Appendix G, typical SAP ESS applications are often form-

based, have a fixed dialog flow and require that a user log onto R/3. Such applications would use the screen-based approach. On the other hand, many Internet services such as an Internet storefront, for example, require flexible customer-specific changes, with a dynamic and easy-to-change dialog flow. These applications would use the dialog flow logic, with its better possibilities for adapting the dialog flow to customer-specific requirements.

ITS Implementation Models

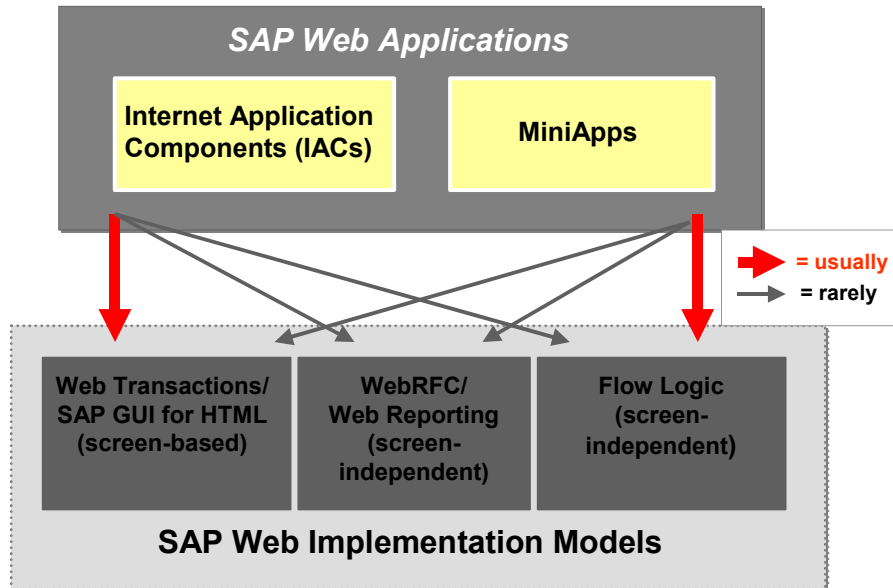
With the introduction of mySAP.com, the ITS experienced two major extensions:

- ▶ The SAPGUI for HTML, enabling the ITS to automatically display any R/3 dialog transactions in the browser.
- ▶ The ITS Flow Logic, extending the ITS with an additional programming model beyond the transactional model of SAP R/3.

As shown in the diagram below, some implementation models are screen-based, while others are screen-independent, but there is no clear assignment of application types to one particular implementation model.

See Appendix G for the features, advantages and disadvantages of the different SAP Web Implementation Models.

A short introduction of the new and existing concepts is given below.



SAP GUI for HTML

Available in Release 4.6B or higher, the SAP GUI for HTML dynamically converts SAP R/3 dialog transaction screens to HTML pages by automatically mapping R/3 screen elements to HTML. This mapping is implemented by so called HTML^{Business} functions residing within the ITS. When a screen is converted to HTML, R/3 screen attributes are used to position HTML controls at the same location on the HTML page as on the underlying R/3 screen. SAP ships a standard library of HTML^{Business} functions for mapping all given R/3 screen elements to HTML.

In general you do not need knowledge of HTML, HTML^{Business}, or scripting languages such as JavaScript, because the SAP GUI for HTML generates the HTML pages automatically. You also do not have to be familiar with the SAP@Web Studio to deploy applications based on the SAP GUI for HTML.

To allow users to run R/3 transactions directly from a Web browser with a graphical user interface similar to that used in the SAP GUI for Windows and with no additional effort involved, you should install the SAP GUI for HTML on your ITS.

The SAP GUI for HTML is one of two models for implementing SAP Internet applications that allow users to run R/3 dialog transactions directly from a Web browser. The other model is a Web transaction.

Web Transactions

Web transactions are Internet-enabled R/3 dialog transactions that you call from a Web browser. They differ from SAP GUI for HTML in that the HTML pages are generated dynamically depending on HTML templates defining the visual aspects of the application and not on the R/3 screen definition. This allows for a clear separation between business logic/dialog flow and presentation aspects.

You can implement the business logic and the dialog flow by creating an R/3 dialog transaction in the ABAP Workbench. The dialog flow is defined in the screen flow logic of the R/3 transaction.

You can implement the presentation aspects and enable the transaction to be run from a Web browser by creating all the required ITS files in the SAP @Web Studio or the Web Application Builder. These files include an ITS service description and HTML templates (one for each screen in the R/3 transaction). At runtime, the ITS merges the data on each R/3 transaction screen into a corresponding HTML template and displays the

result in the user's Web browser. Language resource files and MIME files can also be included here. Language resource files store language-specific information that cannot be derived from the underlying R/3 screen and MIME files (Multipurpose Internet Mail Extension files) include the various static files, such as graphics, images, and video elements.

To implement Internet applications using this model, you must manually map each R/3 screen element to HTML. This requires some knowledge of HTML, HTML^{Business} and – because of the demand for highly interactive HTML pages – scripting languages such as JavaScript. To create services, HTML templates, and other ITS files, you also need to know how to use SAP@Web Studio or the Web Application Builder (transaction SE80).

Flow Logic

Available with ITS Release 4.6C or higher, the flow logic model allows you to develop applications that consist of linked HTML pages. You can fill these HTML pages with data retrieved from the R/3 System (or any other external system). These HTML pages can offer a range of application functions and are generated by following hyperlinks or processing HTML forms. The dialog flow of these applications is defined during development, but can be changed easily to suit customer requirements. This contrasts with the dialog flow in other business scenarios, where the application often dictates how users can navigate. In such scenarios it is not possible to change the dialog flow.

The development process for applications based on dialog flow takes place both inside and outside the R/3 System:

You can define the business logic by creating remote-enabled function modules (RFCs) or Business APIs (BAPIs) in the ABAP Workbench.

You can define the dialog flow and the presentation aspects by creating all the required ITS files in the SAP@Web Studio or the Web Application

Builder (for those working solely within the R/3 System). These files include an ITS service description, HTML templates, and flow files for all templates that require a dialog flow definition. Language resource files and MIME files can be used as well.

The flow logic model is suitable for developing applications that offer several application functions on one page where the dialog flow is not defined in advance. Such applications have simple point-and-click user interfaces, limited manual data input, and reduced data formatting requirements. They are often used in e-commerce scenarios.

Additional Information

For the most current sources of ITS and SAP@Web Studio documentation, please see the following sources:

ITS Web site	http://www.saplabs.com/its (in the section "Documentation")
SAP@Web online help	Choose Help → <i>ITS Documentation within the SAP@Web Studio</i>
R/3 System online help	Choose Help → SAP Library → <i>Basis Components</i> → <i>Frontend Services (BC-FES)</i> → <i>ITS / SAP@Web Studio (BC-FES-ITS)</i>
Web Application Builder (SE80)	SAP Library → <i>Basis Components</i> → <i>ABAP Workbench (BC-DWB)</i> → <i>BC ABAP Workbench Tools</i> → <i>Integration of Internet Services</i> → <i>Web Application Builder</i>

SAP General HTML^{Business} Function Library

All SAP Web application models described above are based on SAP's General HTML^{Business} Function Library. The General HTML^{Business} Function Library encapsulates all of the official 4.6C SAP Web design components in reusable macro-like functions. The use of these functions avoids redundancies and ensures a consistent look and feel.

The functions in the library are used to create the HTML templates for screen-based Web applications and are the basis for the dynamic HTML generation of R/3 dialog transaction screens using the SAP GUI for HTML. The same applies for R/3 screen-independent Web applications based on ITS flow files.

The HTML^{Business} Function Library centrally defines SAP's visual representation in the Web, including SAP ESS and the mySAP Workplace.

The HTML^{Business} Functions Library is the key to SAP's consistent Web design, which means that:

- ▶ When customers enhance SAP ESS by creating their own SAP ESS services, they are equipped with a strong set of design elements to ensure that their templates are consistent with the SAP standard. For details see Chapter 12.
- ▶ Customers can individualize and brand SAP ESS and the mySAP Workplace beyond the scope of Cascading Style Sheets, by changing parameters or the code of HTML^{Business} functions in the library. This ensures that the changes will apply to all SAP Web applications.

Note: Changing parameters or the code of HTML Business Functions requires a strong knowledge of the HTML Business Library. Because most customer specific design changes can easily be made using

Cascading Style Sheets (CSS), we strongly recommend using SAP® Style Sheet Designer (see Chapter 11 for more details).

mySAP Workplace Backend Systems

The Workplace backend system landscape comprises the following:

- ▶ mySAP Workplace server
- ▶ SAP component systems or
- ▶ Non-SAP systems

mySAP Workplace Server

The Workplace server provides the following portal-management and administration functionality:

Central user administration

The Workplace Enterprise Portal provides SAP ESS customers with a system group containing two or more R/3 systems (at least the Workplace and the HR component system). User master records therefore have to be created and kept consistent in multiple systems. Because of the way in which SAP ESS users are generated from the HR master data and the large number of users, this can only be performed by the SAP Central User Administration (CUA). The CUA is based on an Application Link Enabling (ALE) landscape permitting the data to be exchanged in a controlled manner and to be kept consistent. The ALE landscape is designed to define the mySAP MySAP Workplace system as a central system.

For further information about installing the CUA, see SAP Library → *Basis Components* → *Computing Center Management System (BC-BMT)* → *Users and Roles (BC-CCM-USR)* → *Central User Administration*. To find out

more about how the SAP ESS user is created in the HR system once the central user administration has been installed, see Chapter 6.

Role management

The mySAP Workplace server manages all role definitions and access methods (in the form of URLs) for the functions, information, and services that can be accessed in the mySAP Workplace architecture.

RFC management

The mySAP Workplace server supports an RFC connection to all mySAP.com components or applications that can be accessed depending on the user's role.

ITS address management

The mySAP Workplace server connects the logical systems (component systems) with the address of the corresponding ITS server.

Personalization

This includes personalizing roles and MiniApps, defining favorites (for example URLs in the LaunchPad), and selecting the type of GUI.

URL generation

The Workplace server generates the URLs for the different access methods for all applications and content using the ITS address management.

Universal Inbox

With the Workplace server as the central Enterprise Portal in the system group, you can centrally access the work items from the workflows in the different systems. For example, an SAP ESS user can get approval for his absence from the same inbox as the confirmation for a purchase order in BBP Procurement.

When a user logs on to the mySAP Workplace, the Workplace server provides the information required, such as Single Sign-On, assigned roles, system information, transactions and GUI preferences. The Workplace server also generates the URLs available to the user within the LaunchPad on the frontend. All of this information is passed by the mySAP Workplace middleware (ITS and Portal Builder) to the user's browser, where it remains for the duration of the session. The contents, services and information accessed from the LaunchPad during a mySAP Workplace session are then returned from the middleware and the corresponding backend system.

mySAP.com Core Components

The SAP R/3 HR component contains the HR master records that are important for SAP ESS as well as most of the SAP ESS applications. Other applications in R/3 include FI and LO. The single roles determine which applications reside in which component system. For more information on single roles, see Chapter 5.

In general the mySAP.com core component systems must be of Release 3.1I or higher to be included in a mySAP Workplace system landscape. SAP ESS must be based on the HR core component system for Release 4.6C. The mySAP Workplace plug-in must also be imported into all of these systems.

Additional mySAP.com Components

The mySAP Business-to-Business Procurement (BBP) component provides procurement based on self-service. Other mySAP components integrated within the mySAP Workplace are for example the mySAP

Business Information Warehouse and mySAP Advanced Planner and Optimizer, but they are of no relevance for SAP Employee Self-Service.

Chapter 3: Getting Started

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Overview

This chapter contains information you should consider before beginning your SAP Employee Self-Service (ESS) installation:

- ▶ ITS hardware, software and skills
- ▶ SAP@Web Studio hardware, software and skills
- ▶ R/3 hardware, software and skills
- ▶ mySAP Workplace hardware, software and skills

Note: Starting with R/3 Release 4.6C, the main menu for SAP Employee Self-Service has been replaced with the mySAP Workplace menu. Therefore as of Release 4.6C, SAP ESS can only be accessed through the mySAP Workplace.

This chapter provides sizing information as well a sample project plan to help you prepare for your SAP Employee Self-Service implementation project.

It also addresses the importance of having an effective rollout strategy for implementing SAP ESS in your company. Enabling your employees to maintain their individual data and take ownership of their business processes means a shift in corporate culture. It is important that you inform, train, and prepare your employees for the changes that lie ahead.

Quick Guide to SAP ESS

Before you begin your SAP ESS installation, review the following steps. Details on each of these steps are contained in this implementation guide.

1. Size the SAP ESS environment and procure the required hardware.
2. Install the mySAP Workplace server.
3. Implement central user administration
This is optional, but strongly recommended in order to keep users/passwords synchronized
4. Install the Web server, ITS, and SAP@ Web Studio.
You will need a separate virtual instance of the ITS for the mySAP Workplace, but you may install your R/3 component systems on one or more ITS servers. In general SAP recommends installing one ITS for each R/3 component system.
5. Determine which SAP ESS services you are going to use (role customizing).
6. Review and apply any support packages or Hot Packages with implications for SAP ESS to the R/3 System.
7. Publish the necessary SAP ESS services from R/3 to the ITS.
OPTIONAL steps if you choose to create your own SAP ESS services:
 - ▶ Write your SAP ESS service in R/3.
 - ▶ Publish it to ITS and design the visual aspects in the SAP@ Web Studio.
 - ▶ Add the service to R/3 system.

8. Rollout information for all SAP ESS users, including rollout schedules, upcoming changes, and benefits.
9. Create test users.
10. Test the applications.
11. Do any additional SAP ESS customizing, if necessary.
12. Integrate SAP ESS into your company intranet.
13. Change the screens of your selected SAP ESS services, if necessary.
14. Create SAP ESS users for the pilot users.
15. Train the pilot users.
16. Stress test the applications.
17. Create all users.
18. Start production.

ITS Requirements

Hardware

Requirements	Development/Test Environment (single host installation)	Production Environment (dual host installation recommended)
Processor	Pentium PC compatible architecture	
Back-up (optional)	Either over network or tape drive (DAT 4mm or DLT; hardware compression recommended)	
CD-ROM drive	ISO 9660 compatible	
Hard disk	≥ 1GB	≥ 2 × 1 GB mirrored or RAID/each
Memory (RAID)	≥ 128 MB	≥ 128 MB each

Note: For information on sizing, see Chapter 4.

Software

Software	Requirements
Web browser (Minimum version requirements)	4.5B: Netscape Communicator 4.0 Microsoft Internet Explorer 4.0 4.6B: Netscape Communicator 4.06 Microsoft Internet Explorer 4.0 4.6C: Microsoft Internet Explorer 5.0 Netscape Communicator (will be delivered as soon as Netscape 6.0 is available)
Web server software	Netscape Enterprise Server/Microsoft Internet Information Server (IIS)
Operating system	Windows 2000 or WindowsNT 4.0 server, NTFS file system, TCP/IP network, virtual memory
Other software	SAPGUI

Skills

Skills	Training and Documentation
<p>Knowledge of how to install, configure, and manage ITS and Web servers to run the required services. Some knowledge of SAP@Web Studio.</p>	<p>Training:</p> <p>ITS050 – Internet Transaction Server: Basics ITS070 – Administration ITS100 – Development of Easy Web Transactions ITS110 – Development of Web scenarios with ITS flow logic</p> <p>Documentation: <i>SAP Library → Basis Components → Frontend Services (BC-FES) → ITS/SAP@Web Studio (BC-FES-ITS)</i></p> <p>In SAP@Web Studio under Help</p> <p>Please refer to the ITS homepage at http://www.saplabs.com its to download documentation</p>

Note: The training series described above replaces the course BC. 40 – Developing Internet Applications.

SAP@Web Studio Requirements

Hardware

Hardware	Requirements
Processor	Pentium PC compatible architecture
Backup (optional)	Either over network or tape drive (DAT 4mm or DLT; hardware compression recommended)
CD-ROM drive	ISO 9660 compatible
Hard disk	≥ 1 GB
Memory (RAM)	≥ 64 MB

Software

Software	Requirements
Operating system	Windows NT 4.0 Workstation or Server, Windows 2000
Web browser	Microsoft IE 5.0 (for Studio testing)
Virtual memory	According to Microsoft guidelines
File system	NTFS
Network TCP/IP	Installed

Skills

Application Development		
	Skills Required	Training and Documentation
	<p>How to install and use the SAP@Web Studio. How to manage all service-related objects (service files, HTML templates, language resource files, graphics, etc.) that are external to R/3. How to publish these files to the ITS and use source control in R/3.</p>	<p>Training</p> <p>ITS050 – Internet Transaction Server: Basics</p> <p>ITS100 – Development of Easy Web Transactions</p> <p>ITS110 – Development of Web scenarios with ITS flow logic</p> <p>Documentation</p> <ul style="list-style-type: none"> ▶ SAP@Web Installation Guide on http://www.saplabs.com/its ▶ <i>SAP Library</i> → <i>Basis Components</i> → <i>Frontend Services (BC-FES)</i> → <i>ITS/SAP@Web Studio (BC-FES-ITS)</i> ▶ In SAP@Web Studio under Help

Visual Design in HTML		
	Skills Required	Training and Documentation
	<p>How to design templates in standard HTML and HTMLBusiness. Understand the concept of HTMLBusiness functions.</p>	<p>Training ITS150 - Corporate Identity Design</p> <p>Documentation</p> <ul style="list-style-type: none"> ▶ <i>SAP Library</i> → <i>Basis Components</i> → <i>Frontend Services (BC-FES)</i> → <i>ITS/SAP@Web Studio (BC-FES-ITS)</i> ▶ For information on HTMLBusiness, see the: <i>SAP Library</i> → <i>Basis Components</i> → <i>Frontend Services (BC-FES)</i> → <i>ITS/WebStudio (BC-FES-ITS)</i> → <i>HTML Business Language reference</i>

R/3 Requirements

Hardware

For information on R/3 hardware, see the Quick Sizer at <http://service.sap.com/quicksizing>.

Software

SAP ESS is an alternative, simplified user interface to your existing R/3 applications. In most cases, once you have customized the relevant R/3 applications, there is little additional SAP ESS-specific customizing necessary. For more information, see Chapter 7.

The various SAP ESS services will be up and running on the R/3 System once the corresponding R/3 applications (shown in the right column) are customized and in use.

SAP ESS Service		R/3 Application
Office	Calendar	Generic Business Tools (BC-SRV-GBT)
	Inbox	Generic Business Tools (BC-SRV-GBT)
	Organizationa Chart	Organizational Management

Chapter 3: Getting Started

R/3 Requirements

SAP ESS Service		R/3 Application
Office (Cont'd.)	Who's Who	HR master data, specifically the mini master. This includes infotypes 0001 (Organizational Assignment), 0002 (Personal Data), 0032 (Internal Control), 0105 (Communication)
	Change Own Data	See Who's Who
	Service Request	Notifications (CA-NO) may include PM, QM, SM, CO, PS, PP, FI-AA, FI-GL, FI-AP/AR, IS-PS
	My Assets	Asset Accounting
Working Time	Display Leave Information	Infotypes 2006 (Absence Quotas), 2001 (Absences), 0416 (Time Quota Compensation). If you use leave accruals via time evaluation (function QUOTA), these accruals must also be taken into account
	Create Leave Request (workflow-based)	Infotypes 0005 (Leave Entitlement) and/or 2006 (Absence Quotas) for the deductible quotas. Infotype 2001 (Absences) for absences

SAP ESS Service		R/3 Application
	Leave Request- Overview (workflow-based)	Same as above
	Record Working Time (CATS)	Cross-Application Time Sheet, the HR mini master, and infotype 0315 (Time Sheet Defaults)
	Display Time Statement	HR Time Evaluation report (RPTIME00)
	Display Work Schedule	Shift Planning
Business Trips	Travel Management	Business Trip Management, HR mini master, and infotype 0017 (Travel Privileges)
Benefits	Participation Overview	Benefits and infotype 0171
	Enrollment	
	Enrollment including Adjustment Reasons	Benefits and infotype 0171 infotype 0378 for mid-year adjustments

Chapter 3: Getting Started

R/3 Requirements

SAP ESS Service		R/3 Application
	Retirement Plan Valuation Results	Benefits and infotype 0565
	FSA Claims	Benefits and infotypes 0170 and 0172
Jobs	Employment Opportunities	Recruitment
	Application Status	
Payment	Employment and Salary Verification	HR master data for employment verification, infotype 0008 (Employee Basic Pay) for salary verification
	Paycheck Inquiry	HR payroll and the payroll form
	Request W-2 Reprint	Payroll
	Exercising Employee Options	HR master data, specifically infotype 0382
	Display Total Compensation Statement	Compensation

SAP ESS Service		R/3 Application
Personal Information	Address Bank Information Emergency Address Emergency Contact Family Member/ Dependents Personal Data Previous Employers	HR master data, specifically infotypes 0006 (Addresses), 0002 (Personal Data), 0009 (Bank Details), 0021 (Familymember/Dependents), 0023 (Previous Employers)
Training	Training Center	Training and Event Management
	My Bookings	
Qualifications	Maintain Skills Profile	Skills
	Display Skills Profile	
	Display Requirements Profile	
	Display Profile Match-up	
Appraisals	My Appraisals	Infotype 0025

For a complete list of SAP ESS services please refer to Appendix D or <http://www.sap.com/ess>.

R/3 Skills

The R/3 skills you need in order to set up SAP ESS depend on whether your installation falls into one of two cases:

If	Then	Example
You are setting up an application specifically for SAP ESS use	You need a specialist in that particular application who can customize it first in R/3 and then ensure that the settings for SAP ESS are correct	You currently are not using the Training application in R/3, but want to offer this functionality to your SAP ESS users
You want to make an existing R/3 application available for SAP ESS	You need an HR customizing generalist who understands the application and also understands the implications of SAP ESS use for your existing R/3 customizing	You already use Benefits in R/3 and want to make it available to your employees via SAP ESS

mySAP Workplace Requirements

mySAP Workplace	Requirements
Frontend	Microsoft Internet Explorer 5.0 on Windows 95, 98, NT or 2000
Workplace Server	SAP Basis System 4.6D with Workplace Release 2.1x
Workplace Middleware	Windows NT 4.0 or Windows 2000
Component Systems (= R/3 Systems)	No restrictions

Additional Sources of Information

mySAP Workplace Implementation Documentation	Online Documentation
mySAP Workplace documentation (including overview, roles guide and configuration documentation for the mySAP Workplace)	http://service.sap.com/workplace , menu path: Media Center → <i>Literature</i>
SAP Installation Guides	http://service.sap.com/instguides
Platform and Technology Information Center	http://service.sap.com/platforms
SAP System requirements – networks, frontend and communication interfaces	http://service.sap.com/SSR
SAP Security Guide	http://service.sap.com/security
SAP Network Integration Guide and Network Load for Release 4.6	http://service.sap.com/network

Training

MY301 – Workplace Overview.

Topics covered include central user administration, Single Sign-On, the definition of roles, and the integration of MiniApps.

Project Plan

The following SAP ESS implementation project plan outlines the different phases and the steps you must follow.

Project Phase	Actions
Phase 1: Project Preparation	Generate project plan
	Determine project procedures
	Kick off project
	Phase 2: Business Blueprint
	Evaluate the existing intranet environment
	Determine how SAP ESS fits into the intranet concept
	Determine the Web design for SAP ESS
	Determine available services
	Size the SAP ESS environment
	Determine hardware and software requirements for: <ol style="list-style-type: none"> 1. Development and test environment 2. Production environment

Chapter 3: Getting Started

Project Plan

Phase 3: Realization	Implement development and test environment
	Customize R/3
	Set up roles (including any Mini-Apps)
	Publish services
	Modify services (if necessary)
	Create and authorize users
	Transport from development to test environments
	Test the developed SAP ESS services
	Implement the production environment
	Transport from test to production environment
	Integrate with existing intranet
	Test production system
Phase 4: Final Preparation	Share plans and goals with employees
Phase 5: Go Live and Support	Implement support
	Go live and review support
Phase 6: Continuous Optimization	Provide production support
	Evaluate
	Optimize performance

Considerations for a Successful Go Live

The following tips should help you to make going live as smooth as possible.

Phased Implementation

Avoid scheduling the SAP ESS implementation during high-use periods, such as benefits open enrollment. During this period, many users will be logging on to the SAP ESS system and entering a lot of data, which could stress your new system.

Roll out SAP ESS one department at a time rather than all employees at the same time. If you enable all employees at once, for example by sending an email to all employees, everyone will want to see the new system immediately. Long response times could result in employees not fully accepting the system.

Running a Pilot Project

Before rolling out SAP ESS to your entire company, you should define pilot users and run a pilot project. In this way, you can identify possible problems before rolling out on a large scale. Make sure you don't use too small a sample, as this should be a real test. Also, pilot users should be well distributed throughout your company, as these users can then become superusers for the complete rollout of SAP ESS at your company.

Upgrading to 4.6C

When implementing SAP ESS 4.6C, you should consider the hardware, software, network and security requirements for the mySAP Workplace

environment at an early stage. Size the environment accordingly on all components (R/3 and ITS).

Security

SAP strongly recommends that you encrypt your browser connections with the Secure Socket Layer (SSL) protocol, the Internet standard for encrypting HTTP transfers, to ensure security between the Web browser and Web server.

Effective Information Policy

You should inform employees about SAP ESS long before rollout. Communication mechanisms can include employee newsletters, SAP ESS brochures, company presentations, and roundtable discussions. You should include the following information in communications:

- ▶ SAP ESS rollout schedule
 - Changes to expect: Employees should know what changes ESS will bring to their working lives and when to expect these changes.
 - Benefits of SAP ESS: Employees should understand the benefits SAP ESS will bring them (increased productivity, control of their own data) and the company (reduction of HR costs, more efficient data management, concentration on people rather than processes).
- ▶ Cost savings

Employees should understand that SAP ESS, when implemented effectively, saves the company money.
- ▶ Names of your superusers

See *Defining Super User Groups* below.
- ▶ Password distribution

See *Password Distribution* below.

Defining Superuser Groups

You should have **superusers** in place when you rollout SAP ESS. The superusers serve as experts for a group of users. By making their expertise available to others, they can save your project team and HR department from having to answer hundreds of questions. To ensure that your superusers are indeed experts, invest some time in training them before you rollout SAP ESS. Publicize their names in advance so their target groups know who they are. The superusers can provide you with consolidated and representative feedback from your user audience.

Note: A competent superuser network can be extremely useful for IT projects other than SAP ESS. It represents a strategic asset. Reward these employees for their time and effort. At the same time, make sure they don't become troubleshooters for minor problems.

Password Distribution

Make sure your employees know that they must remember and protect their logon and password. You will spend days of extra work if your employees delete, forget, or lose their passwords. Make this information a critical part of your information strategy.

Feedback Mechanisms

While it is vital that you provide your employees with a feedback mechanism, try to channel the feedback through the superusers. During the first few weeks after going live, many employee questions, feedback and concerns become redundant quickly. Your well-trained superusers should be prepared to handle this. If the same questions are being asked repeatedly, you might want to add a "Frequently Asked Questions"

(FAQ) page to the logon screen or some other very obvious location within SAP ESS.

Training

While SAP ESS is simple and intuitive to use, some of your employees may feel they need training. Involve your superusers in providing training for their target groups.

Additional Documentation

SAP ESS is shipped with documentation for the employee rather than for the system administrator. However, what is true for one company may not be valid for another. Make sure the delivered documentation fits your needs. If necessary, replace or augment the delivered documentation with company-specific information. If your SAP ESS applications can be accessed in multiple languages, make sure that this additional documentation is available in all languages.

As of R/3 Release 4.6C, the online documentation for SAP ESS resides just as the online documentation for R/3 in the SAP Knowledge Warehouse. For end user documentation, see *SAP Library* → *Cross-Application Components* → *Employee Self-Service*.

Chapter 4: Sizing the SAP ESS Environment

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Overview

Sizing and tuning the ESS environment involves the server(s) running ITS WGate, the server(s) running ITS AGate and the R/3 System. This chapter will first provide an overview of possible system landscapes as well as instructions on how to determine the number of active users. This is followed by a sizing table that helps determine the hardware requirements for the ITS component, depending on the number of active users or hits per second. Finally there is an overview of the settings that influence the performance and throughput of the ESS environment and instructions on how you can measure and influence these settings.

Note: The calculations and settings mentioned here apply **only** to the Web environment, that is the ITS WGate and ITS AGate server(s), and not to the R/3 environment. As ESS can generate serious load on R/3, you should also check the sizing of your R/3 environment and adjust it according to the number of users you calculated for ESS and the number of standard R/3 users.

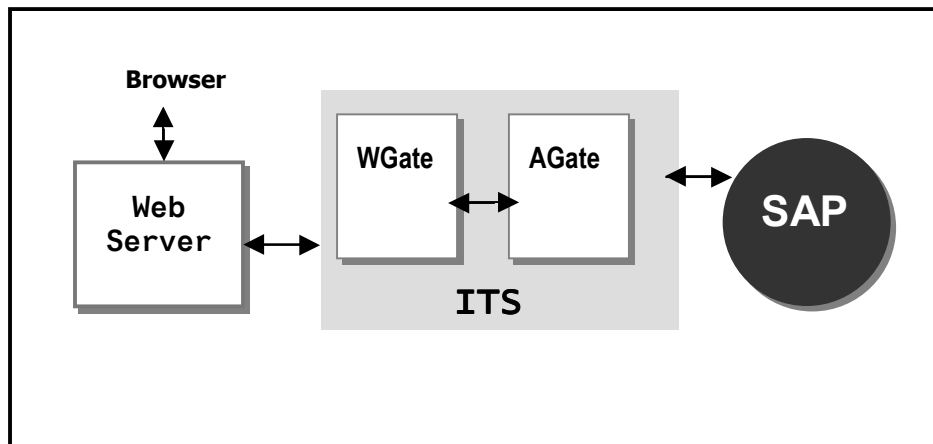
For information about sizing the R/3 environment, see the Quicksizer, which can be found at <http://service.sap.com/Quicksizing>. In the Quicksizer, include the ESS active users in your R/3 sizing project as medium Personnel Administration (PA) users. Also check your network setup, as the network load between the ITS and the R/3 application server is basically the same as the network load between the SAP GUI and the R/3 application servers. For details on network load, refer to the document *Network Load in R/3 Installations for R/3 Release 4.6* found in the Media Center at <http://service.sap.com/sizing>.

If you want to give employees access to the R/3 System through ESS, you must install the ITS. For full instructions about installing the ITS and its components, see the *SAP@Web Installation Guide*, which can be downloaded from <http://www.saplabs.com/its>.

ITS System Landscape

When you install the ITS, there are several ways to install the different components within your system landscape. Only the basic installation types, which can be combined in a variety of ways depending on the throughput, availability and security required by your system, are described here.

Components

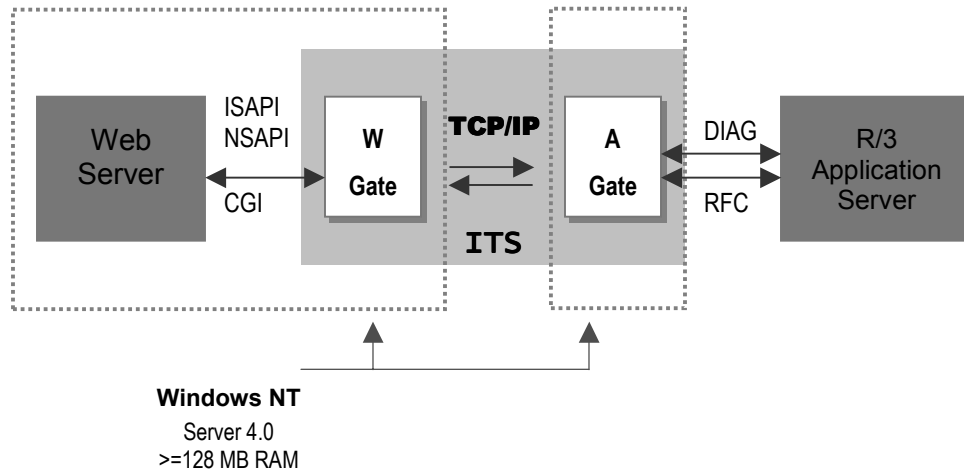


The most basic ITS system landscape consists of the Web server, ITS WGate, ITS AGate, R/3 application server and R/3 database server components as shown above. Since the WGate can be seen simply as a kind of plug-in to a given Web server (or instances of such) and since the WGate and Web server will always be installed together, one usually also means the Web server belonging to the Wgate when one refers simply to the WGate.

Single or Dual Host Installation

In the easiest installation type, all non-R/3 components (Web server, WGate and AGate) are installed on one physical machine. This installation type is called a **single host installation**. A single host installation is very easy to set up and is typical for development / sandbox environments as well as for small non-secure applications, such as a server running only the employee directory in an Intranet environment.

Although you can install both the WGate and AGate on the same machine, it is better to install them on separate hosts, especially if you are setting up production systems. This allows you to place a firewall between the two components and increase the level of protection. In a **dual host installation**, the ITS components (WGate and AGate) run on different physical machines. There are a number of reasons why you might prefer a dual host installation to a single host installation, such as security, high availability and scalability. For security reasons, this installation is always recommended for production systems.



Virtual ITS Instances

The Internet Transaction Server (ITS) supports virtual ITS instances. Once you have run the ITS setup program to create the first physical instance, you can create any number of additional ITS instances on the same hardware by running the ITS setup program repeatedly.

This allows you to minimize hardware requirements and response times by running one physical box that contains several ITS instances used for different purposes connecting to multiple R/3 component systems. This is particularly of interest if you use the same hardware for your development and test environment. You may install multiple production instances on the same physical hardware together with an administration instance; however you should never install development, test and production instances on the same hardware as this dramatically restricts your upgrade possibilities.

