Michael Missbach
George Anderson

Fifth Edition

Thoroughly updated and expanded. Includes new coverage of HANA, simplified finance, and SAP's SaaS solutions

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Sams Teach Yourself SAP

Fifth Edition

in 24 Hours

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Sams Teach Yourself SAP in 24 Hours, Fifth Edition

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Dr. Michael Missbach, Manager of the Cisco SAP Competence Center, focuses on best practices for SAP HANA and other mission-critical applications in public and private cloud scenarios. Earlier, he worked as IT Superintendent for ALCOA. He has also written books on SAP hardware, SAP system operation, adaptive SAP infrastructures, SAP on Windows, and SAP on the cloud.

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Introduction

Now that we've covered the basics of SAP and what it means "The world of SAP and our world in general have gone through major upheavals in the last few years, and I was excited to share with SAPlings and veterans alike just how much had changed." This is how George Anderson started the introduction of the 4th edition of this book in 2011. And it reflects exactly how I felt when he and Sams asked me to take over as the primary author for this newest edition: thrilled! And honored as well. Seriously! Actually, George and I shared the work to rewrite and edit this 5th edition. We introduced many more screen shots and other graphics, and revised the format while preserving the most teachable aspects of earlier editions.

In addition, we added a tremendous amount of new material. From the introduction of new technologies such as in-memory HANA databases and hosting platforms to SAP's new user interfaces, newly acquired cloud-based Software as a Service solutions, new reporting applications, and more, we've essentially rewritten many of the hours from the ground up.

Because the IT world in general has changed so dramatically, we found it useful to provide a broader foundation than ever before. We've incorporated new topics such as the Internet of Things, new mobile device technologies, and how social media and big data are changing the IT playing field. And we've briefly covered data security threats and other developments alongside plausible or possible future trends. Our goal in doing so was to help you think more deeply about where SAP fits in, where the gaps are, and therefore where some of the biggest future challenges might be found.

So thank you for picking up the latest and yes, best ever, edition of *Sams Teach Yourself SAP in 24 Hours*. We are confident you'll find it worth your time.

The hours are organized into five easy-to-consume sections. Part I naturally starts with an introduction to all the basics. Part II covers SAP's new and older business applications and components. In this way, the stage is set for us to explore SAP from a business user perspective (Part III) and then from an IT professional's perspective (Part IV). Part V concludes with three hours devoted to helping you start or grow a career in SAP.

Along the way, we have covered what we think matters most to SAP newcomers. For our business user readers, we've put together several hours that walk through actual business transactions. We explore what it means to create sales orders, check on customer records, update employee personnel records, and more. We provide lists of business transaction codes used in SAP's Business Suite to execute common business transactions. And we explore reporting and query processes executed not only from SAP ERP itself but also from SAP's Business Objects and other applications. In this way, prospective SAP business users will get a better feel for what a day-in-the-life looks like for many SAP end users.

For our technical readers, we've returned to providing deeper content, and we've done something we hope is especially helpful. Feedback from readers let us know that it has become quite difficult and confusing to navigate the SAP Service Marketplace, Developer Network, Help Portal, and various blogs to find the basic installation guides, essential technical information, and so on. So we've added detailed step-by-step "how to locate" material alongside the technical details.

We also quickly walk through the installation of the trial version of SAP, covering both on-premise and in-the-cloud installations. With a "real" SAP system on hand, you'll be able to better apply in real-time what we explore together across these 24 hours. We also explore the world of the SAP developer, look at what it means to prepare for technical upgrades, and explore steps necessary for managing an SAP implementation project. By covering SAP technology from several different perspectives, including cutting-edge insight related to SAP and cloud computing, even our more experienced technical readers will be better positioned to make a difference at work.

Armed with new insight and awareness, we suspect our readers will be more effective than ever. You'll be that rare person who is broad enough to understand the big picture and smart enough to realize you still have a long journey ahead of you. But with this knowledge alone, you'll be well on your way to transforming yourself, your career, and your future.

What's Covered

This book covers what you need to know to understand SAP's core products and components, which are often collectively referred to simply (and vaguely!) as "SAP." Though this is a beginner's book, it provides a well-rounded and current outlook on SAP today. As career SAP professionals, your authors, contributors, and technical editors have made sure that this book reflects the real world.

This latest edition continues to target the two largest audiences of those interested in learning about SAP: business users and IT professionals. Readers will appreciate how the book is arranged around these two very different types of skill sets and interests. And by providing an overview to each area coupled with actionable steps or guidance, we believe you will find this to yet again be the most useful and teachable *Teach Yourself SAP in 24 Hours* to date.

The book begins with the basics, introducing terminology regarding SAP and its business applications, technology underpinnings, and project implementation considerations. From there begins the process of carefully building on your newfound knowledge to piece together the complex world of SAP's applications and components. The pace of the book is designed to provide a solid foundation up front so you can grasp the more advanced topics covered in later hours. In this way, even a novice should quickly understand what it means to plan for, deploy, and use SAP. With this understanding, you'll also begin to appreciate the roles that so many people play in SAP projects and ongoing maintenance—how executive leadership, project management, business applications, technical deployment, and the application's business users all come together to create, use, and manage SAP over its lifecycle.

The first several chapters establish a deeper foundation than past editions, bringing readers up to speed before breaking matters down into areas targeted at business users or IT professionals. The book's hours are also organized more clearly, making it even easier for readers interested in a particular subject area to quickly locate the material that's most interesting to them. And as in the previous edition, each chapter concludes with a real-world case study that enables readers to put their new-found knowledge to the test.

