Contents at a Glance

Introduction ................................................................................................. 1

Part I: Introduction to SAP

**HOUR 1** SAP Explained ................................................................. 7
  2 SAP Business Basics ................................................................. 17
  3 SAP Technology Basics ............................................................... 31
  4 SAP Project Basics .................................................................. 51

Part II: SAP Applications and Components

**HOUR 5** Overview of SAP Applications and Components .......... 69
  6 SAP NetWeaver and HANA ....................................................... 87
  7 SAP ERP and Business Suite ..................................................... 109
  8 SAP on the Cloud and New SAP Solutions .......................... 129

Part III: SAP for Business Users

**HOUR 9** A Business User’s Perspective on Using SAP .......... 149
  10 Using SAP’s Traditional and New User Interfaces .......... 161
  11 Using SAP ERP to Do Your Job .............................................. 179
  12 Using Other SAP Business Suite Applications .......... 197
  13 Using SAP for Reporting .......................................................... 205
  14 Using Simplified Finance and Office Integration .......... 221

Part IV: SAP for IT Professionals

**HOUR 15** An SAP Project Manager’s Perspective ................. 245
  16 A Technology Professional’s Perspective on SAP ........ 265
  17 An SAP Developer’s Perspective ........................................... 287
  18 SAP Installation and Implementation ................................ 303
  19 SAP and the Cloud ................................................................ 325
  20 SAP System Administration and Management ................. 345
  21 SAP Enhancements, Upgrades, and More ...................... 359
Part V: SAP Careers

HOUR 22  SAP Careers for the Business User ................................. 373
23  SAP Careers for the IT Professional .................................... 389
24  Other Resources and Closing Thoughts .............................. 399
APPENDIX A  Case Study Answers ............................................. 411

Index ....................................................................................... 425
# Table of Contents

Introduction ......................................................................................................... 1

Part I: Introduction to SAP

**HOUR 1: SAP Explained** ................................................................. 7
  - Overview of SAP: The Company .................................................. 7
  - SAP Business Applications ....................................................... 9
  - Connecting the Dots ..................................................................... 11
  - Summary ....................................................................................... 14
  - Case Study: Hour 1 ....................................................................... 14

**HOUR 2: SAP Business Basics** .................................................. 17
  - The SAP Business Roadmap ...................................................... 17
  - SAP’s Purpose: To Run the Business ....................................... 19
  - Other Perspectives: Mapping Business Needs to SAP Applications .................................................. 23
  - A Sampling of SAP Business Processes ................................. 26
  - Summary ....................................................................................... 28
  - Case Study: Hour 2 ....................................................................... 29

**HOUR 3: SAP Technology Basics** ........................................ 31
  - SAP Technology .......................................................................... 31
  - What Is the Best Platform for SAP? ......................................... 37
  - Memory: Fast but Volatile ......................................................... 40
  - Storage: Hard Disks and Other Disks ..................................... 40
  - SAP System Landscapes ......................................................... 42
  - Database Basics for SAP ........................................................ 45
  - Future Developments .............................................................. 47
  - Summary ....................................................................................... 48
  - Case Study: Hour 3 ....................................................................... 48
HOUR 4: SAP Project Basics ..................................................... 51
  Running an SAP Project: The Basics .................................. 51
  First Steps in Pursuing an SAP Project .............................. 52
  The SAP Project Lifecycle ................................................. 54
  Organizing a Project by Tasks ........................................... 59
  Organizing a Project by Roles .......................................... 61
  Summary ........................................................................... 65
  Case Study: Hour 4 ............................................................ 65

Part II: SAP Applications and Components

HOUR 5: Overview of SAP Applications and Components .......... 69
  A Real-Time Vision ........................................................... 69
  SAP Business Suite Components ....................................... 72
  SAP NetWeaver Components ............................................. 75
  Small and Medium Enterprises .......................................... 76
  SAP Business One ............................................................ 78
  SAP Business ByDesign ..................................................... 79
  SAP All-in-One ............................................................... 81
  Selecting the “Best” SME Solution ..................................... 83
  Choosing SAP SME Offerings over Business Suite ............... 85
  Summary ........................................................................... 86
  Case Study: Hour 5 ............................................................ 86

HOUR 6: SAP NetWeaver and HANA ....................................... 87
  The Foundation for SAP ..................................................... 87
  The SAP NetWeaver Umbrella: Six Areas ............................ 88
  Bringing It All Together ..................................................... 93
  The Business Case for HANA .............................................. 97
  HANA Cloud Offerings ..................................................... 104
  Summary ........................................................................... 107
  Case Study: Hour 6 ............................................................ 107

HOUR 7: SAP ERP and Business Suite ................................. 109
  SAP ERP Business Scenarios ............................................ 110
  Summary ........................................................................... 126
  Case Study: Hour 7 ............................................................ 127
HOUR 8: SAP on the Cloud and New SAP Solutions .......................... 129
  What Kind of Cloud? ....................................................... 129
  SAP’s Way to the Cloud .................................................. 133
  Newly Acquired SAP Solutions ........................................... 136
  Summary ........................................................................... 145
  Case Study: Hour 8 ........................................................... 145

Part III: SAP for Business Users

HOUR 9: A Business User’s Perspective on Using SAP ......................... 149
  Before SAP Is Deployed: The Business User’s Role ......................... 150
  A Sampling of SAP Business Transactions .................................. 153
  Summary ........................................................................... 159
  Case Study: Hour 9 ............................................................ 160

HOUR 10: Using SAP’s Traditional and New User Interfaces ................. 161
  The SAPGUI ....................................................................... 161
  SAPGUI Elements and Other Basics ........................................ 165
  SAPGUI Navigation Basics .................................................. 166
  SAPGUI Screen Objects ..................................................... 170
  Using the Windows Clipboard ............................................... 172
  Additional Legacy Interfaces ................................................. 172
  SAP’s New User Interfaces and Tools ...................................... 174
  Summary ........................................................................... 178
  Case Study: Hour 10 ........................................................... 178

HOUR 11: Using SAP ERP to Do Your Job ........................................... 179
  The Four SAP Business Scenarios ........................................... 179
  Other Popular Business Transactions ....................................... 193
  Summary ........................................................................... 196
  Case Study: Hour 11 ........................................................... 196

HOUR 12: Using Other SAP Business Suite Applications ..................... 197
  Using SAP SRM .................................................................. 197
  Using SAP CRM .................................................................. 199
  Using SAP SCM .................................................................. 200
Using SAP PLM .................................................. 202
Summary ......................................................... 203
Case Study: Hour 12 ............................................ 203

**HOUR 13: Using SAP for Reporting** .................................. 205
Types of SAP Reporting Users ........................................ 205
SAP Business Objects ............................................. 208
SAP NetWeaver BW Family ......................................... 211
SAP ERP Operational Reporting Tools ............................. 212
Legacy SAP Reporting Options .................................... 213
Summary ......................................................... 219
Case Study: Hour 13 ............................................ 220

**HOUR 14: Using Simplified Finance and Office Integration** ............ 221
SAP Simple Finance Add-On ........................................ 221
Integrating SAP with Desktop Applications ......................... 230
Using %pc to Download Data ...................................... 231
OpenText Archiving for SAP ........................................ 239
SAP and Adobe Forms ............................................ 240
Summary ......................................................... 241
Case Study: Hour 14 ............................................ 241