ITS Installation Options & Scalability

The basic components of an ESS system landscape consisting of WGate, AGate, R/3 application server and R/3 database server can be combined in a variety of ways, depending on what you want to achieve with your system landscape.

The five basic options for installing the ITS are:

1. Multiple W Gates connect to one A Gate
This option is recommended when you have multiple Web servers installed in parallel for failsafe reasons and the W gate should also be installed for each Web server. This option could also be of interest if you have two Web servers, one running on the Intranet and the other on the Internet, and both connect to the same A Gate server.
2. One W Gate connects to multiple A Gates
If you want to run several thousand users using the same ITS server, you should run multiple A Gate processes in parallel from the same instance, as this will allow you to bypass some restrictions within Windows NT that are described below.
3. Multiple ITS instances connect to the same R/3 application server
The relationship between an R/3 System and an ITS is 1:n and not 1:1. Multiple ITS instances can refer to the same underlying R/3 application server, for example to distribute the instances to different locations although the R/3 System is located centrally.
4. Multiple W Gates connect with multiple A Gates for high availability
In system environments where high availability is an issue, you might want to install an ITS cluster allowing each of the W Gates to interconnect with each of the A Gates. This ensures that the users are equally distributed between the different A Gates (and possibly also between the different R/3 application servers) and that there are other

working AGates available if one AGate server fails. If, in a worst case scenario, an AGate fails (e.g. power failure), the sessions on this particular AGate will be lost as the session context is not synchronized. The ITS cluster, however, detects the failure of this AGate and does not distribute any new incoming user sessions to this AGate server until it is available again.

5. ITS connects to R/3 message server for load distribution
The capacity of a single ITS considerably exceeds the capacity of a single R/3 application server. You therefore might want to connect a single AGate to an R/3 message server for load distribution rather than to a single R/3 application server. The R/3 message server then distributes the incoming user sessions to the different R/3 application servers that are part of a specific login group.

Network Configuration

When you check the network configuration for your Internet Transaction Server (ITS) environment, you should keep in mind that the network load between the ITS and the R/3 application server is about the same as the network load between the SAP GUI and the R/3 application server.

- **Network configuration between server components**

Since connections between the different server components are stateful (that is, an internal status must be maintained), the distance between these components should be kept to a minimum.

The large number of request/response cycles means that traffic is high, so stateful connections require good network throughput. Long network delays inevitably slow down the system.

SAP therefore recommends high-speed (100 Mbit/sec or higher) networks between server components. To maximize throughput, use a separate subnet between the Web server(s) and the server(s)

running the ITS. You might want to provide extra processing power for unexpected heavy usage and general growth.

- Network configuration between server and clients

Since connections between the server and clients are stateless (that is, they are used for a single request, but not retained), traffic is less intense. You can therefore spread the components across a wide area network (WAN) without encountering the problems associated with stateful connections.

Memory and Disk Space

The amount of memory required for the server(s) depends on the maximum number of active users (see *Determining Active Users* in this chapter). The amount of disk space required depends on the number of HTML template files, images, and other files stored on the host file system. This amount is generally not very large.

What Are Active Users and How Many Do I Need to Support?

Users execute transactions at different times, so you do not need to size your system for your total number of Employee Self-Service users. Instead, you should size your system for the maximum number of users you expect at any one time or during peak load phases.

Example: A peak load phase for Record Working Time would be Fridays between 1pm and 5pm.

An active user is a user who is logged onto the system and who performs a dialog step (requests an HTML page) every 30 seconds.

Although there are no hard and fast rules to determine how many active users you may have, we suggest you use the strategy below. Keep in mind, however, that this is just one of many possible strategies and does not address the load on the R/3 environment generated by any additional SAP GUI users, batch jobs, reports, and so on. Examine this strategy and determine whether or not it meets your company needs.

Determining Active Users

We recommend the following strategy:

1. List all the ESS services you intend to use.
2. Identify which of the services from (1) you expect to be continuous or peak load services.

Services that generate continuous load might be Address or Who's Who. Services that generate peak loads are typically applications with deadline crunches, such as Record Working Time or Travel Expense Reports within Travel Management.

3. Determine an average number of transactions per month or week (for continuous services) or per crunch period (for peak load services). This value is called "Number of transactions." To get an estimate of the number of transactions, you might want to ask your HR department how many address changes there were last year or how many time sheets are submitted each week.
4. For each service, determine the time frame (in minutes) during which everyone will perform the number of transactions determined in step 3. This value is called "Time frame." For applications with continuous load, this would be the number of working hours per month or week; for peak load services, this might be just a couple of hours or days.
5. Estimate the average time it will take one user to perform each of the identified transactions. This value is called "Average transaction time." We assume one dialog step (screen) every 30 seconds, so count the number of dialog steps and divide it by 2 to get this value in minutes.

For each of the services, apply the above information to the following formula:

**Active users = Number of transactions/Time frame
(minutes) * Average transaction time (minutes)**

Add the active users for each of the ESS services to get the maximum number of active users logged onto ESS at any time.

Sizing Example

1. ESS services that generate load:

Address	Continuous load
Who's Who	Continuous load
Record Working Time	Peak load

6. Number of transactions:

Address	200 transactions/month
Who's Who	10,000 transactions/day
Record Working Time	1,000 transactions/week

Chapter 4: Sizing the SAP ESS Environment

What Are Active Users and How Many Do I Need to Support?

7. Time frames:

Address	Assume equal distribution, meaning 20 days with 8 hours/month (= 9600 minutes)
Who's Who	Assume equal distribution, meaning 1 day with 8 hours (= 480 minutes)
Record Working Time	As a peak load application, Record Working Time generates heavy load at the end of a time entry period (for example, Friday afternoon from 1pm - 5pm) during which you can assume equal distribution, 4 hours (= 240 minutes)

Estimated average transaction time:

Address	5 minutes
Who's Who	2 minutes
Record Working Time	15 minutes

Number of active users per service:

Address	Active users = $200/9600 * 5 = 0.11$
Who's Who	Active users = $10000/480 * 2 = 41.67$
Record Working Time	Active users = $1000/240 * 15 = 62.5$

Summing up the numbers above, you get a total of 105 active users who could be logged on at the same time.

Use this strategy as a starting point to determine how to size your ESS installation. Keep in mind that this is **one** of many possible strategies, and is based on estimated data.

The calculated maximum number of active ESS users will then help you to size both your ITS environment (see below) and the R/3 System landscape. We strongly recommend that you crosscheck your system landscape sizing with your hardware partners.

Sizing Table

The following sizing recommendations are based on performance and benchmark tests and on initial observations at customer sites. These sizing categories are guidelines and the corresponding requirements are minimal requirements. Increasing the main memory and CPU power available will improve the performance of the Internet Transaction Server (ITS).

Keep in mind that the response time and throughput of the ITS depends mainly on the response time of your R/3 System. If the ITS shows high response times, you should first review the GUI response times in the R/3 System.

Chapter 4: Sizing the SAP ESS Environment

What Are Active Users and How Many Do I Need to Support?

Category	Number of active users	Minimum configuration	Transaction requests per second	Transaction requests per day
0	Personal ITS	1-processor Pentium II, min. 200 MHz, min. 64 MB main memory		
1	0 - 250 users	1-processor Pentium III Xeon 500 MHz, 256KB L2 cache, 256 MB main memory, 10 GB disk	5 hits/second	432,000 hits/day
2	0 - 500 users	1-processor Pentium III Xeon 500 MHz, 256KB L2 cache, 512 MB main memory, 10 GB disk	10 hits/second	864,000 hits/day
3	0 - 1000 users	2-processor Pentium III Xeon 500 MHz, 1 MB L2 cache, 1 GB main memory, 10 GB disk	20 hits/second	1,728,000 hits/day
4	0 - 3,000 users	4-processor Pentium III Xeon 500 MHz, 1 MB L2 cache, 2 GB main memory, 10 GB disk	50 hits/second	4,320,000 hits/day
5	> 3,000 users	Multiple ITS		

The most up-to-date version of this sizing table can be found at <http://service.sap.com/sizing>.

Tuning the SAP ESS Applications

When you tune the ITS system, remember that the response time and throughput of the ITS heavily depends on the response time of the underlying R/3 System. The ESS applications can only respond as quickly as the underlying R/3 System. For this reason it is essential that the R/3 System be correctly sized. Details on sizing the R/3 System can be found at <http://service.sap.com/Quicksizing>. Here you find an overview of the factors that limit the performance, in particular CPU and memory sizes, as well as details on tuning the ITS.

Factors Limiting the Performance

In general the performance of the ITS is limited by two main factors: CPU resources and available memory.

CPU

The ITS needs CPU resources for:

- ▶ TCP/IP operations and workthread dispatching
- ▶ Generating HTML pages
- ▶ Communicating with the R/3 System

The Web server needs CPU resources for:

- ▶ Handling static requests
- ▶ Forwarding requests to AGate
- ▶ Encryption/decryption

Encrypting (and decrypting) all messages sent from and to the Web browser using HTTPS (secure HTTP) imposes a higher load on the Web server.

The comparable load distribution between the Web server/WGate and AGate is:

- ▶ ~1:5 when running HTTP
- ▶ ~1:1 when running HTTPS

The CPU size required to process one request/response cycle from and to the Web browser depends on how an HTTP request is actually processed. This in turn depends on the ITS implementation model used (SAP GUI for HTML, template-based services, flow logic) to develop the applications driven by the ITS.

Measurements in AGate based on the Web Transactions implementation model (template-based services) show the following CPU consumption by the ITS:

- About 20% for TCP/IP operations and work thread dispatching
- About 30% for generating HTML pages
- About 50% for communicating with the R/3 System

The Web server/WGate thus typically accounts for one fifth of the AGate CPU consumption, but this can change drastically when HTTP requests are encrypted with HTTPS.

CPU consumption also depends on the Web server you are using. For example, analysis of CPU resources required by the Microsoft Internet Information Server (IIS) shows that multiple Web server instances can increase CPU consumption considerably, especially if you have to run each WGate instance in a separate memory space. With ITS Release 4.6D, you no longer have to separate WGate instances into separate memory spaces, so CPU consumption should decrease noticeably.

Memory

AGate allocates memory for:

- ▶ Session contexts
- ▶ User contexts
- ▶ Workthreads

In Windows NT, a single process can only allocate up to 2 GB of memory, causing problems if there is:

- A large number of sessions
- This could be the case if many users establish a large number of sessions on the ITS , but generate very few HTML pages (such as a 1-screen application, which does not terminate).
- A large number of workthreads
- This could be the case if AGate has to handle large numbers of short requests or smaller but substantial numbers of long-running requests (such as reports).

When using Windows NT as the platform, you should generally ensure that:

$$2 \text{ GB} \geq (\text{max. sessions} * \text{max. request size}) + (\text{workthreads} * \text{stack size})$$

If you cannot be sure that this will be the case, you should run multiple AGate processes in parallel.

In general, the more users AGate has to support in parallel sessions, the more memory will be consumed. AGate uses a small amount of memory, which can be influenced by the "max request size" parameter, for each established session. Some implementation models, such as the SAP GUI for HTML, require more memory than others, such as specialized IACs.

In most cases, CPU consumption is the more limiting factor, because it depends on the number of requests processed.

Performance-Related Settings

A number of different settings within the ITS influence the performance of the ITS and the generation of the HTML pages. We will first look at the settings provided by the ITS admin tool which can be changed in the ITS before discussing the performance-related settings, which can only be changed within the registry.

ITS Administration Tool Settings

The settings that you can make in the ITS Administration tool are either performance parameters or global service file parameters.

The performance parameters in the ITS Administration tool allow you to specify values for:

- ▶ **Maximum number of allowed sessions**

The parameter *MaxSessions* allows you to specify the maximum number of user sessions supported by the given AGate process. Any additional user wanting to connect to the AGate process receives an error message that the ITS is currently under high load and cannot establish additional user sessions. The default value for this variable is 2000 for a standard installation and 64 for a minimal configuration.

- ▶ **Minimum and maximum number of workthreads**

The two parameters *MinWorkThreads* and *MaxWorkThreads* define the minimum and maximum number of workthreads available to the ITS. In the ITS, a workthread is the ITS processing time required by a given user session or the time the ITS waits for a response from the R/3 System before being released for use by another user session. In general we recommend that you make sure that both parameters have

the same value. The default value for both values is 32 for the standard installation and 4 for a minimum installation.

► **Static templates to enable template caching**

The *StaticTemplates* parameter enables or disables HTML template caching. The ITS keeps HTML templates in a memory cache for faster access. When one of these templates is referenced, the ITS checks whether the template has been modified since it was last written to the cache. If changes were made, the template is reloaded into the cache. You can bypass the check by enabling this parameter (setting it to 1).

It is advisable to enable this parameter in a production environment, where templates do not change. You should definitely disable this parameter in a development environment, since templates might change there frequently. The default value for this parameter is 0, meaning it is disabled and the ITS should always check if there are newer versions of the requested HTML templates. If you want to change this parameter, you have to stop and restart the ITS instance at the location where this parameter is changed.

► **Minimum and maximum number of parallel AGate processes and number of extra processes to create in the event of heavy loads**

The variables, *MinAGates*, *MaxAGates* and *IncAGates*, specify the minimum and maximum number of AGate processes as well as how many AGate processes are added if required. In general SAP recommends that the values for *MinAGates* and *MaxAGates* be identical. The default values for all these variables is 1 and you should only change them if the ITS is running out of memory on a given AGate process.

► The variables in the global service file allow you to determine values for:

- **Production mode, defining how system templates are handled**
The global service file contains parameter *~runtime_mode*, which allows you to switch between production mode (value pm) and development mode (value dm). In development mode, the error messages of the ITS system templates are more detailed, making it easier to identify problems and find solutions. You should set this value to pm in a production environment.
- **HTTP compression**
The variable *~http_use_compression* enables compression of data sent from the Web server to the Web browser, increasing the transmission speed and minimizing network bandwidth usage. To do this, set the value of this parameter to 1.
- **Level of HTTP compression**
If you enable HTTP compression by setting *~http_use_compression* to 1, you can use parameter *~http_compress_level* to specify a compression level from 1 to 9, where 1 is the lowest compression level and 9 is the highest.
The higher the value you set for *~http_compress_level*, the greater the compression, but at the expense of processing speed. Level 1 results in the lowest compression / fastest processing speed and level 9 results in the highest compression / slowest processing speed.
When you use SAP GUI for HTML, for example, a compression level of 7 typically results in compression rates of approximately 70%, with no appreciable improvement for higher compression levels.
- **User session timeout and user context timeout**
Parameter *~timeout* defines the time in minutes from the last request during a user session until the session is automatically terminated. Parameter *~usertimeout* specifies the time in **hours** (prior to ITS release 4.6D the time was specified in minutes) that a

user context (client, user and password) is retained after the session timeout period defined by parameter *~timeout* has expired.

If the user logs on again before the time defined by *~usertimeout* has expired, no logon information is required. If the time defined by *~usertimeout* has expired, the user must enter the logon information again.

In addition to the performance and global service file parameters, you can also check the trace level of the ITS and if debugging is enabled or disabled. Make sure that the trace levels are set to a minimum, i.e. 1, if you only want to log errors. Verify this for all the trace levels in the ITS. You must disable debugging in a production environment for security as well as for performance reasons.

Working in the Registry

Since some of the factors that influence performance cannot be maintained using the ITS administration tool, you have to change them directly in the registry tree of a given ITS instance. These parameters are:

- Memory requirement per session

To set the memory requirement for each session, use the registry keys *HKEY_LOCAL_MACHINE\Software\SAP\ITS\2.0\<ITS instance>\Programs\Agate\MaxReqSize* and *HKEY_LOCAL_MACHINE\Software\SAP\ITS\2.0\<ITS instance>\Programs\Agate\MinReqSize*.

Under Windows NT, the maximum size specified by *MaxReqSize* is reserved in the virtual address space, but only the minimum size specified by *MinReqSize* is actually used until more space is required.

The default size for *MaxReqSize* is 5 MB, but if you are only using template-based services (not SAP GUI for HTML), you can reduce this to as little as 0.5 MB as seen at some customer installations.

You should determine the optimum size gradually through ongoing tuning.

- **Production mode for flow logic**

To set the production mode for flow logic applications, use the registry key `HKEY_LOCAL_MACHINE\Software\SAP\ITS\2.0\<ITS instance>\Programs\SAPmpr\ProductionMode`

You should set this key to 1 for all production ITS instances. This is especially important for Workplace installations. You then have to restart the ITS instance.

Identifying Bottlenecks

Once installed, tuning your ESS system landscape is an ongoing process and involves ongoing iterations to fine-tune the different components. In order to support this process, the ITS constantly streams out logfiles, allowing you to analyze the current or past performance and to take appropriate steps to optimize performance. While running, the ITS updates the `loadstat.log` file with data about load statistics every minute.

You can find the `loadstat.log` file in the ITS installation directory under:

```
C:\Program Files\SAP\ITS\2.0\<ITS instance>\logs
```

The `loadstat.log` file contains a number of counters that are relevant for tuning the ITS:

```
1999/08/29 18:44:04.203:    0: w=0.656250 s=61/64 w=2/4 h/s=1.200  
tat=0.500
```

```
1999/08/29 18:44:04.203:    Total 1: 61/64 req#=4
```

```
1999/08/29 18:45:04.289:    [1]: w=[2] s=[3]/[4] w=[5]/[6] h/s=[7]
```

tat=[8]

1999/08/29 18:45:04.289: Total 1: [9]/[10] req#=[11]

Field	Meaning
1	AGate number starting with 0.
2	Relative probability with which AGate will be assigned to support new sessions. The higher the probability, the more likely it is that this AGate will support new sessions.
3	Number of available sessions for this AGate.
4	Total number of sessions for this AGate.
5	Number of available workthreads for this AGate.
6	Total number of workthreads for this AGate.
7	Number of hits per second for this AGate.
8	Average turnaround time for this AGate.
9	Total number of available sessions for all AGates.
10	Total number of sessions for all AGates.
11	Total number of requests for all AGates.

To analyze the `loadstat.log` file, you need to consider the following:

- If there is a high transaction turnaround time (tat):
The most important question is whether this is due to the ITS or R/3. To determine which, you need to analyze the R/3 System logs, comparing the ITS transaction turnaround time with the

R/3 transaction turnaround time. If the high transaction turnaround time is due to the R/3 System, you should verify the sizing of your R/3 System and have a detailed look at the transactions causing the high transaction turnaround time. This might be due to long running data selections or tables that are not, but should be, buffered. If it is due to the ITS, you can monitor the CPU utilization on the ITS and if necessary add additional processing power.

- If you are running out of sessions, that is, if value 3 from logstat is approaching 0:
You can increase the maximum number of sessions available for this ITS instance as described or increase the number of available AGate processes.
- If you are running out of workthreads (possibly due to long R/3 response times) you can increase the number of workthreads.
- If the number of hits per second is suspect, check the ITS hardware requirements and maybe add additional resources.
- If you are experiencing long logon times:
To combat long logon times, you can:
 - ▶ Disable the Easy Access menu by setting the user parameter in view SSM_CUST. To do so, set the value of ITS_PING_SWITCH_ON to *yes*.
 - ▶ Analyze the DNS lookup procedure by verifying the network settings, confirming that the ITS server is entered in the DNS lookup table and comparing the static IP address with DHCP.
 - ▶ Check the network location of the ITS. For internal applications, it should reside in the same subnet as R/3

(this means stateful connection to R/3 and stateless connection to the client).

Analyzing all of these values will help you to tune your ESS system landscape for best performance, which is the key to overall acceptance of self-service by your end users. Your users will enjoy using the applications only if the response times are good (meaning less than 5 seconds). Sluggish services lead users to favor the old method of having someone else maintain information for them.

Chapter 5: Role Customizing for SAP ESS

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Overview

Roles in mySAP.com allow customers to combine the steps for defining user menus and for including user authorization into a single action.

The new role concept seamlessly replaces the two-level SAP ESS menu used in R/3 4.5 and 4.6B with the mySAP Workplace menu.

This chapter describes the steps required to implement roles for SAP ESS 4.6C.

Prerequisites

Role customization as described in this unit assumes you have installed the mySAP Workplace, including backend and middleware. The mySAP Workplace installation process is not described in this book. Detailed installation information about the mySAP Workplace can be found in the SAP online documentation as well as on the SAP Service Marketplace at <http://service.sap.com>. (See detailed links in the table below).

Note: To access the online version of the mySAP Workplace documentation, you need a user and password for the SAP Service Marketplace. For SAP customers and partners this is the same as your existing SAPNet user ID (S-number). If you do not yet have a user ID, you can request it from your SAP system administrator.

mySAP Workplace Implementation Documentation	Online Documentation Available at:
mySAP Workplace documentation (including overview, roles guide and configuration documentation for the mySAP Workplace)	http://service.sap.com/workplace , menu path: Media Center → <i>Literature</i>
SAP installation guides	http://service.sap.com/instguides
Platform and Technology Information Center	http://service.sap.com/platforms
SAP system requirements – networks, frontend and communication interfaces	http://service.sap.com/SSR
SAP Security Guide	http://service.sap.com/security
SAP Network Integration Guide and Network Load for Release 4.6	http://service.sap.com/network

SAP Role Concept

Roles define the contents of the mySAP Workplace menu as well as a selection of MiniApps available to the user on the mySAP Workplace home page. The roles also contain the necessary user authorizations. You can create your own roles or use the role templates delivered by SAP

(see <http://www.sap.com/rolemaps>). These role templates can be modified according to company requirements.

The mySAP Workplace menu is shaped to individual needs according to two elements: single roles and composite roles.

Single Roles

Single roles provide a package of business functionality that belongs to an individual user's job. Examples in SAP ESS are **SAP_ESSUSER** (containing Human Resources functionality) and **SAP_FI_EMPLOYEE** (containing Finance functionality).

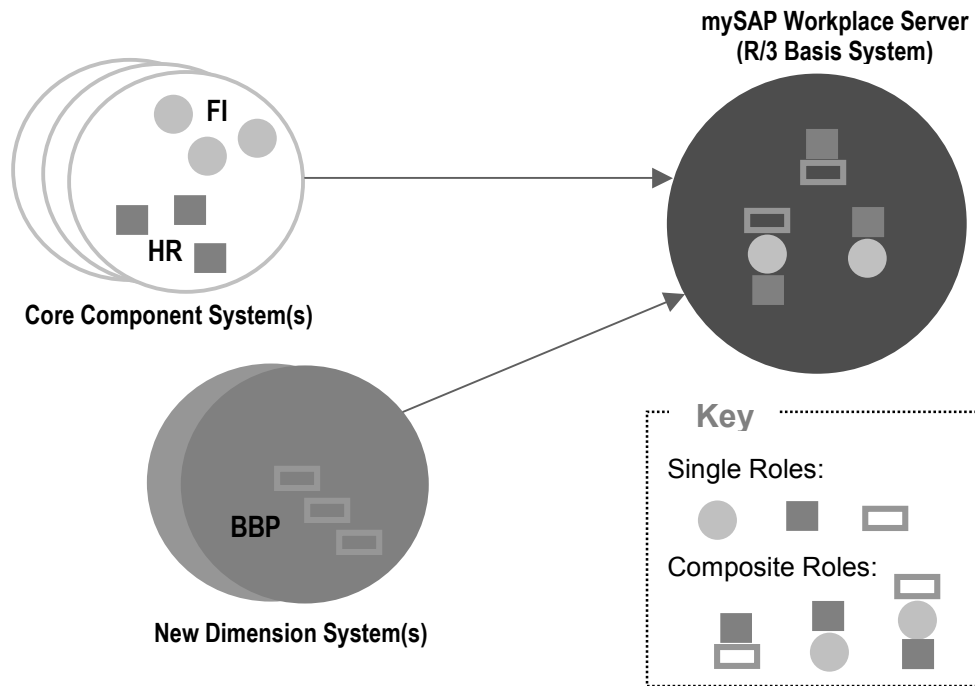
Combining an authorization profile with a single role authorizes a user to perform the functions belonging to that role. Single roles reside on the component system(s) and determine the authorizations within your component system(s).

Composite Roles

A composite role integrates the different single roles from your component system(s). It determines the user's menu in the mySAP Workplace and defines the authorizations needed for the user to access the component system(s).

The composite role can also filter country-dependent functionality according to the user's organizational assignment. This concept implies that you only have to maintain one composite role for all of your SAP ESS users, regardless of their country, since the country-dependent functionality is filtered dynamically. Composite roles reside on the mySAP Workplace server and not within the component system(s). The delivered SAP ESS composite role is **SAP_WP_EMPLOYEE**.

Both single and composite roles may be assigned to a user. SAP recommends that you assign composite roles to users.



MiniApps

MiniApps are self-contained Web documents that are displayed on the user's mySAP Workplace home page. They give users a fast overview and easy access to their most important data when they start the mySAP Workplace. Examples of MiniApps are telephone books, key indicator reports, stock tickers, industry or company news, and e-mail and calendar access. They can reside on the mySAP Workplace Server directly or in any of the component systems. A detailed list of available MiniApps can be found at <http://www.sap.com/miniapps>.

Note: Component systems are R/3 systems such as Human Resource, SAP Business-to-Business Procurement or Logistics. The mySAP Workplace consists of a Workplace server and Workplace middleware. The Workplace server is based on an R/3 4.6D basis system and is responsible for user administration, role definition and assignment as well as system landscape administration for the components to be accessed from the mySAP Workplace. The Workplace middleware consists of a standard Web server handling Web requests from the Web browser, the SAP Internet Transaction Server (ITS) including plug-ins such as the SAP GUI for HTML, and the Drag&Relate Servlet.

The Employee Self-Service Role

SAP delivers the composite role Employee Self-Service (technical name SAP_WP_EMPLOYEE) for SAP ESS use. This composite role contains a variety of single roles. The menu presented to your employees within the mySAP Workplace depends on the overall configuration of your SAP ESS composite role and on the user's country settings.

Role Overview

The following table lists all single roles included in the composite role SAP_WP_EMPLOYEE.

Single Roles that Reflect R/3 Core Components (e.g. Human Resources, Financials, Logistics)		
Role	Text	Description
SAP_BC_EMPLOYEE	Employee Self-Service (BC)	Since only HR workflows are currently used within SAP ESS, this role must be deployed in the HR system. If you use workflows for SAP ESS in other R/3 systems as well, SAP_BC_EMPLOYEE must also be deployed in those R/3 systems.
SAP_ESSUSER	Employee Self-Service (HR)	Contains HR functionality
SAP_FI_EMPLOYEE	Employee Self-Service (FI)	Contains FI functionality
SAP_FI_TV_TRAVELER	Traveller	Contains travel functionality
SAP_LO_EMPLOYEE	Employee Self-Service (LO)	Contains LO functionality
SAP_HR_EMPLOYEE_AU	SAP ESS Australia	Contains country-specific functionality

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The Employee Self-Service Role

SAP_HR_EMPLOYEE_CA	SAP ESS Canada	Contains country-specific functionality
SAP_HR_EMPLOYEE_CH	SAP ESS Switzerland	Contains country-specific functionality
SAP_HR_EMPLOYEE_DE	SAP ESS Germany	Contains country-specific functionality
SAP_HR_EMPLOYEE_HK	SAP ESS Hong Kong	Contains country-specific functionality
SAP_HR_EMPLOYEE_ID	SAP ESS Indonesia	Contains country-specific functionality
SAP_HR_EMPLOYEE_JP	SAP ESS Japan	Contains country-specific functionality
SAP_HR_EMPLOYEE_MY	SAP ESS Malaysia	Contains country-specific functionality
SAP_HR_EMPLOYEE_NZ	SAP ESS New Zealand	Contains country-specific functionality
SAP_HR_EMPLOYEE_PH	SAP ESS Philippines	Contains country-specific functionality
SAP_HR_EMPLOYEE_SG	SAP ESS Singapore	Contains country-specific functionality
SAP_HR_EMPLOYEE_TH	SAP ESS Thailand	Contains country-specific functionality
SAP_HR_EMPLOYEE_TW	SAP ESS Taiwan	Contains country-specific functionality

SAP_HR_EMPLOYEE_US	SAP ESS USA	Contains country-specific functionality
SAP_HR_EMPLOYEE_ZA	SAP ESS South Africa	Contains country-specific functionality
SAP_BC_ENDUSER	Uncritical basis authorizations for all users	Role needed for authorization only (thus not visible in the user's menu) Contains all basis authorizations needed in each component system. This role must be copied for each component system and the copies have to be added to the role Employee Self-Service.
Single Roles that Reflect R/3 New Dimension Components (e.g. SAP Business-to-Business Procurement, SAP Knowledge Warehouse)		
Role	Text	Description
SAP_EC_BBP_EMPLOYEE	SAP BBP employee functionality	

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The Employee Self-Service Role

SAP_KM_KW_ALL _AREAS_DISP_EMPL	Display all existing documents	This role enables a user to display documents within the SAP Knowledge Warehouse component
Single Roles on the mySAP Workplace Server		
Role	Text	Description
SAP_WPS_EMPLOYEE	Employee Self-Service (WPS)	Contains central MiniApps
SAP_WPS_USER	Workplace user	Role needed for authorization for the mySAP Workplace Server Contains all basis authorization needed for the mySAP Workplace Server and must be integrated into the role Employee Self-Service.

Role Customizing

The role setup for new SAP ESS customers in R/3 4.6C and for existing customers who are upgrading from SAP ESS in 4.5/4.6B to SAP ESS 4.6C is described separately.

Note: To use the role concept, you must install the SAP Central User Administration (CUA). Details on CUA can be found in SAP Online help: *Basis Components* → *Computing Center Management System (BC-CCM)* → *User and Roles* → *Central User Administration*

New Installation of SAP ESS 4.6C

Single Roles in Component System(s)

Select the single roles delivered by SAP (see above table) you want to use and copy them to your customer namespace, which must begin with Y or Z. If necessary, you can include other services and MiniApps in your single roles or remove them from your single roles. A complete list of the services included in the delivered single roles can be found in Appendix G.

You can access the role maintenance in the component system(s) from the SAP menu → *Tools* → *Administration* → *Users* or with transaction PFCG.

After copying the single roles, you need to generate the authorization profile for each of these roles once in the component system(s). If you change a single role, however, you must check the authorizations and generate the profile again. For more information, see the Profile Generator documentation or access transaction SU25.

The single roles delivered by SAP contain all the system authorizations necessary for SAP ESS. However, they do not contain certain

organizational criteria you may have defined during customizing. By copying the single roles into your namespace you can adapt these roles to match your organizational criteria.

If you add functionality to a single role, make sure that the authorization profile is adapted and generated correctly.

Composite Roles on the mySAP Workplace Server

After preparing the single roles in the component system, you must consolidate them on the mySAP Workplace server with transaction PFCG.

There are two ways to do this:

- ▶ Import single roles with RFC (recommended)
- ▶ Download/Upload the role

Then maintain the composite role on the mySAP Workplace server.

To define the user menu:

- ▶ Insert single roles into your composite role for SAP ESS using transaction PFCG → *Roles tab*
- ▶ Create the menu manually or read the menu structure from the single roles and adapt it manually

To define access to your component systems, you need to install Central User Administration (CUA). Details on CUA can be found in the SAP online help.

Upgrading to SAP ESS 4.6C

In R/3 4.5 or 4.6B you used a single role (called activity group prior to Release 4.6C) to create the authorization profile for SAP ESS users.

Single Roles in Component System(s)

The single role you maintained for SAP ESS 4.5 or 4.6B can be reused in 4.6C. It is usually a customer copy derived from the activity group SAP_ESSUSER that was delivered in former R/3 releases.

New single roles (delivered with R/3 4.6C) representing R/3 core components (e.g. Human Resources, Travel, Logistics, etc.) can be assigned to your existing (customer) single role.

You cannot assign new single roles representing New Dimension components (e.g. SAP Business-to-Business Procurement, SAP Knowledge Warehouse, etc.) to your existing (customer) single role because the latter components do not reside on your core R/3 system(s). Single roles from R/3 systems other than your core R/3 system(s) can be consolidated as composite roles only on the mySAP Workplace Server.

Mandatory Changes to your Single Role

Some SAP ESS services have been significantly improved and redesigned. Please replace the old service codes with the new services in SAP ESS 4.6C.

For example, the new services PV7I and PV8I replace PV01, PV1I, PV3I and PV5I in Training. Travel now uses the service TRIP instead of PR05. For a complete list of ESS services and transactions, see Appendix E.

Please change your single roles in your component system(s) accordingly using transaction PFCG.

If you integrated SAP Business-to-Business Procurement into the old SAP ESS menu, delete the start service PZBBPSTART from the single role in your HR component system. It is now replaced in your BBP system with the single role SAP_EC_BBP_EMPLOYEE.

When using any country-specific services, you should create single roles for each country and bundle the local services into them. To do so, you should start with a copy of the single role for the given country. A more detailed description of country-dependent roles and how they work in the mySAP Workplace can be found in the section “Customizing Country-specific Roles in SAP ESS” below.

For new R/3 Release 4.6C services, check the table in Appendix G. The last column shows all the services new with SAP ESS 4.6C. If you want to implement these services, add them to your single roles in the suitable component system(s).

The single role (formerly called activity group) you created for SAP ESS in 4.5B or 4.6B contains the authorization profile. If you change the single role for 4.6C, you have to check the authorizations and re-generate the profile. For more information, see the Profile Generator (transaction SU25).

Be aware that some of the new services added to your single roles may require R/3 customizing and/or master data setup.

Establishing the Composite Role on the mySAP Workplace Server

After preparing the single roles in the component system(s), you must consolidate them on the mySAP Workplace server with transaction

PFCG. For these procedures, please see the “Composite Roles on the mySAP Workplace Server” section above.