What's Really New

Beyond important structural changes and a clear focus on business users and IT professionals, this latest edition of *Teach Yourself SAP in 24 Hours* includes new content reflecting

- SAP's newest cloud-based and other products and acquisitions, including Ariba, Concur, Fieldglass, hybris, and SuccessFactors
- The strategy behind HANA, along with business cases explaining when and how to benefit from it
- Where SAP Simple Finance fits into SAP's application portfolio
- Much deeper and broader technology platform details
- Reporting applications beyond SAP ERP's legacy reporting capabilities, including Business Objects Explorer, Crystal Reports, Xcelcius, Web Intelligence, and more
- Improved real-world SAP project implementation, migration, and upgrade guidance
- Use of SAP Solution Manager to address systems management and monitoring well beyond traditional CCMS
- New ideas and next steps related to career development

To give you a sense of how SAP businesses work with SAP at their desks every day, the book also includes real-world transactions used to run common SAP business scenarios. Several of these scenarios are detailed, whereas others simply reflect the kind of work that users might regularly perform in SAP CRM, ERP, PLM, SCM, and SRM systems.

Who Should Read This Book

This book is for people new to SAP, as well as for experienced people interested in filling in some of their own SAP knowledge gaps. Because the past five years have seen tremendous changes in the SAP application landscape, even the most seasoned SAP professionals will still benefit from Hours 3, 5, 6, 8, 13, 14, 18, 19, 20, and 21 (as well as significant portions of Hours 4, 7, 10, and 16).

From all of us at Sams, we hope you enjoy this read. More importantly, we hope this material helps give you the jump-start you need to make a difference in the world around you. Thank you again for adding our latest book to your personal library.

Conventions Used in This Book

Each hour starts with "What You'll Learn in This Hour," a brief list of bulleted points highlighting the hour's contents. Each hour also includes a summary highlighting key takeaways. Finally, each hour concludes with a case study with questions and answers relevant to the material in that hour.

PART I

Introduction to SAP

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HOUR 8

SAP on the Cloud and New SAP Solutions

What You'll Learn in This Hour:

- The different flavors of cloud services for SAP
- SAP's road to the cloud
- Running classic SAP solutions on the cloud
- HEC versus HPC
- New SAP solutions: SuccessFactors, Ariba, Fieldglass, Concur, and hybris

Despite its great tradition of in-house developments from R/3 to HANA, SAP has never been shy about acquiring other companies to extend its application portfolio and gain access to new technologies. Examples from the past include Business Objects, Kiefer & Veittinger, and Sybase's database technologies.

At this writing, Wikipedia lists 59 SAP acquisitions, with Concur Technologies being the latest. Among these acquisitions are several cloud-based Software as a Service (SaaS) solutions that were already successful on the market. With HANA Enterprise Cloud (HEC) and HANA Cloud Platform (HCP), SAP also added Platform as a Service (PaaS) and hosting services to its portfolio. In this hour, we provide a general overview of these solutions, how they fit into the big picture, how they are used, and the value they provide.

To business readers, it makes no difference whether SAP runs on premise (in a company's in-house datacenter) or out on the cloud somewhere, so you may skip the first half of this hour and move directly to the section "Newly Acquired SAP Solutions," which describes SAP's new solutions.

What Kind of Cloud?

Discussions about the cloud tend to contain a confusing variety of acronyms. Obviously, every vendor defines its own cloud according to the product portfolio it has available.

The cloud definitions of the National Institute of Standards and Technology[1] are so general that they are not much help in understanding cloud options. To understand the options relevant for SAP, it is helpful to take a look how other services are offered in the market.

An example that can in help understanding cloud concepts involves the provisioning of pizza for a family dinner. As most of us realize, there are several options available for obtaining pizza, ranging from genuine homemade to dining out and several options in between, as shown in Figure 8.1.

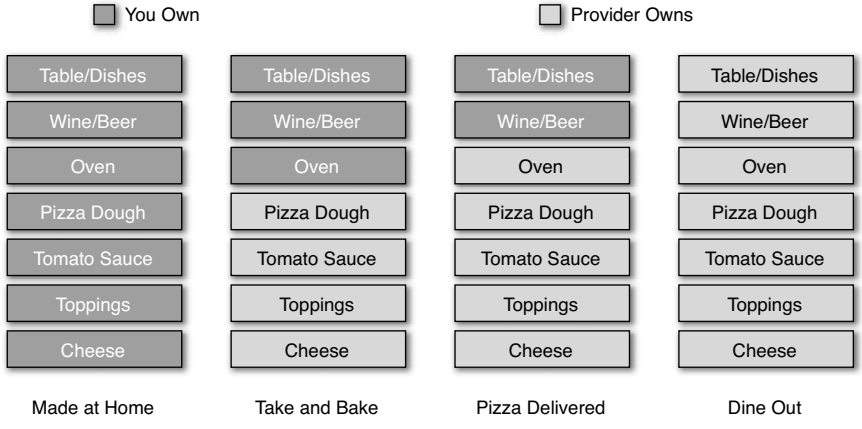

FIGURE 8.1
Different options for getting a pizza.

What distinguishes the different models (of cloud services as well as pizza) is the degree of the necessary infrastructure, supplies, and services you are able to control compared to the ones you have to "take-or-leave":

- In case of the traditional homemade pizza, you (or your grandma) can control the quality of all the ingredients, from flour to tomatoes, and you own all the kitchen equipment, down to the tableware.
- If you use frozen pizza, you outsource the hassle of preparing the dough, sauce, and toppings, but have to rely on the taste and quality of the ingredients used by your preferred brand. In addition, not all combinations of toppings and cheese are available, you can't choose the cheese from one vendor and the topping from another. The kitchen and dishes are still under your control (including the cleaning afterward).

[1] See http://csrc.nist.gov/publications/PubsSPs.html#800-145.