**Part IV: SAP for IT Professionals** ....................................
**HOUR 15: An SAP Project Manager’s Perspective** ....................... 245
The SAP Implementation Methodology ............................... 245
Introduction to ASAP ............................................... 246
SAP Program and Project Leadership ............................... 251
The Project Team’s Subteams ....................................... 256
Project Team Member Characteristics ............................. 260
Project Tools and Other Methodologies ........................... 260
Project Closeout .................................................. 261
Summary ......................................................... 262
Case Study: Hour 15 ............................................ 262
HOUR 16: A Technology Professional's Perspective on SAP

- Shifting Focus: From Business to Technology ......................................................... 265
- Understanding the SAP Quicksizer ........................................................................ 270
- Beyond the Quicksizer: Measurement-Based Sizing ................................................. 272
- Can Performance Be Guaranteed? ............................................................................ 273
- Understanding SAP Availability ................................................................................ 274
- Security Considerations ............................................................................................. 278
- Network Considerations ............................................................................................ 282
- Operational Considerations ....................................................................................... 284
- Summary ..................................................................................................................... 286
- Case Study: Hour 16 .................................................................................................... 286

HOUR 17: An SAP Developer's Perspective

- Programming Tools .................................................................................................... 287
- Developer and SAP Methodologies .......................................................................... 290
- Configuration and the SAP IMG .............................................................................. 293
- Different Views of the IMG ...................................................................................... 294
- Additional IMG Fundamentals .................................................................................. 297
- Summary ..................................................................................................................... 300
- Case Study: Hour 17 .................................................................................................... 301

HOUR 18: SAP Installation and Implementation

- First Steps .................................................................................................................... 303
- SAP Installation Preparation ....................................................................................... 304
- Locating and Downloading SAP Software ................................................................. 306
- Infrastructure Readiness ............................................................................................. 311
- Installing the SAP Trial Version .................................................................................. 314
- HANA on Public Cloud Platforms .............................................................................. 316
- The SAP Cloud Appliance Library ............................................................................. 320
- Introducing SAP Single Sign-on .................................................................................. 322
- Summary ..................................................................................................................... 323
- Case Study: Hour 18 .................................................................................................... 323
| Case Study: Hour 18 Answers | 420 |
| Case Study: Hour 19 Answers | 421 |
| Case Study: Hour 20 Answers | 421 |
| Case Study: Hour 21 Answers | 422 |
| Case Study: Hour 22 Answers | 422 |
| Case Study: Hour 23 Answers | 423 |
| Case Study: Hour 24 Answers | 423 |
| Index | 425 |
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We Want to Hear from You!

As the reader of this book, you are our most important critic and commentator. We value your opinion and want to know what we’re doing right, what we could do better, what areas you’d like to see us publish in, and any other words of wisdom you’re willing to pass our way.

We welcome your comments. You can email or write to let us know what you did or didn’t like about this book—as well as what we can do to make our books better.

*Please note that we cannot help you with technical problems related to the topic of this book.*

When you write, please be sure to include this book’s title and author as well as your name and email address. We will carefully review your comments and share them with the author and editors who worked on the book.

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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, Xcelsius, 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

HOUR 1  SAP Explained  7
HOUR 2  SAP Business Basics  17
HOUR 3  SAP Technology Basics  31
HOUR 4  SAP Project Basics  51
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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 & Veitinger, 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.

![Diagram of pizza options](image)

**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).

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

![Diagram of Cloud Options](image)

**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 adopting 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
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,

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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](image)

**FIGURE 8.3**
Subscription page for HANA App Services on the SAP Service Catalog Portal.\(^6\)

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**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.

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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).
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. 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.

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7  See https://service.ariba.com/Discovery.aw.
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 timesheets and budgetary reports down to employee reviews are available as structured workflows.
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 captures 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).

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 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

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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](image)

The hybris Product Cockpit manages product information and catalogs (courtesy of hybris).  

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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\(^\text{10}\) 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.

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**

<table>
<thead>
<tr>
<th>HOUR</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>A Business User's Perspective on Using SAP</td>
<td>149</td>
</tr>
<tr>
<td>10</td>
<td>Using SAP's Traditional and New User Interfaces</td>
<td>161</td>
</tr>
<tr>
<td>11</td>
<td>Using SAP ERP to Do Your Job</td>
<td>179</td>
</tr>
<tr>
<td>12</td>
<td>Using Other SAP Business Suite Applications</td>
<td>197</td>
</tr>
<tr>
<td>13</td>
<td>Using SAP for Reporting</td>
<td>205</td>
</tr>
<tr>
<td>14</td>
<td>Using Simplified Finance and Office Integration</td>
<td>221</td>
</tr>
</tbody>
</table>
Index

Symbols
%pc command, 231
  AD (Active Directory) integration, 239
  creating form letters in Word, 233-235
  creating reports in Access, 236-238
  exporting data from Excel, 232
  importing data into Access, 235-236
  SharePoint integration, 238-239

Actual End Date field, Status Information (IMG), 300
Actual Start Date field, Status Information (IMG), 300
Actual Work Days field, Status Information (IMG), 300
AD (Active Directory), integration, 239
adapters, NetWeaver PI (Process Integration), 89-90
Adobe PDF files, using with Interactive Forms, 240-241
Advanced Business Application Development (ABAP), 289
agility, business, 20-21
All (Auto-ID Infrastructure), 75
Alert Overview, 354-355
All-in-One, 77, 81
  cost, 83-84
  features, 82-84
  functionality, 81-84
  partners, 82
  solution centers, 82
Amazon, cloud innovation, 326
Americas' SAP Users' Group (ASUG), 401-402
Analytics (ERP), 73
APO (Advanced Planner and Optimizer), 74-75
  Supply Chain Management (SCM), 200-201
APO Demand Planning (DP) module, 121
ABAP (Advanced Business Application Programming), 289
  list processing, 213
Accelerated SAP (ASAP). See ASAP (Accelerated SAP)
Access
  creating reports with Report Wizard, 236-238
  importing SAP data into, %pc command, 235-236
access strategy tasks, projects, 61
ACI (Application Centric Infrastructure), 283