Customizing Country-Specific Roles in SAP ESS

The mySAP Workplace allows you to specify a single role as being relevant for a particular country only. For example, single role SAP_HR_EMPLOYEE_US in the standard delivery contains services that are only relevant to US employees, such as Tax Withholding (W-4) and W-2 Reprint. These country-specific roles, however, do not include services such as Address or Bank Information. The country-dependency for those services is handled within the services themselves by the employee’s country assignment (MOLGA). For a detailed list see Appendix B.

Country-specific single roles allow you to maintain only one composite role for all of your employees and then define different country-specific menus for the individual users based on their respective country settings.

Specifying a Role as Country-Specific

After setting up the various single roles in the component system(s), you can define the attributes for each of them in the standard table maintenance (transaction SM30). Enter view name VAGRATTS there and select *Maintain*. Then enter the role you intend to specify as country-specific and define the attribute. Ensure that the *Dynamic filtering* field is marked.

Assigning a User to a Country

The country-specific services presented to a user depend on the user parameter UCN in the mySAP Workplace. If you want to filter menu items dynamically, assign parameter UCN to each user and make sure

that the values of this user parameter match the country the employee resides in. When using transaction HRUSER to create new users, this user parameter will be automatically set. If an employee's country assignment changes, update this parameter accordingly.

Chapter 6: Installing and Maintaining SAP ESS Users

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Overview

This chapter contains information on the user-related activities that you must perform to install SAP Employee Self-Service (SAP ESS). First, it includes all information required to generate SAP ESS users for customers using SAP Employee Self-Service for the first time in R/3 Release 4.6C. Secondly, this chapter describes procedures for upgrading existing SAP ESS users (within 4.5 or 4.6B) to the new mySAP Workplace 4.6C environment.

SAP ESS User Management

What is an EHR User?

An Enterprise Human Resources (EHR) user is a pricing concept that defines the price for an SAP ESS user.

What is an Employee User?

An employee user is part of the new mySAP.com pricing concept that defines a certain price for an SAP ESS user. The employee user is licensed to use the mySAP Workplace and SAP Employee Self-Service.

What is an SAP ESS User?

An SAP ESS user is a standard SAP user that is specially enabled for SAP ESS. Technically it has the following defining characteristics:

- ▶ Assigned to the customer-defined SAP ESS role

- ▶ Individualized; that is, assigned to one employee for that employee's exclusive use
- ▶ Not limited to SAP ESS use only. It might include additional authorization for a professional user who needs to use the SAPGUI.

How Do I Enable an Employee to Use SAP ESS?

1. Create an SAP user.
2. Assign the new SAP user to the appropriate master data record in the HR System using the communication infotype (0105).
3. Assign the SAP user to the SAP ESS composite role you customized (see "Role Customizing" in Chapter 5). This user is now granted access and authorization to use SAP Employee Self-Service functionality.
4. Transfer the SAP user to the Workplace system landscape using the Central User Administration (CUA).

Companies may choose to set up thousands of users for SAP ESS. Both existing and new users are enabled for SAP ESS in phases. SAP provides a user generation tool (transaction *HRUSER*) and the CUA to guide you through these phases.

SAP ESS User Installation Process

This section describes the user installation processes for customers who will use SAP ESS for the first time in R/3 Release 4.6C. It also explains the user-related activities for existing customers who are migrating from 4.5/4.6B SAP ESS to 4.6C SAP ESS.

Typically new customers have to create thousands or even tens of thousands of new users. The SAP ESS user generation tool enables the customer to automate this process by creating users from HR employee master data. It individualizes the users by assigning each user to its HR data records with communication infotype 0105. This informs the system which employee belongs to which user, preventing unauthorized changes to a person's information.

The SAP ESS user generation tool gives all SAP ESS users the appropriate authorization profile and SAP ESS menu by assigning the user to the correct employee composite role. Although the composite role is part of the Workplace System and the SAP ESS user creation process runs in the HR component system, the user is assigned to the appropriate role by the *HRUSER* transaction.

The user is created in the HR component system because the HR data is stored there. To be active within the mySAP Workplace system, the newly generated SAP ESS users have to be distributed throughout the landscape. This is managed by the CUA, which has to be activated and properly installed.

See the steps of the user generation process in the following table:

In order to	Then	Where to find information
1. Provide a customer-specific authorization profile and SAP ESS menu in the mySAP Workplace.	Create customer-specific single roles in the component systems and consolidate them in a customer-specific SAP ESS composite role in the Workplace system.	Chapter 5 "Role Customizing"
2. Qualify existing SAP users for SAP ESS use.	Individualize existing users by assigning them to their HR employee data (infotype 0105).	
3. Define the group of employees to be enabled to use SAP ESS.	Define employee selection.	
4. Give existing SAP users the SAP ESS role menu and authorize them to use SAP ESS	Assign existing user to the SAP ESS composite role.	Chapter 5 "Role Customizing"
5. Create and authorize new users i.e. create new SAP users for employees that have none, and assign them to the SAP ESS composite role in one step.	Create new users and assign them to the SAP ESS composite role.	Chapter 5 "Role Customizing"

<p>6. Introduce the newly created SAP ESS users from the HR component system where they were created to the Workplace server system.</p>	<p>The CUA manages this automatically when users are changed or created in the component system.</p>	<p>Details on CUA can be found in SAP Online help: <i>Basis Components</i> → <i>Computing Center Management System (BC-CCM)</i> → <i>User and Roles</i> → <i>Central User Administration</i></p>
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Access the SAP user generation tool with transaction *HRUSER*; or in the IMG with *Personnel Management* → *Employee Self-Service* → *General Settings for SAP ESS* → *Create SAP users for SAP ESS*.

When you implement SAP ESS for the first time, running a pilot project is strongly recommended. Tips on doing so can be found in “Considerations for a Successful Go Live” in Chapter 3.

The user generation tool offers different selection criteria for choosing employees. This tool also enables you to establish a link between existing users and employees or to create new users. Once you have linked individual employees one-to-one to SAP users, you can then generate the authorizations necessary for those employees to use SAP ESS. This is the method for authorizing both old and new users to use SAP ESS.

SAP ESS User Creation

Before creating SAP ESS users it is necessary to:

- Create a customer-specific SAP ESS composite role in the Workplace system using your customer namespace. (See Chapter 5).
- Establish the link between existing users and employees.

Establishing the Link Between Existing Users and Employees

Your system may contain SAP users that are not yet assigned to employees. By linking users to employees one-to-one, you enable these users for SAP ESS. This can only be done manually.

While assigning an employee to an existing user, you can check the employee's master data against the user master record to ensure they match.

In the *Set up and Maintain SAP ESS users (Start)* screen:

1. Choose *Preparation* → *Assignment of employees to existing users*.
2. The *Reconcile User Master with HR Master* screen appears. There are various methods by which you can select users.
3. Select a method and choose *Execute*.
4. The *Assign Employees to Existing Users* screen appears.
5. Choose *Assign employees*.
6. The *Choose Person* dialog box appears.
7. Select an employee.

8. The *Create Relationship* dialog box appears.
9. Change the validity date if you need to, and choose *Create*.

You have now assigned an employee to a user, hereby creating a relationship between the two. View this relationship in the communication infotype (0105).

Selecting Employees for SAP ESS

You must now decide which employees you intend to enable for SAP ESS.

If you do not want to enable all employees for SAP ESS, you may choose a certain department or employee group. We recommend running a pilot project for SAP ESS, using a small group of employees, before rolling out the product to the whole company. For more information, see “Considerations for a Successful Go Live” in Chapter 3.

Note: In the user selection process, you can exclude inactive or retired employees.

The user installation tool offers you different selection criteria. You can pre-select employees by organizational assignment or by employee data.

In the *Choose Personnel Numbers using Employee Master* screen, you can define the desired employee status to ensure that you do not include inactive employees (such as retirees) in the group of employees to be authorized for SAP ESS. By doing this, you prevent inconsistencies later on. It is very important that you check the employee status before creating the user.

Preselecting Employees by Organizational Assignment

In the *Set up and Maintain SAP ESS Users (Start)* screen:

1. Choose Pre-select Employees via Organizational Assignment under User/Authorization Assignment. The Choose Personnel Numbers Using Org. Assignment screen appears.
2. Enter the relevant search criteria and choose *Execute*. The *Choose Personnel Numbers using Employee Master* screen appears.
3. Enter relevant search criteria and choose *Execute*.

Selecting Employees by Employee Data

In the *Set up and Maintain SAP ESS Users (Start)* screen:

1. Choose Select Employees using Employee Master under User/Authorization Assignment. The Choose Personnel Numbers using Employee Master screen appears.
2. Enter the relevant search criteria and choose *Execute*.
The *Set up and Maintain SAP ESS Users (List)* screen appears.

You have selected a group of employees for whom you are going to maintain SAP ESS users.

Enabling Users for SAP ESS

In the *Set Up and Maintain SAP ESS Users (List)* screen, you can maintain different groups of employees:

- Employees with users that are not already assigned to the SAP ESS composite role.
These are the employees you linked to users in *Establishing the Link Between Existing Users and Employees*. They still need the SAP ESS role assignment.
- Employees without users
You need to create users for these employees and empower them with the SAP ESS role.

If a large number of employees is involved, you can generate the users for SAP ESS in background mode.

Setting up Users for Employees Who Have Users without SAP ESS Role Assignment

In the *Set up and maintain SAP ESS Users (List)* screen:

1. Choose *Employees with users without SAP ESS role*.
The *Relate Users with Persons* screen appears.
2. Select the employee to be assigned a user and choose *Authorization Assignment*.
The *Attributes of Users* screen appears.
3. Choose *Execute*.
The SAP ESS composite role profile you configured for SAP ESS users has been assigned.

Setting up Users for Employees Without Users

In the *Set up and Maintain SAP ESS Users (List)* screen:

1. Choose *Employees Without Users*.
 - If you choose *Background*, the *Attributes of Users to Be Created* screen appears.
 - If you choose *Overview*, the *Create Users for Persons* screen appears.
2. Select a person and choose *Create User*.
The *Attributes of Users* screen appears. See “*Selecting the User Attributes*” section below for more information.
3. Choose *Execute*.

You now have to select the attributes for your SAP ESS users and create users for these employees.

Selecting the User Attributes

You must decide how employees will log on when they use SAP ESS.

The user group ESSUSER is a fixed user attribute. It distinguishes users who are authorized for SAP ESS purposes from other system users, such as system administrators or online SAPGUI users.

In the *Set up and Maintain SAP ESS User (Start)* screen:

1. Choose *Change user attributes*.
The *Attributes of Users* screen appears.
2. In the *Password* field, INIT appears as the default. You can change this.
For more information on the entries that you can make in this screen, choose *Information*.
3. In the *User group* field, the entry SAP ESSUSER is fixed and cannot be changed. It is important to differentiate users authorized for SAP ESS from other users.
4. In the *Role* field, the SAP role (which you have copied to your namespace) is the default.

Note: SAP delivers a user exit, which you can use to determine your own password routine and define your user name. See *User Exit* below for details.

SAP ESS User Distribution within the Workplace System Landscape

The SAP ESS users created by the user generation tool (transaction *HRUSER*) in the HR component system have to be introduced to the

mySAP Workplace system landscape. It is necessary to have an activated CUA because it manages this process automatically.

Upgrading SAP ESS Users to 4.6C

Existing SAP ESS 4.5 or 4.6B customers have already generated a productive set of SAP ESS users that will be reused in the new mySAP Workplace system landscape. To introduce current SAP ESS users to the 4.6C world, however, the following activities have to be performed:

- The *SAP ESS activity group* (from 4.5 or 4.6B) has to be replaced with the new composite role (see Chapter 5).
- The adapted SAP ESS users have to be distributed to the Workplace system landscape using the CUA.

Replacing an SAP ESS Activity Group with an SAP ESS Composite Role

The prerequisites for the migration process are:

1. Creating a customer-specific SAP ESS composite role in the Workplace system using your customer namespace. (See Chapter 5).
2. Activating and a properly installing Central User Administration.
3. Importing SAP ESS users from the HR component system into the central system

The SAP ESS users that exist in the HR component system only must be transferred to the mySAP Workplace system. Thus, they are integrated into the distributed system landscape and administered centrally by the CUA.

In the central system of the CUA, (e.g. the Workplace system) use transaction SCUG.

In the *Central User Administration Structure Display* screen:

1. Select the HR component system
2. Choose *Transfer Users*
The *Transfer Users* screen appears.
3. Select all the users, by role assignment, that you want to import into the central system
4. Choose *Transfer Users*

You have now imported the existing SAP ESS users. Though imported to the Workplace system, the SAP ESS users are still assigned to the existing SAP ESS 4.5 or 4.6B activity group. This assignment has to be replaced in two steps with the SAP ESS composite role (4.6C) you created: first, the SAP ESS activity group assignment is deleted and then the user is reassigned to the new SAP ESS composite role.

Deleting the SAP ESS User's Activity Group Assignment

In the central system of the CUA (e.g. the Workplace system), use transaction SU10 (or use the SAP Easy Access Menu → *Tools* → *Administration* → *User Maintenance* → *User Mass Maintenance*):

1. Choose *Environment* → *Mass changes*
The *User Maintenance: Mass Changes Initial* screen appears.
2. In *User selection* choose *Authorization data*
3. Enter selection criteria for the imported SAP ESS users (this might be the *Group for authorization* ESSUSER) or you might select the SAP ESS users by role using *Role* <your SAP ESS activity group (4.5 or 4.6B)> in your namespace

4. Select the SAP ESS users with assignments to be deleted
5. Choose *Transfer*
6. In the *User Maintenance: Mass Changes Initial* screen select all SAP ESS users with assignments to be deleted.
7. Choose *Change*
8. In the *Mass User Changes* screen select *Roles*
9. Select the role you want to delete from the role assignment
10. Choose *Delete line*
11. Choose *Save*

You now have deleted the SAP ESS activity group assignment. The next step is to assign the SAP ESS user to the new SAP ESS composite role.

Assigning the new Composite Role (4.6C) to SAP ESS Users

In the HR component system call up transaction HRUSER. In the *Set up and Maintain SAP ESS User (Start)* screen:

1. Choose *Change user attributes*
2. In the *Role* field, the SAP composite role (which you have copied to your namespace) is the default. Enter your new SAP ESS composite role
3. Choose *Execute*

The user installation tool offers you different selection criteria. You can pre-select employees by their organizational assignment or their employee data.

In the *Choose Personnel Numbers using Employee Master* screen, you can define the employee status to ensure that you do not include inactive employees (retirees, for example) in the group of employees to be authorized for SAP ESS. This prevents future inconsistencies. It is very

important that you check the employee status before maintaining the user.

Preselecting Employees by Organizational Assignment

In the *Set up and Maintain SAP ESS Users (Start)* screen:

1. Choose *Preselect Employees via Organizational Assignment* under *User/Authorization Assignment*. The *Choose Personnel Numbers Using Organizational Assignment* screen appears.
2. Enter the relevant search criteria and choose *Execute*. The *Choose Personnel Numbers using Employee Master* screen appears.
3. Enter relevant search criteria and choose *Execute*.

Selecting Employees by Employee Data

In the *Set up and Maintain SAP ESS Users (Start)* screen:

1. Choose *Select Employees using Employee Master* under *User/Authorization Assignment*. The *Choose Personnel Numbers using Employee Master* screen appears.
2. Enter the relevant search criteria and choose *Execute*. The *Set up and Maintain SAP ESS Users (List)* screen appears.

You have selected a group of employees for whom you are going to maintain SAP ESS users.

In the *Set Up and Maintain SAP ESS Users (List)* screen, you can maintain the SAP ESS users that are not assigned to the SAP ESS composite role.

If a large number of employees is involved, you can assign the new SAP ESS composite role in background mode.

Maintain Users for Employees Who Have Users Without SAP ESS Role Assignment

In the *Set up and maintain SAP ESS Users (List)* screen:

1. Choose *Employees with users without SAP ESS role*. The *Relate Users to Persons* screen appears.
2. Select the employee you are processing and then choose *Authorization Assignment*.

The *Attributes of Users* screen appears. Choose *Execute*. You have assigned the SAP ESS composite role you configured for your SAP ESS users.

Introducing the User Changes in the HR Component System to the Workplace System

The CUA ensures that the user changes resulting from the new role assignment are distributed to the mySAP Workplace system landscape. Therefore the CUA has to be active.

SAP ESS User Maintenance Activities

There are functions to support the periodic maintenance of SAP ESS. You should regularly check for inconsistencies by selecting:

- ▶ Inactive employees with Users (employees who have retired or left the company and still have SAP Users. You should delimit their user assignment so that they cannot use SAP ESS).
- ▶ Employees with deleted Users.
- ▶ New employees who need SAP ESS Users.

Note: SAP delivers workflow support for SAP ESS user maintenance.

Work items prompt system administrators to create SAP ESS Users for new employees and to delimit the SAP ESS Users of employees who leave the company.

Checking Inactive Employees with Users

In the *Set Up and Maintain SAP ESS Users (List)* screen:

1. Choose *Inactive Employee with Users*.
The *Delete User Assignments to Inactive Users* screen appears.
2. Select the user you wish to delimit and choose *Delimit*.

User Exit

SAP delivers a user exit as part of the enhancement HRSAP SAP ESSWWW: Exit_saplehus_001. This enables you to change the name and password that the user installation tool creates for each SAP ESS user that is generated.

As a default, the tool creates:

- Name: Uses the personnel number and puts a "P" as the first character; for example, P00000001
- Password: Uses "init" as an initial password

To access and modify the user exit:

1. Choose *Tools* → *ABAP Workbench* → *Utilities* → *Enhancements* → *Project Management*.
The *Project Management of SAP Enhancements* screen appears.
2. Name your project and choose *Create*.
The *Attributes of Enhancement Project* screen appears.
3. Enter a short text and choose *Save*.

Chapter 6: Installing and Maintaining SAP ESS Users

SAP ESS User Maintenance Activities

4. Choose *SAP Enhancements*, select the delivered enhancement HRSAP ESSWWW, and *Save*.
5. In the *Project Management of SAP Enhancements* screen, enter the project name, select enhancement components, and choose *Change*.
6. Select the user exit you want to modify (Exit_saplehus_001) and choose *Edit component*.

You are in the function module, where you can select and modify the user exit.

Deleting Users

Note: You can only delete SAP ESS users that are assigned to use group ESSUSER.

In the *Set up and Maintain ESS Users (Start)* screen:

- Choose *Delete SAP ESS Users*.
The *Delete ESS Users (Selection)* screen appears.
- Enter the name of the user you want to delete and choose *Execute*.
The *Delete ESS Users (List)* screen appears.
- Select the users you want to delete, and choose *Delete users (Online)*.

The users are deleted from the user master in the system.

SAP ESS Tools

The SAP Employee Self-Service (SAP ESS) generation tool (HRUSER) provides several tools that may be useful when creating and authorizing users for SAP ESS:

- **Log:** All the steps you perform are recorded in a log. You can display the log at any time. To do so, choose *Log*. To reset the log, choose *Delete log*.
- **Background Processing:** You can choose to perform most of the tasks in the SAP ESS component with background processing. For any group of over 100 employees, SAP recommends the use of background processing. To do so, choose *Background*.
- **View Data:** You can view or change the HR master data of the employee you are processing. Choose *User Master Record* to view or change the user master record.
- **Access Role Maintenance:** If the Central User Administration is activated in the recommended manner, you can access the composite roles exclusively within the central Workplace system. The role maintenance transaction can be accessed with Transaction *PFCG*. Alternatively you can choose *Display* in the *Attributes of Users* screen.

Enabling HR Authorization Checks

You must enable the HR authorization checks. The SAP ESS composite role authorization is based on the object P_PERNR. To enable authorization checks, activate the SAP ESS-specific P_PERNR authorization object in table T77S0.

Chapter 7: Customizing R/3 for SAP ESS Applications

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Overview

This chapter describes the settings necessary to install SAP Employee Self-Service (SAP ESS) in an R/3 System. It includes information on the application-specific settings you must make for SAP ESS in the Implementation Guide (IMG). These operations should be performed in addition to the standard customizing necessary for the individual R/3 applications.

Note: To customize your system as described in this chapter, begin in the IMG with *Personnel Management* → *Employee Self-Service* unless otherwise indicated.

SAP ESS Applications

Office

Who's Who

In the Who's Who service, employees can change some of their own data. Changes can be made to all fields of infotype 0032 (Internal Communication) and infotype 0105 (Communication) except infotype 0105 subtype 0001). Employees can also use this service to change their photo.

Who's Who: Employee Photo

In this step, you can define whether employee photos are displayed in the Who's Who service. To do so, select *ESS Settings for Specific Services* → *Office* → *Who's Who/User's Own Data (ESS): Determine Functions*

Additionally, you may want to define the document type for the Who's Who service in which employee photos are entered into the optical archive. (You only have to process this step if you have not yet defined the document type for the optical archive.)

In the SAP standard system, document type HRICOLFOTO is already defined as the default value in table T77S0. (The table entry is PRPID ADMIN, SEMID = PHOTO, GSAVL = HRICOLFOTO)

Note: 1. The default document type is also used for entering photo formats in Personnel Administration (PA). If you do not want to change the photo format you are already using in PA, do not change the default here. SAP ESS supports photos in GIF and JPEG format. It does not support BMP graphics, as these will constrain certain browsers. The optical archive system is not a standard component of R/3. For details on how to connect the optical archive with SAP ArchiveLink see Chapter 10.

2. If you do not want to display employee photographs, you can gain performance by entering the following values in table T77S0: PRPID = ESS, SEMID = NOPIC, GSVL = X. In this case the BAPI "BAPI_EMPLOYEE_GETDATA" will not access the archive, resulting in a higher throughput.

Who's Who: Selection and Output

In this step you can change the data selection and/or data output fields for the Who's Who service with *ESS Settings for Specific Services* → *Office* → *Who's Who (ESS): Selection and Output (PZ01)*. You can define fields for the:

- Selection screen: different selection criteria for employees
- Hit list: list of all employees who match the selection criteria.
- Detail screen: detailed information about the selected employee

The fields of the InfoSet (formerly called: "functional area") of the underlying Ad-Hoc Query are available. For the fields *organizational unit text*, *name of position* and *job description* fields, there is an additional text field. The selected fields are automatically copied to the service in the given order and are available there for selection or output.

The standard SAP system contains an InfoSet for the Who's Who service (/SAPQUERY/HR_XX_PA_ESS) and default values are set for the selection and output fields.

Changing the Selection and Output Fields

First check whether the standard settings satisfy your requirements. If not, proceed as follows:

Choose *ESS Settings for Specific Services* → *Office* → *Who's Who (ESS): Selection and Output (PZ01)*:

- To change the selection field, choose the *Selection fields* tab page.
- To change the fields of the hit list, choose the *Output field* tab page.
- To change the fields of the detail screen, choose the *Detail output fields* tab page.

- To delete a default field, mark the field in the relevant tab page and choose *Delete lines from display tables*.
- To include another field from the InfoSet, mark the desired field in the *Fields in InfoSet* box and choose *Copy entry from InfoSet table*. You now have two options:
 1. Mark a field that already exists in the tab page and choose *Insert entry in display table*. The system copies the field of the InfoSet in front of the marked entry.
 2. Mark the empty field at the end of the tab page and choose *Insert entry in display table*. The system copies the field of the InfoSet to the end of the tab page. Make sure the order of the fields on the tab page matches the structure of the fields in the service.

1	2	3	13	17
4	5	6	14	18
7	8	9	15	19
10	11	12	16	20

- The fields of the selection screen are ordered as shown above. The fields of the hit list are ordered from left to right with a maximum of 20 fields (as shown above). The fields of the detail screen are structured vertically with a maximum of 20 rows.
- It is not possible to select the *Employee status* field as a search field. To include a field that does not already exist in the InfoSet you must create a new InfoSet. Then assign the desired field to this

InfoSet. Next, choose the new InfoSet in the parameter box in the InfoSet field.

Proceed as explained above to include the field in the corresponding tab page. To create InfoSets, please read *Human Resources Information System* in the *Maintain InfoSet* step of the IMG. You can find this in the IMG, under *Personnel Management* → *Human Resources Information System* → *HR settings for SAP Query* → *Specify InfoSets for Interactive Employee Selection*.

Note that the SAP naming convention is used for the standard InfoSet: /SAPQUERY/HR_XX_PA_ESS. The country key 'XX' stands for international. The InfoSet is part of the global area (cross-client). You can create customer InfoSets by copying an existing entry. However, you must take your customer namespaces into account and set the relevant country abbreviations.

Note: Do not include the *Personnel number* field P0000-PERNR in the InfoSet. If you want to include the personnel number, select field I 0001-PERNR.

You can define the sort sequence of the hit list in the *Sort* field on the *Output fields list* tab page.

Example: You have chosen the last and first names as fields for the hit list. Now you want the hit list to be sorted by the last name and then by the first name. To do this, enter "1" for the last name and "2" for the first name in the *Sort* field.

When you have finished making changes, select *Check*. If the check is successful, select *Save*. You will be informed of any inconsistencies.

Troubleshooting and Additional Comments

- **Runtime Problems:** In the event of runtime problems, set the *Selection fields* indicator in the *Use default settings for* box. This deactivates the Ad Hoc Query and uses the BAPI_EMPLOYEE_GETDATA method instead.
 - ▶ You can switch the hit list and detail screen to the BAPI_EMPLOYEE_GETDATA method with the output fields list and detail output fields indicators.
 - ▶ Note that when you set an indicator, you limit the field selection on the respective tab pages on the interface of the method.
- **Country Information:** When you enter a country in the initial screen for which no values have been defined, the system automatically sets all the indicators in the *Default settings use for* box. You can then change this entry as required.

Deleting Fields

You do not have to switch to Ad-Hoc Query to delete fields used with default settings BAPI_EMPLOYEE_GETDATA in Who's Who. Instead you should delete these fields directly in the corresponding templates. A comment in each template explains which line corresponds to which field:

- Template 'sapmpz01_200_core.html' for selection fields
- Template 'sapmpz01_400_core.html' for result list fields
- Template 'sapmpz01_500_core.html' for detail fields

Who's Who: Restricting the Search for Employees

In the Who's Who service, the default is an unrestricted search, which means that the system will look for all employees. You can modify this to suit your needs.

Enter the keys PRPID=ESS and SEMID=STAT2 in table T77S0. Select one or more of the following values for field GSVAl to limit the search:

/alue	Restriction
0	Employee is not part of the company
1	Employee is part of the company, but is not working (for example, maternity leave)
2	Employee is part of the company, but is retired
3	Employee is active in the company

You will usually select value "3" to restrict your search to active employees only.

Additional Functionality within Who's Who

In the Who's Who service, additional functionality such as Display Photograph, Telephony, Calendar, Organizational Chart are activated by default. They can be deactivated in the IMG with the following customizing path: *ESS Settings for Specific Services* → *Office* → *Who's Who/User's Own Data (ESS): Determine Functions*.

Who's Who with Unnamed User

In addition to the “normal” Who’s Who, which requires a user login like other SAP ESS services, you can obtain a “thinner” version of Who’s Who by accessing transaction PZ24. In this case you do not need to log onto the system. Who's Who with an unnamed user includes the following functionality:

- Display colleague’s calendar
- Telephony
- Display photo
- Who's Who with unnamed user does not include the following functionality:
 - Download own photo
 - Display organizational chart (modify screen 500 in order to include it)

You can customize PZ24 when you customize PZ01 with MOLGA = 10.

Who's Who: User Exit

When you search for information on individuals using the default search pattern, you must specify one of the following:

- The full word
- Part of the word plus wildcard (“+” for exactly one letter, “*” for at least one letter)
- Only a wildcard

Example: To search for a range of names starting with 'Jo', you must enter 'Jo*'. You are offered such names as John, Johnson, Jones etc.

In the enhancement HRESSWWW, SAP delivers a user exit (exit_saplrh65_001) for changing the search pattern in Who's Who. This exit makes using wildcards unnecessary.

Who's Who: MiniApp

The MiniApp version of Who's Who provides instant, simple access to the service. The IMG path is *SAP ESS Settings for Specific Services → Office → Who's Who (ESS): Selection and Output. PZ35, MiniApp, PZ50* are essential for the Who's Who service. You have to define the fields for searching and output:

- Choose a country group and set the Who's Who type to *MiniApp*.
- Set both indicators.
- Choose the *Selection* tab page and enter the fields the employee should use for the search. Use the default settings.
- Choose the *Output fields* tab page and enter the fields the employee should see.
- Save the settings and choose another country group if necessary.

With MiniApps, the number of selection fields is restricted to 4 and the number of output fields to 7.

Note: 1. If you want the same layout for all employees in all countries (MOLGA), use the default country group "US" (MOLGA = 10).

2. Customizing for the Who's Who MiniApp also defines the settings of the Who's Who WAP service. This service is delivered with the SAP Web Add-On Release (WAO).

Change Own Data

In this Who's Who service, SAP enables employees to change their own data. This feature is available for most of the fields of infotypes 0105 (Communication) and 0032 (Internal Communication) as well as the employee photo.

Change Own Data: Determine Functions

First determine to what extent employees may manipulate their own data and/or employee photo. Then start *ESS Settings for Specific Services* → *Office* → *Who's Who/User's Own Data (ESS): Determine Functions* in the IMG and select one or two of the indicators in the group box *Change Who's Who and Own Data*.

You should remove "Change Own Data" (PZ50) from the SAP ESS role menu if you select **no** indicator.

Change Own Data: Determine Fields

The next step is to select the fields to be changed by the employee. This is done within the IMG with *ESS Settings for Specific Services* → *Office* → *Who's Who (ESS): Selection and Output (PZ35, MiniApp, PZ50)*.

Choose a country group and set the Who's Who type to *Easy Web Transaction*.

1. Set both indicators.
2. Choose the *Detail output fields* tab page and enter the fields to be changed by the employee. Be aware of the restriction to infotypes 0105 and 0032.
3. Save the settings and choose another country group if necessary.

Internal Service Request

The Internal Service Request (ISR) enables employees to process various requests over the intranet instead of using mail or the telephone. For example, ISR can be used to request that a cost center be created or deleted. You can easily create new ISR services to meet the special requirements of each organization.

SAP has defined a number of different functions for the Internal Service Request. These can be deactivated separately in the IMG with *Cross-Application Components* → *Notification* → *Notification Processing on the Intranet* → *Define Scenarios*. Each scenario is checked against the user's personal authorizations.

Note: These scenarios need notification types specifying whether the service request requires approval, and if so, by whom. The SAP System provides numerous notification types. You can use them by copying the settings from client 000 using the QISR_SM29 transaction.

To set up new ISR services, create a notification type and define a new scenario within the IMG step *Define Scenarios*. See the IMG documentation for detailed information on ISR.

My Assets

The My Asset service is integrated within Asset Management. The asset master record links employees to their assets. The SAP ESS view has the name *Employee* and can be reached with *ESS Settings for Specific Services* → *Office* → *Process Asset Views*.

Office: MiniApps

SAP provides a number of MiniApps to handle office issues such as appointments and e-mail. These MiniApps are designed for use with an

R/3 office system (BW00, BW01, BW02, BW03) or with Microsoft Outlook (BW04, BW05, BW06). The R/3 office-based MiniApps do not need any customizing. The Microsoft Outlook based MiniApps use an ActiveX-control provided only by Microsoft . These MiniApps do not require any customizing either, but the Outlook directories must adhere to specific naming conventions because the MiniApps expect terms such as "Inbox," "Calendar" or "Tasks." You can change these names in the MiniApp templates using the Web Application Builder (transaction SE80) or in the SAP@WebStudio.

Another MiniApp is the *Workflow Inbox*, which is part of the mySAP Workplace system. If the *Workflow Inbox* is active for a user, data is selected in all logical systems that are:

- Activated globally (*Active* in table SWLIGL) or
- Addressed by a role that is associated with both attributes *Read Workflow Inbox* (*Active* in table SWLIAG) and the user

The *Workflow Inbox* MiniApp selects all the work items for the current user from these systems. Users can then enter *Inbox*, *Outbox*, or *Resubmission*. For more details see the mySAP Workplace documentation.

Time Management

Determine Subtypes

When you define subtypes in the IMG, you also define the Absence/ Attendance types relevant to CATS and the Leave Request. When you use the Leave Request, some absence types might not be relevant to your ESS users. You can switch them off here. For more information see *Determine Subtypes* in the *Personal Information* section of this chapter.

Working Time

In this step you set up the Time Sheet as an SAP ESS service.

Determine the layout of the SAP ESS service in the same way that you customize the Time Sheet for R/3. You can also make specific profile settings in a view designed especially for the SAP ESS service.

Specify the data entry profile used to maintain data for each employee in user parameter CVR. If you do not maintain this user parameter for an employee, the system uses data entry profile SAP ESS.

Alternatively, you can set up a default data entry profile with the name SAP ESS. The system uses this profile if you did not maintain user parameter CVR.

Procedure

1. If required, set up your own data entry profiles for the service with *ESS Settings for Specific Services* → *Time Management* → *Set up Internet Time Sheet (CATS)* → *Create Data Entry Profiles*.

The following profile settings in the General Settings section are supported for the SAP ESS version of CATS:

- With target hours
- With totals line
- With clock times
- No deduction of breaks
- Highlight rejected records
- Workdays only
- Display weekdays
- Release future times
- Release on saving

- Approval required
- No changes after approval
- Immediate transfer to HR
- Print program

The following sections in the profile customizing are fully supported:

- Time settings
- Cost accounting variant
- Default values
- Worklist
- Data entry checks (general)
- Checks for users of SAP HR
- Workflow

The following function is not supported:

- Person selection

2. To make additional Web specifications, perform the *Specify Additional Information for ESS Profile* step.
3. To select the fields in which users should enter values using the standard profile SAP ESS or your own profile, perform the *Define Field Selection for ESS* step.

Leave Request

You can specify the absence types an employee may enter in the Leave Request service with *ESS Settings for Specific Services* → *Time Management* → *Internet Leave Request*. Decide which absence types cannot be edited in SAP ESS and deactivate them by selecting *Deactivate*. For more

information see *Defining Subtypes* in the *Personnel Information* section of this chapter.