- If you choose pizza home delivery, you don't have to own an oven, but some of the other restrictions for frozen pizza apply: you can't choose the vendors for the ingredients. You depend on the capability of the service to deliver the pizza still hot, but you can still choose your preferred wine and tableware (and you still have to clean up afterward).
- If you decide to go with your family to a pizzeria, you take care of the reservation, the selection from the menu, and payment; you do not need to do any food preparation or cleanup. On the downside, you have to accept what's available on the menu and accept some longer waiting time until you get seated and served during prime time (which is called "oversubscription" in IT terms).

When it comes to SAP solutions and the IT services necessary to deliver them, it is important to distinguish between physical infrastructure (network, storage, or server) and software infrastructure (virtualization solutions, operating system, database, and application), where the actual ownership is represented by the license and maintenance contracts (see Figure 8.2).

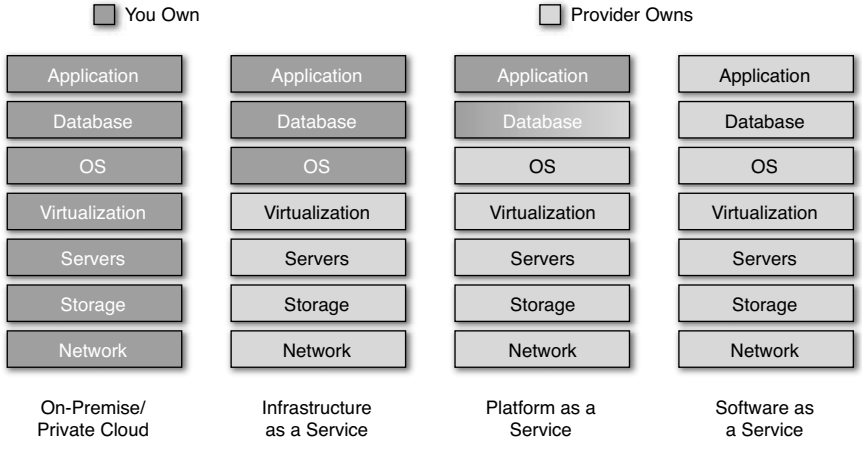

FIGURE 8.2
Different options for getting an SAP solution.

As with the pizza example, the different cloud offerings relevant to SAP can be classified by the ownership of the various layers necessary to deliver SAP as a service.

- In case of the traditional on-premise model, you own, manage, and maintain the complete infrastructure. Utilizing state-of-the-art private cloud virtualization and orchestration technologies provides the same flexibility as with the public counterparts. Being in a position to select from the portfolio of different hardware vendors competing against each other, you enjoy having access to the top expertise of their SAP competence centers for

sizing and architecture optimization—worth hundreds of consulting hours free of charge—as a pre-sales service. Given the fact that a migration to another platform is not a big deal anymore, you can get prime attention if you run into trouble by claiming that you will move to another vendor and forcing the vendor to do the root cause analysis to prove that his part of the infrastructure is not causing the trouble. However, you also need the necessary skill in-house to operate and maintain the hardware and software you have acquired, and you have to pay license and maintenance fees for virtualization, the OS, the database, and the application.

- While in a classical hosting model you are still in a position to choose the hardware infrastructure, you don't have the hassle of dealing with the hardware vendors if you utilize an Infrastructure as a Service (IaaS) provider. The downside is that the hardware vendors are not available for root cause analysis when the system becomes unstable after an OS, database, or application patch if the service provider claims that the part he is responsible for runs stable. In regard to performance, you have to accept the level of resource over commitment you agreed to in the fine print. You pay only the hardware resources you consume but still have to "bring your own license" for the OS, database, and SAP solution, and you also have to bring the expertise to configure and maintain this part of the stack.
- Using a Platform as a Service (PaaS) is nearly the same as using an IaaS provider, but you don't have to worry about the operating system. And if you're using HANA Enterprise Cloud (HEC) or HANA Cloud Platform (HCP), you don't even need to be concerned about the database. You are still in control of the application licenses and can change the provider with little effort and little risk.
- If you decide to go with a genuine Software as a Service (SaaS) offering or transform the licenses of your classical SAP solutions into an SAP cloud license, you get rid of the responsibility for the complete infrastructure stack and can focus on utilizing the features provided by the solution for your business. However, you can order only the business processes available on the service menu; customization is restricted in most cases to adapting the user interface to your corporate design. In a way, you can say that you can use a SaaS solution without having IT skills. However, as with all the other cloud offerings, you still need in-house expertise or external consulting to integrate the different applications with each other and train your users in how to use the services provided.

With all the hype surrounding the cloud, it may be worth mentioning some of the most common challenges. Security is among the major concerns that come to mind. With the implications of the Patriot Act, many non-U.S. companies keep their sensitive data within the border of their country. However, nifty details like patch management can become a major headache, especially in hybrid scenarios where one vendor's patch cycles may not be coordinated with the

customer, resulting in additional downtime. (For an in-depth discussion of security aspects, see our book *SAP on the Cloud*.[2])

SAP's Way to the Cloud

SAP customers don't like change—and for good reason. After all, mission-critical software is a conservative business, and SAP is the epitome of a conservative company. But even a company like SAP must eventually follow new trends like cloud computing to remain relevant and competitive.

In the past, SAP maintained a focus on developing solutions in-house complemented by solutions and technologies acquired externally. With a few exceptions, these solutions were tightly integrated in the portfolio and integrated with the standard technology. In any case, customers could choose to run these solutions on-premise or hosted by an SAP-certified provider.

It has been a long road from SAP's early efforts with service-oriented architecture (SOA) in 2004 (called Project Vienna). SAP's next cloud attempt was Business by Design, released in 2006. With the acquisition of SuccessFactors in 2011 and Ariba in 2012, SAP sent a signal to the market and its customers about its direction into on-demand software and cloud computing. Today, SAP follows a dual approach:

- Supporting the deployment of Business Suite and NetWeaver on IaaS and PaaS offerings from Amazon, Azure, and certified service providers with real experience in running mission-critical business applications, including their own HEC and HCP
- Acquiring established SaaS solutions to complement Business Suite, including Ariba, SuccessFactors, Fieldglass, and Concur

Given the current amount of change and transformation within SAP's cloud strategy, this section provides only a snapshot of the current initiatives on which SAP focuses.