A
Application Centric Infrastructure (ACI), 283
application security team, projects, 259
application software foundation, applications, 9-11
mapping business needs to, 23-26
combining all four perspectives, 25-26
functional perspective, 24
project implementation perspective, 25
technical perspective, 24-25
platforms, 37-39
big iron, 39
blades, 39
three-tier, 38-39
two-tier, 38-39
architecture (business), 17-19, 31
archiving, OpenText, 239-240
Ariba, 138-140
acquisition, 72
Discovery portal, 139-140
SaaS (Software as a Service), 339-341
ASAP (Accelerated SAP), 21, 246-248, 290
business blueprinting phase, 248-249
final preparation phase, 250
go-live support phase, 250-251
methodology limitations, 291
operate (run) phase, 251
project preparation phase, 248
realization phase, 249-250
Assistant (SAP), 230
ASUG (Americas’ SAP Users’ Group), 401-402
asynchronous update work process, 44
ATP (Availability-to-Promise) module, 122
availability, 274-276
disaster recoverability, 276-278
high availability (HA), 278
MTBF (mean time between failures), 275
MTTR (mean time to repair), 275
planning for downtime, 276
stability requirements, 276
Availability-to-Promise (ATP) module, 122
B
background work process, 44
balancing books, 27-28
Basis team, staffing, 284-285
BBP (Business to Business Procurement), 70
BI (business intelligence) users, reporting, 206
big iron platform, versus blades, 39
blades, versus big iron, 39
blueprinting, business. See business blueprinting
blueprints and analysis tasks, projects, 60
BO (Business Objects), 208
Crystal Reports, 209
Explorer, 208-209
Web Intelligence, 210-211
Xcelsius Enterprise, 210
bottlenecks, financial closings, eliminating, 226-227
BPAs (business process analysts), 251, 257
BPM (Business Process Management), 92, 288, 406
business acceptance testing, project lifecycle, 56-57
business agility, 20-21
Business All-in-One, 77, 81
cost, 83-84
features, 82-84
functionality, 81-84
partners, 82
solution centers, 82
business analysts, 63
business applications, 9-11
mapping business needs to, 23-26
combining all four perspectives, 25-26
functional perspective, 24
project implementation perspective, 25
technical perspective, 24-25
platforms, 37-39
big iron, 39
blades, 39
two-tier, 38-39
three-tier, 38-39

business architecture, 17-19, 31

business blueprinting, 21-22
ASAP (Accelerated SAP), 248-249
development phase, 292

Business by Design (BBD), 77, 79-80, 133
adaptability, 80
challenges, 80-81
cost, 83-84
features, 84
functionality, 84
functionality and features, 80
implementation, 80
SaaS approach, 80

business configuration teams, projects, 257

business continuity/disaster recovery (DR) leads, 64

business ethics, 385-386

Business Intelligence (BI), 19-20
users, reporting, 206

Business Objects (BO). See BO (Business Objects)

Business One (B1), 78

cost, 83-84
development, 79
features, 84
functionality, 84

business transactions, 153, 193, 196
changing outbound delivery, 158

Corporate Services, 192
Real Estate module, 192
Transportation submodule, 192

creating new sales orders, 154-156

Cross-Application (CA) module, 194
T-codes, 194
displaying existing sales orders, 156-157
displaying list of orders, 158

Human Capital Management (HCM), 116-118
Operations, 115
Supply Chain Management, 121-123
Treasury Management module, 113

Business Suite, 72-73, 109-110

CRM (Customer Relationship Management), 74
ERP (Enterprise Resource Planning), 73-74
migrating to sFIN, 229

SCM (Supply Chain Management), 74-75
SME solutions, choosing over, 85-86

SRM (Supplier Relationship Management), 75

Business to Business Procurement (BBP), 70

business transactions, 153, 193, 196
changing outbound delivery, 158

Corporate Services, 192
Real Estate module, 192
Transportation submodule, 192

creating new sales orders, 154-156

Cross-Application (CA) module, 194
T-codes, 194
displaying existing sales orders, 156-157
displaying list of orders, 158
business transactions

Environment, Health, and Safety (EH&S) module, 195

ERP Financials
Financial and Managerial Accounting module, 180-184
Financial Supply Chain Management (FSCM) module, 183-184
Treasury Management module, 182-183

ERP Operations, 184

ERP Human Capital Management (HCM), 191

T-codes, 191

logging on using Logon Pad, 153-154

Operations
Enterprise Asset Management module, 187-188
Materials Management (MM) module, 188-189
Production Planning (PP) module, 186
Quality Management (QM) module, 189-191
Sales and Distribution (SD) module, 184-185
stopping runaway, SAPGUI, 166-167
Supply Chain Management (SCM), 201

business user careers, 373, 386
business and functional positions, 379-380
certifications, 374-376
experience, 374-376
functional project and program management, 380
functional trainers and testers, 381
intangibles, 383-386
networking, 374-376
preparing for, 381-386
SAP customers, 379
SAP partners, 378-379
SAP SE, 376-377
types, 373-374

business user roles, 150
functional configuration specialists, 151-152
power users, 152-153
row leaders, 150-151

Business Warehouse, 19-20, 70
NetWeaver, 90
BusinessObjects Analysis for Office, WIP analysis, 226
business-to-business (B2B) adapters, NetWeaver PI (Process Integration), 89-90

BW (Business Warehouse), NetWeaver, 96-97, 211-212
Business Explorer, 212
BW Powered by SAP HANA, 211-212
BWA (Business Warehouse Accelerator), 211
BW Expert newsletter, 404

C

CA (Cross-Application) module, 194
T-codes, 194

CAL (Cloud Appliance Libraries), 320-321
careers
business users. See business user careers
IT professionals, 389, 391, 394, 396
developers, 395-396
hardware and infrastructure specialists, 394
intangibles, 396
platform administrators, 395
preparing for, 393-394
programmers, 395-396
SAP customers, 390-391
SAP partners, 390
SAP SE, 389-390
technical project managers, 392
technical trainers, 392
testers, 392
resources, 408-409

CCMS (Computing Center Management System), 346

CE (Composition Environment), 91, 290
certification, obtaining, 383-384
calculate change management managers, 63
Cross-Application (CA) module