Leave Information

Choose *ESS Specific Settings* → *Employee Self-Service* → *Internet Leave Information* to specify the time evaluation variants used to simulate an account balance on the basis of time data that has not been evaluated by general time evaluation.

Employees use this SAP ESS service to display the status of their leave balance for any date. The system checks whether the specified key date lies within a period that has already been evaluated.

If the date lies . . .	Then the system . . .
Within a period that has already been evaluated	Accesses the relevant data
Outside the last period evaluated by time evaluation	Attempts to simulate time data up to the specified key date

In this case time evaluation uses the variant specified in the feature LLREP. If there are errors in the simulation, the system accesses the data from the Absence Quotas infotype (2006). Assign the required time evaluation variant using the feature.

Work Schedule

In this service, Sunday is considered to be the last day of the week. If you do not want to display the days from Monday through Sunday, you can use the feature LDAYW to specify a weekday other than Sunday as the

last day of the week. To do so, choose *ESS Specific Settings* → *Employee Self-Service* → *Internet Work Schedule*.

Time Statement

If you want to use a time statement form other than the one you have been using in the intranet, you can create your own form using the form editor. Follow IMG steps *ESS Specific Settings* → *Employee Self-Service* → *Internet Time Statement*.

If you want to specify selection parameters other than those in the standard system, you can create a variant called HRESS_TEDT00 for report RPTEDT00 (Time Statement Form). If you do not create this variant, report RPTEDT00 is run using standard form TF00. Specify the name of your Internet form. All other parameters for the report are also available for Internet display.

Travel Management

If you use Travel Management in SAP ESS, you can choose:

- The online Travel Management component delivered with Release 4.6, which requires no SAP ESS-specific customizing
- The offline Travel Management component delivered with Release 4.5A, which requires SAP ESS-specific customizing.

Perform IMG steps *ESS Settings for Specific Services* → *Travel* and read OSS Note 183871.

Benefits

To set SAP ESS parameters, perform the IMG step: *ESS Settings for Specific Services* → *Benefits*.

In this step, you define the functions of the ESS service Spending Account Claims and the payroll simulation function within the Enrollment service you want to implement. Your settings are valid for a single benefit area.

For the Spending Account Claims service, define which specific activities employees are allowed to perform. For payroll simulation, define when employees may use the simulation and how it is performed by the system.

Note: Depending on your hardware and the number of employees simultaneously using the function, payroll simulation can adversely affect system performance. You should therefore consider whether your system resources are sufficient to support this function.

URLs

In these steps, enter the URLs of the resources that should appear as links in the SAP ESS services Enrollment and Participation Overview. Save each URL with a unique identifier so that you can assign it easily to different objects and modify it centrally as required (→ *Define URLs*).

Indicate whether each URL refers to a general or specific service. General services are links available for selection in each screen of the Enrollment and Participation Overview services. Specific services are available for specific objects (plan types, plans, and investments). (→ *Assign URLs*).

Note: If you want the URL for an investment simulator to be accessible from investment information only, define it as a specific service.

Further Comments

In the R/3 system, you can define SAPScript or Office documents for printing the enrollment and confirmation forms. For technical reasons the Internet version is restricted to the SAPscript forms. Additionally, you must provide Adobe Acrobat Reader on the user's computer.

Business-to-Business Procurement

The SAP ESS composite role SAP_WP_EMPLOYEE contains the single role SAP_EC_BBP_EMPLOYEE. This single role reflects purchasing functionality from the SAP BBP component. To use this functionality within SAP ESS, implement SAP BBP in your SAP BBP component system. Customizing is performed in the single role SAP_EC_BBP_EMPLOYEE in that system. See Chapter 5 for a detailed description of role maintenance.

Jobs

Employment Opportunities: Basic Settings

You must set up the following features for the Employment Opportunities service.

- INTDF (Default value for Internet medium)
- INTDY (Default value for Internet applications)

In the INTDF feature, store the medium for Internet applications and the default value for the address details to be transferred to the entry screen for the applications.

The return matrix of the INTDF feature has the following structure:

- MEDIA -Internet medium

Determine which vacancy structure is offered to the applicant here. Copy the Internet medium value stored in customizing for Recruitment. The value of the Internet medium can be found in the Medium customizing table (T750D). To find out how to create media, see the *IMG Personnel Management → Recruitment → Workforce Requirements in Advertising → Create Media*.

- LAND1 - Country indicator

The default values stored here for the address details are transferred to the applicant's entry screen.

In the INTDY feature, specify the default values to be used in the country-specific format of applicant addresses. The country-specific entry screen in which the applicant can submit his or her application is also specified in this way. This feature can also be used to set up various unsolicited application groups that depend on the country group.

The return matrix of the INTDY feature has the following structure:

- SPAPL - Unsolicited application group
- PERSG - Applicant group
- PERSK - Applicant range
- WERKS - Personnel area
- BTRTL - Personnel sub-area
- SACHP - Personnel officer responsible

You can enter a personnel officer to whom the applicant should be assigned from the Intranet here.

- INAME - Internet address: name of administrator
- ISERV - Internet address: name of server

If the applicant should be able to send e-mails to the administrator, enter an e-mail address.

To permit formats for applicant documents to be used as enclosures (e.g. Microsoft Word file with curriculum vitae, included photography and scanned certificates) you should add the document type (e.g. doc, txt, htm) and the mime type (e.g. application/MSWord, text/plain, text/html).

Note: To upload documents you must implement an archive system. Please see Chapter 10 for more information.

Application Status: Create Texts

You can create additional texts for the processing status of the SAP ESS service Application Status. Use the names Status-1, Status-2, Status-3, Status-4, Status-5, Status-6 and Status-7 for the respective texts. Use PAWW as the text ID.

Additional Text Creation Procedure

1. Create texts individually as usual for the R/3. Note the name specifications recommended by SAP and use the specified text ID assignment.
2. Enter the desired text and save it.

The status texts are read from the R/3 System and displayed for the applicant.

Payment

Paycheck Inquiry

The standard system uses the remuneration statement program variant stored in feature EDTIN to create the remuneration statement. Follow the

following path: *ESS Settings for Specific Services → Payment → Provide Remunerations Statement ESS*.

To change the remuneration statement:

1. Instead of using the standard remuneration statement in the intranet, you can create a new form using transaction PE51.
2. Create a variant for the remuneration statement program (e.g. transaction PC00_M01_CEDT) by using the new form.
3. Enter the variant in the feature EDTIN.

Personal Information

Determining Subtypes

You should limit the number of subtypes your users may access in SAP ESS. Your HR administration has access to additional subtypes beyond the standard set in SAP ESS services.

Example: In the infotype Family Member/Dependents, the only subtypes relevant to your company's employees may be Spouse and Child. You may choose to switch off any other family member subtypes displayed in SAP ESS.

You can define the desired personal master data subtypes here. All the subtypes delivered for SAP ESS-critical infotypes are displayed in this view.

To define subtypes:

- In the IMG select *ESS Settings for Specific Services → Personal Information → Determine Subtypes*.

- Select the view.

In the *SAP ESS: Deactivation of Subtypes* table, deactivate those subtypes you do not want to use.

User Exits in Personal Information

You can now adjust the default start date in some of the Personal Information services (i.e. Address, Bank Information, Family Members, Emergency Contact) when you change existing entries or add new ones by using user exit ZXWWWU04 in function module EXIT_SAPLEHSS_002. The user exit ZXWWWU0Z in function module EXIT_SAPLEHSS_001 to check that the begin date is still available. See IMG step “Customer Extensions in ESS.” This allows you to set the default value for the new start date for example to the beginning of the next payroll period rather than the current date.

For more information on the Personal Information services, see Appendix B, which discusses the relevant time dependencies and Appendix D, which contains details on country dependencies.

Setting up the New Hire Data Service

The following information helps you determine which services are available when *New Hire Data* is selected in the IMG. It can be found under *ESS Settings for Specific Services → Personal Information*.

Deactivate the services you want to exclude from New Hire Data and change the catalog item numbers to define a different sequence.

Note: As of SAP ESS 4.6C, we recommend using the Life & World Event My First Days (transaction PZLE_01) instead of New Hire Data. For more information please see Chapter 1 or Chapter 8.

Training

In the IMG step *ESS Settings for Specific Services → Training → Setup control elements for ESS*, you set parameters in the training scenario:

- The setting for SEMIN INPRI defines the SAP ESS booking priority.

The setting for SEMIN REQUE defines whether manager approval is always required (which does not affect authorizations, etc.):

- The setting for SEMIN WEBST defines why the Web application should be terminated. This simple value can be overwritten by defining a Business Add-In (BADI) in the next IMG step.

The next two steps define Business Add-Ins (BADIs) for:

- Providing more sophisticated, customer-defined cancellations.
- Allowing a customer-specific setup of the SAP ESS service My Bookings. Before the bookings are printed, the BADI receives the data set and deletes or adds entries. This can be controlled by customer-defined workflows.

When setting up business events, you can define categories for searching in the Web. You can also add Web and knowledge links to be displayed in the events.

Skills Profile

Customizing in R/3

Using the IMG path *ESS Settings for Specific Services → Qualifications → Define Root Qualification Group*, specify which group of skills will be displayed to employees. This ensures that users see only a defined sub-catalog of the Skills Database service.

If you do not specify anything, the value of the equivalent parameter (~quali_id) in the service file or template is used. If that is also empty, all skills are displayed.

Note: See Note 184009 for information about the table settings needed for SAP ESS.

Customizing in Service Files

The Skills Profile service consists of two services: PZ31, the start service, and PZ32, the maintenance service. In the service file of PZ31 (PZ31.srv), there are optional parameter changes. Make the changes in R/3 Web Application Builder (transaction SE80), SAP@WebStudio or a text editor, such as Notepad.

Some parameters can be modified, but the more technical parameters should not be changed:

- Parameter 1: Catalog Root (~quali_id and ~quali_type)
This parameter limits the display of your skills catalog to a certain part or sub-catalog. '~quali_id' is the number and '~quali_type' the type 'QK' or 'Q' (capital letters). The id number is equivalent to the number in the IMG switch. Only the id is overwritten by the IMG value.
- Parameter 2: Delimiter (~delimiter)
The structure information in the skills catalog is provided in a string. The components of this string are delimited by the ASCII character '|', which is entered by default. You may use this ASCII character in the name of your skills, but in this case must replace this delimiting character with another one (such as a backslash) in this parameter.

- Parameter 3: Catalog text (~root_text)

This parameter is empty by default and indicates that the root text of the Skills Catalog in the browser is Skills. If you want to change this text for example to Qualifications at My Company, you can override the default.

- Parameter 4: Mode (~display)

This parameter is empty by default. This means that the Display Skills Profile service can always be modified by the SAP ESS user. If you would like the service to be display only, you should set the parameter to 'X'.

- Parameter 5: Plan version (~plvar)

This parameter overrides the default plan version 01.

Surveys

The Carry Out a Survey template is a flexible tool that allows users to design and create surveys, evaluations, questionnaires and appraisals. These forms can be created and installed quickly. The template can be modified as described below.

Customizing Steps

To create a survey tailored to your company's specific purposes, you must follow these customizing steps:

1. Create an appraisal model
2. Define the service's layout in the Intranet/Internet.
3. Define whether the appraisal should be anonymous or not.

Creating an Appraisal Model

Before defining an appraisal model you must first identify an appropriate type of appraisal. You can view your existing appraisal forms within the customizing activity *Edit form of Appraisal* (transaction OOB1). As surveys are usually anonymous, choose an appraisal that represents an anonymous individual appraisal. If you do not have one, create a new form for anonymous usage.

When creating a new form, you can optionally define new scales. Therefore, use customizing activity *Edit Scales* (transaction OOSC).

To create the appraisal model itself, use the customizing activity *Edit Appraisals Catalog* (transaction OOAM).

Defining the Layout

When creating an appraisal model or changing an existing one, you can influence and define the layout of the survey in the Intranet/Internet. To do so, go to the detail popup for the appraisal model. There choose the *Additional Data* tab and under *layout details* you define whether the appraisals model's description should be shown in the intranet/Internet or not. You can, for example, use this description as your survey's introduction. In addition, if the appraisers should be able to add some notes, specify how many lines they will be able to enter in the *Lines for notes* field. If your proficiency scales should be formatted as checkboxes make an entry in the *Display as checkbox* field.

Defining the Survey's Anonymity

If your survey is to be anonymous, you have to indicate this. To do so, first specify this in the *Appraisal Model* tab. There select *Anonymous individual appraisal* in the *Appraisal type* field. Secondly, you have to define the survey's anonymity in the *Additional Data* tab.

There you can define the survey's anonymity in the *Field for Appraiser* field. You can choose *Not ready for input*, *Ready for input*, or *Do not display*. Depending on this setting, the appraiser will or will not be able to enter his or her name in the survey's head.

Defining the Criteria for the Survey

The criteria for the survey are defined during the creation of the appraisal model itself (within IMG activity *Edit Appraisals Catalog* or transaction OOAM).

In order to define the content and structure of your survey, such as the questions the participants will answer, you can define criteria groups. Criteria groups are sets of attributes that will appear in your survey or form. It is not always necessary to define criteria groups. But we recommend using them when the structure of your form or survey is complex. After creating criteria and criteria groups you must assign them to the appraisal model.

Publishing Steps

After you finish defining the survey in customization, follow these steps to publish the survey:

1. Copy the standard service.
2. Publish the service for the survey.
3. Test your service (optional).
4. Link the URL address to your homepage.

Copying the Standard Service

In the ABAP Workbench (SE80), make a copy of the standard service *Carry Out a Survey* (MY_APP_CREATE). Do so either locally or in the

customer's name range. It's important to copy the service with all its templates.

After you have copied the service, you need to customize a few parameters in the service file of your custom service. These parameters are:

- ▶ PLANVERSION (plan version)
- ▶ EVALUATED_OBJECT_TYPE (Object being appraised)
- ▶ EVALUATED_OBJECT_ID (ID of object being appraised)
- ▶ EVALUATION_SHEET (ID of appraisal model)
- ▶ EVALUATION_VALID_FROM (Start date of the evaluation period)
- ▶ EVALUATION_VALID_TO (End date of the evaluation period)

To prevent users from being able to use their username and password to execute the survey, you must specify a public user login in the service file using the following parameters:

~CLIENT
~LOGIN (User)
~PASSWORD
~LANGUAGE

Publishing the Service for the Survey

Once you have copied the service and adjusted the parameters mentioned above, you must publish all the service related files to your ITS servers. We recommend publishing the complete service. Choosing *Publish* → *Complete service*. This step requires that you have set up the IACOR tool for the ITS connected to your R/3 system. In case you do not have IACOR

set up, use the SAP@Web Studio and publish the service via the SAP@Web Studio to the ITS.

Testing the Service

After publishing the service for your survey, you can check the layout and verify that it is working. To test the service, start it from within the ABAP Workbench (SE80), choosing *Internet service* → *Execute*. Or simply type in the URL for the service in the browser following the standard naming convention, which is

http://<myITSserver>:<port>/scripts/wgate/<servicename>/!.

Linking the URL Address to Your Homepage

As with the last step, you have to link to your service's Web address in your homepage, or to the document sent to the appraisers.

Additional Services

Display/Change Picture MiniApp

This MiniApp allows the user to personalize the mySAP Workplace to display a personal photo or receive birthday greetings (OSS note 353077). The customer can define a default picture and switch on/off the birthday greetings with transaction PZUSFB.

Country-Specific Settings

While SAP ESS delivers a number of country-specific services, only a few require SAP ESS-specific customizing. They are described in the following section.

Time Management

Set Up Leave Request (ESS Japan)

This step can be found in the IMG under *ESS Settings for Specific Services* → *Time Management*. Specify the actions used in the Leave Request (Japan) service here. To deactivate action types that you do not want to use, select the action type and choose *Deactivate*. Save your settings.

Payment

Salary Packaging (ESS South Africa, ESS Australia)

The initial setup of the SAP ESS scenario and transaction P16B_TEST are located in the IMG under *Payroll* → *Payroll: Australia* → *Salary Packaging* → *Salary Packaging/ESS Services* (or → *Payroll* → *Payroll: South Africa*). Transaction P16B_TEST displays detailed and technical error messages that the standard transaction P16B would not provide. The setup consists of three steps:

- The feature 16EFD is set up with a default effective date. This is the date on which the employees' options in their chosen package will be updated in the system.
- The second feature, 16UPD, determines if the employee is authorized to directly update the infotypes within his chosen package distribution or if manager approval is required.
- The final step creates a specific SAP ESS pay slip. The pay slip must conform to the rules given in the documentation. This pay slip is designed to offer a good visual presentation in SAP ESS.

IR56F and IR56G Form (ESS Hong Kong)

To use Internet scenarios for payroll calculation, you must maintain feature 27ESS. In that feature, enter the payroll calculations scheme used

by your company (such as HK00, SAP delivery standard scheme for Hong Kong).

IR21, IR8A and IR8S Form (ESS Singapore)

These forms must be customized using the new features 25w21, 25w8a and 25w8s, respectively. To do so, use transaction PE03.

Personal Information

External Bank Transfer: Check Entry Permissibility (ESS Australia)

You can find this step in the IMG under *ESS Settings for Specific Services* → *Personal Information* → *External Bank Transfer*.

In this step, you can restrict the wage types an employee is allowed to use for an external bank transfer in the SAP ESS service. External Payments using that wage type must be maintained centrally by the personnel administrator.

To set up this restriction, first define which wage types can be entered for the external transfer infotype (0011) in the R/3 System. For more information, see *Check Entry Permissibility* for each infotype. To deactivate a wage type for the SAP ESS service for external bank transfers, choose *Deactivate* and save your entries.

Chapter 8: Customizing R/3 for Life & Work Events

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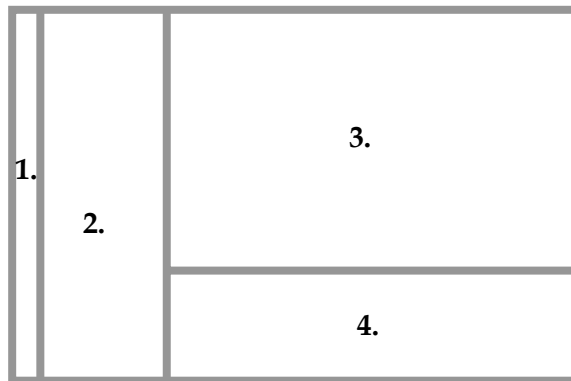
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Overview

The Life & Work Event (L&W) framework is a basis for modeling sequences of tasks consisting of both content and applications. These tasks represent professional or personal life changes which employees confront on a regular basis such as starting a new job, getting married, or having a baby. L&W events typically contain administrative forms, ESS services and background information to help guide users as they update their personal information or make decisions.

The following chapter provides an overview of how to customize these events or implement customer-specific ones. It also introduces the architectural aspects you should consider before integrating additional or external content.

L&W Events in the mySAP Workplace



L&W events are independent, self-contained services. The Workplace menu automatically disappears immediately after an L&W event is started from the mySAP Workplace LaunchPad. The mySAP Workplace menu reappears when the event is closed.

1. mySAP Workplace LaunchPad
2. L&W event menu
3. Application area: reserved for the applications started from the menu
4. Content area: only visible if content service is assigned to the started application

The framework is based on the type of Web-based content displayed in the content area of the user's screen.

Type	Description
U	URL to any web-based content
S	ITS service name
X	External service

Application area	Content area	Screen layout			
U	empty	<table border="1"> <tr> <td>2</td> <td>3</td> </tr> </table>	2	3	
2	3				
S	empty				
X	empty				
U	U	<table border="1"> <tr> <td rowspan="2">2</td> <td>3</td> </tr> <tr> <td>4</td> </tr> </table>	2	3	4
2	3				
	4				
U	S				
U	X				
S	U				
S	S				
S	X				
X	U				
X	S				
X	X				

Each type in area 3 can be combined with each type in area 4. Area 4 can also be empty. Service types S and U are familiar from ESS 4.6B and are described in the ESS Installation Guide 4.6B.

External Services

The external service type (X) was introduced within the L&W framework in order to easily connect any Web-based content delivered by a

knowledgebase. These services are capable of displaying any content. The displayed content can be personalized based on any R/3 data.

Setting up External Services

The following URL is a common way to access database content over the Web:

`http://www.myserver.com/myDB?key=123`

`http://www.myserver.com/myDB?key=999`

`http://www.myserver.com/myDB?key=abc`

There is always a static part (= base URL) followed by a key (= any kind of identification for the requested page).

Example:

Base URL:	<code>http://www.myserver.com/myDB?key=</code>
Key:	123

These two parts are necessary in order to set up an external service provider within the L&W framework.

Defining a Service Provider

External service providers are set up within table T77WWW_LE_EP. This table requires the following entries:

ID: Unique numeric value for each service provider

Description: Service provider name

Interface: Interface to connect R/3 to the knowledgebase. There is one generic interface available in the SAP standard delivery: IF_DEFAULT.

You can also define a customer interface (if necessary). To learn about that procedure and how the SAP standard interface works, see the section "The Interface" below.

Base URL: As described above, this is the static part of the external service provider URL.

Example:

Number	Name	Interface	Base URL
5	My Provider	IF_DEFAULT	http://www.myserver.com/myD ?key=

Defining External Services

In order to define an external service in table T77WWW_SRV, you must know the following about the service:

- External provider ID (e.g. 5)
- Key (= ESS service parameter) for the external service. The provider usually supplies this information (e.g. abc).

Example:

Service	ESS name of service	Service type	ESS service add./log. address	ESS service parameter
10018	Content address	X	5	abc

10007	Code of Conduct form	X	5	123
-------	-------------------------	---	---	-----

Defining Data Requirements

If the external provider is able to receive R/3 data, you can define the data requirements in table T77WWW_SDATA. There are two types of data requirements:

I (Infotype): If the data is stored in SAP infotypes, you only have to specify the infotype number and the field name within the infotype; for example to post the user's Social Security Number, the infotype would be 0006 and the field name PERID.

F (Function module): A function module, which reads the specific data, must be provided for data that is not stored in SAP infotypes. For details on the function module, see the section "Defining Data Requirements" in this chapter.

Example:

Service	Name of service	Data type	Source	Field
10009	I-9 Form 1	I	0006	STATE
10009	I-9 Form 1	I	0002	PERID
10010	Employment Profile	F	ESS_NEW_HIRE_DATA_01	

The Interface

The interface should be able to connect R/3 to almost every knowledgebase, but it can be used as a template and modified if necessary.

The following variables are used within the interface:

Base_URL: The knowledge provider's base URL.

Key: The key for the external service

Data table: The actual R/3 data that is sent to the external service.

This table has the following format:

Field name	Contains a unique field name; e.g. P0006-PERID for infotype data
Value	Actual field value

Example:

Field name	Value
P0006-PERID	999999999
P0006-STATE	CA
P0002-NACHN	Tompkins
P0002-VORNA	Andrea

SAP standard interface IF_DEFAULT:

This interface creates an HTML form with a list of hidden input fields. The first table field (field name) is written to input field property NAME. The second table field (value) is written to input field property VALUE.

HTML form:

The forms properties are set to:

NAME = SAP_DATA

ACTION = BASE_URL + KEY (variables delivered by R/3)

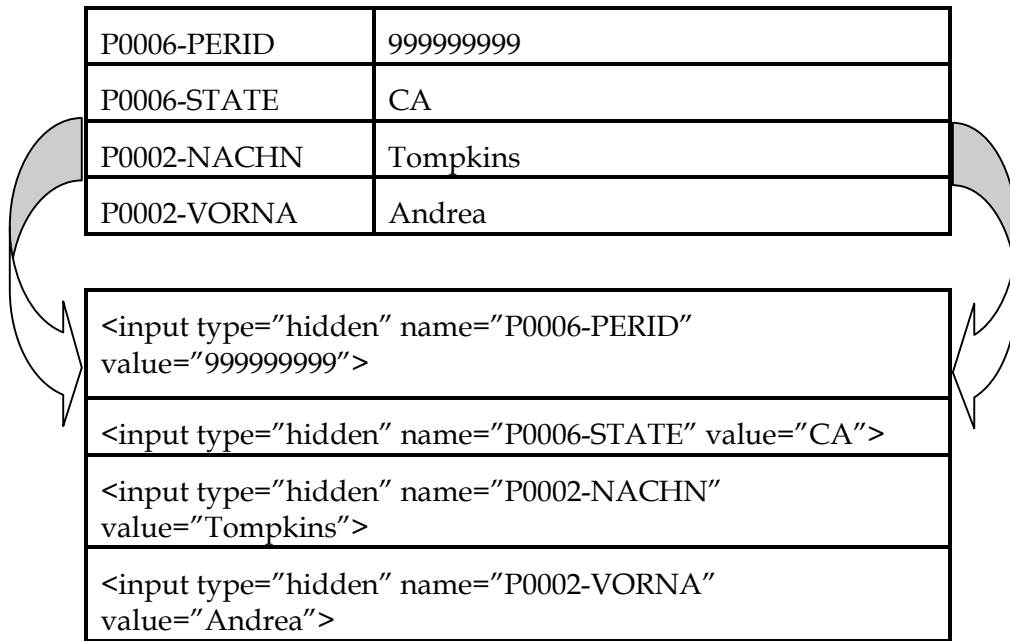
METHOD = POST

After being loaded, the form is submitted to the external provider. It has the following input fields.

HTML input fields:

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Overview

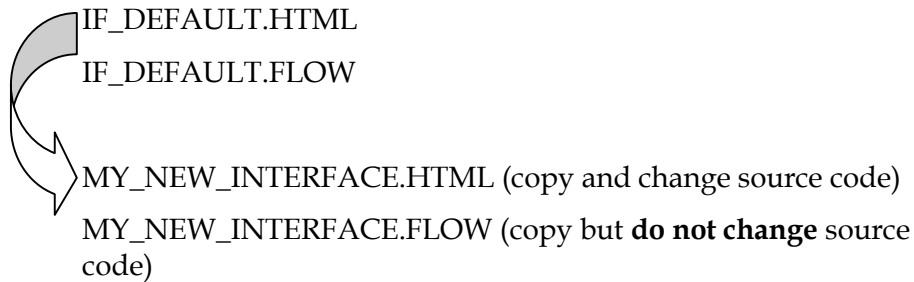


Example:

```
<HTML>
  <HEAD></HEAD>
  <BODY onload="document.SAP_data.submit()">
    <form name="SAP_data" action="`~baseURL`~ext_key`"
method="post">
      <input type="hidden" name="language" value="EN">
      <input type="hidden" name="P0006-PERID" value="999999999">
      <input type="hidden" name="P0006-STATE" value="CA">
      <input type="hidden" name="P0002-NACHN" value="Tompkins">
      <input type="hidden" name="P0002-VORNA" value="Andrea">
    </form>
  </BODY>
</HTML>
```

Defining the Customer Interface

To create a customer interface, copy the IF_DEFAULT interface. The files are located in the ITS template directory of service PZLE.



In this case the new interface name is MY_NEW_INTERFACE. This must then be assigned to the proper service provider in table T77WWW_LE_EP. For detailed information see *Customizing L&W Events* in this chapter.

Status Tracking

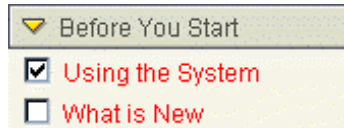
The status tracking function is optional. You can switch it on or off by setting the parameter in the L&W event service file (PZLE_01, PZLE_02, etc.) as shown in the table below. When status tracking is activated, checkboxes appear next to each menu item as shown in the diagram below.

Note: Do not change the PZLE service file. This file is integrated in each of the sub-files or L&W events. Changes to that file would therefore affect all other services as well.

Parameter: ~use_status

Value	Description
X	Status tracking switched on
“ ”	Status tracking switched off

Menu when status tracking is activated:



The status information for a service is stored in table T77WWW_LESTATUS. You can query the status information for a user in a specific event with the following function module.

Function module **ESS_LE_STATUS_CHECK**

Import:

Parameter	Description
UNAME	User name
LIFE_EVENT	L&W event key defined in table T77WWW_MN (e.g. EM01, EM02)
COMMAND	A (default): reads all services defined in the menu C: reads all checked services from the menu U: reads all unchecked services from the menu

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Overview

Parameter	Description
SERVICE_TAB	This table contains all services with the following information <u>Service ID</u> : defined in table T77WWW_SRV <u>Service Name</u> : defined in table T77WWW_SRVN <u>Status</u> : This flag is set to "X" if the service is checked by the user.

Export:

Parameter	Description
DESCRIPTION	L&W event description
LE_OPEN	1: the L&W event is open for the user 0: the L&W event is already closed for the user

Customizing the Life & Work Event Framework

SAP delivers the Life & Work events pre-customized. This includes:

- Pre-defined menu structure
 - ▶ ESS services
 - ▶ External services

Please note: SAP links to a sample page. The actual content templates of the external services are to be delivered by you or your knowledgebase provider.

- R/3 parameters to populate external services

This pre-customization will help you start building and modeling your own company-specific L&W events.

All subsequent customizing steps are performed in transaction SM30.

Customizing the Menu

The first three tables below define the basic customizing settings for each Life and Work event, such as defining the event name. You can also create a link to the start/home page of the event or define how long an event is accessible to the user.

Defining the Menu

Start with the following table to define the event name.

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Customizing the Life & Work Event Framework

Table: T77WWW_MN

Fields	Description
ESS menu	Event key (max 4 digits)
Text	Event name

Example:

ESS menu	Text
ZZZ1	Divorce

Menu Description

Use this table to define event names in additional languages.

Table: T77WWW_MNT

Fields	Description
Language	Language key
ESS menu	Event key defined in T77WWW_MN
Text	Event name in selected language

Example:

Language	ESS menu	Text
EN	ZZZ1	Divorce
IT	ZZZ1	Divorzio

A new record is automatically created in table T77WWW_MN after you add a new event to it. The program uses your logon language for the language key.

Event-Specific Settings

Some specific settings can be defined in this table. For example, you can create a link to the start service for that specific event. You can also define a function module to control the availability of the event.

Example: SAP delivers the function module `ESS_NEW_HIRE_CLOSE_CHECK`, which calculates the time difference between the actual date and the user's hire date. If this difference exceeds the amount entered in field *Period*, the function module returns '0', which closes the event.

The function module must have the following interface:

Import:

Parameter Name	Type spec.	Reference type
UNAME	LIKE	SY-UNAME
PERSNR	LIKE	P0006-PERNR
PERIOD	LIKE	T77WWW_LEDATA-CLOSE_PERIOD

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Customizing the Life & Work Event Framework

Export:

Parameter name	Type spec.	Reference type
IS_ACTIVE	LIKE	CHAR1
MESSAGE	LIKE	CHAR100

If IS_ACTIVE is set to 0, the L&W event will be closed. The function module can be used as a template for creating further function modules.

Table: T77WWW_LEDATA

Fields	Description
ESS menu	Event key defined in T77WWW_MN
Text	Event name
Start Service	Service ID defined in T77WWW_SRV
Name of Service	Service name
Active Check	Function module to control whether or not the event is active. The L&W framework checks the following parameter of the function module interface: "IS_ACTIVE" 1 L&W Event is active 0 L&W Event is inactive
Period	This numeric value is sent to the function module and might be used.

Example:

ESS menu	Text	Start Service	Name of service	Active Check	Period
ZZZ1	Divorce	10000	Start wage	ESS_NEW_HIRE_CHECK	30

The text fields for the ESS menu and Start service are read only and will be automatically filled when a new record is saved.

Customizing the Catalogs

The following tables will help you customize the catalogs for each event. This includes creating catalogs and defining their positions within the event menu.

Defining Catalogs

Define the names of your catalogs here.

Table: T77WWW_CT

Fields	Description
Service Catalog	Catalog key
Text	Catalog name

Example:

Service Catalog	Text
0102	Personal information

0107	Corporate information
------	-----------------------

Catalog Description

Use this table to define catalog names in additional languages.

Table: T77WWW_CTT

Fields	Description
Language	Language key
ServCat	Catalog key defined in T77WWW_CT
Text	Catalog name in selected language

Example:

Language	Service Catalog	Text
EN	0102	Personal Information
IT	0102	Dati personali

A new record will be created automatically in table T77WWW_CT when you add a new catalog to it. The program uses the logon language for the language key.

Catalog Position

Use this table to assign a catalog to an event. You also define the catalog's position within the event.

Table: T77WWW_MNP

Fields	Description
ESS menu	Event key defined in T77WWW_MN
Text	Event name
Service Catalog	Catalog key defined in T77WWW_CT
Text	Catalog name
No.	Catalog position within the event

Example:

ESS menu	Text	Service Catalog	Text	No.
ZZZ1	Force	0102	Personal Information	1
ZZZ1	Force	0107	Corporate Information	2

The text fields for the ESS menu and the service catalog are read only and will be automatically filled when you save a new record.

Country-Specific Services

The table below explains how to assign a given service to a specific country group. If a service is assigned to one or more country groups and the user who is logged on does not belong to one of these country groups, the service is disabled in the menu.

Table: T77WWW_CD

Fields	Description
Service	Service ID defined in T77WWW_SRV
Name of service	Service name
Country Grouping	All of the country groups that exist in the R/3 system are stored in table T500L
Name of HR Country grouping	Name of HR country grouping

Example:

Service	Name of Service	Country Group	Name of HR country group
3	Bank Information	22	Japan
3	Bank Information	10	USA

The text fields for Name of service and Name of HR country group are read only and are automatically filled when a new record is saved.

Customizing the Services

The following tables define customization for the individual services provided within events. Use these to define services and position them within the event catalogs. You can personalize content by passing R/3 parameters to the external provider interface. Finally, you can define color codes for the services to show their priority.

Defining Services

This table lists all the services used to pre-configure L&W events. Additional services may also be defined.