Classic SAP Solutions on the Cloud

In principle, all the classic SAP Business Suite and NetWeaver solutions described in Hours 6, "SAP NetWeaver and HANA," and 7, "SAP ERP and Business Suite," can be implemented on IaaS and PaaS offerings.

At this writing, SAP has certified 220 partners for hosting, 105 for cloud, and 35 for HANA. Among them are large service providers like Virtustream, T-Systems, Telstra, Suncore, Secure-24, NNIT, MKI, and Singapore Telecom; consulting companies like Accenture, Atos, CSC,

[2] *SAP on the Cloud* by Missbach et al., Berlin: Springer, 2015.

CapGemini, Deloitte, and IBM; and specialized boutique providers like Freudenberg IT, Ciber, Finance-IT, OEDIV, Gisa, and Novis.[3]

SAP's own hosting organization was sold to T-Systems and Freudenberg IT in 2009. SAP does not own or operate Hana Enterprise Cloud itself, either, but acquires the services from Softlayer, an IBM company.

The most prominent cloud providers offering SAP solutions are Amazon and Azure, even though they can't offer anything other than IaaS. It has become a common practice in many enterprises to keep the mission-critical production systems on premise or at a classic full-service hosting provider, while utilizing cloud offerings for non-production systems that are needed only temporarily for development, testing, or training.

If you are a user, you will not see any difference in the way that the SAP Business Suite and NetWeaver solutions are operated; all the business processes should behave identically whether on premise or in the cloud, and the user interface should look exactly the same.

HEC Versus HCP

For the quite special demands of HANA, there are cloud options available from SAP (as well as from a variety of cloud service providers):

- **HANA Enterprise Cloud (HEC):** Despite its name, HEC is not a cloud service but a classical hosting service for HANA. SAP sells the service on its paper, but the infrastructure is actually hosted by Softlayer. For certain solutions, SAP offers a subscription pricing as an alternative to the perpetual license option that continues to be available.
- **HANA Cloud Platform (HCP)[4]:** HCP is a real subscription-based IaaS offering, aimed for development projects and providing HANA-based application services for a monthly subscription. Sizes ranging from 1 GB up to 1 TB can be ordered from the SAP Service Catalog Portal.

Both of these cloud offerings requires customers to buy their own HANA licenses. SAP recently announced that it would change the license model to a pay-as-you-go model, but the prices will rise from the "maintenance fee" of 22% to 50% of license list price per year.

Technically, all HANA cloud offerings are based on the so-called tailored datacenter integration (TDI) model that allows sharing server, storage, and networking resources.

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[3] For a complete list of SAP Certified Outsourcing Operations Partners, see http://global.sap.com/community/ebook/2012_Partner_Guide/partner-list.html.

[4] See http://hcp.sap.com/platform.html.

Alternatively, SAP HANA App Services provides HANA instances with services for mobility, collaboration, security, systems management, and more—all orderable from the SAP Service Catalog Portal[5] (see Figure 8.3).

As discussed in Hour 6, "SAP NetWeaver and HANA," the HANA cloud offerings start at a very attractive price level for small development environments. With more features and options, the price rises significantly, as shown in Figure 8.3. Even with a monthly subscription fee, an annual contract is required. Note that system provisioning can take up to 48 hours.

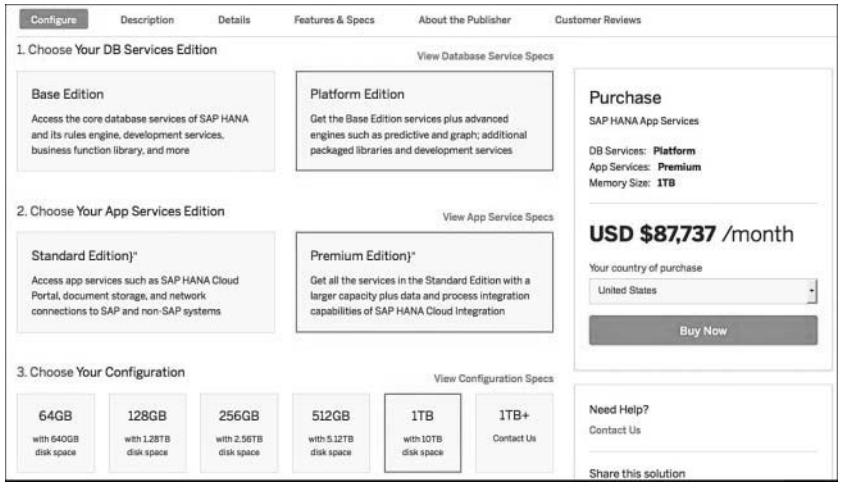

FIGURE 8.3
Subscription page for HANA App Services on the SAP Service Catalog Portal.[6]

NOTE

SAP on AWS and Azure

IT professionals will appreciate the extra level of deep technical and project management guidance provided in Hour 19, "SAP and the Cloud," with regard to how to run SAP on AWS and Azure. (We've also included an introduction to the SAP Cloud Appliance Library and Project Monsoon.) Enjoy.

[5] See http://marketplace.saphana.com/hcp.

[6] See http://marketplace.saphana.com/p/1808.

Newly Acquired SAP Solutions

Now that's we've discussed SAP's road to the cloud, we will introduce some of SAP SE's recent acquisitions, in the order in which they were acquired. With a few exceptions, these acquired companies provide SaaS solutions that are "cloud only."