CIDX adapter (PI), 89
Cisco Application Centric Infrastructure (ACI), 283
classical hosting model, cloud services, 132
clients, 12-13
Clipboard, 172
closeout, projects, 261-262
cloud, 133, 145, 325-326
Amazon, 326
Ariba, 138-140
CAL (Cloud Appliance Libraries), 320-321
Concur, 142-143
Fieldglass, 140-141
HANA, public cloud platforms, 316-320
hybrid, 328
hybris, 143-145
IaaS, 330
Monsoon, 334-335
DevOps mode, 335
open source, 336
OpenStack, 336-337
moving systems to, 330-331
nonproduction systems, 332
PaaS (Platform as a Service), 329
private, 327
public, 327-328
SaaS (Software as a Service), 329
Ariba, 339-341
hybris, 342
integration, 337-342
SuccessFactors, 338-339
SAP solutions, 133-134
services, 331-334
classical hosting model, 132
PaaS (Platform as a Service), 132
on-premise model, 132
SaaS (Software as a Service), 132
terminology, 131
SuccessFactors HCM suite, 136
transition and exit strategies, 334
versus virtualization, 330
WebAS (Web Application Server), 329
Cloud Appliance Libraries (CAL), 320-321
cloud options, HANA, 104-106
cloud storage, 42
columns, orientation, 99-100
commands, %pc, downloading data, 231-239
Commerce suite (hybris), 144
communication planning, PMO (project management office), 255
communications tasks, projects, 59
Compensation Management module (Success Factors HCM suite), 137-136
Compensation module (Success Factors HCM suite), 137
components, 9-10
Composite Applications, 20
Composition (NetWeaver), 76, 91
Composition Environment (CE), 91, 290
Computing Center Management System (CCMS), 346
Concur, 142-143
acquisition, 72
Travel & Expense app, 142
TripIt, 143
conferences, 406-408
configuration phase, development, 292
configuration tasks, projects, 60
Configuration Validation Check (SolMan), 356-357
containers, security policy, 280
contingency plans, 20
Controlling module (Financials), 112
Corporate Services, 192
Real Estate module, 192
T-codes, 192
Corporate Services (ERP), 73, 115-116
cost, SME (Small and Mid-sized Enterprises) solutions, 83-84
CPUs (central processing units) load distribution, 34-36
memory slower than cache, 99
CRM (Customer Relationship Management), 9, 19, 70, 74, 199
T-codes, 199
CRM Expert newsletter, 404
Cross-Application (CA) module, 194
T-codes, 194
cross-application business processes, 10-11
Crystal Reports (BO), 209
Customer Relationship Management (CRM). See CRM (Customer Relationship Management)
customers
business user careers, 379
IT professionals, 390-391
customizations tasks, projects, 60
cutover and go-live tasks, projects, 61
documentation
business processes, 53
IMG (Implementation Guide), 297
donkey and the bag scenario, 36
downloading data, %pc command, 231
AD (Active Directory) integration, 239
creating reports in Access, 236-238
creating SAP form letters in Word, 233-235
exporting data from Excel, 232
importing data into Access, 235-236
SharePoint integration, 238-239
downtime, planning for, 276
design and construction, project lifecycle, 56
developer methodologies, 290-291
implementation development phases, 291
business blueprint, 292
creation, 292
final preparation, 292-293
go-live, 292-293
project preparation, 291-292
testing, 292-293
Run SAP roadmaps, 293
Developer Network, 400
Developer Studio (NetWeaver), 91
developers, careers, 395-396
development (DEV) systems, 42
development and customization teams, projects, 258
development leads, 63
development tools, 287
DevOps mode, Monsoon, 335
dialog boxes, 171
dialog work process, 44
disaster recovery, 276-278
Discovery portal (Ariba), 139-140
display fields, SAPGUI, 170
E	Early Watch Alerts, 272
Early Watch Reports, 272-273
EBP (Enterprise Buyer Professional), 70
Ecosystem, 400
EDI/FACT/ANSI X.12 adapter (PI), 89
EH&S (Environment, Health, and Safety) module, 195
t-codes, 195
EIS (Executive Information System), 213
EM (Event Management), 75
EIS (Executive Information System), 213
data compression, HANA, 101
data tasks, projects, 61
data team, projects, 258-259
database administrators, 63
database servers, installation, 313
databases, 45-46
future developments, 47-48
HANA
architectures, 100-101
migrating during upgrades, 365
public cloud platforms, 316-320
indexes, 46
migration, 363-365
safe migration, 47
tables, 46-47
orientation, 99-100
datacenter operators, 64
day-to-day monitoring, Solution Manager, 354-357
decision makers, reporting, 206
default profile, instances, 45
defects tasks, projects, 60
disaster recovery, 276-278
discovery portal (Ariba), 139-140
Employee Central (Success Factors HCM suite), 137
Employee Self Service (ESS). See ESS (Employee Self-Service)
Employee Self-Service (ESS), 118
Employee tab, Status Information (IMG), 300
enhancements, 360-361, 369
high-level project planning, 366-367
enqueue work process, 44
Enterprise Asset Management module, 116, 187-188
T-codes, 188
Enterprise Controlling module (Financials), 113
Enterprise IMG (Implementation Guide), 295
Enterprise Learning (SAP), 117
Enterprise Resource Planning (ERP). See ERP (Enterprise Resource Planning)
Enterprise Search (ES), NetWeaver, 90-91
environment, hardening, 279-281
Environment, Health, and Safety (EH&S) module, 195
T-codes, 195
ERP (Enterprise Resource Planning), 9, 12, 19-20, 27-28, 73-74, 109-111, 196
ABAP list processing, 213
Analytics, 73
Corporate Services, 73, 115-116, 192
Real Estate module, 192
Transportation submodule, 192
Customer Relationship Management (CRM), 118-120
Financials, 73, 111-114, 180-184
Controlling module, 112
Enterprise Controlling module, 113
Financial and Managerial Accounting module, 111-112, 180-184
Financial Supply Chain Management (FSCM) module, 113, 183-184
Treasury Management module, 113, 182-183
GRC (Governance, Risk, and Compliance), 125-126
HCM (Human Capital Management), 73
Human Capital Management (HCM), 116-118, 191
T-codes, 191
Human Resources information system, 214
Operations, 73, 115, 184
Enterprise Asset Management module, 187-188
Materials Management (MM) module, 188-189
Production Planning (PP) module, 186
Quality Management (QM) module, 189-191
Sales and Distribution (SD) module, 184-185
Report Painter, 212
Supply Chain Management, 121-123
ESS (Employee Self-Service), 26-27
ethics, 385-386
events (SAP), 406-408
Excel, exporting SAP data from, %pc command, 232
Exchange, integration, 230
Executive Information System (EIS), 213
executive SAP business sponsor/leaders, 62
executive steering committee, 251-252
experience, leveraging, 382
Explorer (BO), 208-209
exporting
data from Excel, %pc command, 232
VMs (virtual machines), 331
F
features, SME (Small and Mid-sized Enterprises) solutions, 84
Fieldglass, 140-141
acquisition, 72
job posting template, 141
management dashboard, 141
fields
SAPGUI, 167-168
display, 170
input, 168-169
Status Information (IMG), 299-300
File/FTP adapter (PI), 89
final preparation phase
ASAP, 250
development, 292-293
Financial Accounting Benchmark, 27-28
Financial and Managerial Accounting module, 180, 183-184
CO submodules, 181
FI submodules, 180-181
T-codes, 181
financial closings, eliminating bottlenecks, sFIN (Simple Finance), 226-227
Financial Supply Chain Management (FSCM) module, 113, 183
submodules, 183-184
T-codes, 184
Treasury Management module, 113, 182
submodules, 182-183
T-codes, 183
Financials Expert newsletter, 404
Fiori, 94
dashboard, 226
Launchpad, 174-176
fit/gap analysis, software vendors, 53
form letters, creating in Word, %pc command, 233-235
forms, PDF, using with Interactive Forms, 240-241
foundation management,
NetWeaver, 88
Foundation Management (NetWeaver), 76
fringe business functions, 382-383
functional architects, 62-63
functional configuration specialists, 151-152
functional roles, projects, 62-63
functional row leaders, 151
functional support engineers, 63
functionality, SME (Small and Mid-sized Enterprises) solutions, 84
G
gateway work process, 44
General Report Selection, 214-215
general support roles, projects, 63-64
Global Trade Services (GTS), 126
go-live phase, development, 292-293
go-live support phase (ASAP), 250-251
GRC (Governance, Risk, and Compliance), 125-126
GTS (Global Trade Services), 126
H
HA (high availability), 278
Hadoop, 102
HANA, 37, 40, 87-88, 97-98, 107
cloud options, 104-106
data compression, 101
database architectures, 100-101
datacenter integration, 103-104
future developments, 47-48
HANA Cloud Platform mobile services (HCPms), 96
HCM (Human Capital Management),
SuccessFactors suite, 136
HCP (HANA Cloud Platform), 134-135
HEC (HANA Enterprise Cloud), 134-135
hot data, 102
Infrastructure Services, 104
memory, 101-104
delivery, 103
logs, 102
savepoints, 102
volatile and persistent storage, 102
migrating during upgrades, 365
public cloud platforms, 316-320
access, 320
deployment process, 317-320
size and timing limitations, 317
Studio, 103
hard disks, 40-41
hardware, 32-33
CPUs, load distribution, 34-36
hard disks, 40-41
memory, 40
servers, 33
big iron, 39
blades, 39
three-tier, 38-39
two-tier, 38-39
specialists, 394
system horsepower, 36-37
system performance, 33-36
HCM (Human Capital Management). See Human Capital Management (HCM)
HCP (HANA Cloud Platform), 104, 134-135
HDD (hard-disk drive), 41
HEC (HANA Enterprise Cloud), 104, 134-135
Hector, Hans-Werner, 69
Help, IMG (Implementation Guide), 297
Help Portal, 400
high availability (HA), 278
high-activity users, 269
HL7 adapter (PI), 89
Hopp, Dietmar, 69
horsepower, system, 36-37
hosted SME solutions, 85
hot data, HANA, 102
HR Expert newsletter, 404
HTTP(S) adapter (PI), 89
Human Capital Management (HCM), 116-118, 191
PA (Personal Administration) module, 116-117
t-codes, 191
hybrid cloud, 328
hybris, 143-145
Commerce suite, 144
SaaS (Software as a Service), 342
hypervisor, 282