Table: T77WWW_SRV

Fields	Description
Service	Service ID (max 5 digits)
ESS name of service	Service name
Service type	SAP delivers three service types S: ITS service U: Other services (URL) Link to any document that is accessible with a Web browser. X: External service: Can be provided by any Web-based knowledgebase. In order to use this service type you first have to define an external provider in table T77WWW_LE_EP.
ESS service add./log. address	If the service type is <...>: <S>: enter any ITS service name <U>: maintain URL <X>: enter the provider ID defined in table T77WWW_LE_EP
ESS service parameter	If the service type is <...>:

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Customizing the Life & Work Event Framework

	<p><S>: add service parameters if necessary</p> <p><U>: leave empty</p> <p><X>: add key for the specific external service (given by the provider)</p>
--	---

Example:

Service	ESS name of service	Service type	ESS service add./log. address	ESS service parameter
2	Address	S	PZ02	
10006	More Benefits@You Decide.com	U	http://www.youdecide.com	
10018	Content Address	X	2	key01
10007	Code of Conduct Form	X	2	key02

Note: If a service does not appear in the menu, check whether it is country-specific. If so, you need to enable this service for the specific country group in table T77WWW_CD.

Service Description

Use this table to define service names in additional languages.

Table: T77WWW_SRVN

Fields	Description
Language	Language key
Service	Service ID defined in T77WWW_SRV
ESS name of service	Service name in selected language

Example:

Language	Service	ESS name of service
EN	3	Bank Information
FR	3	Coordonnées bancaires

A new record is automatically created in this table when you add a new service to table T77WWW_SRV. The program uses the logon language for the language key.

Service Position

This table is used to assign services to a catalog. You can also define the position of each service within the catalog.

Table: T77WWW_CTP

Fields	Description
ServCat	Catalog key defined in T77WWW_CT
Text	Catalog name
Service	Service ID defined in T77WWW_SRV

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Text	Service name
No.	Service position within the catalog

Example:

Service Catalog	Text	Service	Text	No.
0102	Personal Information	3	Bank Information	1
0102	Personal Information	2	Address	2

The text fields for catalogs and services are read only and will be automatically filled when a new record is saved.

Mapping Applications and Content (Split-Screen)

In order to split the screen into an application and a content area, the specific content service needs to be connected to the application service. This mapping can be done with the following table. All services (application and content) have to be maintained in advance in table T77WWW_SRV.

Table: T77WWW_SMAP

Fields	Description
Application Service	Service started in the application area
Text	Name of application service

Content Service	Service started in the content area
Text	Name of content service
Height	The content area height in % (0-99). The default height is 30.

Example:

Application Service	Text	Content Service	Text	Height
2	Address	10090	Content Address	
3	Bank Information	10091	Content Bank Information	40

The text fields for application and content services are read only and are automatically filled when a new record is saved.

External Provider Configuration

The external provider configuration is necessary for services with service type X, such as External Services.

Defining the External Provider

This table defines the interface and Web server address of an external provider. SAP delivers this table with one sample provider called SAP.

Chapter 8: Customizing R/3 for Life & Work Events

Customizing the Life & Work Event Framework

Table: T77WWW_LE_EP

Field	Description
Number	Unique key for each provider This key needs to be entered in field <i>ESS service add./log. address</i> for all external services in table T77WWW_SRV
Name	Name of the external service provider
Interface	SAP delivers the Life and Work Event framework with two interfaces: <ul style="list-style-type: none">▪ IF_SAP: This interface is only used to display a sample page for an external service provider▪ IF_DEFAULT: This is a generic interface to connect to an external service provider
Base URL	Web server base URL

Example:

Number	Name	Interface	Base URL
1	SAP	IF_SAP	
2	My Provider	IF_DEFAULT	http://www.myserver.com/lw/

Defining Data Requirements

The data requirements for external services can be defined in this table. There are two types of data requirements:

Infotypes:

A specific field from an SAP infotype, e.g. field PERID from infotype 0006 for the user's Social Security Number.

Function modules:

R/3 data that is not necessarily stored in infotypes. In this case a given function module reads all the information. This function module must have the following interface.

Import:

Parameter name	Type spec	Reference type
UNAME	LIKE	SY-UNAME
PERSNR	LIKE	P0006-PERNR

Tables:

Parameter name	Type spec	Reference type
DATA_TAB	LIKE	ESS_INFOTYPE_LN

Function module ESS_NEW_HIRE_DATA_01 is delivered by SAP and can be used as a template for creating further function modules.

Chapter 8: Customizing R/3 for Life & Work Events

Customizing the Life & Work Event Framework

Table: T77WWW_SDATA

Fields	Description
Service	Service ID defined in T77WWW_SRV
Name of service	Name of service
Data type	I (Infotype): for data based on SAP infotypes F(Function module): for data delivered by a function module
Source	For data type: I: enter the four digit infotype number F: enter the function module name.
Field	For data type: I: enter the selected infoytp e field (5 characters) F: leave empty

Example:

Service	Name of service	Data type	Source	Field
10009	I-9 For 1	I	0006	STA E
10009	I-9 For 1	I	0002	PER D
10010	Employment Profile	F	ESS_NEW_HIRE_D/ TA_01	

The text field for services is read only and will be automatically filled when a new record is saved.

Color Coding

Use the following table to define individual color codes for the services in an event. These color codes indicate priorities, showing that a service is for example mandatory or optional.

Defining Color Codes

Table: T77WWW_LECC

Fields	Description
ESS color	Select a unique ID for a color code
Text	Description for this color code. (This text appears in the info box below the event menu)
Code	A hexadecimal color code, e.g. #33FFCC RED GREEN BLUE 33 FF CC

Example:

ESS color	Text	Code
1	Complete this now	#FF0000
2	Complete within your first two weeks of work	#455900

The descriptions for each color code are sorted in ascending order by the unique ESS color ID. Later on they are displayed in the info box below the event menu.

Color Code Description

Use this table to add color code descriptions in additional languages.

Table: T77WWW_LECCT

Fields	Description
Language	Language key
ESS color	ESS color code ID defined in table T77WWW_LECC
Text	Color code description in selected language

Example:

Language	ESS color	Text
EN	1	Complete this now.
FR	1	Ceci doit être effectué le premier jour

A new record is created automatically in this table when you add a new color code in table T77WWW_LECC. The program uses the user's logon language for the language key.

Assigning Color Codes

Use the following table to assign the defined color codes to individual services in an event.

Table: T77WWW_LECCP

Fields	Description
ESS menu	Event key defined in T77WWW_MN
Text	Event name
Service	Service ID defined in T77WWW_SRV
Text	Service name
Color	Color code ID defined in T77WWW_LECC
Text	Description of color code

Example:

SS menu	Text	Service	Text	Color	Text
EM01	My First Days	2	Address	1	Complete this now
EM01	My First Days	3	Bank Information	2	Complete within first two weeks of work

The text fields for the ESS menu, service and color are read only and are automatically filled when a new record is saved.

Creating a New L&W Event

In order to create a new L&W event that is not delivered by SAP, follow the steps described below to configure the R/3 environment and the ITS services.

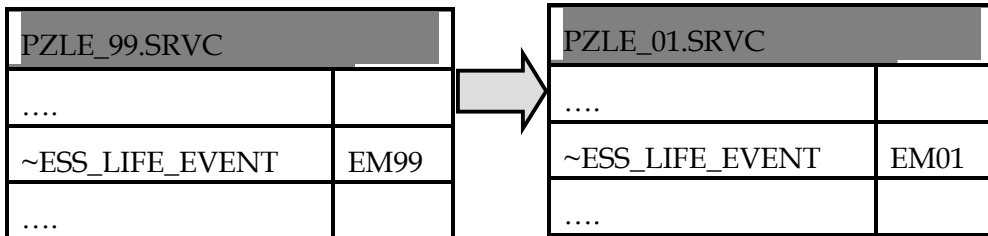
Creating a New ITS Service

Maintain the tables described thus far in this chapter to set up the event framework in the SAP HR system.

SAP delivers the service PZLE_01 (L&W New Hire event) as a template for creating further events. You can use SAP@Web Studio or transaction SE80 to copy this service.

After copying, you have to set service parameter ~ESS_LIFE_EVENT to the new menu key defined in table T77WWW_MN (e.g EM99). Note that menu codes are case-sensitive and should always be capitalized.

Example:



Copying Transactions in R/3

Since the L&W event framework is not based on an existing R/3 transaction, you have to create a dummy transaction to include this new service in the mySAP Workplace.

You can do so by copying transaction PZLE_01. Make sure the service name and transaction name are identical. This is done in transaction SE93 in the SAP HR system.

Adding a L&W Event to a Workplace Role

After creating a new transaction in the R/3 component system connected to your Workplace system, you must reload the transaction information in the Workplace system. This is done with transaction CS_WP_CACHE_RELAOD on the Workplace server. The reload process might be quite long if you reload all the information from all connected R/3 component systems. You can minimize this time by selecting the following options:

Logical System

Deselect *ALL* and add the logical system used for the role.

Data Transfer

Select the option *Partially force* and reload only system and classification data.

In transaction PFCG, add the new transaction to the applicable role(s). For more information on role customizing see Chapter 5.

Chapter 9: Workflow in the SAP ESS Environment

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Overview

One of the missions of SAP Employee Self-Service is to connect all employees directly to the business processes represented by the R/3. With the Web Inbox (*Transaction BWSP*) SAP ESS brings workflow processes directly to ALL employees. This opens a massive networking potential by running processes company-wide in order to connect every employee. These processes will be simpler, less centralized, and the per user implementation cost will decrease considerably.

To this end, SAP ESS 4.6C has extended its set of workflow templates. So by now, all SAP ESS Services involving superior or administrative approval can be managed by workflow.

The following section gives an overview of all workflow templates that typically support processes in the SAP ESS environment. It lists and names the templates, describes the triggering events and gives a short description of the processes and roles involved.

However, this book does not describe general or template-specific workflow customizing. For more information please see the IMG: *Basis* → *Business Manager* → *SAP Business Workflow*.

Triggering Workflow Processes from SAP ESS

SAP ESS works with the same business objects as SAP's R/3. If activities on these objects trigger workflow events in R/3 (for example, changing

an address in the database), the same activities will trigger workflow events in SAP ESS.

Note: In order for workflows to be triggered on the business objects in ESS, the objects must have workflows coupled to them in R/3.

Workflow Templates Delivered with SAP ESS

A number of workflow templates are delivered with SAP ESS:

- **Post-Hire Activities**
Triggered by the events Employee.Hired, Employee.Rehired
- **User Delimit**
Triggered by the events Employee.Retired and Employee.Company.Left
- **Leave Request**
Triggered when the employee submits a leave request form
- **Cancel Leave Request**
Triggered when the employee submits a form that cancels the leave request
- **Employment and Salary Verification**
Triggered when the employee submits a form asking an HR administrator to send an employment and salary verification to a third party
- **W-2 Reprint**
Triggered when the employee submits a form asking an HR administrator to provide a W-2 reprint

- **Approval of Trip Reimbursement**
Triggered when the employee submits a trip reimbursement to be approved. The event is EmployeeTrip.Created
- **Approval of Travel Request**
Triggered when the employee submits a trip request to be approved. The event is EmployeeTrip.Requested
- **Approval of Travel Plan**
Triggered when the employee submits a travel plan to be approved. The event is EmployeeTrip.PlanCreated
- **Approval of Cross-Application Time Sheet**
Triggered when the employee saves and releases a Cross-Application Time Sheet (CATS)
- **Plausibility Check for Change of Address**
Triggered when the employee changes his address within ESS. The event (EmployeeAddressRequested) can only be triggered when the employee has limited authorization that merely allows him to write the data in 'locked' status.
- **Training: Attendance Booking**
Triggered when the employee books a course in the *Training Center* without having booking authorization. The event is RelationIsAttended.requested
- **Training: Attendance Rebooking**
Triggered when the employee changes the booking of a course in the *Training Center* without having booking authorization. The event is RelationIsAttended.moveRequested
- **Training: Attendance Cancellation**
Triggered when the employee cancels a course in the *Training Center* without having cancelling authorization. The event is RelationIsAttended.deleteRequested

- **Internal Service Request**
Triggered when the employee submits an Internal Service Request (ISR) or reactivates an ISR. The events are Notification.created and Notification.inProcessAgain
- **Approve and Revise Appraisal**
Triggered when the manager completes and submits an appraisal. The Events is Appraisal.Completed

When you use a workflow template, you should copy the template to a customer object and work on the customer object itself. This protects the template from any changes SAP may make.

You should analyze the roles in each template to ascertain how to select an agent. Then set up your organizational structure accordingly. However, you may not need to use roles based on the organizational structure (if, for example, you are a small company). In this case, you may choose to find potential agents of a workflow task with direct addressing. Make sure that the workflows are coupled to the right events and that the events are activated. The following sections give a short description of the workflow templates delivered and describe the roles involved.

Post-Hire Activities (WS01000036)

The processes in this workflow are event-triggered. They consist of the following steps:

1. A new employee is hired.
This triggers the workflow. It sends a work item to the inbox of the system administrator, who must create an ESS user for the new employee.
2. The *HRUSER* transaction appears as a dialog box in the SAPGUI inbox of the system administrator. The transaction pre-selects the new employee's data. The system administrator then creates the new user.

3. A work item is sent to the Web inbox of the new employee, asking him or her to enter personal data in the ESS service New Hire Data.
4. The employee enters the data and confirms in the Web inbox that the data is complete.
This sends a work item to the HR administrator, asking him or her to check the new employee's entries.
5. If there are corrections, a work item is sent to the employee's Web inbox asking him or her to correct the data. After correcting the data, the employee confirms in the Web inbox that the data is complete. The work item is returned to the HR administrator.
6. If there are no corrections, the workflow is complete.

Note: Because this is a template, you can extract a section of it (for example the user creation process) instead of using the whole template.

Roles in the Post-Hire Activities Template

- System Administrator (60100009)
Creates a new ESS user for the newly hired employee using *HRUSER*
- HR Administrator (the standard uses role 60100010)
Checks the data entered by the employee in the New Hire Data service
- Employee (addressed automatically)
Enters personal details, such as address and bank details

User Delimit (TS01000050)

This is a single-step task, rather than a workflow template. The workflow is triggered when an employee leaves the company. A work item is sent

to the system administrator, asking him or her to delimit the departing employee's ESS user. The role used is System Administrator, who delimits the ESS user of the employee leaving the company.

Leave Request (WS2000081)

The leave request form that is submitted by the ESS user triggers this workflow. The employee triggers the workflow by entering leave request data in an HTML form. The system selects the name of the line manager who should approve the cancellation. The employee can overwrite this entry.

Note: Since you can overwrite a manager's name in ESS, it is unnecessary to have Organizational Management customize | and supporting workflow.

This sends a work item to the employee's manager, asking him or her to view the employee's leave request and take some action.

1. If the manager approves the leave request, the approval is logged in R/3.

If there is a problem with this record, a work item is sent to the HR administrator, who addresses the problem.

2. If the manager does not approve the leave request, the employee receives a work item in his or her Web inbox.

Depending on the manager's comment, the employee either withdraws the leave request or changes it. If the latter occurs, the workflow begins again.

Roles in the Leave Request Template

- HR Administrator (60100010)
Troubleshoots if there are system problems with the leave request; for example, if the manager could not be determined or if creation of the approved absence fails
- Manager or relevant person defined in the approver field (default is the line manager, selected according to role 00000168)
Approves or rejects the leave request
- Employee
Receives confirmation of leave or information that the leave application was rejected

Cancel Leave Request (WS1000109)

The cancel leave request form submitted by the ESS user triggers this workflow.

1. The Cancel Leave Request service displays a list of all approved leaves and pending leave requests. The employee triggers the workflow by selecting the leave to be cancelled. He or she can choose to cancel the leave partially (a date interval is offered). The system selects the name of the line manager who should approve the cancellation. The employee can overwrite this entry.
2. If the leave request to be cancelled is pending (there has been no approval yet), the system cancels the leave request workflow. The manager then receives no approval item.
3. If a leave request has already been approved, the manager receives a work item, asking him or her to approve the cancellation.
4. If the manager approves the cancellation request, the existing leave is deleted in R/3. If there is a problem with this record, a work item is sent to the HR administrator, who addresses the problem.

5. If the manager does not approve the cancellation, the employee receives a work item in the Web inbox informing him or her of this decision.

Roles in the Cancel Leave Request Template

- HR Administrator (60100010)
Troubleshoots if there are system problems with the cancellation request; for example if deletion of the approved absence fails
- Manager or relevant person defined in the approver field (default is the line manager, selected according to role 00000168) Approves or rejects the cancellation request
- Employee
Receives confirmation of cancellation or information that the request has been rejected

Employment and Salary Verification (WS01000045)

The workflow is triggered when the employee submits the Employment and Salary Verification form.

1. The employee fills out the form and decides which type of verification should be sent. He or she can also decide if the form should be sent to an HR administrator to be printed, signed, and posted or if it should be faxed directly to the address entered.
2. If the employee chooses to send the form to an HR administrator, the HR administrator receives a work item in his or her inbox. When the work item is executed, the administrator is prompted to send the document to the printer.
3. If the employee chooses to fax the form directly, the document is sent out via the fax server without any further user intervention.

Roles in the Employment and Salary Verification Template

- HR Administrator (60100010): Prints, signs, and verifies the form, and then sends it to the employee's chosen destination

W-2 Reprint (WS01000090)

The W2-Reprint form that the employee submits triggers this workflow.

1. The employee submits the W-2 Reprint form from ESS.
2. The HR administrator receives a work item in his or her inbox. When the work item is executed, the administrator is prompted to send the document to the printer.

Roles in W2-Reprint

- HR Administrator (60100010): Prints the form and sends it to the employee according to the delivery option the employee has chosen

Approval of Trip Reimbursement (WS20000040)

The process is triggered when the employee releases his trip data by setting it to the status *“to be Accounted.”*

1. The expenses department checks the trip data to see if it is plausible and if it complies with the statutory or enterprise-specific travel provisions. It also verifies if the travel data is consistent with original (or facsimile) receipts. The trip can be forwarded to the employee's manager, or sent back to the employee for correction.
2. If corrections are necessary, an employee in the expenses department creates a message as a workflow attachment. The employee who entered the trip data receives a work item with this attachment. The employee can change the trip by executing the

appropriate transaction directly from the integrated inbox. When the trip is saved, the workflow is started again.

3. If the trip data is consistent, it is then checked by the employee's manager, who can approve the trip, send it back to the employee for correction, or reject it.
4. If corrections are necessary, the employee's manager creates a message as a workflow attachment. The employee receives a work item with this attachment, and can access the transaction to change the trip directly.
5. If the trip is rejected, the manager creates a message that is sent to the employee as an email.
6. If the manager approves the trip the employee who submitted the request is informed of the approval in an automatically generated email.

Roles in the Workflow Approval of Trip Reimbursement

The roles involved in the process are

- Expense Department (no standard role currently available in the standard delivery)
Checks plausibility and consistency of the trip data.
- Manager (00000168)
Decides whether a travel request or a travel plan should be approved or rejected or if the employee has to correct his or her request.

Approval of Trip Request (WS2000050) and Approval of Travel Plan (WS0100087)

The process is basically the same for approving either a trip request or a travel plan. The process starts when the employee has recorded his trip

request or trip plan. The employee's manager receives a work item for approval in his inbox giving him the option to approve or reject the request or ask for a correction.

- **Approval:** If the superior approves the travel plan or trip request, the employee is informed in an automatically generated email. If a travel plan is subject to approval, the posting record (PNR) with the reservation information included in the travel plan is written to a processing queue for the connected travel agent.
- **Correction:** If corrections are necessary, the superior creates a message as a workflow attachment. The employee receives a work item with this attachment. The transaction for changing the travel plan or travel request is started when this work item is executed.
- **Rejection:** If the travel plan or travel request is rejected, the superior creates a message that is sent to the employee as an email. If a travel plan is rejected, the posting procedure for travel services included in the travel plan is canceled.

Roles in the Workflows Approval of Trip Request and Approval of Travel Plan

The role used to determine the approving person is:

- **Manager (00000168)**
Decides whether a travel request or a travel plan should be approved or rejected or if the employee should correct his or her request.

Cross-Application Timesheet (CATS) Approval (TS40007901), (TS20000459), (TS20000460)

The process is started when an employee "*Saves and Releases*" the timesheet. The person to approve the timesheet receives a report (as a

work item) listing all the employee's released timesheets that have not yet been approved. He or she can approve or reject the data.

1. If the user approves the employee's timesheet, the process is finished.
2. If the user rejects the employee's timesheet, he or she can enter a standard reason to explain the decision. The employee receives a work item informing him or her about the rejection.

Roles used in the Standard Tasks for Timesheet Approval

The role used to determine who is responsible for approval depends on the standard task that is used for the process. You define this in customizing transaction CAC1 with the following options.

- With standard task TS20000460 the role Manager (00000157) selects the responsible manager of the employee.
- With standard task TS20000459 the role HR Administrator (01000003) selects the responsible HR Administrator assigned to the employee.
- With standard task TS40007901 the ESS user himself enters the person or user to approve his timesheet.

Plausibility Check for Change of Address (WS01000015)

The process is started when an employee changes his address using the ESS Service *Address*. This is only possible if the employee has limited authorization and can write data records only in 'locked' status. The steps of the workflow are:

1. The employee changes and saves his address.
2. The HR administrator is notified about the change of address with a work item. When the work item is executed, an R/3 window is

opened containing the employee's address data for him to check. In a second window, the HR administrator can approve the change or request a correction. He can enter any changes required using notes.

3. If the change of address is plausible and contains no errors, the process is completed.
4. If a correction is required, the employee is sent a work item asking him to make the necessary change.

The process described above is a model for any changes to employee data in ESS that have to be checked by an administrator. Similar workflows can also be implemented for other master data such as infotype 0021 (Family) or 0210 (W4) following the same model.

Roles in the Workflow Plausibility Check for Change of Address

The role is HR Administrator (01000003): Checks the employee's change of data and possibly requests correction.

Attendance Booking (WS01200151)

This workflow is started when an employee who does not have booking authorization tries to book attendance using the SAP Employee Self-Service *Training Center*. The following workflow steps are triggered:

1. A work item is created for the employee's manager with which he can approve or reject event attendance.
2. If the manager approves attendance, it is booked automatically. The system checks if the booking was made successfully. If it was, the employee is notified automatically by email that attendance was booked.

3. If an error occurred when booking attendance automatically, a work item is created for the relevant administrator with which he can book attendance manually.
4. If the manager rejects attendance, the employee is notified by email that attendance was not approved.
5. The workflow is terminated if the employee requested that his attendance at this event be canceled with My Bookings.

Roles in the Attendance Booking Workflow

The roles are:

- Manager (00000168)
Approves or rejects employee attendance.
- HR Administrator for Training
Is notified if an error occurs during automatic booking and can then book attendance manually.

Attendance Rebooking (WS01200160)

This workflow is started when an employee who is already booked for an event and who does not have authorization to cancel bookings requests that he be booked on a different event using My Bookings.

My Bookings:

A work item is created with which the employee's manager can approve or reject the rebooking.

1. If the manager approves it, attendance is automatically rebooked. The system checks if the booking was made successfully. If it was, the employee is notified by email that attendance was rebooked.

2. If an error occurred when automatically rebooking attendance, a work item is created with which the relevant administrator can book attendance manually.
3. If the employee's manager rejects the rebooking, the employee is notified by email that rebooking was not approved.
4. The workflow is terminated when the following events occur:
 - The employee requests the changed attendance at the event where he wanted to be rebooked using the *Training Center*. This calls a workflow of workflow model Attendance Booking (WS01200151). The employee is notified by email that he no longer can rebook attendance.
 - The employee requests cancellation of attendance at the old event he wanted to rebook from or the new event he wanted to rebook to with My Bookings. The employee is notified by email that he can no longer rebook attendance.

Roles in the Attendance Rebooking Workflow

The roles are:

- Manager (00000168) Approves or rejects employee's rebooking.
- HR Administrator for Training
Is notified if an error occurs during automatic rebooking and can rebook manually.

Attendance Cancellation (WS01200147)

This workflow is triggered when an employee who does not have cancellation authorization requests cancellation of event attendance with the My Bookings.

1. The workflow checks whether the attendance to be canceled was already booked or only requested. If attendance was only requested but not approved, it is canceled without requiring the manager's approval. The participant is notified that attendance was canceled.
2. If the booking was approved, the cancellation must also be approved. The system reads the cancellation data (cancellation fee). A work item is created for the corresponding manager, who can approve or reject the cancellation.
3. If the manager approves the cancellation, attendance is automatically cancelled and the employee is informed of the cancellation by email. The employee is also informed by email if the manager rejects the cancellation.
4. The workflow is terminated if the employee again requests attendance at the event for which he requested cancellation using the SAP Employee Self-Service Training Center.

Roles in the Attendance Cancellation Workflow

The role is Manager (00000168): Approves cancellation if attendance was already approved.

The role is:

- Manager (00000168)
Approves cancellation if attendance was already approved.

Internal Service Request (WS03100019)

The workflow is triggered when the employee submits an ESS Service *Internal Service Request* (ISR). The workflow procedure is:

1. The workflow checks if message processing has to be approved, which depends on the message type. If message processing requires approval, the approving employee receives a work item with which he can approve or reject processing. The workflow terminates if he rejects processing.
2. If approval is not required or if processing is approved, the responsible processor receives the message as a work item for processing.
3. The processor closes the message when it has been completed. He can also trigger further measures for the message. The persons who should process these measures are notified with further workflows (Workflow Complete Task WS20001028).
The person processing the message can only close the message when all related measures have been completed.

Roles of the Internal Service Request Workflow

- Message processor (20000101)
Responsible for processing the message
- Person approving the message (20000116)
Approves message processing if required
- Other persons processing measures (20000100)
- Responsible for completing further measures if the message processor created such measures.

Approve and Revise Appraisal (WS01000105 and WS01000108)

The process starts when an employee appraisal is created. The workflow is started when the form has been completed.

The steps of the workflow are:

1. The appraised employee is shown the appraisal and can agree with or reject the appraisal.
2. If the appraisee agrees with the appraisal, the appraiser is notified by email.
3. If the appraisee rejects the appraisal, the appraiser receives a work item for revising the appraisal. The process of rejecting and revising the appraisal can be repeated. The workflow is complete when the appraisee approves the appraisal.

Roles in the Approve and Revise Appraisal Workflow

The roles are:

- Appraisee (01000016)
Checks the appraisal and approves or rejects it.
- Manager of the appraised employee (01200025)
Creates the appraisal and corrects it if necessary.

Chapter 10: Add-On Components within SAP ESS

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Overview

This chapter provides information on R/3 Telephony, ArchiveLink, and the R/3 fax interface. So far, Telephony and the ArchiveLink are used only within the “Who’s Who” service, but Telephony in particular can be easily implemented for use in any other ESS service as described below. The R/3 fax interface is typically used in the Payment and Salary Verification services. This feature can also be easily implemented in other services.

Telephony

This chapter provides information on Telephony in R/3, including the technical requirements and information on the SAPphone interface. It also describes how you can include Telephony in other SAP ESS services.

The goal of Telephony integration in the R/3 is to make the telephone an integral part of business processes. From Release 4.6A onwards, the call control functions to initiate and terminate outbound calls are available for integration in the Internet Application Components (IACs) environment. In SAP ESS, for example, you can call all employees by selecting their data record and pressing a button.

Telephony integration in R/3 brings some new functions to the IAC environment including:

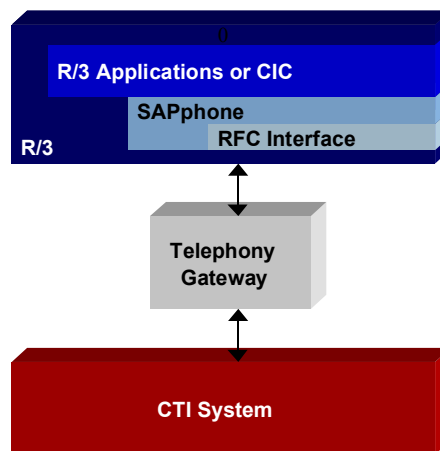
- ▶ More call control functions such as transfer, hold, conference etc.
- ▶ Processing inbound call information (e.g. stored data about clients may be generated automatically when they call)

- ▶ Call Center support (e.g. to log an agent in and out of queues)
- ▶ Call campaign support (predictive dialing)

For more information about telephony integration in R/3, see the SAPphone documentation in *Basis* → *Basis Services* → *Communication interfaces* → *SAPphone*.

Which Components are Required?

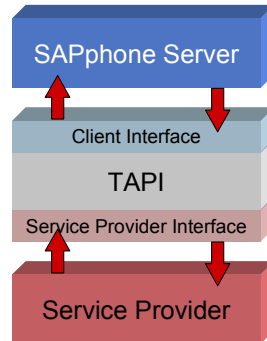
In order to support Telephony integration in R/3, additional hardware and software are needed: Computer Telephone Integration (CTI) systems such as the call center (CC) software or a Private Branch Exchange (PBX) connected to R/3 with a gateway (GW). These communicate with R/3 applications or a Customer Interaction Center (CIC) using the SAPphone RFC interface.



Finding a Suitable Gateway

1. Be sure your CTI system supports TAPI version 2.0 or higher. Your gateway could then consist of:
 - SAPphone server (SPS), which is shipped by SAP
 - TAPI, which is part of the NT operating system
 - TAPI Service Provider (TSP), which is delivered by the CTI system vendor

The SPS communicates with the SAPphone RFC interface and is compatible with every SAPphone version available. All basic Telephony and call center functions included in SAPphone are also supported by SPS, whereas campaigns (predictive dialing) are not supported. Check with the vendor if the TSP supports all the functions you need.



2. To determine if there is a certified gateway for your CTI system, check the SAP Complementary Software Program (CSP) located at <http://wwwext.sap.com/solutions/compsoft/cspdirectory/default.asp> → “software category” → “computer telephony” (in the drop-down box). Such a gateway could be provided by the CTI system vendor (e.g. a call center package could come with a suitable gateway) or by third parties.

3. If there is no gateway that directly supports the CTI component, check the SAP CSP Web page for certified CTI middleware supporting your CTI component. CTI middleware can be used to connect different kinds of CTI products and can also be listed with the certified gateways. In this case the CTI middleware has its own gateway to SAPphone and can communicate with the CTI system. Check with the middleware vendor to find out if the software supports your CTI component.

Architecture

The gateway and the CTI system that link the user's telephone to the R/3 application in the user's Web browser can be:

- Installed on the user's PC (local architecture)
- Installed on a Telephony server (central architecture)
- Distributed on the user's PC and on the Telephony server (client-server architecture)

For more information on the architecture see the SAPphone online help.

Telephony in SAP ESS

Telephony is available in the Who's Who service. In Who's Who the user can search for employees using various criteria, such as the last name or organizational unit. Once users have found the individual they are looking for, they can display detailed information, such as the cost center and phone number. From the detail screen, they can telephone that person by simply clicking the Telephony icon.

While it forms part of Who's Who, Telephony it is in fact a standalone ESS service. In other words, you can use it in any other relevant service. In your Enrollment service, for example, you may decide it would be useful

Telephony

to provide Telephony to a benefits administrator who assists employees in making benefits enrollment choices.

To call Telephony from any HTML page, use this path:

```
http://[your ITS]/scripts/wgate/sphw/!?tel_number=[number to  
call]&country_to=[country to  
call]&~client=~client`&~language=~language`&~Okcode=enter
```

This will replace your HTML page with the Telephony dialing page. If you want to offer the telephone option as it appears in the Who's Who service, insert the following code in your template:

```
<html><head>. . .  
  
<script language="JavaScript">  
function phone_window( NumberToCall, CountryTo ){  
    pp_address      = eval("http://~http_host` `~URLWgate`~/sphw/  
        ?tel_number=' + NumberToCall +  
        '&country_to=' + CountryTo +  
        '&~client=~client`&~language=~language`&~Okcode=ent  
er ~OKCODE=ENTER");  
    pp_name         = "Phone_Popup";  
    pp_properties   = "toolbar=no,width=600, height=220, status=no,  
        resizable=yes, scrollbars=auto, menubar=no";  
    dialpopup = window.open( pp_address, pp_name, pp_properties );  
    dialpopup.focus();  
    return false;}  
  
function ringing(){  
    document['phone'].src=`mimeURL(~language="", ~service="sphw",  
        ~name="image/phone_ringing.gif")`;}  
  
function stop_ringing(){  
    document['phone'].src=`mimeURL(~language="", ~service="sphw",  
        ~name="image/phone.gif")`;}  
  
</script></head>  
<body>. . .  
  
<!-- click this icon to open phone popup →
```

```

<a href="return false" onclick="return phone_window(
  '\writeENC(PHONE_NUMBER)`, '\writeENC(COUNTRY_TO)`) "
  onmouseover="ringing()" onmouseout="stop_ringing()">
</a>
. . .</body></html>

```

Additional Comments

1. Ensure that the phone number (`PHONE_NUMBER`) and the country code, e.g. DE or US (`COUNTRY_TO`), is in the anchor tag.
2. If you have more than one phone icon on your template, give them different names. Examples can be found in templates 500 and 500_core of service pz01.
3. You might want to have a resource variable called `phoneme` (phone me) in the language file in case the phone icon is not found at runtime. This missing icon is then replaced with the text you choose (like “Call me now” or something similar). The user can continue with Telephony by selecting the text instead of the icon.

Note: When the user selects the phone icon next to someone's extension number (in either the result or detail view), Who's Who opens a new window to process the phone call. The number to be called is entered with an area code in this window. The area code is determined by the R/3 system. If the user calls someone within the same area code, e.g. within a subsidiary, the phone server will ignore the area code.

SAP Business Documents (SAP ArchiveLink)

Overview

Along with classic business objects, documents play an important role in business processes. The basis for the trouble-free exchange and processing of documents is their retrieval in an electronically prepared form. This guarantees access to the documents at all times.