The acquired companies discussed here all utilize technologies that have nothing in common with classic SAP architecture in regard to platforms, code, and user interfaces. This can be challenging for IT departments that must integrate these solutions into their existing software environment. It can also be challenging for end users, who have to adapt not only to a new look and feel but also to different naming conventions and business process concepts. Besides the fact that all of these solutions are owned and offered by SAP, the only other thing they have in common is HANA. They either already use the HANA platform or will be moved to HANA in the near future.

SuccessFactors

For most companies, the workforce represents up to 60% of operating expenses, which makes it their single largest investment. SAP's 2011 acquisition of SuccessFactors added talent management expertise and human resource management (HCM) to SAP's cloud assets.

SuccessFactors' HCM solutions are based on management by objectives (MBO) principles and promise that you don't need to know HR jargon to use the system. However, the user interface is quite different from SAP's standard UIs (see Figure 8.4 and Figure 8.5).

FIGURE 8.4
Example of the SuccessFactors Employee Central built-in organization chart (courtesy of SAP).

The SuccessFactors HCM Suite includes

- **Employee Central:** A self-service core HR and talent management solution
- **Recruiting:** Helps to attract, engage, and select candidates and measure the results
- **Onboarding:** Guides hiring managers and improves employees' job satisfaction, time to productivity, and first-year retention
- **Performance & Goals:** Communicates strategy and creates meaningful individual goals, streamlines the performance appraisal process, and enables meaningful feedback
- **Compensation:** Supports a company to pay people based on achievement and objective ratings
- **Succession & Development:** Enables planning for staffing changes
- **Learning:** A complete learning management solution (LMS) that enables instructor-led and formal and social online training; includes a Content-as-a-Service (CaaS) solution
- **Workforce Planning:** Provides workforce information and benchmarks to forecast the impact of business decisions.
- **Workforce Analytics & Reporting:** Delivers quantitative insights
- SAP added "**Jam**" (their private social network tool which combines collaboration and content creation) to the SuccessFactors portfolio.

In December 2013, SuccessFactors' Talent Management solution already had more than 4,000 customers with 25 million users, and the Learning Management System had more than 600 customers with 11.5 million users. Employee Central had 15 million users spanning 3,500 companies.

Integration with Payroll

Even if SuccessFactors' Compensation Management (see Figure 8.5) provided all the functionality needed to manage your employees' salaries, the actual payments would still need to be processed by SAP HCM's payroll (part of the core ERP system) or another third-party bookkeeping system.

Synchronizing the data between two systems has always been a complex activity. This should be considered when evaluating the compensation management of Successfactors compared to using the already built-in HCM integration of SAP ERP (more on this in Hour 19).

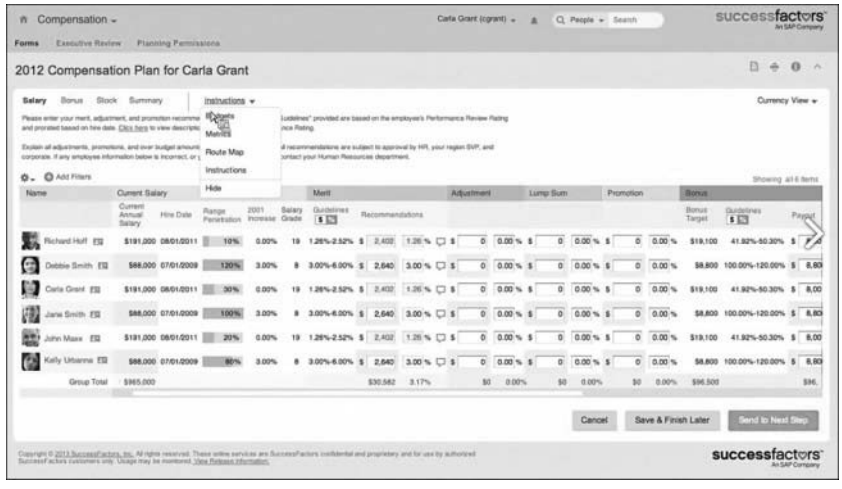

FIGURE 8.5
An example of SuccessFactors' compensation management (courtesy of SAP).

Ariba

From the first versions of R/3 and even R/2, the procurement process was an integral part of SAP's ERP solution, covering the complete process from placing an order to paying the invoice. To serve the specific demand of procurement departments, SAP soon split out a dedicated solution for enabling point-to-point purchasing connections between buyers and sellers.

See Hour 5, "Overview of SAP Applications and Components," especially Figure 5.1, to better understand how the name of the solution has changed over time from Business-to-Business procurement to SAP Enterprise Buyer Professional (EBP) and then Supplier Relationship Management (SRM)—enhanced by a catalog server, a bidding engine for online auctions, and more. However, the connection to each business partner had to be negotiated and set up separately.

In contrast to SAP's approach, focused on the demand of the buyer's departments for individual customers, Ariba succeeded in establishing a centralized trading platform for suppliers.

Founded in 1996 as one of the first startups utilizing the Internet for procurement processes, and acquired by SAP in 2012, Ariba provides a fully cloud-based SaaS solution for external order and payment processing as well as for sourcing and spend analysis. However, the biggest benefit that the more than 730,000 Ariba customers can capitalize on is a business network with more than 750,000 suppliers; Ariba claims that every two minutes, a company adds itself to this network.

And even in the event that a product can't be found within the catalogs of the partners in this huge network, Ariba can be configured to search other sites, such as eBay, using criteria to only

consider vendors where the product can be bought immediately and with a high customer feedback rating.

Ariba solutions are available by subscription and on-demand, so there's no software to install or maintain. All an end user needs is a web browser. Whether you want to buy (see Figure 8.6) or sell (see Figure 8.7), there is an easy step-by-step process available via Ariba Discovery.[7] Just click on Register Now to obtain an account and request a demo. It's free and takes only a few minutes.