I
iaas, cloud services, 330
IBM 3270/5250 adapter (PI), 89
IDOC adapter (PI), 89
IMG (Implementation Guide), 293-294, 297
documentation, 297
Help, 297
release notes, 300
Status Information, 298-300
views, 294-296
Enterprise IMG (Implementation Guide), 295
Project IMGs (Implementation Guides), 295-296
Reference IMG (Implementation Guide), 295
Upgrade Customizing IMGs (Implementation Guides), 296
implementation
development phases, 291
business blueprint, 292
configuration, 292
final preparation, 292-293
go-live, 292-293
project preparation, 291-292
testing, 292-293
IMG (Implementation Guide), 293-294
views, 294-296
Implementation Guide (IMG). See IMG (Implementation Guide)

importing
SAP data into Access, %pc command, 235-236
VMs (virtual machines), 331

Identity Management (NetWeaver), 88
indexes (database), 46
industry solutions, 11
in-flight transactions, stopping, SAPGUI, 166-167

Information Lifecycle Management (NetWeaver), 90
Information Management (NetWeaver), 76, 90
Information Systems, General Report Selection, 214-215
InfoSet Query, 218-219
InfoSets, 216-217
administrative decisions, 217-218
infrastructure, specialists, 394
initiation, project lifecycle, 55
in-memory, 98-99
input fields, SAPGUI
   displaying possible entries for, 168-169
   editing data in, 169
   required, 169
Insert mode, SAPGUI, 168
InsiderPROFILES, 403
installation
database server, 313
SAP, 303-304
infrastructure readiness, 311-314
locating and downloading software, 307-311
post-installation tasks, 314
preparation, 304-307
software, 314
trial version, 314-316

Installation Guide (SolMan), 305-307
Installation Master Guides, 265-266
instance profile, 27-28, 42, 45
integration
   AD (Active Directory), 239
   SharePoint, 238-239
integration team, projects, 258
interactive forms, using PDF forms, 240-241
interfaces, 161, 172, 174, 178
Fiori Launchpad, 174-176
JavaGUI, 173
NetWeaver, 94-95
NetWeaver Business Client (NWBC), 173
SAPGUI. See SAPGUI
SAPUI5, 177
Screen Personas, 176-177
UI Theme Designer, 177
Web IDE (integrated development environment), 177
WebGUI, 173
Inventory Collaboration Hub (SCM), 75

IT professionals, careers, 389, 391, 394, 396
developers, 395-396
development, 395-396
hardware and infrastructure specialists, 394
intangibles, 396
platform administrators, 395
preparing for, 393-394
programmers, 395-396
SAP customers, 390-391
SAP partners, 390
SAP SE, 389-390
technical project managers, 392
technical trainers, 392
testers, 392
ITtoolbox, 405
ITtoolbox for Careers, 409

J-K

Jam module (SuccessFactors HCM suite), 137
Java, 289-290
JavaGUI, 173
JDBC adapter (PI), 89
JMS adapter (PI), 89
job posting template, Fieldglass, 141
just in-memory, 98
keyboard, SAPGUI, navigating, 166
Launchpad (Fiori), 174-176
leadership, projects, 62
  executive steering committee, 251-252
PMO (project management office), 254-256
program managers, 253-254
project managers, 253-254
project sponsors, 253
Learning module (Success Factors HCM suite), 137
Learning Solution (SAP), 117
ledgers, sFIN (Simple Finance), 228
legal patches, 117, 360
lifecycle (project), 54-59
  business acceptance testing, 56-57
design and construction, 56
initiation, 55
operational stabilization, 59
production cut-over preparation, 58
  prototyping, 55
SIT (system integration testing), 56
Lightweight dashboard users, 206
list of orders, displaying, 158
load, system, predicting, 268-270
load distribution, CPUs, 34-36
load testing, 57
logging on using Logon Pad, 153-154
Logon Pad, 153-154, 163-164
logs, HANA, 102
low-activity users, 269
Lumira, 95
LVM (Landscape Virtualization Management), 92-93, 351
M
MADP (mobile application development platform), 289
MAI (Monitoring and Alerting Infrastructure), Solution Manager, 351-350
management dashboard (Fieldglass), 141
management tools, 345
CCMS (Computing Center Management System), 346
  database monitoring, 352
LVM (Landscape Virtualization Management), 351
Nagios, 352-353
Solution Manager, 346-350
day-to-day monitoring, 354-357
Manager Self-Service (MSS), 118
Managing Your SAP Projects conference, 407
Manufacturing, 114-115
mapping business needs to applications, 23-26
  combining all four perspectives, 25-26
  functional perspective, 24
  project implementation perspective, 25
technical perspective, 24-25
Master Data Management (NetWeaver), 90
master data row leaders, 151
Master Guides, Installation, 265-266
Materials Management (MM) module, 115, 188-189
  T-codes, 189
mean time between failures (MTBF), 275
mean time to repair (MTTR), 275
measurement-based sizing, 272-273
medium-activity users, 269
memory, 40
  HANA, 101-104
delivery, 103
  logs, 102
  savepoints, 102
just in-memory, 98
in-memory, 98-99
  persistent storage, 102
slower than CPU cache, 99
volatile storage, 102
message work process, 44
Middleware (NetWeaver), 76, 89-90
migration, 369
database, 47
OS/DB, 363-365
  versus upgrades, 362-363
mobile application development platform (MADP), 289
mobile platform, NetWeaver, 95-96
modules, 9-10, 12
   Corporate Services, 115-116
   Real Estate, 192
   Transportation, 192
Cross-Application (CA) module, 194
   T-codes, 194
Customer Relationship Management (CRM), 199
Environment, Health, and Safety (EH&S), 195
ERP Human Capital Management, PA (Personal Administration), 116-117
ERP Operations, 115
Financials
   Controlling, 112
   Enterprise Controlling, 113
   Financial and Managerial Accounting module, 111-112, 180-182
   Financial Supply Chain Management (FSCM), 114, 183-184
   Treasury Management, 113, 182-183
Operations
   Enterprise Asset Management module, 187-188
   Materials Management (MM), 188-189
   Production Planning (PP) module, 186
   Quality Management (QM), 189-191
   Sales and Distribution (SD) module, 184-185
SAP Supply Chain Management, 121-122
SuccessFactors HCM suite, 137-136
Monsoon, 334-335
   DevOps mode, 335
   open source, 336
   OpenStack, 336-337
mouse, SAPGUI, navigating, 166
MTBF (mean time between failures), 275
MTTR (mean time to repair), 275