SAP ArchiveLink® is the middleware component of the SAP System which links to external storage systems such as optical archives and document management systems. It is an interface providing SAP applications with document management functionality such as:

- Storing and displaying any incoming documents (scanned, fax, e-mail or PC files of any format)
- Storing and displaying SAP print lists (ABAP report output) and outgoing documents (SAPscript, Smartforms)
- High-volume capability using optimized processes (such as multi-tasking)
- Standard scenarios for incoming document processing based on SAP business workflow

Because SAP ArchiveLink now uses the SAP HTTP Content Server interface and the old RFC interface, all content servers working under these interfaces. The SAP HTTP Content Server and external certified content server can be used as a storage server. Only fully certified SAP

ArchiveLink systems can provide the customer with the complete set of interfaces (scan dialogs, bar code BAPIs). The other components are purely server-based

Prerequisites for Use

A few preparations are necessary before customizing. Primarily server-based functionality is needed for SAP ESS use.

SAP ArchiveLink requires either an installed certified external storage system or a content server working under the SAP HTTP Content Server Interface (SAP Content Server or external certified HTTP content server). Database storage is not available for SAP ArchiveLink.

Before using SAP ArchiveLink certified external storage systems, preparations should be made by the system provider and basis administrator. This consists of all installation steps, (front-end and backend), and constructing and testing the different forms of communication between SAP and the external storage system.

If an SAP content server, (Adabas database on Windows NT), which has been delivered in the standard installation package (CD) from Release 4.6B, is to be used as a storage server, install it using the included installation guide (Material No. 51008399).

SAP ArchiveLink: Basic Customizing

The complete SAP ArchiveLink Customizing information can be found in the SAP Reference IMG: *Basis Components* → *Basis Services* → *SAP ArchiveLink*. SAP ArchiveLink Basic Customizing consists of three steps:

1. Control of the external content server is determined in the **content repository definition**. Implementation Guide (IMG): *Basis Components → Basis Services → SAP ArchiveLink → Storage System Settings → Maintain content repositories*

2. The SAP system has to register with the HTTP content server by **sending a certificate** (when working with secure access)

For release 4.6B or lower, in the Implementation Guide (IMG), select: *Basis Components → Basis Services → SAP ArchiveLink → Basic Settings → Send Certificates to HTTP content server*.

Starting with Release 4.6C, you can directly send the certificate of the SAP System for storage type HTTP from the content repository definition to an HTTP content server with the symbol *Send certificate*. You need to send certificates in order to be able to work with signed URLs. Once the certificate has been sent to the content server, it normally has to be activated there before you can work with the content server and store documents.

3. **Document types** (working with a business object type) are **assigned to specific content repositories**. Implementation Guide (IMG): *Basis Components → Basis Services → SAP ArchiveLink → Basic Settings → Maintain Links*.

These three steps activate SAP ArchiveLink for ESS.

Documentation and Further Information

A public description of the product is available at <http://www.sap.com/technology>.

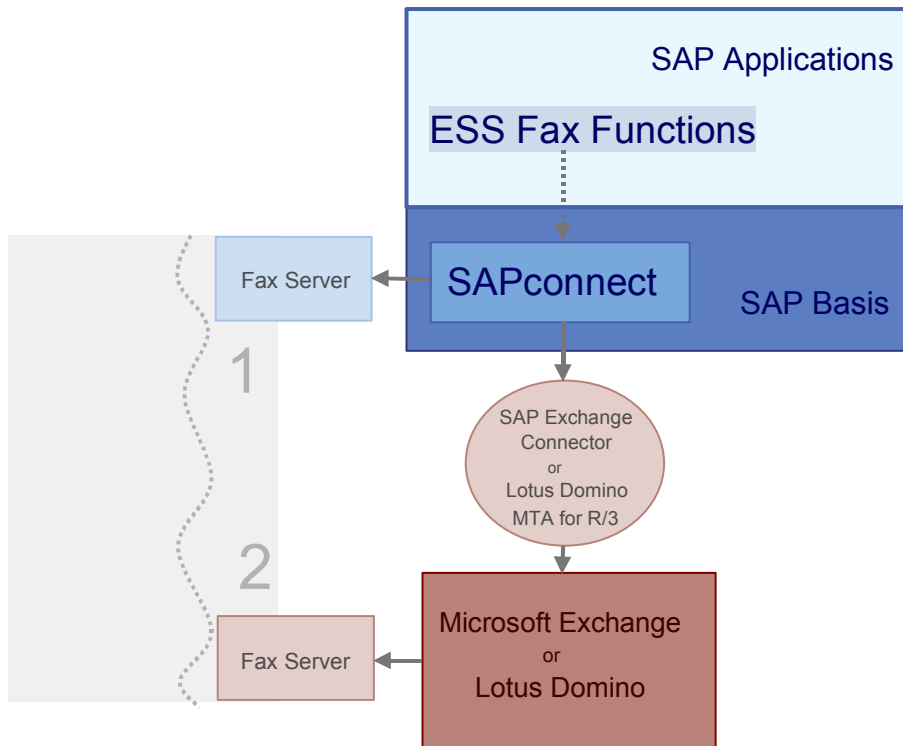
Customer and partner information is available in the SAP Portal <http://service.sap.com/archivelink>.

Faxing from SAP Employee Self-Services

Some SAP ESS services provide fax functions. One example is the service *Employment and Salary Verification*, where a fax can be sent from the intranet to a third party such as a bank or mortgage company. To enable your employees to use these functions, you have to connect a fax server to the SAP system and configure the fax interface.

Fax Infrastructure

You can either connect a fax server directly to the SAP system or use the fax server of a third-party mail system. In both cases, the fax server or the connector to the third-party mail system has to be connected to the SAP System using SAPconnect, the standard communication interface of the SAP system. The graphic below illustrates the alternatives:



Required Components

For alternative 1, you need a fax server that is certified for the SAPconnect interface. For more information, see the Software Partner Program Web page at:

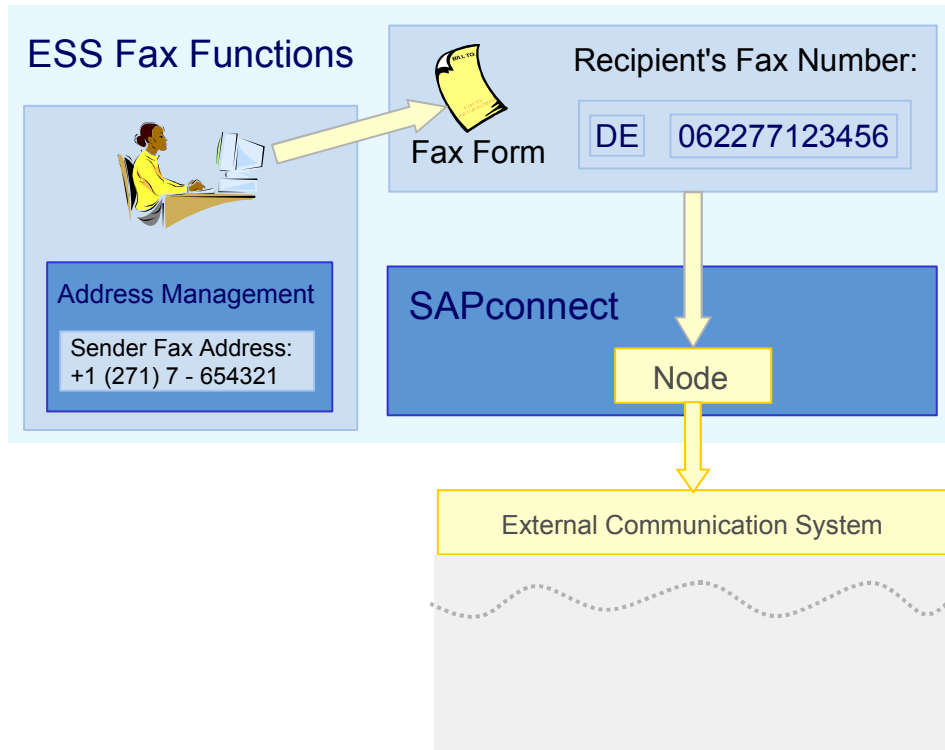
<http://wwwext.sap.com/solutions/compsoft/cspdirectory/default.asp>
→ "software category" → "fax and email" (in drop-down box),
containing information about complementary products for SAP's
business technology.

For alternative 2, you need a fax server that is certified for your mail system and a connector that connects the mail system to SAPconnect (for example, the Lotus Domino MTA for R/3 or the SAP Exchange Connector). For more information, refer to the chapter *SAP Exchange Connector (BC-SRV-COM)* under *Basis → Basis Services → Communication Interfaces* in the SAP Library and to SAPNet Note 98408 *Support: Interface SAP R/3 - Lotus Products*.

Note: You can also use the old communication interface SAPcomm instead of SAPconnect. However, SAPcomm will not be delivered after Release 4.6C. If you use SAPcomm in Release 4.6B, see Note 30002.

SAP Components Required for Faxing

The service transfers the fax form and fax number to SAPconnect. On the basis of the recipient's fax number, the fax is routed through an SAPconnect node to the external communication system. The sender address is taken from the SAP address management. The graphic below illustrates the components involved:



Components to be Configured

SAPconnect

Customizing (Transaction SPRO) for SAPconnect includes setting country codes. To access SAPconnect Customizing, choose *Implementation Guide for R/3 Customizing IMG* → *Basis* → *Basis Services* → *Communication Interfaces* → *SAPconnect*.

In SAPconnect administration (transaction SCOT), you have to create a node for the external communication system (that is, for the fax server or for the connector to your mail system).

For more information, refer to the chapter on *SAPconnect (BC-SRV-COM)* under *Basis* → *Basis Services* → *Communication Interfaces* in the SAP Library.

User and Address Management

Users can send faxes only if they have been assigned a fax address. They also require send authorization for faxing, which is contained in the single role SAP_BC_ENDUSER included in the composite role SAP Employee Self-Service.

Fax Forms

Each application provides a form for faxing. For example, the service *Employment and Salary Verification* uses the SAPscript document HR_SALARY_EMPLOYMENTVERIFICATION. The service's fax function works only if the document exists in the logical SAP System (that is, the combination of an SAP System and client). You can check this in transaction SO10. Otherwise you can copy the document from client 000.

Some of the fax forms have to be adapted to suit the requirements of your enterprise. For example, if your employees send faxes from the Business Workplace, the form OFFICE-TELEFAX is used. You can change the form in transaction SE71.

For more information, refer to the administration section under *Basis* → *Basis Services* → *Business Workplace and Services* → *Business Workplace (BC-SRV-GBT)* in the SAP Library and to the documentation for the business applications which provide their own fax forms.

Chapter 11: Troubleshooting

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Overview

This chapter describes how to handle errors that could occur during installation of the Internet Transaction Server on a Windows NT host. It describes troubleshooting specifically for a dual host installation as well as your R/3 set-up.

Troubleshooting the ITS

Installation Problems

If you receive error messages like “General file transfer error” when using the `SetupITS.EXE` program, make sure your `TEMP` directory is empty.

Diagnosing Problems

To diagnose a problem, check the trace files in the traces directory
<install-dir>\<virtual ITS>\

Example: `C:\Program Files\SAP\ITS\2.0\<virtual ITS>\traces`

Trace Facility Settings

You can modify the trace facility settings listed below, but do so only for a temporary diagnosis. Changing these settings can adversely affect performance.

You can modify the following settings in the Windows registry, which you start with *Start* → *Run* → *regedit* in Windows:

- `HKEY_LOCAL_MACHINE\SOFTWARE\SAP\ITS\2.0\<virtual ITS>\Programs\AGate\TraceLevel`

Default	Range	Description
1	1 (errors only) 2 (errors and warnings) 3 (errors, warnings and information records)	Trace level for tracing the ITS interface to the R/3 System

- `HKEY_LOCAL_MACHINE\SOFTWARE\SAP\ITS\2.0\<virtual ITS>\Traces\TracePath`

Default	Description
<code>C:\Program Files\SAP\ITS\2.0\<virtual ITS>\Traces</code>	Path where all virtual ITS-related trace files are stored

- `HKEY_LOCAL_MACHINE\SOFTWARE\SAP\ITS\2.0\<virtual ITS>\Traces\...`

Chapter 11: Troubleshooting

Troubleshooting the ITS

Followed by one of the paths below:

`AGate\TraceLevel`
`MManager\TraceLevel`
`SAPjulep\TraceLevel`
`SAPirf\TraceLevel`
`SAPxGDK\TraceLevel`
`Wgate\TraceLevel`

Default	Range	Description
1	1 (errors only) 2 (errors and warnings) 3 (errors, warnings, and information records)	Trace level for the corresponding trace type

- `HKEY_LOCAL_MACHINE\SOFTWARE\SAP\ITS\2.0\<virtual ITS>\Traces\...`

Followed by one of the paths below:

```

AGate\TraceAppend
MManager\TraceAppend
SAPjulep\TraceAppend
SAPirf\TraceAppend
SAPxGDK\TraceAppend
Wgate\TraceAppend

```

Default	Range	Description
1	<p>1 (only one trace file, additional records are always appended)</p> <p>0 (each new start of this software creates a new trace file; the old one is renamed with a timestamp in the trace file name)</p>	Toggle switch to select one or more trace files. Do not change.

Changing R/3 Connection Information

Each service you offer on the Web is defined by a specific service file (*.*svc*). There is also a global service file `global.svc` which contains general settings and is not related to any particular service.

Note: The settings in the specific service files override the setting in the global service file.

These service files are located in the services directory `<install-dir>\<virtual ITS>\Services`.

Example: `C:\Program Files\SAP\ITS\2.0\<virtual ITS>\services`

The easiest way to create and maintain these service files is in the Web Application Builder (transaction SE80) or SAP@Web Studio. If you modify the files manually using a simple text editor, be careful not to change the file structure and syntax. Basic definitions like R/3 connection information are written to the `global.srvc` file at setup. You can change the setup information by modifying the relevant entries in this file.

In addition, each service can define its own connection information in its own service file, which then overrides the settings in the `global.srvc` file.

Uninstalling the Internet Transaction Server

SAP recommends that you make a backup copy of all files you want to keep before starting the uninstall procedure. You should also stop your web server and the *ITS Manager* service before uninstalling. To uninstall, choose *Start* → *Settings* → *Control Panel* → *Add/Remove Programs* on the Windows NT 4.0 desktop.

Note: Log on as the ITS administrator. That is, the Windows NT user that installed the ITS.

Reporting a Problem

If you have a problem that you cannot solve yourself, report the problem in the Online Service System using component BC-FES-ITS. Make sure you provide SAP with as much information as possible:

1. Note the exact error message displayed in the Web browser.
2. Save all current trace files. The default location of the trace files is `<install-dir>\<virtual ITS>\Traces`.
For example: `C:\Program Files\SAP\ITS\2.0\<virtual ITS>\traces`
3. If possible, find a way to reproduce the error.
4. Include the following information: about your system setup:
 - **ITS version**
This is found by selecting the “View Source” option from your web browser. The ITS version number is located in the first few lines of the HTML source code.
 - **System configuration**
(Windows NT version, host name(s), Web server software, Web browser software, network/firewall configuration, user accounts, etc.).

R/3 Problems

If you have a problem that you cannot solve yourself, report the problem in the Online Service System using the application-specific component for the problem.

Chapter 11: TroubleshootingR/3 Problems

Problems relating to	Specific area	Online Service System component
Absence Request	BAPIs	PT-RC
	SAP Business Workflow	BC-BMT-WFM
Benefits		PA-BN
CATS		CA-TS
Country-specific services	Australia	PA-PA-AU
	Canada	PA-PA-CA
	Denmark	PA-PA-DK
	France	PA-PA-FR
	Germany	PA-PA-DE
	Great Britain	PA-PA-GB
	Ireland	PA-PA-IE
	Italy	PA-PA-IT
	Japan	PA-PA-JP
	Netherlands	PA-PA-NL
	Norway	PA-PA-NO
	Portugal	PA-PA-PT

Problems relating to	Specific area	Online Service System component
	South Korea	PA-PA-KR
	Spain	PA-PA-ES
	Sweden	PA-PA-SE
	Switzerland	PA-PA-CH
	United States	PA-PA-US
Jobs		PA-RC
Payment and Salary Verification (US)		PY-US
Paycheck (Forms)		PY-XX-FO
Business-to-Business		ECO-BBP
Skills Database		PA-PD-QR
Time Statement (Time Evaluation)		PT-EV
Training and Event Management		PE
Workflow	General	BC-BMT-WFM
	Web Inbox	BC-BMT-WFM
Work Schedule		PT-WS
My Assets		FI-AA

Chapter 11: Troubleshooting

R/3 Problems

Problems relating to	Specific area	Online Service System component
Travel Management		FI-TV
My Appraisals		PA-PD-AP
Internal Service Request		CA-NO
Change Own Data		CA-ESS, PA-PA
(MiniApp)	Outlook	BC-SRV-GBT
(MiniApp)	Mails and Appointments	BC-SRV-GBT
(MiniApp)	SAPterm Dictionary	BC-DOC-TER
(MiniApp)	Workflow Inbox	BC-BMT-WFM

CA-ESS for these ESS-specific problems

- Who's Who service, including Calendar, Telephony, and Organizational Chart
- New Hire Data service
- Miniapps
 - ▶ Display/Change Picture
 - ▶ Who's Who
 - ▶ Search the Web
 - ▶ mySAP.com Information
 - ▶ System Messages
- ESS upgrades from R/3 Release 4.5 to 4.6

- ESS user generation
- ESS user profiles
- Any other ESS problems not listed in the above table

Personal Information

ESS reduces the functionality offered in transaction PA30 for maintaining personal information, thus simplifying the handling of this kind of time-dependent data. This simplification is intentional, to make ESS easy for casual users to use.

A professional user, such as an HR administrator, may expect to see the same options that exist in PA30 in the ESS services. You should not assume that missing functionality in the Personal Information services is an error. For more information on system response and the handling of personal information, see Chapter 7 and Appendix A.

Not all buttons appear on each list or detail screen. Check the time constraints in table T519A for the infotype used. For more information, see Appendix A.

Chapter 12: Changing the Design of SAP ESS Services

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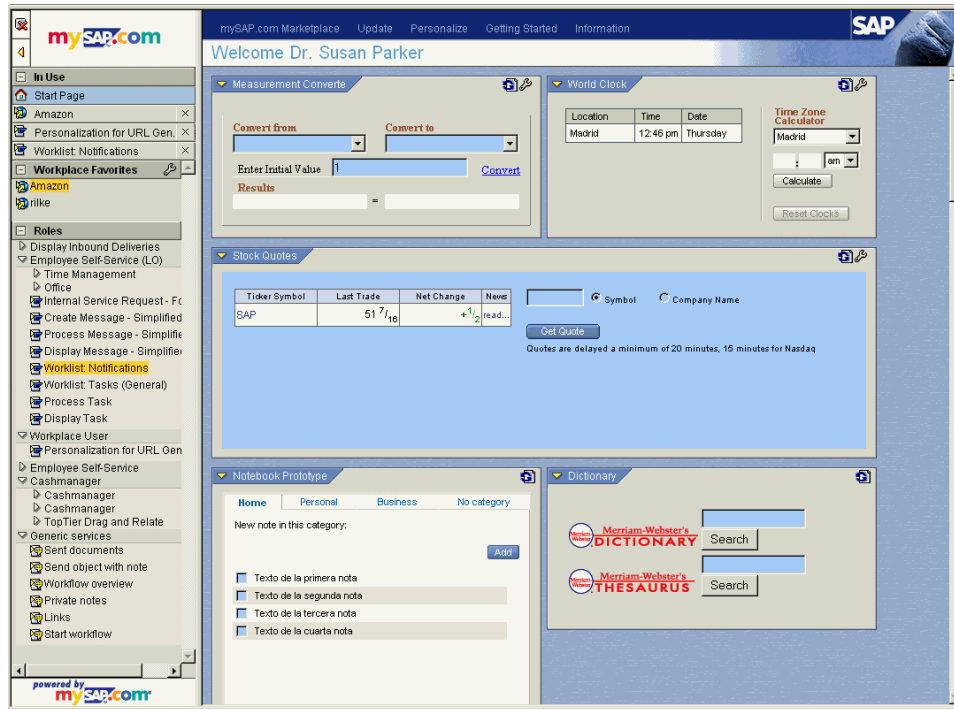
Overview

This chapter describes how to change the visual appearance of the mySAP Workplace, MiniApps and Internet Application Components (SAP Web applications). The design concept is presented, followed by a description of the possible procedures.

Design Concept

The design concept is part of the mySAP Workplace architecture. The relevant elements and principles for changing the design are described here.

Design elements of the mySAP Workplace and individual MiniApps and Internet Application Components dictate the appearance of SAP ESS services for endusers.



To get the best overall design, you generally have to adapt the design of both the mySAP Workplace and the SAP Web applications. When doing so, you should keep in mind that:

- Different **programming models** are used for developing the mySAP Workplace, MiniApps and Internet Application Components.
- The design is controlled by the Internet Transaction Server (ITS). Since the overall architecture usually contains **more than one ITS** (one ITS for the mySAP Workplace system and one ITS for each component system), you generally have to make the design changes for a number of Internet Transaction Servers.

mySAP Workplace and SAP Web Applications

The mySAP Workplace is the SAP enterprise portal from which the various SAP Web applications can be started. These applications consist of the following:

- ▶ **Internet Application Components (IACs)** are Web applications that were developed specially for the browser. The ITS generates a Web-oriented design for IACs. Internet Application Components are intended for users who only rarely have to access the SAP System and are therefore designed to be intuitive and easy-to-use. Technically speaking, the mySAP Workplace itself is also an IAC.
- ▶ **MiniApps** are also Web applications that were developed specially for the browser, but they are smaller than Internet Application Components and are primarily used to display important data on the start page of the mySAP Workplace.

Note: In contrast to IACs, **Professional User Transactions** are SAP System transactions that were originally developed for the *SAP GUI for Windows* and can be displayed with the ITS using a browser. The ITS tries to simulate the original functions and graphic elements (including the menus and toolbars) of the *SAP GUI for Windows* as closely as possible. Professional User Transactions are intended for experienced SAP System users who regularly perform complex transactions.

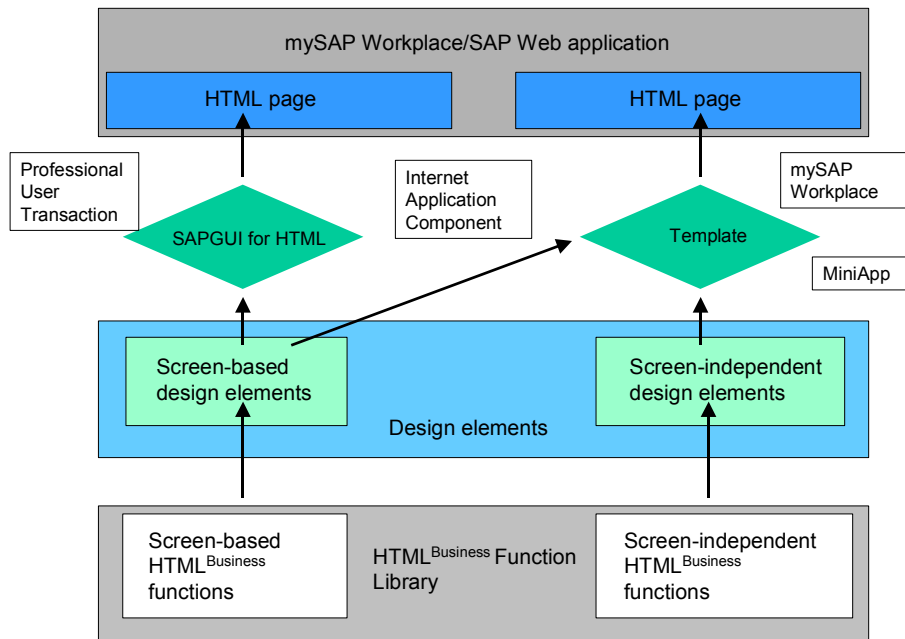
The ABAP Workbench is responsible for classifying each and every transaction.

Programming Models and HTML Generation

Various programming models are used to develop the mySAP Workplace and SAP Web applications.

The focus of these programming models is on **HTML generation**: The browser-enabled HTML pages contained in the mySAP Workplace or in an SAP Web application are created either by automatic HTML generation or by using templates. The HTML is generated on the ITS using HTML^{Business}, an SAP macro language. **HTML^{Business} functions** can be used to encapsulate design elements that are used frequently, permitting them to be reused. All the design functions in the standard SAP delivery are stored in the *SAP General HTML^{Business} Function Library*. The reusability of these design functions ensures a consistent layout for all the SAP Web applications (including the mySAP Workplace) and reduces development costs. You can also develop your own HTML^{Business} functions in addition to the standard functions.

You can find more information in the SAP Library under *Basis Components* → *Frontend Services (BC-FES)* → *ITS/SAP@WebStudio (BC-FES-ITS)* → *HTMLBusiness Language Reference* → *HTMLBusiness Language Description* → *HTMLBusiness Function Specification*.



Normally each SAP Web application contains a number of HTML pages. The layout of each **HTML page** consists of a number of design elements, such as pushbuttons and fields, which can have the following types:

- **Screen-based** design elements are elements based on transaction screens in the SAP System.
- **Screen-independent** design elements are not based on a screen, such as in the case of a template-based design.

The actual design (colors, fonts, images, etc.) of the individual design elements is defined within the generated HTML page with **Cascading Style Sheets (CSS)**.

The number and types of design elements used on one HTML page depend on the way in which that page is generated. HTML pages can be generated automatically using the ITS or by using templates. You can use the following models:

1. HTML **automatically** generated by the ITS: The corresponding HTML page is based on a transaction screen in the SAP System. The ITS converts the elements and the layout of the screen into an HTML page **at runtime**. The resulting HTML layout closely corresponds to the original screen layout. The **screen-based** HTML^{Business} functions generate the HTML for the particular screen elements, taking their corresponding attributes into consideration.
2. HTML generated using **templates**: A manually created template can include both screen-based and screen-independent design elements:
 - **Screen-based** HTML^{Business} functions are used to access screen-based elements.
 - **Screen-independent** HTML^{Business} functions are used to display design elements that are not screen-based.

When you use a template, you can define any layout for the HTML page. That is, the HTML page **does not depend on a screen layout**, even if screen-based HTML^{Business} functions are used.

The following two cases are exceptions:

- A Web application can include HTML pages that are automatically created by ITS as well as those that are generated with a template (mixed mode).
- A single HTML page can consist of one part that is generated by template and another part that is generated automatically if it is based on more than one subscreen.

Note: If the Internet Transaction Server does not find a template when it calls a transaction, it automatically generates the necessary HTML page. If a template is found, it will always have priority over automatic generation.

HTML generation with templates as well as screen-independent functions is always used for **MiniApps** and the mySAP Workplace. All the options given above can be used for **Internet Application Components**. In the case of **Professional User Transactions**, automatic HTML generation by the ITS (screen-based) is used.

Methods for Changing the Design

You can change the design of the mySAP Workplace and the various SAP Web applications using the following methods:

Method 1: Changing Cascading Style Sheets

To change the design, edit the central Cascading Style Sheets (CSS). The advantage is that coding normally does not have to be changed. Fonts and colors are defined using CSS classes, and images (logos, pictures or graphics) are referenced with paths.

The easy-to-use *Style Sheet Designer* service helps you change the style sheets. It permits design changes in all applications of the mySAP Workplace and in all SAP Web applications. For each design element, the Style Sheet Designer provides a number of adjustable attributes (font, color, etc.) based on the style sheet. Changes to these attributes are

displayed (preview) and the corresponding style sheet is adapted automatically.

Method 2: Changing HTML^{Business} Functions

To make more **complex design changes**, such as redesigning individual design elements (for example tab pages) or changing the interactive behavior of individual elements, it is necessary to modify the delivered HTML^{Business} functions.

Note: Changes to HTML^{Business} functions require a deeper understanding of HTML, Dynamic HTML, JavaScript, HTML^{Business} and the Internet Transaction Server.

SAP strongly recommends that you make all design changes by editing Cascading Style Sheets **without** changing the HTML^{Business} function . Please remember to monitor and save all your changes to the design .

The four tables below provide paths to the files that define the standard design for each application type/programming model and method:

Screen-Based Design Elements for IACs

	Path
Images	<webroot directory> \sap\its\mimes\webgui\wa\webgui\images
CSS	<webroot directory> \sap\its\mimes\webgui\wa\webgui\style

Chapter 12: Changing the Design of SAP ESS Services

Methods for Changing the Design

	Path
HTML ^{Business} functions	<ITS>\templates\system\dm\generator.html (contains several other include files) <ITS>\templates\system\dm\templateLibraryTemplateBasis.html <ITS>\templates\system\dm\templateLibraryTemplateDynpro.html

Screen-Independent Design Elements for IACs

	Path
Images	<webroot directory> \sap\its\mimes\webgui\wa\scrIndp\images
CSS	<webroot directory> \sap\its\mimes\webgui\wa\scrIndp\style
HTML ^{Business} functions	<ITS>\templates\system\dm\templateLibraryScreenIndependentDHTML.html (contains several other include files)

Screen-Independent Design Elements for MiniApps

	Path
Images	<webroot directory> \sap\its\mimes\webgui\ma\scrIndp\images
CSS	<webroot directory> \sap\its\mimes\webgui\ma\scrIndp\style

	Path
HTML ^{Business} functions	<code><ITS>\templates\system\dm\templateLibraryScreenIndependentDHTML.html</code> (contains several other include files)

mySAP Workplace

	Path
Images	<p>Workplace-specific images:</p> <code><webroot directory>\sap\its\mimes\sapwp\99\button</code> <code><webroot directory>\sap\its\mimes\sapwp\99\icon</code> <code><webroot directory>\sap\its\mimes\sapwp\99\image</code> <p>Screen-independent design elements:</p> See the table for screen-independent design elements
CSS	<p>Workplace-specific style sheets:</p> <code><webroot directory>\sap\its\mimes\sapwp\99\style</code> <p>Screen-independent style sheets:</p> See the table for screen-independent design elements
HTML ^{Business} functions	<p>Screen-independent design elements:</p> See the table for screen-independent design elements

Method 3: Changing the Structural Design

Use the **Portal Builder** to make complex structural changes to the *mySAP Workplace*. You can find more information about this in the documentation for the *mySAP Workplace 2.11* in the SAP Library under *mySAP Workplace* → *Configuration Guide for the mySAP Workplace* → *Portal Builder for the mySAP.com Workplace*.

Changing Cascading Style Sheets

Changing the Cascading Style Sheets using the *Style Sheet Designer* offers three advantages:

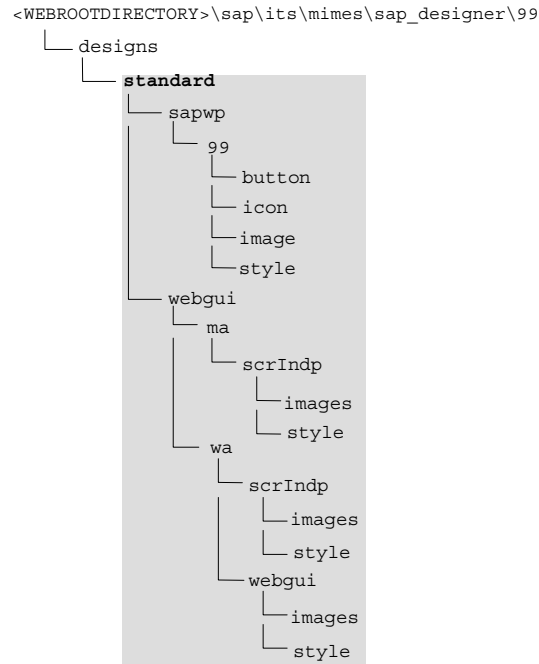
- All applications reflect the changes, ensuring a consistent design of the *mySAP Workplace*, MiniApps and Internet Application Components.
- Changes are made in a copy of the original files, and not in the standard delivered files. Therefore, the standard design is retained. The files for your design may reside on any server. The design you define is protected against overwriting in an ITS upgrade.
- A number of your own designs can be defined and stored, but only one design is used at a given time.

Changes are made with the *Style Sheet Designer* and the necessary directory structures are created manually.

Procedure

1. Install the *Style Sheet Designer* on the Workplace ITS. This tool can be found on sapserv<X> under *general\its\design\tool.car*. Further information about installation is contained in OSS Note 331407.

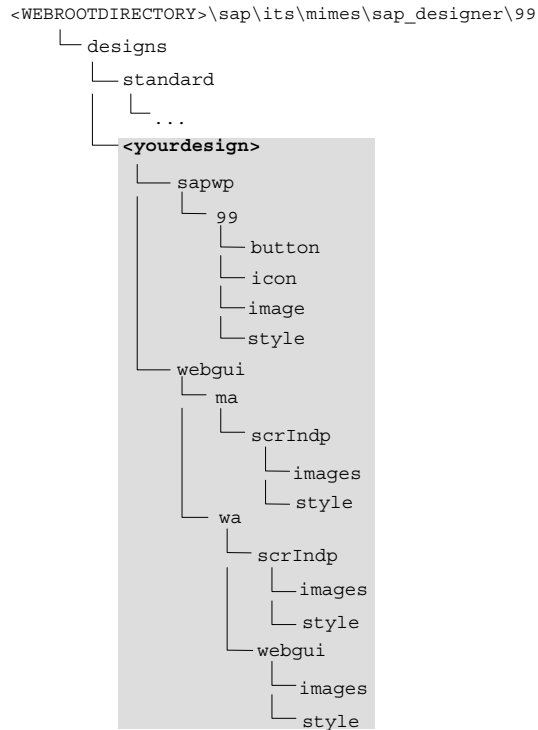
The *Style Sheet Designer* contains all the style sheets and images of the standard design. The directory structure of the *Style Sheet Designer* on the Workplace ITS is:



2. Copy directory *standard* with all its contents and store it under a new name in directory *designs*. The new directory structure must be as follows:

Chapter 12: Changing the Design of SAP ESS Services

Methods for Changing the Design



All the files in directory *standard* were copied to directory *<yourdesign>*. All references to images in the style sheets point to the copied images in your new directory.