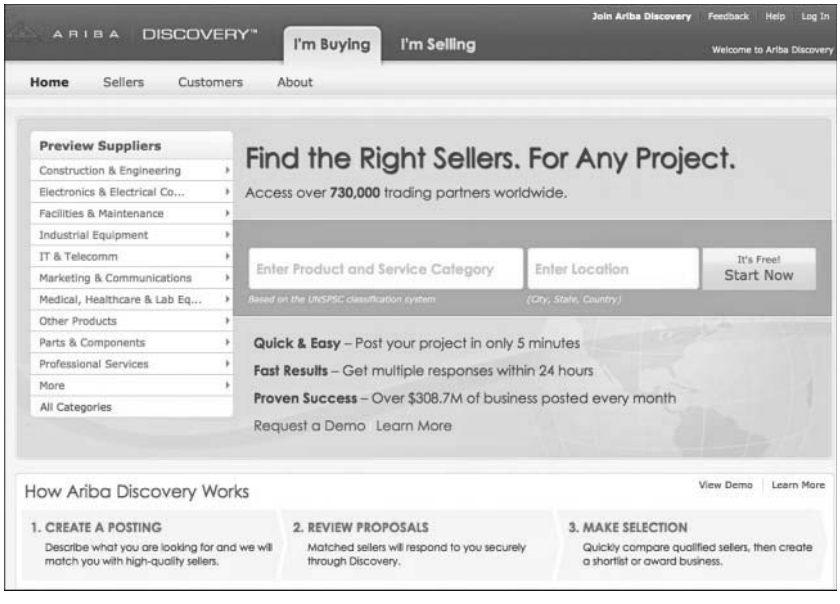

FIGURE 8.6
The Ariba Discovery portal for buyers (courtesy of Ariba).

For standard sellers, there is a fee to respond to postings based on the posting deal size: free up to US$1,000; $19 up to $50,000; $49 up to $100,000; $119 up to $1,000,000; and $149 over $1,000,000. Upgrading to the Advantage or Advantage Plus package brings free responses and other marketing opportunities.

[7] See https://service.ariba.com/Discovery.aw.

FIGURE 8.7
Ariba Discovery portal for vendors (courtesy of Ariba).

Because all purchase orders have to be processed in the bookkeeping and incoming goods department, Ariba has to be integrated into the SAP ERP system to make sure that everything procured is accounted correctly. (See Hour 19.)

Fieldglass

Another kind of goods or resources a company needs to procure is external staffing power; these resources range from individual freelancers or contingent workers to leased workforces capable of supporting a complete plant. The concept of engaging managed service providers (MSPs) to oversee the onsite contingent workforce emerged in the late 1980s and gained steam around the mid-1990s. During that same time, automated vendor management systems (VMS) propelled and enabled the MSP model.

Fieldglass, founded in 1999 and acquired by SAP in 2014, provides a cloud-based VMS used to manage a non-employee workforce of contingent workers (that is, independent contractors). The various business processes that such management comprises include procurement, creation of statements of work, project management, and payment management.

Figure 8.8 illustrates a variety of templates for job postings a project manager can use to select the proper skill set for a development task.

Figure 8.9 shows the Fieldglass management dashboard, where all activities from the hiring process to times sheets and budgetary reports down to employee reviews are available as structured workflows.

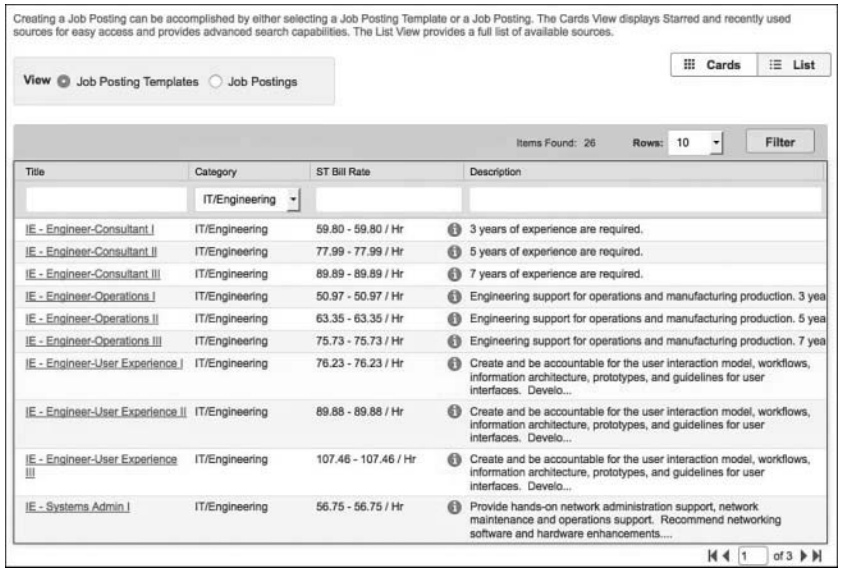

FIGURE 8.8
Fieldglass job posting template (courtesy of Cisco).

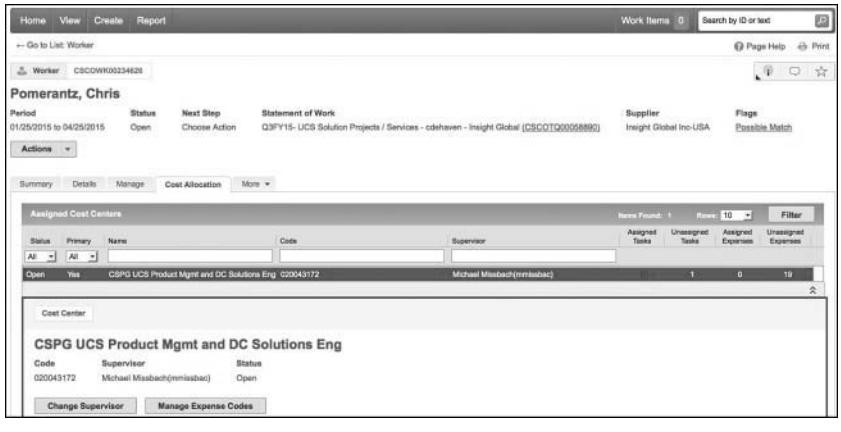

FIGURE 8.9
Fieldglass management dashboard (courtesy of Cisco).