N

Nagios, 352-353
NAS (network-attached storage) systems, 41
NetWeaver, 71, 75-76, 87-88, 93-94, 107
   BPM (Business Process Management), 92, 288
   Business Process Management, 76
   BW (Business Information Warehouse), 96-97
   BW (Business Warehouse), 211-212
   Business Explorer, 212
   BW Powered by SAP HANA, 211-212
   BWA (Business Warehouse Accelerator), 211
   CE (Composition Environment), 290
   Composition, 76, 91
   Fiori, 94
   Foundation Management, 76
   foundation management, 88
   Information Management, 76, 90
   interfaces, 94-95
   Lumira, 95
   LVM (Landscape Virtualization Management), 92-93
   Master Guide, 93
   Middleware, 76, 89-90
   mobile platform, 95-96
   NWBC (NetWeaver Business Client), 173
   NWDS (NetWeaver Developer Studio), 289-290
   PI (Process Integration), adapters, 89-90
   Team Productivity, 76, 90-91
   trial version, installing, 314-316
networking (business), 383
   installation preparation, 312
   NAS (network-attached storage) systems, 41
   SANS (storage area networks), 41-42
   newsletters, 404
   nonproduction systems, cloud, 332
   NWBC (NetWeaver Business Client), 173
   NWDS (NetWeaver Developer Studio), 289-290
Office
Access importing SAP data into, 235-236
Report Wizard, 236-238
BusinessObjects Analysis for Office, 226
Excel, exporting SAP data from, 232
integration, 230
SharePoint, integration, 238-239
Word, creating SAP form letters, 233-235
OLAP systems, column orientation, 99-100
OLTP systems
Business Suite, 110
row orientation, 99-100
Onboarding module (Success Factors HCM suite), 137
on-premise model, cloud services, 132
on-premise SME solutions, 85
open source, Monsoon project, 336
OpenStack, Monsoon, 336-337
OpenText, SAP archiving, 239-240
OpenUI5, 177
operate (run) phase (ASAP), 251
operating systems
installation preparation, 312-313
landscapes, 42-45
migration, 363-365
Operational Management, Structural Graphics, 213
operational reporting users, reporting, 206
operations
administration and management, 285
staffing Basis team, 284-285
Operations (ERP), 73, 115, 184
Enterprise Asset Management module, 187-188
T-codes, 188
Materials Management (MM), T-codes, 189
Materials Management (MM) module, 188-189
Production Planning (PP) module, 186
submodules, 186
T-codes, 186
Quality Management (QM) module, 189-190
submodules, 190-191
T-codes, 191
Sales and Distribution (SD) module, 184
submodules, 184-185
T-codes, 185
Oracle, 7
organizational change management leads, 64
Organizational Management, 117
organizing projects by roles, 61-62
business, 62-63
functional, 62-63
general support, 63-64
leadership, 62
technical, 63-64
organizing projects by tasks, 59
access strategy, 61
blueprints and analysis, 60
communications, 59
configuration, 60
customizations, 60
cutover and go-live, 61
data, 61
defects, 60
post go-live, 61
pre-sales, 59
program management, 60
project management, 60
security, 61
technical team, 61
testing, 60
training, 61
orientation, row versus column, 99-100
OS-level profiles, 27-28
outbound delivery, changing, 158-159
Outlook, integration, 230
output lists, General Report Selection, 215
Overwrite mode, SAPGUI, 168
P
PA (Personal Administration) module, 116-117
PaaS (Platform as a Service), cloud services, 132, 329
pain points, identifying, 53
Partner Cloud (HANA), 105
Partner Portal, 400
partners

business user careers, 390
IT professionals, 390
patches, legal, 117, 360
PDF forms, using with Interactive Forms, 240-241
Percent Complete field, Status Information (IMG), 299
Performance & Goals module (Success Factors HCM suite), 137
performance guarantees, 273-274
persistent storage, 102
Personal Administration (PA) module, 116-117
PI (Process Integration), 70
adapters, 89
NetWeaver, adapters, 89-90
Plan End Date field, Status Information (IMG), 299
Plan Start Date field, Status Information (IMG), 299
Plan Work Days field, Status Information (IMG), 299
planning projects
enhancements, 366-367
upgrades, 367-369
Plant Maintenance (PM) module, 115
platform administrators, careers, 395
platform security team, projects, 259
platforms, 37-39
big iron, 39
blades, 39
three-tier, 38-39
two-tier, 38-39
Plattner, Hasso, 69, 71-72
PLM (Product Lifecycle Management), 9, 19, 202-203
PMO (project management office), 254-256
communication planning, 255
quality planning, 255
risk and contingency planning, 256
scheduling, 255
scope management, 255
Portal (NetWeaver), 90-91
post go-live tasks, projects, 61
power users, 152-153
PP (Production Planning) module, 122
predicting system load, 268-270
PREPARE tool, 368
pre-sales tasks, projects, 59
private cloud, 327
processes
business, 10, 26
balancing books, 27-28
cross-application, 10-11
documenting, 53
ESS (Employee Self-Service), 26-27
selling stocks, 28
work, 44
Product Lifecycle Management (PLM). See PLM (Product Lifecycle Management)
production cut-over, preparation, 58
Production Planning (PP) module, 115, 122, 186
T-codes, 186
Professional Journal, 402-403
profiles, instances, 27-28
program directors, 62
program management tasks, 60
program managers, 251, 253-254
programmers, careers, 395-396
programming tools, 287-288
ABAP (Advanced Business Application Programming), 289
Java, 289-290
MADP (mobile application development platform), 289
NetWeaver Business Process Management (BPM), 288
NetWeaver Composition Environment (CE), 290
NetWeaver Developer Studio (NWDS), 289-290
SE80, 289
programs, functional management, 380
Project and Portfolio Management module, 116
Project IMGs (Implementation Guides), 295-296
project management office (PMO). See PMO (project management office)
project managers, 62, 251, 253-254
project preparation phase
ASAP, 248
development, 291-292
projects, 51, 65, 251, 262
ASAP (Accelerated SAP), 246-248
business blueprinting phase, 248-249
final preparation phase, 250
go-live support phase, 250-251
operate (run) phase, 251
project preparation phase, 248
realization phase, 249-250
closeout, 261-262
functional management, 380
high-level planning enhancements, 366-367
upgrades, 367-369
leadership
executive steering committee, 251-252
PMO (project management office), 254-256
program managers, 253-254
project managers, 253-254
project sponsors, 253
lifecycle, 54-59
business acceptance testing, 56-57
design and construction, 56
initiation, 55
operational stabilization, 59
production cut-over preparation, 58
prototyping, 55
SIT (system integration testing), 56
management, 245
SAP implementation methodology, 245-246
tasks, 60
technical, 392
methodologies, 260-261
organizing by roles, 61-62
business, 62-63
functional, 62-63
general support, 63-64
leadership, 62
technical, 63-64
organizing by tasks, 59
access strategy, 59
blueprints and analysis, 59
communications, 60
configuration, 60
customizations, 60
cutover and go-live, 61
data, 61
defects, 61
post go-live, 61
pre-sales, 59
program management, 60
project management, 60
security, 61
technical team, 61
testing, 60
training, 61
pursuing, 52-53
running, 51-52
sponsors, 253
subteams, 256-257
application and platform security teams, 259
business configuration teams, 257
data team, 258-259
development and customization teams, 258
integration team, 258
technical teams, 259-260
test teams, 258
team member characteristics, 260
tools, 260-261
prototyping, project lifecycle, 55
public cloud, 327-328
HANA, 316-320
Purchasing Planning module, 122