Note: You can store one new design in the directory you created (*<yourdesign>*). If you want to create further designs, you have to create further copies of directory *standard*.

3. Start the *Style Sheet Designer* with `http://<YOUR WORKPLACE ITS>/scripts/wgate/sap_designer/!~design=<YOUR DESIGN>`.
4. In the left area of the screen, select a design element. The following is displayed in the right area of the screen:
 - The design element in its current form
 - The changeable parameters
5. Change the parameters as desired.

To change an image, replace the image stored under the given reference with another image (under the same name).
6. Choose *Update style sheet classes* to adapt the CSS files.

The design element is displayed in its new form.
7. You can cancel your changes or replace them with other values if necessary. In this case choose *Update style sheet classes* again.
8. You can store the current parameters in R/3 under a name of your choice for later editing.
9. Choose *Show style sheets* to display the style sheets.
10. Copy the displayed contents of the CSS files to the given target files in the directory `<yourdesign>` using Copy & Paste.
11. Create directory *designs* on the server where you want to store your new design (design server).
12. Copy directory `<yourdesign>` and its contents from the Workplace ITS to directory *designs* on the design server.
13. For each ITS, enter the path of your design server in parameter `~designBaseURL` of file *global.srv* (`http://<yourdesignserver>`).

14. For each ITS, enter directory name *<yourdesign>* for the design you currently want to use in parameter *~design* of file *global.srv*. If this parameter is not set, the standard design is used.

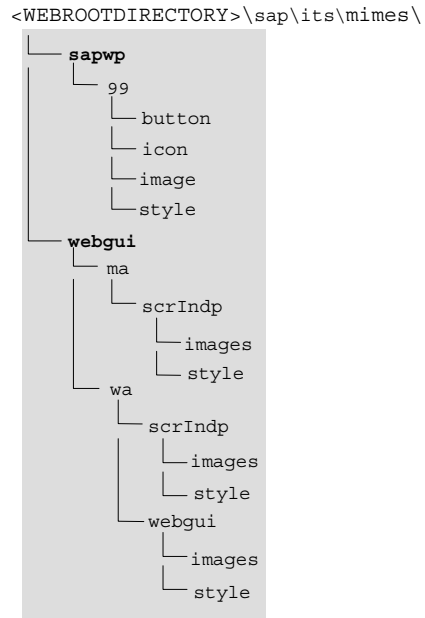
The new design is used the next time the mySAP Workplace or a Web application is called.

Manual Changes

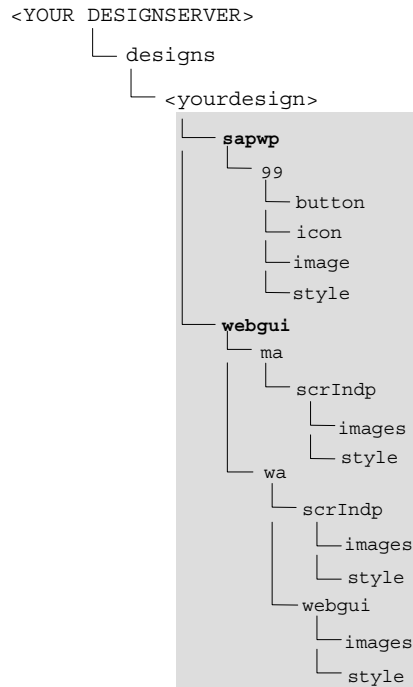
It is also possible to change the style sheets manually, that is, without using the *Style Sheet Designer*.

To adapt the style sheets manually, you must copy the delivered files defining the standard design to the server where the new design is to be stored.

The directory structure of the delivered design on the Workplace ITS is shown below:



15. Create directory *designs* and subdirectory *<yourdesign>* on the server where you want to store your design (design server).
16. Copy the directories that are marked in the above graphic together with their contents to subdirectory *<yourdesign>* as follows:



1. Make your changes in this directory.
4. For each ITS, enter the path of your design server in parameter `~designBaseURL` of file `global.srv` (`http://<yourdesignserver>`).
5. For each ITS, enter directory name `<yourdesign>` of the design you currently want to use in parameter `~design` of file `global.srv`. If this parameter is not set, the standard design is used.

The new design is used the next time the mySAP Workplace or a Web application is called.

Chapter 13: Enhancing SAP ESS

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Overview

This chapter describes how to enhance SAP Employee Self-Service (SAP ESS) functionality by developing new services and/or modifying existing ones. Adding new services or content links to the SAP ESS menu is part of role customization, which is covered in Chapter 5.

Country Dependency

Within SAP Employee Self-Service, some services are either country-specific, such as the W-2 Reprint (US only) service, or contain country-specific functionality, such as the Address service.

Country-Specific Services

Country-specific services are created when the single roles are set up in the SAP R/3 component system. You should define a single role in the system for each country that has country-specific services. An example is given in the single role SAP_HR_EMPLOYEE_US, which contains all services specific to the USA.

After creating the single roles, you must maintain them in the component system with view VAGRATTS using transaction SM30. In this view, you define the country for which those single roles are relevant. You can then import the single roles into the mySAP Workplace and define your composite role as described in Chapter 5.

In the mySAP Workplace, users are assigned a composite role containing country-specific single roles. These single roles are filtered according to user parameter UCN. The user therefore only sees the menu items from

country-independent single roles or those defined for that user's country. Other single roles are filtered out dynamically.

When you use transaction HRUSER to create and maintain your SAP ESS users, user parameter UCN is set automatically according to the employee's home country (MOLGA). If you do not use transaction HRUSER, you have to maintain this user parameter manually. This is also true if an employee moves to another country, because the user parameter is not automatically updated in this case.

Country-Specific Functionality

Some of the services within SAP ESS contain country-specific functionality but are more or less relevant for all countries. The Address service is such a service. Though everyone has an address, formats differ between countries. For example, the information in addresses in the USA is typically given in a different order than in Germany or Argentina.

The country-specific functionality within SAP ESS is defined in table T77WWW_SC. This table includes, for example, the services PZ02 (Address), PZ03 (Bank Information), PZ05 (Emergency Address), and PZ12 (Family Members/Dependents). It defines the relationship between SAP ESS services, screens, the country and the function module that generates the screen. All personal information services have two screens: a list or overview screen (column "Logic Screen" has the value 1) and a detail screen (column "Logic Screen" has the value 2). If more than one country version exists for a specific service, one country version serves as default. This default value is widely used in most of the list screens, making it applicable in all countries.

Changes to Existing Services

Changes to services delivered by SAP fall into one of the following categories:

- ▶ Modify visual aspects
- ▶ Change field layout and flow logic of the applications
- ▶ Modify SAPGUI for HTML-based screens
- ▶ Create HTML templates for SAPGUI for HTML-based screens
- ▶ Modify template-based screens

Modifying Visual Aspects

The visual aspects of the SAP ESS services, such as colors, fonts or graphics, can be easily modified, allowing you to apply corporate style and branding to the applications. These modifications are easy to make using the SAP Stylesheet Designer, which is described in Chapter 12.

Field Layout and Flow Logic Changes

Adding fields to or removing fields from an application is somewhat more complex and requires development work. Such modifications require that you differentiate between SAPGUI for HTML-based screens and template-based screens. To determine which services within SAP ESS are SAPGUI for HTML-based and which are template-based, see Appendix H.

Modifying SAPGUI for HTML-Based Screens

SAPGUI for HTML-based screens are HTML pages generated dynamically by the ITS without an HTML template. This means that

everything appearing on these screens depends solely on the definition of the underlying R/3 screen. To change these screens, use the ABAP Workbench within your R/3 System and handle these modifications as you would handle changes to any other R/3 screen.

Creating HTML Templates for a SAPGUI for HTML-Based Screens

If you wish to add features to a SAPGUI for an HTML-based screen but cannot do so by modifying the underlying R/3 screen, you can create an HTML template for this screen. To create a template for a screen, use the Web Application Builder or the SAP@Web Studio.

The Web Application Builder is a new tool as of R/3 4.6C and is part of the ABAP Workbench. You can find details on how to use the Web Application Builder in the SAP R/3 4.6C online help under *Basis Components* → *ABAP Workbench* → *ABAP Workbench Tools* → *Integrating Internet Services* → *Web Application Builder*.

You can use the HTML template wizard within the SAP@Web Studio to generate an HTML template for an R/3 screen. Details on this functionality can be found in the SAP@Web Studio Online help.

Both of the above approaches generate HTML templates based on the SAP HTML Template Library, which gives you a good start for your modifications.

Modifying Template-Based Screens

You can use the SAP@Web Studio or the Web Application Builder to modify template-based screens. With these tools you can edit an HTML template, such as adding more hyperlinks. If you want to add new fields to such a screen, make sure the desired field exists on the underlying R/3 screen, as this screen defines which fields can be displayed on the HTML page.

All the HTML templates delivered by SAP for SAP ESS are based on the SAP HTML Template Library. This ensures a common look and feel for all applications. We strongly recommend that you also use the SAP HTML Template Library when you create your own HTML templates and when you modify those delivered by SAP. Details about the SAP HTML Template Library can be found in the Internet Service drop-down item. You will find the button for Business HTML documentation within the ABAP Workbench there.

Creating a Country-Specific Service from an Existing Service

The following information is applicable for the functions delivered by SAP. When you create new or modified country-specific program objects, be sure to use customer namespaces instead of SAP namespaces. This ensures that these objects will not be overwritten during a system upgrade.

You can implement country-specific functionality in two different ways:

- By making country-specific modifications to an existing service, using additional fields as well as different or additional plausibility and/or consistency checks.
- By designing a new service for a particular country function (such as US taxes)

This chapter focuses on the first case, but also covers some of the steps you must perform if you choose to design a new service from scratch. It refers specifically to services within the Personal Information menu, but these steps can be adapted to other SAP ESS services.

Requirements

- You must have the basic international version of the screen (with default logic) to provide the standard functionality. This version is used automatically as a default if no country version exists for the country in question. In general, one specific country version (usually the first to be implemented) serves as this default version from which all other country versions are derived. This default version is specified in table T77WWW_SC.
- You must develop country-specific screens yourself, using the country's development classes.

Procedure

1. Determine the employee's country (MOLGA).

The SAP ESS user's country is determined as follows: *User ID* → *Employee ID (P0105)* → *Personnel Area (P0001)* → *Country (T001P)*.

2. Determine country-specific screens.

In the country-specific services delivered by SAP, each SAP ESS screen of the R/3 Web transaction is contained in a function module. Each function module contains exactly one screen. Using table T77WWW_SC, a function module and, therefore, exactly one technical screen is assigned to each logical screen of a Web transaction.

If the scenario is based on an infotype and you want to exclude subtypes, enter values in table T591A_ESSEX for all infotypes except 2001 and 2002. Subtypes of these infotypes are excluded in table T554S_ESSEX.

Before you start creating a country-specific service, you should ask yourself:

- Is there really a need for localization?

- Is there really a need for a modified/new BAPI?
- Is there really a need for a modified list screen?

You should also:

1. Check if there is standard functionality that can be reused.
2. Check if there are BAPIs available for the service you have in mind.
3. Create a new transaction in the customer namespace (starting with Z). If you want to use the functionality provided by table T77WWW_SC, this transaction should refer to program SAPMPZ02 with screen 1000. Also ensure that the transaction is classified correctly when you create it.
4. Check if you can save time by copying the function group of an existing similar service (for example, Address) into a new function group. SAP defines the function groups as follows:
 - For country-independent services: EH0<m> in development class PWWW, where m = number of the scenario. See the table *Numbers for Country-Specific Function Groups* in Appendix D.
 - For country-specific services, create a new function group EH<x><m> in the particular country development class, where x = country identifier and m = number of the scenario. See the tables *Numbers for Country-Specific Function Groups* and *Letters for Country-Specific Function Groups* in Appendix D.
5. Adapt the function group name (depending on the country) in the dialog.
6. Adapt and activate the function modules:
 - HR_ESS_<scenario>LIST_<molga>
 - HR_ESS_<scenario>DETAIL_<molga>

(for example, HR_ESS_ADDRESSLIST_01 and HR_ESS_ADDRESSDETAIL_01)

If you need only the list or the detail screen, you must create only one function module.

7. Adapt and activate the screens, status, and titles.
8. Enter values in the table for the function modules in table T77WWW_SC, for example, Address: Transaction PZ02.
9. You can also create new HTML templates as described above. This might not be necessary for certain applications, as you might be able to use the SAPGUI for HTML-based approach for your application. When using the SAPGUI for HTML, ensure that the transaction is correctly classified (in transaction SE93).

Appendix A: System Response When Using Personal Information Services

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Overview

The personal data recorded in SAP Employee Self-Service (SAP ESS) is subject to various time constraints. These time constraints define which entries an SAP ESS user can make for the first time and which ones they can change. These constraints also specify how the history entry is recorded for every infotype/subtype. This appendix describes the system responses to different time constraints and how these responses affect SAP ESS.

Time Constraints

A time constraint defines whether there may be:

- ▶ gaps in a record for a particular infotype or subtype for one or more periods
- ▶ more than one record per person for a particular infotype in a given period

SAP ESS knows the following time constraints:

Time constraint	Meaning
1	A record must always exist; it may be changed, that is, a record may be delimited and replaced with another record
2	A record may but need not exist; there may not be more than one record for a given period
3	A record may but need not exist; there may be more than one record for a given period

System Response in SAP ESS

Default start date

If you	Then the default start date is the
Enter data for the first time	Current date NOTE: If you want to use a different start date, you can overwrite the date.
Change the current data	Current date NOTE: If you want to use a different start date, you can overwrite the date.

Appendix A: System Response when Using Personal Information Services

System Response in SAP ESS

If you	Then the default start date is the
Change a record that begins in the future	Future start date

Note: In each of these scenarios, the default date ensures that currently valid records are recorded historically and that records that will be valid in the future are changed properly.

▶ Data display

You only see the records that are currently valid or that will be valid in the future.

▶ Data change

The change date must be later than the last start date. If there is no start date, any date may be entered. In contrast to SAPGUI users, SAP ESS users cannot make changes in the past, regardless of whether the changes are currently relevant. Only the personnel department may make such changes.

If you enter a change date that is the same as the start date of the record to be changed, the data record is changed rather than recorded historically. This can be used for example to correct typing errors in data records.

Time Constraint 1: System Response

Subtypes Permanent Residence (Address infotype) and Main Bank (Bank Information infotype) are examples of subtypes that have time constraint 1. Changing records using the *Change* button

Appendix A: System Response when Using Personal Information Services

System Response in SAP ESS

If	Then	System response
The user changes current data	The current date becomes the default date	The old record is recorded historically and a new one is created with the current date
The user changes a current record, but wants the change to be valid in the future	The user overwrites the default date with a future date	The old record is delimited and a new one is created with the date entered
The user corrects a current valid record without changing the validity period	The user must replace the default value (current date) with the start date of the record	The current record is changed rather than delimited
The user corrects a record that will be valid in the future and the validity period is not to be changed	The user must copy the default value (current date)	The existing record is changed rather than delimited

Changing the Validity of a Record

If	Then	System response
The user changes the start date to an earlier date (<i>Change</i> button)	The user must change the default value (current date) accordingly	The previous record is automatically shortened
The user changes the start date to a later date (<i>Change</i> button)	The user can copy or change the default value (current date)	The previous record is automatically lengthened
The user changes the start date of a future record to an earlier date (<i>Change</i> button)	The user must change the default value (start date) accordingly	The previous record is automatically shortened
The user changes the start date of a future record to a later date. The record must first be deleted (<i>Delete</i> button)	The user must first copy the default value (start date) and then create the record again with a new start date.	The previous record is automatically lengthened

Deletion

A record can only be completely deleted, but not partially deleted (*Delete* button). The previous record is automatically lengthened. The first existing record cannot be deleted.

Time Constraint 2: System Response

Subtype Spouse (of infotype Family Member/Dependents) is an example of a subtype having time constraint 2. With the exception of deletion, the system responses are the same as for time constraint 1.

Deletion

- ▶ When you delete a record, the previous record is not automatically lengthened.
- ▶ The validity period of a record is delimited when the record is deleted (*Delete* button).

Time Constraint 3: System Response

Subtypes Temporary Residence (Address) and Additional Bank (Bank Information) are examples of subtypes having time constraint 3. Time constraint 3 differs from time constraint 1 as follows:

Creating and changing data

- ▶ Users can create as many records as they want (*New* button). These can have the same or overlapping validity periods.
- ▶ If a new record replaces a record that was valid in the last period, the user must delete the existing record (*Delete* button) and create a new one (*New* button).

Changing a start date

- ▶ To change the start date of a record, the user must delete the record and replace it with a new record having the new start date.

Deletion

- ▶ To delimit the validity period of a record, the user must delete the record on the desired date (*Delete* button).

Conclusion

SAP ESS users only have to deal with the logical and intuitive concepts embodied in the *New*, *Delete*, and *Change* buttons. Historical record keeping and delimiting are automatic.

In general, SAP ESS users are not concerned with the time dependency of data. Only in exceptional circumstances will they have to overwrite the validity date suggested by the system (for example, if changes are entered today that will only be valid in the future).

SAP ESS users cannot trigger retroactive actions by changing their data.

Appendix B: SAP ESS and R/3 HR Infotypes

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Overview

SAP Employee Self-Service HR applications require several R/3 HR infotypes for display or support purposes. These infotypes and any corresponding subtypes must be configured in R/3 with a time constraint of 1 or 2. SAP ESS users can modify infotypes identified in the update column.

Infotype Table

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0001	Organizational Assignment	Required for R/3 personnel records	Who's Who (PZ01) Organization Chart (PZ26)	Int'l	
0002	Personal Data	Required for R/3 personnel records	Who's Who (PZ01) Personal Data (PZ13) Notification of Marriage (TS_WS0100060OH)	See Table 2	X

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0006	Addresses	Multiple subtypes distinguish address types	Personal Information (PZ02)	See Table 2	X
		Subtype 04	Emergency Address (PZ05)	See Table 2	
0007	Planned working time	Contains work schedule rules	Display Work Schedule (PZ17) Display Time Statement (PZ04)	Int'l	

Appendix B: SAP ESS and R/3 HR Infotypes

Infotype Table

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0008	Basic pay	Defines pay scales and salaries	Employment and Salary Verification (WS0100045) Net Calculation of Monthly Salary) (HRESSDE_CNET) Salary Package Modeler (P16B)	See Table 2	
0009	Bank Details	Defines main and alternative bank accounts and payment methods	Bank Information (PZ03)	See Table 2	X

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0010	Capital Formation	Defines a special state-supported savings payment for employees	Capital Formation (PZ41)	Germany	X
0011	External Bank transfers	Allows payments to be made to external sources.	External Bank Transfer (PZ29)	See Table 2	X
0014	Recurring Payments/Deductions	Allows employer to make payments to employee in several successive payroll periods	Salary Package Modeler (P16B)	See Table 2	
0015	Additional Payments	Allows employer to make additional payments to employee	Salary Package Modeler (P16B)	See Table 2	

Appendix B: SAP ESS and R/3 HR Infotypes

Infotype Table

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0016	Contract elements	Defines a contract with specific attributes.	Employment and Salary Verification (WS0100045)	See Table 2	
0017	Travel Privileges	Required to permit expense report entries	Travel Management (TRIP) Expense Reports Offline (PRWW)	Int'l	
0021	Family Member/Dependents	Defines data about dependents/contacts	Family Member/Dependents (PZ12)	See Table 2 See Table 2	X
		Subtype 07	Emergency Contact (PZ18)		
0023	Other/Previous Employers	Defines data about previous employers	Previous Employers (PZ28)	Int'l	X

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0024	Skills	Identifies employees' skills, knowledge, or abilities which are of interest to an employer	Edit Skills Profile (PZ31) Display Skills Profile (PP_MY_QUALIFIC) Display Requirements Profile (PP_MY_REQUIREMENTS) Profile Match Up with Own Position (PP_MY_PROFILEMATCHUP)	Int'l	X

Appendix B: SAP ESS and R/3 HR Infotypes

Infotype Table

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0025	Appraisals	Defines a process for rating the employee in a planned, structured, and standardized way	My Appraisals (PP_MY_APP)	Int'l	
0032	Internal Control	Defines data for automobiles and building locations	Who's Who (PZ01)	Int'l	
			Change Own Data (PZ50)	Int'l	X

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0041	Date Definitions	<p>Defines date types to be assigned to employees.</p> <p>Contains hire date information.</p> <p>The feature ENTRY may be used as default for date of hire</p>	Employment and Salary Verification (PZ21)	See Table 2	
0077	Additional Personal Data	Defines additional Personal Data	Employment Equity (PZ56)	Canada	X
0105	Communication	Required to associate logon user names with personnel records	All ESS applications and services	Int'l	

Appendix B: SAP ESS and R/3 HR Infotypes

Infotype Table

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
		For HR Query.	Who's Who (PZ01)	Int'l	
			Change Own Data (PZ50)	Int'l	X
0167	Health plans	Contains information on the health plans the employee is enrolled in	Participation Overview (PZ07) Enrollment (PZ14)	Int'l	X
0168	Insurance plans	Contains information on the insurance plans the employee is enrolled in	Participation Overview (PZ07) Enrollment (PZ14)	Int'l	X
0169	Savings plans	Contains information on the savings plans the employee is enrolled in	Participation Overview (PZ07) Enrollment (PZ14)	Int'l	X

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0170	Flexible spending accounts	Contains information on spending accounts (such as dependent or healthcare) the employee is enrolled in	Participation Overview (PZ07) Enrollment (PZ14) Spending Account Claims (PZ40)	Int'l	X
0171	General benefits data	Required for user enrollment in benefits	Participation Overview (PZ07) Enrollment (PZ14) FSA Claims (PZ40)	Int'l	
0172	FSA claims	Defines the claims information for flexible spending accounts	FSA Claims (PZ40)	Int'l	

Appendix B: SAP ESS and R/3 HR Infotypes

Infotype Table

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0182	Alternative names Asia	Defines information for alternative names	Alternative Name (PZ42)	See Table 2	X
0185	Personal Ids	Defines information for personal IDs	Personal Ids	See Table 2	X
0188	Tax Australia	Contains tax information for Australia	Tax (PZ25)	Australia	X
0210	Withholding information W-4/W-5	Contains federal and state tax withholding information. <i>On R/3 4.X Systems, the Tax exempt indicator status is Exempt (that is, not reportable).</i>	Tax Withholding (W-4) (PZ10)	US	X
0219	External organizations	Identifies external organizations as beneficiaries	Enrollment (PZ14)	Int'l	

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0220	Super-annuation Australia	Defines an investment vehicle to which employer and employee contribute for the employee's retirement	Super-annuation (PZ27)	Australia	X
0224	Canadian taxation	Contains tax information for Canada	Tax Inquiry (PZ08)	Canada	
0227	Tax file number Australia	Contains information on the tax file number for Australia	Tax (PZ25)	Australia	
0236	Credit plans	Contains information on the credit plans the employee is enrolled in	Participation Overview (PZ07) Enrollment (PZ14)	Int'l	X

Appendix B: SAP ESS and R/3 HR Infotypes

Infotype Table

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0315	Time sheet defaults	Contains sending defaults for CATS records	Time Sheet (CATW)	Int'l	
0364	Tax Thailand	Contains tax information for Thailand	Tax (PZ51)	Thailand	
0377	Miscellaneous plans	Contains information on miscellaneous benefits plans (such as company car or health club) in which the employee is enrolled	Participation Overview (PZ07) Enrollment (PZ14)	Int'l	X
0378	Adjustment reasons	Required for mid-year adjustment	Enrollment (PZ14)	Int'l	

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
0379	Stock purchase plan	Contains information on the stock purchase plan in which the employee is enrolled	Participation Overview (PZ07) Enrollment (PZ14)	Int'l	
0382	Awards	Defines long-term incentive awards for employees	Exercising Employee Options (HRCMP0080 ESS)	Int'l	
0565	Retirement plans valuation results	Contains information on the retirement plan in which the employee is enrolled	Retirement Benefits (PZ43)	Int'l	
2001	Absences	Records absences	Time Sheet (CATW)	Int'l	X
2002	Attendance	Records attendances	Time Sheet (CATW)	Int'l	X

Appendix B: SAP ESS and R/3 HR Infotypes

Infotype Table

Info-type	Description	Notes	ESS Application & Transaction	Countries where Used	Updated by ESS?
2006	Absence quotas	Records absence quotas	Display Leave Information (PZ09) Create Leave Request (WS20000081) Cancel Leave Request (WS01000109)	Int'l	X
			Create Leave of Absence Request (WS01000060)	Japan	X

Table 2

Country	MOLGA	Address IT 0006	Bank Information T009	Personal Data IT 0002	Family Member/ Dependents IT 0021	Other Country- Specific Services
Argentina	29	4.6C	4.6C	4.6C	4.6C	
Australia	13	4.6A	4.6A	4.6A	4.6A	Superannuation, External Bank Transfers
Austria	03	4.6C	*	4.6C	4.6C	
Belgium	12	4.6C	4.6C	4.6C	4.6C	Employment Equity for Canada only.
Brazil	37	4.6C	*	4.6C	4.6C	
Canada	07	4.5A	4.5A	4.5A	4.5A	
Denmark	09	4.6B	4.6B	4.6B (Uses Irish screens)	4.6A (Uses British screens)	
France	06	4.6A	4.6A	4.6A	4.6A	
Germany	01	4.5A	*	4.6C	4.6C	Capital Formation,

Appendix B: SAP ESS and R/3 HR Infotypes

Infotype Table

						Net Calculation of Monthly Salary
Great Britain	08	4.6A	4.6A	4.6A (Uses Irish screens)	4.6A	
Hong Kong	27	4.6C	*	4.6C	4.6C	Personal Ids, Alternative Name
Indonesia	34	4.6C	*	4.6C	4.6C	Personal Ids (default), Alternative Name (default)
Ireland	11	4.6B	4.6B	4.6B	4.6B (Uses British screens)	
Italy	15	4.6A	4.6A	4.6A	4.6A	
Japan	22	4.5A	4.5A	4.5A	4.5A	Notification of Marriage,

Appendix B: SAP ESS and R/3 HR Infotypes

Infotype Table

						Create Leave of Absence Request
Korea	41	4.5B	4.5B	4.5B	4.5B	
Malaysia	14	4.6C	4.6C	4.6C	4.6C	Personal Ids, Alternative Name (default)
Mexico	32	4.6C	*	4.6C	4.6C	
Nether- lands	05	4.6A	4.6A	4.6A	4.6A	
New Zealand	43	4.6C	4.6C	4.6C	4.6C	External Bank Transfers (AU)
Norway	20	4.6B	4.6B (Uses Irish screens)	4.6B (Uses Irish screens)	4.6B (Uses British screens)	
Philip- pines	48	4.6C Default= Germany	4.6C	4.6C	4.6C	
Portugal	19	4.6C	4.6C	4.6C	4.6C	

Appendix B: SAP ESS and R/3 HR Infotypes

Infotype Table

Singapore	25	4.6C	*	4.6C	4.6C	Personal Ids, Alternative Name (default)
South Africa	16	4.6B	4.6B	4.6B (Uses Irish screens)	4.6B (Uses British screens)	Salary Package Modeler
Spain	04	4.6A	4.6A	4.6A	4.6A	
Sweden	23	4.6B	4.6B (Uses Irish screens)	4.6B (Uses Irish screens)	4.6B (Uses British screens)	
Switzer- land	02	4.6A	*	4.6C (Uses German screens)		
Taiwan	42	4.6C	*	4.6C	4.6C	Alternative Name (default), Personal Ids (default)
Thailand	26	4.6C	4.6C	4.6C	4.6C	Taxes, Personal Ids, Alternative

Appendix B: SAP ESS and R/3 HR Infotypes

Infotype Table

						Name
USA	10	4.5A	4.5A	4.6C	4.5A	Employment and Salary Verification, W-4, W-2 Reprint
Venezuela	17	4.6C	4.6C	4.6C	4.6C	

* Using Canadian screens (Default = 07)

Appendix C: Availability of SAP ESS Services

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Overview

Although the SAP Employee Self-Service development push came in R/3 Release 4.5, some of the SAP ESS services have been available since R/3 Release 3.1H. Some services are specific to certain countries, while others use a country version as the default. Still others have an international version only, and use a generic screen as the default.

For example, the Employment and Salary Verification service was designed to meet a need in the US, but can be used by all countries. If you use it without changing it, you will receive the US version as the default.

Service Availability Table

SAP ESS Service		Country / Dependency	Availability
Office	Calendar	International	4.6A
	Inbox	International	3.1H
	Organizational Chart	International	4.6A
	Telephony	International	4.6A
	Who's Who	International	3.1H
	Change Own Data	International	4.6C
	Internal Service Request	International	4.6C
	My Assets	International	4.6C
Working Time	Display Leave Information	International	4.5A
	Create Leave Request (workflow-based)	International, with separate service for Japan	4.5A
	Leave Request Overview (workflow-based)	International	4.6B
	Record Working Time (CATS)	International	4.0B

Appendix C: Availability of SAP ESS Services

Service Availability Table

SAP ESS Service		Country / Dependency	Availability
	Display Time Statement	International	4.5A
	Display Work Schedule	International	4.5A
Business Trips	Expense Reports (offline with Excel)	International	4.5A
	Expense Reports (online)	International	4.6A
	Travel Management	International	4.6C
Benefits	Participation Overview	International	4.5A
	Enrollment	International	4.5A
	Retirement Benefits	International	4.6C
	FSA Claims	International	4.6C
Purchase	SAP Business-to-Business Procurement	International	N/A
	Procurement via Catalog	International	3.1H - 4.5B
Jobs	Employment Opportunities	International	4.6A
	Application Status	International	4.6A

Appendix C: Availability of SAP ESS Services

Service Availability Table

SAP ESS Service		Country / Dependency	Availability
Payment	Employment and Salary Verification	International, US as default	4.5A
	Paycheck Inquiry	International	4.5A
	W-2 Reprint	US	4.6A
	Exercising Employee Options	International	4.6C
	Display Total Compensation Statement	International	4.6C
	Pension Fund – Online Simulation	Switzerland	4.6C
	Net Calculation of Monthly Salary	Germany	4.6C
	Salary Package Modeler	South Africa	4.6C
	IR56B Form	Hong Kong	4.6C
	IR56F Form	Hong Kong	4.6C
	IR56G Form	Hong Kong	4.6C
	IR21 Form	Singapore	4.6C
	IR8A Form	Singapore	4.6C
	IR8S Form	Singapore	4.6C

Appendix C: Availability of SAP ESS Services

Service Availability Table

SAP ESS Service		Country / Dependency	Availability
Personal Information	Address	Germany, US, Japan, Canada	4.5A
		Netherlands, South Korea	4.5B
		Australia, France, Italy, Switzerland, Portugal, UK	4.6A
		Sweden, Norway, Spain, Ireland, Denmark	4.6B

Appendix C: Availability of SAP ESS Services

Service Availability Table

SAP ESS Service	Country / Dependency	Availability
Personal Information (cont'd.)	Argentina, Austria, Brazil, Venezuela, Mexico, Belgium, Hong Kong, Indonesia, Malaysia, New Zealand, Philippines, Singapore, Thailand, Taiwan.	4.6C
	Bank Information	US, Japan, Canada
		Netherlands
		Australia, France, Italy, Portugal, UK
		Spain, Norway, Sweden, Ireland, Denmark

Appendix C: Availability of SAP ESS Services

Service Availability Table

SAP ESS Service	Country / Dependency	Availability	
Personal Information (cont'd.)	Argentina, Austria, Brazil, Venezuela, Mexico, Belgium, Hong Kong, Indonesia, Malaysia, New Zealand, Philippines, Singapore, Thailand, Taiwan.	4.6C	
	Emergency Address	See Address	4.5A
	Emergency Contact	See Family Member/ Dependents	4.5A
	External Bank Transfer	Australia	4.6A
		New Zealand	4.6C
	Family Member/Dependents	Canada, Japan, JS	4.5A
		Netherlands, South Korea	4.5B

Appendix C: Availability of SAP ESS Services

Service Availability Table

SAP ESS Service		Country / Dependency	Availability
		France, Italy, Australia, Portugal	4.6A
		Spain, UK, Denmark, Norway, Sweden, Ireland	4.6B
		Argentina, Austria, Brazil, Venezuela, Mexico, Belgium, Germany, Hong Kong, Indonesia, Malaysia, New Zealand, Philippines, Singapore, Thailand, Taiwan	4.6C
	New Hire Data	International	4.5A

Appendix C: Availability of SAP ESS Services

Service Availability Table

SAP ESS Service	Country / Dependency	Availability
	Notification of Marriage	Japan 4.5A

	Personal Data	Canada	4.5A
		South Korea	4.5B
		UK, Italy Netherlands, France Portugal	4.6A
		Spain, Denmark, Australia, Norway, Sweden, Ireland	4.6B

Appendix C: Availability of SAP ESS Services

Service Availability Table

		Argentina, Austria, Germany, Switzerland, Brazil, Venezuela, Mexico, Belgium, Hong Kong, Indonesia, Malaysia, New Zealand, Philippines, Singapore, Thailand, Taiwan	4.6C
	Employment Equity	Canada	4.6C
	Personal IDs	Hong Kong, Indonesia, Malaysia, Singapore, Taiwan, Thailand	4.6C

Appendix C: Availability of SAP ESS Services

Service Availability Table

	Alternative Name	Hong Kong, Indonesia, Malaysia, Singapore, Taiwan, Thailand	4.6C
	Previous Employers	International	4.6A
	Superannuation	Australia	4.6A
	Tax	Australia	4.6A
	Tax	Thailand	4.6C
	Tax Inquiry	Canada	4.5A
	Tax Withholding (W-4)	US	4.5A
	Capital Formation	Germany	4.6C
Training	Book Attendance	International	3.1H
	Cancel Attendance	International	4.0A
	View Attendance	International	3.1H
	List of Events	International	3.1H
	Training Center	International	4.6C
	My Bookings	International	4.6C
Skills	Edit Skills Profile	International	4.6A
	Display Skills Profile	International	4.6C

Appendix C: Availability of SAP ESS Services

Service Availability Table

	Display Requirements Profile	International	4.6C
	Profile Match Up with Own Position	International	4.6C
	Carry Out a Survey	International	4.6C
Appraisals	My Appraisals	International	4.6C
My ESS	My Preferences	International	4.6A
	My Photo	International	4.6A
Passwords	Password Reminder	International	4.6B
Life and Work Events	My First Days	International	4.6C
	Annual Enrollment	International	4.6C
	Divorce	International	4.6C
MiniApps*	(multiple services)	International	4.6C

*For a complete list of current MiniApp services, please see Appendix E.