As of early 2014, Fieldglass' client base included approximately 250 customers, many of them quite large or complex. SAP expects this business to grow as companies continue to shed traditional workforces and employ new staffing and resourcing models.

Concur

Travel and entertainment spend is the second-largest controllable cost for some companies—just behind payroll. Many highly paid experts have to spend a considerable amount of time organizing their travel and collecting all their travel receipts for reimbursement.

Concur's basic idea is to integrate corporate travel booking with expense tracking, so employees don't have to key in the same data multiple times in multiple systems. Electronic receipts from airlines, rental car companies, hotels, and restaurants are captured automatically and turned into expense line items, eliminating the hassle of filling out travel reports and improving accuracy significantly. If national tax laws permit, travelers just have to take photos of train tickets or taxi or restaurant bills with their smartphones and attach the images to expenses; in addition to the other benefits, this process saves greenhouse gases by preventing piles of paper from being processed abroad.

Figure 8.10 illustrates the Concur expense reporting process. The Travel & Expense app capture transactions directly from airlines, hotels, restaurants, and car companies and transforms them into expense line entries (left). Travelers can also add photos of receipts (middle) to the expense report. The last step is to forward the finished report to a manager for approval (right).

FIGURE 8.10
Generating a travel report with Concur Travel & Expense (courtesy of Concur).

Concur Travel & Expense supports multiple languages and currencies. Currency exchange rate and complex car-mileage allowances are automatically calculated, as are the tax rates of many countries. Interfaces for SAP business solution and other ERP systems are available.

Concur Travel & Expense is offered in multiple editions (Small Business, Standard, Concurforce, Professional, and Premium) and processes $50 billion in expense transactions per year.

In addition, Concur offers TripIt, a mobile travel organizer for individuals that is currently used by more than 5 million individuals (see Figure 8.11). Users simply forward all hotel, flight, car rental, and restaurant confirmation emails to plans@tripit.com, and TripIt transforms them into a detailed itinerary with dates, times, and confirmation numbers. In addition, directions, maps, weather, and other such information may be consolidated and centrally displayed for every trip.

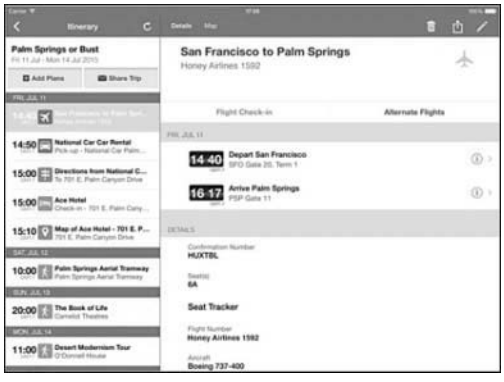

FIGURE 8.11
TripIT's user interface (courtesy of Concur).

Like Ariba, Concur offers a test drive for 30 days free of charge[8] to help potential users become familiar with the look and feel of the solution.

SAP completed the acquisition of Concur in December 2014. While SAP will continue to fully support its customers currently using SAP Cloud for Travel and Expense through their current contract term, Concur's solution will be the offering of choice for customers moving forward.

hybris

In an interesting way, hybris represents an exception to the general trend of SAP acquiring established cloud solutions, because hybris is classic on-premise software that may be installed as an IaaS cloud offering. Founded in 1997 in Switzerland and acquired by SAP in 2014, hybris provides a suite of multichannel and product content management (PCM) software to complement SAP's classical CRM solutions.

Multichannel retailing considers the variety of channels consumers can choose today for shopping. Digitally savvy consumers are entering stores already well informed about a product's features and prices, and they expect store employees to know more than they do. Purchases may

[8] See https://www.concur.com/en-us/free-trial?icid=en_us_trialtesttop.

be made in the store but are researched through other channels of communication, including online catalogs, television, mobile apps, and online stores like Amazon and eBay. To win connected consumers, all shopping channels from brick-and-mortar shops to telesales need to use the same information regarding products, prices, promotions, etc.

Many retailers also have to deal with multiple catalogs for different target audiences and languages. hybris supports multilevel hierarchies of catalogs, such that child catalogs can inherit a parent catalog's settings. On the other side, multichannel retailing solutions enable consumer-specific offerings, analyzing purchase patterns, social network affinities, website visits, loyalty programs, and so on—all of which increase the complexity of such solutions significantly.

The hybris Commerce Suite

The hybris Commerce Suite offers a single system for managing product content, commerce operations, and channels from mobile and online to in-store. Figure 8.12 gives you a glimpse of the catalog management capabilities of hybris.