Q

quality assurance (QA)
systems, 42
Quality Management (QM)
module, 116, 189-191
submodules, 190-191
T-codes, 191
query groups, 216
administrative decisions, 217-218
QuickSizer, 270-271
questionnaires, 271
QuickViewer, 219
R

R/3 system, evolution, 109-111
radio buttons (SAPGUI), 171
Real Estate Management module, 116
Real Estate module, 192
T-codes, 192
realization phase (ASAP), 249-250
real-time transactions, 71-72
reconciliation, reducing, sFIN (Simple Finance), 225-226
Recruiting module (Success Factors HCM suite), 137
Reference IMG (Implementation Guide), 295
release managers, 63
release notes, IMG (Implementation Guide), 300
release updates, 360
Remaining Work Days field, Status Information (IMG), 300
remediation, upgrades, 368-369
Replace mode, SAPGUI, 168
Report Painter, 212
Report Wizard (Access), 236-238
reporting, 205, 212-213, 215-216, 219
ABAP list processing, 213
BO (Business Objects), 208
Crystal Reports, 209
Explorer, 208-209
Web Intelligence, 210-211
Xcelsius Enterprise, 210
creating reports in Access, Report Wizard, 236-238
Early Watch Reports, 272-273
EIS (Executive Information System), 213
ERP Human Resources information system, 214
General Report Selection, 214-215
InfoSet Query, 218-219
InfoSets, 216-217
administrative decisions, 217-218
NetWeaver BW (Business Warehouse), 211-212
Business Explorer, 212
BW Powered by SAP HANA, 211-212
BWA (Business Warehouse Accelerator), 211
query groups, 216
administrative decisions, 217-218
QuickViewer, 219
Report Painter, 212
report trees, 214
SAP Query, 218
Structural Graphics, 213
users, 205-207
RFC adapter (PI), 89
risk and contingency planning, PMO (project management office), 256
risk management, 20
roadmaps, 293
Run SAP, 293
Roles
business users, 150
functional configuration specialists, 151-152
power users, 152-153
row leaders, 150-151
leadership
executive steering committee, 251-252
PMO (project management office), 254-256
program managers, 253-254
project managers, 253-254
project sponsors, 253
project organization, 61-62
business, 62-63
functional, 62-63
general support, 63-64
leadership, 62
technical, 63-64
RosettaNet adapter (PI), 89
row leaders, 150-151
rows, orientation, 99-100
Run SAP, 59
roadmaps, 293
runaway transactions, stopping, SAPGUI, 166-167
running projects, 51-52
S