Note on Purchasing Functionality

Until R/3 Release 4.5, purchasing functionality was part of R/3 core delivery and was therefore available within SAP Employee Self-Service. With R/3 Release 4.6 and higher, Purchasing is now offered through SAP's Business-to-Business Procurement. To use the Purchasing functionality within ESS, you must first install SAP Business-to-Business Procurement and then connect to the SAP Business-to-Business Procurement server from within SAP ESS. Make sure that the ITS version

used for both SAP ESS and SAP Business-to-Business Procurement is at least Release 4.6B. The ability to start a service on a different ITS, that is, to carry over user parameters, is new with ITS Release 4.6B.

SAP ESS and Workflow

The availability of SAP's Integrated Inbox via the Web enables the use of workflow applications. Workflow thus becomes more accessible to your employees. Currently there are 12 workflow templates delivered with SAP ESS:

- Post-Hire Activities (including ESS user creation)
- User Delimit
- Leave Request
- Cancel Leave Request
- W-2 Reprint
- Employment and Salary Verification
- Approve Employee Attendance Booking
- Approve Employee's Attendance Cancellation
- Approve Employee's Attendance Rebooking
- Internal Service Request
- My Assets
- My Appraisals
- Time Sheet
- All Personal Information services

For detailed information about workflow templates and triggering workflow processes from SAP ESS, please see Chapter 9.

SAP ESS and Language

SAP ESS is available in all the languages installed on your R/3 instance. For example, you can have a Canadian employee who works for a US company viewing and changing his or her personal information in French.

SAP ESS and Country-Specific Functionality

SAP ESS supports localization of its services for different countries in two ways:

- ▶ By enabling the development of country-specific screens
 - For example, in the Personal Information services (such as Address and Bank Information), additional fields and different or additional plausibility and/or consistency checks are implemented.
 - If a localized screen exists for a country, it is called dynamically (see R/3 table T77WWW_SC).
 - If there is no localized screen, the system delivers the default screen. This is also determined in R/3 table T77WWW_SC.

Appendix C: Availability of SAP ESS Services

Additional Information on SAP ESS

- ▶ By providing services that have been designed for a particular country, such as Australian, Canadian, or US taxes
 - The system ensures that only employees working for a company within the relevant country see the country-specific services. This is controlled by the mySAP Workplace server with user parameter UCN and dynamic country filtering.

Additional Information on SAP ESS

To find out more about SAP Employee Self-Service, refer to the following Web sites.

Medium	Type of information	Web site
Internet	SAP ESS product information, news, and events	http://www.sap.com/ess http://www.saplabs.com/ess
SAPNET*	SAP ESS product information, news, events, demo system	http://www.service.sap.com/ess

* Access to this location is limited to customers and partners. A SAPNet ID, identical to an OSS user and password, is required.

Appendix D: Internal SAP Naming Conventions and ESS Tables

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Overview

To view SAP ESS tables and information in the R/3 system, you need to know the SAP naming conventions. The function group names always start with **EH**, followed by a letter representing the country and a number for a specific service. The codes for countries and services are shown in the following tables. Note that the letters have nothing to do with ISO standards. They serve only to differentiate countries within SAP ESS.

Note: The function group for German addresses is **EHD1**. The function group for Canadian personal data is **EHC5**.

Letters for Country-Specific Function Groups

Country	Letter	Country	Letter
Australia	A	Argentina	AR
Brazil	B	Canada	C
Belgium	BE		
Germany	D	Denmark	DK
Spain	E	France	F
Great Britain	G	Hong Kong	H
Italy	I	Indonesia	ID
Japan	J	Korea	K

Country	Letter	Country	Letter
Ireland	L	Mexico	M
Malaysia	MY	Netherlands	N
Norway	NO	New Zealand	NZ
Portugal	P	Philippines	PH
Singapore	R	Sweden	SE
Thailand	T	Taiwan	TW
United States	U	Venezuela	V
South Africa	W	Switzerland	Z

Numbers for Country-Specific Function Groups

Number	Service	Number	Service
1	Employee Address	2	Taxes
3	Employee Bank Detail	4	Absence/ Attendance
5	Employee Personal Data	6	Employee Family Member
7	Employment and Salary Verification	8	Reserved ...

Appendix D: Internal SAP Naming Conventions and ESS Tables

Overview

Number	Service	Number	Service
9	Notification of Marriage	10	Previous Employers
11	External Bank Payments	12	Superannuation
13	Year End Adjustment	14	Personal IDs
15	Social Insurance	16	Capital Formation
17	Reserved for Education	18	Alternative Name
19	Seniority	20	Employment Equitiy

Appendix E: SAP ESS Services and R/3 Transactions

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Table of Services and Transactions

Service	Transaction	Service Name
PZ01	PZ01	Who's Who
PZ26	PZ26	Organizational Chart
BWSP	BWSP	Inbox
BWCA	BWCA	Calendar
QISR	QISR	Internal Service Request
ASEM	ASEM	My Assets
PZ04	PZ04	Display Time Statement
PZ17	PZ17	Display Work Schedule
PZ09	PZ09	Display Leave Information
WS20000081	WS20000081	Create Leave Request
WS01000060	WS01000060	Create Leave of Absence Request (Japan)
WS01000109	WS01000109	Leave Request Overview
CATW	CATW	Display Working Time
PZ13	PZ13	Personal Data
PZ56	PZ56	Employment Equity
PZ02	PZ02	Address
PZ03	PZ03	Bank Information
PZLE_01	PZLE_01	My First Days

Appendix E: SAP ESS Services and R/3 Transactions

Table of Services and Transactions

Service	Transaction	Service Name
PZLE_02	PZLE_02	Enrollment
PZLE_03	PZLE_03	Divorce
PZ05	<i>PZ05</i>	Emergency Address
PZ12	<i>PZ12</i>	Family Member/Dependents
PZ18	<i>PZ18</i>	Emergency Contact
<i>TS_WS0120017OH</i>	<i>TS_WS0120017OH</i>	Notification of Marriage
PZ28	<i>PZ28</i>	Previous Employers
PZ29	<i>PZ29</i>	External Bank Transfers
<i>PZ50</i>	<i>PZ50</i>	Change Own Data
<i>PZ42</i>	<i>PZ42</i>	Alternative Name
<i>PZ39</i>	<i>PZ39</i>	Personal Ids
PZ07	<i>PZ07</i>	Participation Overview
PZ14	<i>PZ14</i>	Enrollment
<i>PZ43</i>	<i>PZ43</i>	Retirement Benefits
<i>PZ40</i>	<i>PZ40</i>	FSA Claims
PZ11	<i>PZ11</i>	Paycheck Inquiry
PZ08	<i>PZ08</i>	Tax Inquiry
PZ10	<i>PZ10</i>	Tax Withholding (W-4)
PZ25	<i>PZ25</i>	Tax
PZ51	<i>PZ51</i>	Tax

Appendix E: SAP ESS Services and R/3 Transactions

Table of Services and Transactions

Service	Transaction	Service Name
WS01000045	WS01000045	Employment and Salary Verification
WS01000090	WS01000090	W-2 Reprint
PZ27	PZ27	Superannuation
P16B	P16B	Salary Package Model ar
PZ41	PZ41	Capital Formation
PZ51	PZ51	Tax
PACG	PACG	Pension Fund – Online Simulation
HRESSDE_CNET	HRESSDE_CNET	Net Calculation of Monthly Salary
HRESSHK_IR56B	HRESSHK_IR56B	IR56B Form
HRESSHK_IR56F	HRESSHK_IR56F	IR56F Form
HRESSHK_IR56G	HRESSHK_IR56G	IR56G Form
HRESSSG_IR21	HRESSSG_IR21	IR21 Form
HRESSSG_IR8A	HRESSSG_IR8A	IR8A Form
HRESSSG_IR8S	HRESSSG_IR8S	IR8S Form
HRCMP0061ESS	HRCMP0061ESS	Exercising Employee Options
HRCMP0080ESS	HRCMP0080ESS	Display Total Compensation Statement
TRIP	TRIP	Travel Management
PZ21	PZ21	Employment Opportunities

Appendix E: SAP ESS Services and R/3 Transactions

Table of Services and Transactions

Service	Transaction	Service Name
PZ22	PZ22	Application Status
PV7I	PV7I	Training Center
PV8I	PV8I	My Bookings
PZ31	PZ31	Edit Skills Profile
MY_QUALIS	PP_MY_QUALIFICATI ONS	Display Skills Profile
MY_REQUIREMENT	PP_MY_REQUIREME NTS	Display Requirements Profile
MY_PROFILEMATC	PP_MY_PROFILEMAT CHUP	Profile Match Up with Own Position
MY_APPRAISALS	PP_MY_APP	My Appraisals
PZ15	PZ15	New Hire Data
PZSPHW	SPHW	Telephony
*PZ16	PZ16	Employment and Salary Verification
**PRWW	PRWW	Expense Reports (Offline)
PR05	PR05	Expense Reports
PZ35_MA	None	Who's Who
FOTO	None	Display/Change Picture
BW03	None	Mails and Appointments Overview
BW01	None	Unread Mails

Appendix E: SAP ESS Services and R/3 Transactions

Table of Services and Transactions

Service	Transaction	Service Name
BW00	None	Appointments
TERM_MINIAPP	None	SAPterm Dictionary
MA_ESS_NEWS	None	Reuters News
MA_ESS_SEARC	None	Search the Web
BCBMTWFM0001	None	Workflow Inbox
SYMSG	None	System Messages
BW04	None	Microsoft Outlook Inbo c
BW05	None	Microsoft Outlook Calendar
BW06	None	Microsoft Outlook Tasks
BW07	None	Overview Unread Messages

*This service and R/3 transaction was changed to WS01000045 with R/3 Release 4.6C.

**This service and R/3 transaction is not available in R/3Release 4.6C and higher.

*** This service is new as of 4.6C HR Support Package 8.

Appendix F: Features of ITS Implementation Models

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Model and Feature Tables

The table below summarizes the currently available ITS implementation models and gives a brief description of each.

Model	Functionality
Web Transactions using iAP GUI for HTML	<p>Enables users to call R/3 dialog transactions from a Web browser</p> <p>R/3 transaction screens are automatically converted to HTML pages using generic templates based on the HTML_{Business} Function Library</p>
Web Transactions using application specific templates	<p>Enables users to call R/3 dialog transactions from a Web browser</p> <p>R/3 screen elements are mapped “manually” by using individual Templates based on HTML, HTML_{Business} Function, and Java Script</p>
Flow Logic	<p>Enables users to run applications from a Web browser where:</p> <ul style="list-style-type: none"> ▪ The business logic is defined in R/3 function modules or BAPIs ▪ The dialog flow is defined in flow files and determined by the user at runtime ▪ The presentation is defined in HTML templates

WebRFC	Enables users to call R/3 function modules from a Web browser
Web Reporting	Enables users to call R/3 reports and pre-generated lists from a Web browser, and browse R/3 report trees in the Web Reporting Browser. Web Reporting is a special-case WebRFC application (that is, based on WebRFC technology)

The table below lists the features, advantages and disadvantages of the ITS implementation models:

Qualities	WebTransactions/ using SAF GUI for HTML	WebTransactions/ using HTML Business Templates	WebRFC/ Web Reporting	Flow Logic
Screen-based or screen-independent?	Screen-based	Screen-based	Screen-independent	Screen-independent
Programming basis (SAP side).	SAP transactions	SAP transactions	SAP RFC function modules, BAPIs	SAP RFC function modules, BAPIs

Appendix F: Features of ITS Implementation Models

Qualities	WebTransactions/ using SAF GUI for HTML	WebTransactions/ using HTML Business Templates	WebRFC/ Web Reporting	Flow Logic
Application types	Stateful Logon to R/3 required; roll area retained for long time on application server	Stateful Logon to R/3 required; roll area retained for long time on application server	Stateful or stateless Roll area retained for short time on application server Mixed mode of stateful and stateless possible	Stateful or stateless Roll area retained for short time on applica- tion server or not at all. Mixed mode of stateful and stateless possible
Communi- cation protocol (ITS-R/3)	DIAG	DIAG	RFC	RFC
HTML design	Automatic HTML generation bases on	HTML templates outside R/3 System	HMTI in SAP function modules; freely	HTML templates outside R/3

Appendix F: Features of ITS Implementation Models

Qualities	WebTransactions/ using SAF GUI for HTML	WebTransactions/ using HTML Business Templates	WebRFC/ Web Reporting	Flow Logic
	<p>HTML^{Business} Function Library</p> <p>Changes made inside R/3 System with Web Application Builder (SE80 in ABAP Workbench)</p>	<p>Changes made outside R/3 System with SAP@Web Studio or any suitable text editor, or (from Release 4.6C) inside R/3 System with Web Application Builder (SE80 in ABAP Workbench)</p>	<p>designed templates supported</p> <p>Changes made only inside R/3 System (SE80 in ABAP Workbench)</p>	<p>System Changes made outside R/3 System with SAP@Web Studio or any suitable text editor, or (from Release 4.6C) inside R/3 System with Web Applica- tion Builder (SE80 in ABAP Work- bench)</p>

Appendix F: Features of ITS Implementation Models

Qualities	WebTransactions/ using SAF GUI for HTML	WebTransactions/ using HTML Business Templates	WebRFC/ Web Reporting	Flow Logic
Template generation	No use of individual application specific Templates	Automatic (using function modules)	Unnecessary (manual generation for freely designed templates)	Manual
Template technology	Use of generic Template	Dynamic templates with simple placeholders and HTML ^{Business} functions Can be language-independent	Dynamic templates with simple placeholders. Can be language-independent	Dynamic templates with simple placeholders and HTML ^{Business} functions Can be language independent
Dialog flow	In R/3 transactions Changes possible only in R/3 System	In R/3 transactions Changes possible only in R/3 System	In R/3 function modules Changes possible only in R/3 System	In ITS flow files Changes can be made outside R/3

Appendix F: Features of ITS Implementation Models

Qualities	WebTransactions/ using SAP GUI for HTML	WebTransactions/ using HTML Business Templates	WebRFC/ Web Reporting	Flow Logic
				System with SAP@Web Studio or any suitable text editor, or (from Release 4.6C) inside R/3 System with WAB (SE80 in ABAP Workbench)
Integration of SAP and non-SAP systems	Client-side with HTML pages	Client-side with HTML pages	Client side with HTML pages	Server-side with Module Provider Interface or client-side with HTML pages

Appendix F: Features of ITS Implementation Models

Qualities	WebTransactions/ using SAF GUI for HTML	WebTransactions/ using HTML Business Templates	WebRF C/ Web Reporting	Flow Logic
Advantages	<p>Well-suited to stateful applications that are form-based and require the user to log on to R/3</p> <p>All of the business logic and dialog flow resides in R/3; no HTML or scripting needed for visualization</p> <p>Proven programming model that has been around since Release 3.1H; experience in development and production areas with</p>	<p>Well-suited to stateful applications that are form-based and require the user to log on to R/3</p> <p>Most of the business logic and dialog flow resides in R/3. Application specific Template scripting based on HTML, HTML^{Business} and Java Script provide flexibility for advanced visualization and integration. Proven</p>	<p>Well-suited to stateless applications such as shopping cart systems</p> <p>Due to independence from R/3 dialog screens, you can develop more "Web-friendly" applications, especially when designing HTML pages</p> <p>Particularly well suited to dynamically generated pages</p>	<p>Well-suited to stateless applications such as shopping cart systems</p> <p>Due to greater distance from R/3 System, you can develop more "Web-friendly" applications, especially when defining the dialog flow and</p>

Appendix F: Features of ITS Implementation Models

Qualities	WebTransactions/ using SAF GUI for HTML	WebTransactions/ using HTML Business Templates	WebRFC/ Web Reporting	Flow Logic
	major projects	programming model that has been around since Release 3.1H; experience in development and production areas with major projects such as Employee Self-Service (ESS) and Business-to-Business (B2B)	Supports object oriented programming Proven programming model that has been around since Release 3.1H; experience in development and production areas with major projects such as Business Warehouse (BW)	designing HTML pages Particularly well suited to applications with highly flexible dialog flow
Disadvantages	Partially bound to R/3 "look and feel" (particularly	SAP Transaction Model not always	No tool support.	New implementation model -

Appendix F: Features of ITS Implementation Models

Qualities	WebTransactions/ using SAP GUI for HTML	WebTransactions/ using HTML Business Templates	WebRF C/ Web Reporting	Flow Logic
	<p>SAP GUI for HTML) – not always appropriate for Web applications</p> <p>Performance of anonymous user applications such as shopping cart systems is not as good as screen-independent implementation models</p>	<p>appropriate for Web application</p> <p>Performance of anonymous user applications such as shopping cart systems is not as good as screen-independent implementation models</p>	<p>Requires knowledge of HTML and scripting languages.</p> <p>HTML_{Business} not supported</p>	<p>relatively little experience.</p> <p>Require knowledge of HTML- and scripting languages</p>

Appendix G: Single Roles and Services in R/3 Release 4.6C

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SAP ESS Services

Role		Service	Service Name	Notes	New with 4.6C
SAP_BC_EMPO EE	Employee Self-Service (BC)	BWSP	Inbox		
		BWCA	Calendar		
		BWWE_WI_DECI	Execute User Decisions	Needed for Authorization	
SAP_BC_ENDUSER	Uncritical basis authorizations for all users			Needed for Authorization	X
SAP_EC_BBP_EMPLOYEE	B2B Employee	BBPPU99	Purchase Order Without Limit	In the menu seen as Purchase	
		BBPPU05	Purchase Order With Limit	Needed for Authorization	

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role		Service	Service Name	Notes	New with 4.6C
		BBPPU02	Open Purchase Orders		
		BBPCF02	Confirm Goods Receipt		
		BBPIV02	Enter Invoice		
		BWSP	Inbox		
		BBPAT05	My Settings		
		BBPATTR MAINT	Change Attributes		
SAP_ESS USER	Employee Self-Service (HR)	PZ01	Who's Who		
		PZ50	Change Own Data		X
		WS20000081	Create Leave Request		
		WS01000109	Leave Request - Overview		
		PZ09	Display Leave Information		
		PZLE_01	My First Days		X

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role	Service	Service Name	Notes	New with 4.6C
	PZLE_02	Enrollment		X
	PZLE_03	Divorce		X
	PZ17	Display Work Schedule		
	PZ04	Display Time Statement		
	PZ07	Participation Overview		
	PZ14	Enrollment		
	PZ40	FSA Claims		X
	PZ43	Retirement Benefits		X
	PZ21	Employment Opportunities		
	PZ22	Application Status		
	PZ11	Paycheck Inquiry		
HRCMP0061ESS	Exercising Employee Options		X	

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role	Service	Service name	Notes	New with 4.6C
	HRCMP0080ESS	Display Total Compensation Statement		X
	PZ02	Address		
	PZ03	Bank Information		
	PZ05	Emergency Address		
	PZ12	Family Member/ Dependents		
	PZ13	Personal Data		
	PZ28	Previous Employer		
	PZ15	New Hire Data		
	PV7I	Training Center		X
	PV8I	My Bookings		X
	PZ31	Edit Skills Profile		
	PP_MY_QUALIFICATIONS	Display Skills Profile		X

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role	Service	Service Name	Notes	New with 4.6C
	PP_MY_REQUIREMENTS	Display Requirements Profile		X
	PP_MY_PROFILEMATCHUP	Profile Matchup With Own Position		X
	PP_MY_APP	My Appraisals		X
	SPHW	Telephony	Needed for authorization	
	PZ26	Organizational Chart	Needed for authorization	
	PZ01_AD D_0032	Who's Who (Authorization)	Needed for authorization	
	PZ01_AD D_0105	Who's Who (Authorization)	Needed for authorization	

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role		Service	Service Name	Notes	New with 4.6C
		PZ32	Edit Skills Profile	Needed for authorization	
		PZ35	Who's Who (Flow Logic)		X
		SU53	Display Check Values	Needed for authorization	
		PZSU53	ESS Display Authorization Errors	Needed for authorization	
SAP_FI_EMPLOYEE	Employee Self-Service (FI)	ASEM	My Assets		X
SAP_FI_TVTRAVELER	Traveler	TRIP	Travel Management		X
SAP_HR_EMPLOYEE_AU	Employee Self-Service Australia	PZ25	Taxes	Australia only	

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role		Service	Service Name	Countries	New with 4.6C
		PZ18	Emergency Contact	Australia only	
		PZ29	External Bank Transfers	Australia only	
		PZ27	Superannuation	Australia only	
SAP_HR_EMPLOYEE_CA	Employee Self-Service Canada	PZ08	Tax Inquiry	Canada only	
		PZ18	Emergency Contact	Canada only	
		PZ56	Employment Equity	Canada only	
SAP_HR_EMPLOYEE_CH	Employee Self-Service Switzerland	PACG	Pension Fund - Online Simulation	Switzerland only	X
SAP_HR_EMPLOYEE_DE	Employee Self-Service Germany	HRESSD E_CNET	Net Calculation Of Monthly Salary	Germany only	X
		PZ41	Capital Formation	Germany only	X
SAP_HR_EMPLOYEE_K	Employee Self-Service	HRESSHK_IR56B	IR56B Form	Hong Kong	X

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role		Service	Service Name	Notes	New with 4.6C
EE_HK	Hong Kong			only	
		HRESSH K_IR56F	IR56F Form	Hong Kong only	X
		HRESSH K_IR56G	IR56G Form	Hong Kong only	X
		PZ18	Emergency Contact	Hong Kong only	
		PZ39	Personal IDs	Hong Kong only	X
		PZ42	Alternative Name	Hong Kong only	X
SAP_HR_EMPLOYEE_ID	Employee Self-Service Indonesia	PZ18	Emergency Contact	Indonesia only	
		PZ39	Personal IDs	Indonesia only	X
		PZ42	Alternative Name	Indonesia only	X

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role		Service	Service Name	Notes	New with 4.6C
SAP_HR_EMPLOYEE_JP	Employee Self-Service Japan	WS01000060	Create Leave of Absence Request	Japan only	
		PZ18	Emergency Contact	Japan only	
		TS_WS01200170H	Notification of Marriage	Japan only	X
		PZ20	Notification of Marriage	No longer used within 4.6C, replaced with TS_WS01200170H	
SAP_HR_EMPLOYEE_MY	Employee Self-Service Malaysia	PZ18	Emergency Contact	Malaysia only	
		PZ39	Personal IDs	Malaysia only	X
		PZ42	Alternative Name	Malaysia only	X

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role		Service	Service Name	Notes	New with 4.6C
SAP_HR_EMPLOYEE_NZ	Employee Self-Service New Zealand	PZ18	Emergency Contact	New Zealand only	
		PZ29	External Bank Transfers	New Zealand only	
SAP_HR_EMPLOYEE_PH	Employee Self-Service Philippines	PZ18	Emergency Contact	Philippines only	
SAP_HR_EMPLOYEE_SG	Employee Self-Service Singapore	HRESSSG_IR21	IR21 Form	Singapore only	X
		HRESSSG_IR8A	IR8A Form	Singapore only	X
		HRESSSG_IR8S	IR8S Form	Singapore only	X
		PZ18	Emergency Contact	Singapore only	
		PZ39	Personal IDs	Singapore only	X
		PZ42	Alternative Name	Singapore only	X

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role		Service	Service Name	Notes	New with 4.6C
SAP_HR_EMPLOYEE_TH	Employee Self-Service Thailand	PZ18	Emergency Contact	Thailand only	
		PZ39	Personal IDs	Thailand only	X
		PZ42	Alternative Name	Thailand only	X
		PZ51	Taxes	Thailand only	X
SAP_HR_EMPLOYEE_TW	Employee Self-Service Taiwan	PZ18	Emergency Contact	Taiwan only	
		PZ39	Personal IDs	Taiwan only	X
		PZ42	Alternative Name	Taiwan only	X
SAP_HR_EMPLOYEE_US	Employee Self-Service USA	WS01000045	Employment and Salary Verification	US only	
		WS01000090	W-2 Reprint	US only	
		PZ10	Tax Withholding (W-4)	US only	

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role		Service	Service Name	Notes	New with 4.6C
		PZ18	Emergency Contact	US only	
		PZ16	Employment and Salary Verification	No longer used within 46A, replaced with WS01000090	
SAP_HR_EMPLOYEE_ZA	Employee Self-Service South Africa	P16B	Salary Package Modeler	South Africa only	X
SAP_KM_KW_AL_L_AREA_S_DISP_EMAIL	Display All Existing Documents	<none>			
SAP_LO_EMPLOYEE	Employee Self-Service (LO)	CATW	Record Working Time		
		QISR	Internal Service Request		X

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role	Service	Service name	Notes	New with 4.6C
		QISR1	Internal Service Request - Forms	Needed for authorization X
		IQS21	Create Message - Simplified View	Needed for authorization X
		IQS22	Process Message - Simplified View	Needed for authorization X
		IQS23	Display Message - Simplified View	Needed for authorization X
		IQS8	Worklist: Notifications	Needed for authorization X

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services

Role		Service	Service name	Notes	New with 4.6C
		IQS9	Worklist: Tasks (General)	Needed for authorization	X
		IQS12	Process Task	Needed for authorization	X
		IQS13	Display Task	Needed for authorization	X
SAP_WP S_EMPL LOYEE	Employee Self-Service (WPS)	<none>			
SAP_WP S_USER	Workplace User			Needed for authorization	X

SAP ESS Services in MiniApps

Role		MiniApp	Name of Service	Now in 4.6C/D
SAI_BC_EMPLOYEE	Employee Self-Service (BC)	BW00	Deadlines	X
		BW01	Unread Messages	X
		BW03	Worklist Overview	X
SAI_ESS_USER	Employee Self-Service (HR)	PZ35_MA	Who's Who	X
		FOTO	Display/Change Picture	X
SAI_KM_KW_ALL_AREAS_DISPLAY_EMPLOYEE	Display All Existing Documents	TERM_MINIAPP	SAPterm Dictionary	X
SAI_WPS_EMPLOYEE	Employee Self-Service (WPS)	BCBMTWFM0001	Workflow Inbox	X
		SYSMMSG	System Messages	X
		BW04	Microsoft Exchange Inbox	X

Appendix G: Single Roles and Services in R/3 Release 4.6C

SAP ESS Services in MiniApps

		BW05	Microsoft Exchange Calendar	X
		BW06	Microsoft Exchange Tasks	X
		BW07	Overview Unread Messages	X
		MA_ESS_NEWS	Reuters News	X
		MA_ESS_SEARCH	Search the Web	X
		MA_ESS_STOCK	Stocks	X

Appendix H: SAP ESS Services and Programming Models

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Table of Services and Programming Models

All of the services within SAP Employee Self-Service 4.6C are based on the Internet Transaction Server. However they differ in regards to their programming models. This appendix gives an overview of all the services and lists which programming model they are based on.

In general you can differentiate between:

- ▶ Flow Logic based services (Flow logic)
- ▶ GUI-based services

Flow logic based services are always based on HTML templates. For the GUI-based services you can further differentiate between:

- ▶ SAPGUI for HTML-based services (SAP GUI for HTML)
- ▶ HTML template-based services (Templates)
- ▶ Mixtures between the two above (MixMode)

Details about the difference between these programming models and how one would implement those can be found in the ITS Implementation Models documentation, which you may download from www.saplabs.com/its.

Some of the services in ESS use additional components, such as Java Applets on the client side or Excel sheets, which is noted in the table below as well.

Appendix H: SAP ESS Services and Programming Models

Table of Services and Programming Models

Service	Service Name	Programming Model
ASEM	My Assets	SAP GUI for HTML
BCBMTWFM0001	Workflow Inbox Mini App	Flow logic
BW00	Appointments	Flow logic
BW01	Unread Mails	Flow logic
BW03	Mails and Appointments Overview	Flow logic
BW04	Microsoft Outlook Inbox	Flow logic
BW05	Microsoft Outlook Calendar	Flow logic
BW06	Microsoft Outlook Tasks	Flow logic
BW07	Overview Unread Messages	Flow logic
BWCA	Calendar	Templates
BWSP	Inbox	Templates
CATW	Display Working Time	MixMode
FOTO	Display/Change Picture	Flow logic
HRCMP0061ESS	Exercising Employee Options	Templates
HRCMP0080ESS	Display Total Compensation Statement	SAP GUI for HTML
HRESSDE_CNET	Net Calculation of Monthly Salary	SAP GUI for HTML
HRESSHK_IR56B	IR56B Form	SAP GUI for HTML

Appendix H: SAP ESS Services and Programming Models

Table of Services and Programming Models

Service	Service Name	Programming Model
HRESSHK_IR56F	IR56F Form	SAP GUI for HTML
HRESSHK_IR56G	IR56G Form	SAP GUI for HTML
HRESSSG_IR21	IR21 Form	SAP GUI for HTML
HRESSSG_IR8A	IR8A Form	SAP GUI for HTML
HRESSSG_IR8S	IR8S Form	SAP GUI for HTML
MA_ESS_NEWS	Reuters News	Flow logic
MA_ESS_SEARC	Search the Web	Flow logic
MY_APPRAISALS	My Appraisals	MixMode
MY_PROFILEMATCH	Profile Match Up with Own Position	SAP GUI for HTML
MY_QUALIS	Display Skills Profile	SAP GUI for HTML
MY_REQUIREMENT	Display Requirements Profile	SAP GUI for HTML
P16B	Salary Package Modeler	SAP GUI for HTML
PACG	Pension Fund - Online Simulation	SAP GUI for HTML
PR05 ¹	Expense Reports	Templates
PRWW	Expense Reports (Offline)	Templates,

¹ This service and R/3 transaction is not available in R/3 Release 4.6C and higher.

Appendix H: SAP ESS Services and Programming Models

Table of Services and Programming Models

Service	Service Name	Programming Model
		MS Excel sheets
PV7I	Training Center	SAP GUI for HTML
PV8I	My Bookings	SAP GUI for HTML
PZ01	Who's Who	Templates
PZ02	Address	SAP GUI for HTML
PZ03	Bank Information	SAP GUI for HTML
PZ04	Display Time Statement	SAP GUI for HTML
PZ05	Emergency Address	SAP GUI for HTML
PZ07	Participation Overview	Templates
PZ08	Tax Inquiry	SAP GUI for HTML
PZ09	Display Leave Information	Templates
PZ10	Tax Withholding (W-4)	SAP GUI for HTML
PZ11	Paycheck Inquiry	SAP GUI for HTML
PZ12	Family Member/Dependents	SAP GUI for HTML
PZ13	Personal Data	SAP GUI for HTML
PZ14	Enrollment	Templates
PZ15 ²	New Hire Data	MixMode

² The New Hire data service has been replaced by the Life & Work Event framework and we recommend no longer using this service

Appendix H: SAP ESS Services and Programming Models

Table of Services and Programming Models

Service	Service Name	Programming Model
PZ16 ³	Employment and Salary Verification	Templates
PZ17	Display Work Schedule	SAP GUI for HTML
PZ18	Emergency Contact	SAP GUI for HTML
PZ21	Employment Opportunities	Templates, Java Applet
PZ22	Application Status	Templates
PZ25	Tax	SAP GUI for HTML
PZ26	Organizational Chart	Templates, Java Applet
PZ27	Superannuation	SAP GUI for HTML
PZ28	Previous Employers	SAP GUI for HTML
PZ29	External Bank Transfers	SAP GUI for HTML
PZ31	Edit Skills Profile	Templates, Java Applet
PZ35_MA	Who's Who	Flow logic
PZ39	Personal Ids	SAP GUI for HTML
PZ40	FSA Claims	Templates

³ This service and R/3 transaction was changed to WS01000045 with R/3 Release 4.6C.

Appendix H: SAP ESS Services and Programming Models

Table of Services and Programming Models

Service	Service Name	Programming Model
PZ41	Capital Formation	SAP GUI for HTML
PZ42	Alternative Name	SAP GUI for HTML
PZ43	Retirement Benefits	Templates
PZ50	Change Own Data	Templates
PZ51	Tax	SAP GUI for HTML
PZ51	Tax	SAP GUI for HTML
PZ56	Employment Equity	SAP GUI for HTML
PZLE_01 ⁴	My First Days@...	Flow Logic
PZSPHW	Telephony	Templates
QISR	Internal Service Request	Templates
SYMSMSG	System Messages	Flow Logic
TERM_MINIAPP	SAPterm Dictionary	Flow Logic
TRIP	Travel Management	SAP GUI for HTML
TS_WS0120017OH	Notification of Marriage	SAP GUI for HTML
WS01000045	Employment and Salary Verification	SAP GUI for HTML
WS01000060	Create Leave of Absence Request (Japan)	SAP GUI for HTML

⁴ This service is new as of 4.6C HR Support Package 8

Appendix H: SAP ESS Services and Programming Models

Table of Services and Programming Models

Service	Service Name	Programming Model
WS01000090	W-2 Reprint	SAP GUI for HTML
WS01000109	Leave Request Overview	Templates
WS20000081	Create Leave Request	Templates