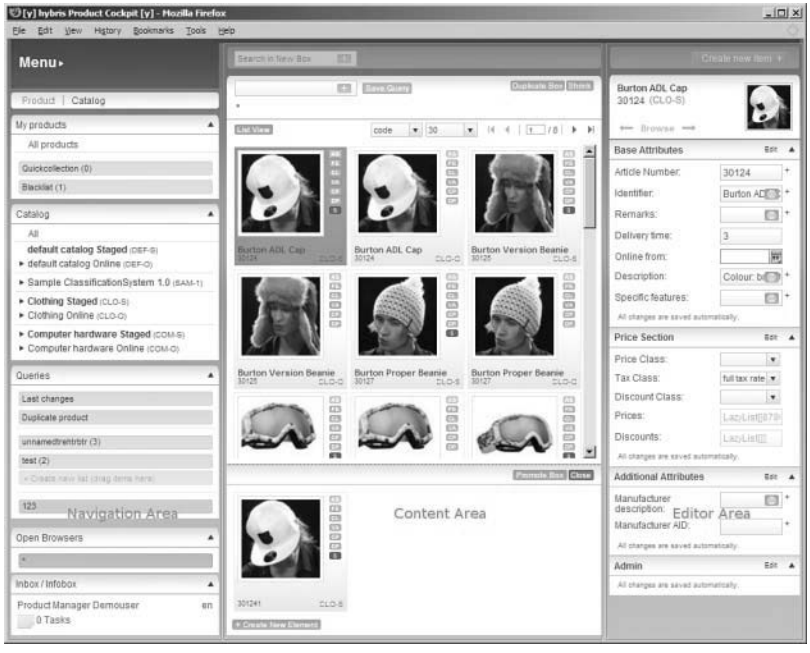

FIGURE 8.12
The hybris Product Cockpit manages product information and catalogs (courtesy of hybris).[9]

[9] See http://www.lewiswire.com/de/lewiswire/Hybris/Hybris-Suite-40-Neue-Architektur-und-modernste-Technologie-legen-die-Messlatte-fr-E-Commerce-und-Master-Data-Management-Anwendungen-hher/n/5278.

hybris on the Cloud

Currently, hybris can use the cloud in a simple IaaS approach. According to a blog, SAP offers to run hybris on HANA for free, with the HANA Cloud Platform Developer Trial[10] at the time of writing. However, you should not expect good performance as the HANA cloud database is reachable via the relatively slow open-db-tunnel command, and the HANA instance is shared.

Summary

SAP has spent a significant amount of time and money over the past 15 years transforming itself from a purely on-premise software company to a company that offers a significant portion of its portfolio as software on demand.

In the first part of this hour, we discussed the different cloud flavors available for SAP and compared them with the classical on-premise and hosting models, using pizza as an example. We described SAP's road to the cloud and how classic SAP solutions look and feel for the user when running on the cloud, and we gave a short introduction to the HANA Enterprise Cloud and the HANA Cloud Platform.

In the second part of this hour, we described the purpose, focus, and functionality of new solutions acquired by SAP since the last edition of this book: SuccessFactors, Ariba, Fieldglass, Concur, and hybris. The majority of these are delivered exclusively from the cloud via the SaaS paradigm. Technical details of the integration of these new solutions into the classic SAP system landscape are provided in Hour 19.

Case Study: Hour 8

Consider this hour's case study regarding the new SAP applications and cloud solutions. Read through and respond to the questions that follow. You can find answers to the questions related to this case study in Appendix A, "Case Study Answers."

Situation

Like many other companies, MNC is considering the cloud as a sourcing and platforming option. You have been asked to study how to utilize the cloud in the most optimal way for MNC's SAP systems. You also need to evaluate questions regarding several of the newer SaaS and other solutions SAP has recently acquired.

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[10] See http://scn.sap.com/community/developer-center/cloud-platform/blog/2013/12/14/run-Hybris-on-hana-cloud-database.

Questions

1. What type of cloud offerings can be considered for classic SAP solutions?
2. For what will MNC still be responsible when moving classic SAP solutions to the cloud?
3. Can MNC run only parts of their SAP systems on the cloud? If yes, which one should it start with?
4. Is the SAP HANA Enterprise Cloud (HEC) the only option for running HANA in the cloud?
5. What business processes does SuccessFactors offer?
6. How does Ariba complement SAP SRM?
7. What type of purchase is supported by Fieldglass?
8. How does Concur improve the accuracy of expense reports?
9. Which department would get the most benefit from hybris?

PART III

SAP for Business Users

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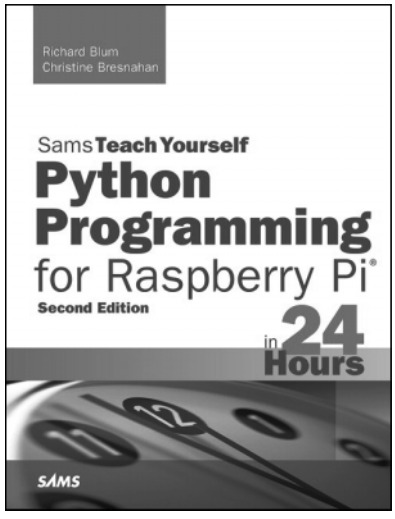

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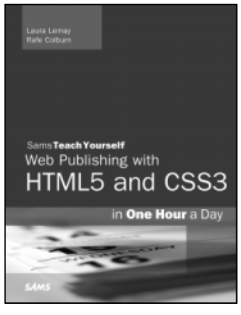

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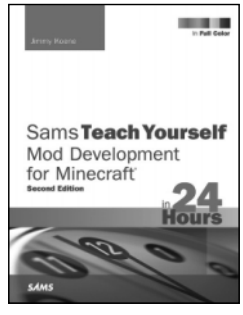

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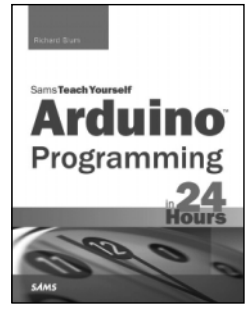

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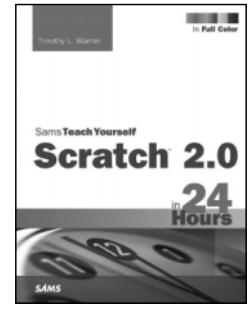

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