SaaS (Software as a Service), cloud services, 132, 329
Ariba, 339-341
hybris, 342
integration, 337-342
SuccessFactors, 338-339
Sales and Distribution (SD) module, 115, 184
submodules, 184-185
T-codes, 185
sales orders
creating, 154-156
displaying existing, 156-157
SAML (Security Assertion Markup Language), enabling SSO, 323
SANs (storage area networks), 41-42
SAP, 7-9, 14
administrators, 63
availability, 274-276
disaster recoverability, 276-278
high availability (HA), 278
MTBF (mean time between failures), 275
MTTR (mean time to repair), 275
planning for downtime, 276
stability requirements, 276
business acquisitions, 129, 136
business applications, 9-11
change manager, 63
changing, 359-360
competitors, 7
customers, 379
database administrators, 63
datacenter operators, 64
development leads, 63
founding, 8
functional architects, 62-63
functional support engineers, 63
implementation methodology, 245-246
installation, 303-304
infrastructure readiness, 311-314
locating and downloading software, 307-311
post-installation tasks, 314
preparation, 304-307
software, 314
trial version, 314-316
landscape, 266
organizational change management leads, 64
program directors, 62
project managers, 62
security/audit leads, 64
sizing, 267-268
measurement-based, 272-273
Quicksizer, 270-271
systems management leads, 64
team managers, 62
technical architects, 63
technical support engineers, 64
test managers, 63
SAP Assistant, 230
SAP business continuity/disaster recovery (DR) leads, 64
SAP Business Suite, 72-73
CRM (Customer Relationship Management), 74
ERP (Enterprise Resource Planning), 73-74
SCM (Supply Chain Management), 74-75
SRM (Supplier Relationship Management), 75
SAP Ecosystem, 400
SAP Enterprise Learning, 117
SAP Fans, 405
SAP FAQ, 406
SAP Interactive Forms, using PDF forms, 240-241
SAP IQ, warm data, 102
SAP ITtoolbox, 405
SAP Learning Solution, 117
SAP Manufacturing, 114-115
SAP NetWeaver PI (SAP NetWeaver Process Integration), 9
SAP Notes, 266
SAP Professional Journal, 402-403
SAP Query, 218
SAP SE careers
business users, 376-377
IT professionals, 389-390
SAP TechEd, 407
SAPGUI, 161-166
display fields, 170
fields, 167-168
input fields, 168-169
Insert mode, 168
Logon Pad, 163-164
navigating using mouse and keyboard, 166
Overwrite mode, 168
performing tasks using menu paths, 166
Replace mode, 168
screen objects, 170-172
dialog boxes, 171
radio buttons, 171
table controls, 172
trees, 171
stopping runaway transactions, 166-167
title bar, 165
user sessions, 164-165
WebGUI, 173
SAPinsider, 403
SAPPHIRE NOW event, 407
SAPS (SAP Application Performance Standard), 36-37
SAPUI5, 177
savepoints, HANA, 102
SCC (Supply Chain Cockpit), 122
scheduling, PMO (project management office), 200-201
SCM (Supply Chain Management), 10, 70, 74-75, 200-201
All (Auto-ID Infrastructure), 75
APO (Advanced Planner and Optimizer), 74-75
EM (Event Management), 75
Inventory Collaboration Hub, 75
T-codes, 201
SCM Expert newsletter, 404
scope management, PMO (project management office), 255
screen objects, SAPGUI, 170-172
dialog boxes, 171
radio buttons, 171
table controls, 172
trees, 171
Screen Personas, 176-177
SD Benchmark, 28
SE80, 289
search engines, most relevant versus complete answers, 98
SearchSAP.com, 406
Secure Network Communications (SNC), 279
security, 278-279
containers, policy, 280
hardening environment, 279-281
running systems, 281-282
tasks, projects, 61
security/audit leads, 64
Selection screens (General Report Selection), 215
self-services, Solution Manager, 357
selling stocks, 28
servers, 33
big iron, 39
blades, 39
database, installing, 313
installation preparation, 311
three-tier, 38-39
two-tier, 38-39
WebAS (Web Application Server), 329
Service Marketplace, 304-311, 400
service-oriented architecture (SOA), 133
sessions, SAPGUI, 164
ending and logging off, 164-165
sFIN (Simple Finance), 221
add-on, 221-229
as central ledger, 228
eliminating financial closings bottlenecks, 226-227
hybrid approach, 224-225
migrating from Business Suite, 229
reducing reconciliation efforts, 225-226
SharePoint, integration, 230, 238-239
SID (single system identifier), 42
Simple Finance (sFin). See sFIN (Simple Finance)
single system identifier (SID), 42
single-sign on (SSO), 322-323
SIT (system integration testing), 57
project lifecycle, 56
sizing, 267-268
measurement-based, 272-273
Quicksizer, 270-271
Small and Mid-sized Enterprises (SME). See SME (Small and Mid-sized Enterprises)
small business
Business All-in-One, 77, 81-84
Business by Design (BBD), 77, 79-81, 83-84
Business One (B1), 77-79, 83-84
Smart Business, Fiori dashboard, 226
SME (Small and Mid-sized Enterprises), 76-77, 86
    Business All-in-One, 77, 81-84
    Business by Design (BBD), 77, 79-81, 83-84
    Business One (B1), 77-79, 83-84
solutions
    choosing, 83-85
    choosing over Business Suite, 85-86
    compared, 77
    hosted, 85
    on-premise, 85
SNC (Secure Network Communications), 279
SNP (Supply Network Planning) module, 122
SOA (service-oriented architecture), 133
SOAP adapter (PI), 89
Software Download Center, 307-311
software vendors
    fit/gap analysis, 53
    selecting, 53
Softwarejobs.com, 408
solid-state drives (SSD), 41
Solution Manager, 88, 290, 303, 346-350, 358
    Alert Overview, 354-355
    Configuration Validation Check, 356-357
    dashboards, 349-351
    downloading, 310-311
    Installation Guide, 305-307
MAI (Monitoring and Alerting Infrastructure), 351-350
self-services, 357
System Recommendations, 355
technical monitoring, 347-349
SPNego, enabling SSO, 322-323
spool work process, 44
SRM (Supplier Relationship Management), 9, 19, 70, 75, 197
    T-codes, 197
SSD (solid-state drives), 41
SSM (SAP Solution Manager), 70
SSO (single sign-on), 322-323
stakeholders, working with, 23
start profile, instances, 45
Status Information (IMG), 298-300
    Actual End Date field, 300
    Actual Start Date field, 300
    Actual Work Days field, 300
    Employee tab, 300
    Percent Complete field, 299
    Plan End Date field, 299
    Plan Start Date field, 299
    Plan Work Days field, 299
    Remaining Work Days field, 300
STMP/POP3/IMAP adapter (PI), 89
stock, selling, 28
storage area networks (SANs), 41-42
stress testing, 57
structures, databases, 47
Studio (HANA), 103
SuccessFactors
    acquisition, 72
    HCM suite, 136
    Compensation Management, 137-136
    SaaS (Software as a Service), 338-339
Succession & Development module (Success Factors HCM suite), 137
Supplier Relationship Management (SRM). See SRM (Supplier Relationship Management)
Supply Chain Cockpit (SCC) module, 122
Supply Chain Management (SCM). See SCM (Supply Chain Management)
Supply Network Planning (SNP) module, 122
Support Portal, 400
SWIFT adapter (PI), 89
synchronous update work process, 44
system horsepower, 36-37
system integration testing (SIT), 57
    project lifecycle, 56
system landscapes, 42-45
system peaks, 270
system performance, 33-36
System Recommendations (SolMan), 355
systems management leads, 64
T

tables (database), 46-47
controls, 172
orientation, row versus column, 99-100
tasks, project organization, 59
access strategy, 61
blueprints and analysis, 60
communications, 59
configuration, 60
customizations, 60
cutover and go-live, 61
data, 61
defects, 60
go-live, 61
pre-sales, 59
program management, 60
project management, 60
security, 61
technical team, 61
testing, 60
training, 61
T-codes
CRM (Customer Relationship Management), 199
Cross-Application (CA) module, 194
Enterprise Asset Management module, 188
Environment, Health, and Safety (EH&S) module, 195
Financial and Managerial Accounting module, 181
Financial Supply Chain Management (FSCM) module, 184
Materials Management (MM) module, 189
PLM (Product Lifecycle Management), 202-203
Production Planning (PP) module, 186
Quality Management (QM) module, 191
Real Estate module, 192
Sales and Distribution (SD) module, 185
SCM (Supply Chain Management), 201
SRM (Supplier Relationship Management), 197
Transportation submodule, 193
team managers, 62
Team Productivity (NetWeaver), 76, 90-91
technical architects, 63
technical monitoring, Solution Manager, 347-349
technical project managers, 392
technical roles, projects, 63-64
technical support managers, 64
technical teams, projects, 61, 259-260
technical trainers, 392
TechTarget, 406
terabytes (TB), 36-37
test managers, 63
test teams, projects, 258
testers, 392
functional, 381
testing
business acceptance, 56-57
project tasks, 60
upgrades, 368-369
testing phase, development, 292-293
three-tier platforms, versus two-tier, 38-39
title bar (SAPGUI), 165
TP-VS (Transportation Planning-Vehicle Scheduling) module, 122
traditional business concerns, 19
trainers
functional, 381
technical, 392
training classes, attending, 383-384
training tasks, projects, 61
transactions. See business transactions
Transora adapter (PI), 89
Transportation Planning-Vehicle Scheduling (TP-VS) module, 122
Transportation submodule, 192
Travel & Expense app (Concur), 142
Travel Management module, 116
Treasury Management module, 182-183
submodules, 182-183
T-codes, 183
Treasury Management module (Financials), 113
trees (SAPGUI), 171
trial version, installing, 314-316
Triplt (Concur), 143
two-tier platforms, versus three-tier, 38-39

U

UCCnet adapter (PI), 89
UI Theme Designer, 177
unit/function testing, 57
updates, release, 360
Upgrade Assistant, 368
Upgrade Customizing IMGs (Implementation Guides), 296
upgrades, 360-362, 365-366, 369
high-level project planning, 367-369
migrating HANA during, 365
versus migrations, 362-363
testing and remediation, 368-369
Upgrade Assistant, 368
user acceptance testing, 57
user groups, 401-402
user IDs, 162
user interfaces, 161, 172, 174, 178
  Fiori Launchpad, 174-176
  JavaGUI, 173
  NetWeaver Business Client (NWBC), 174
  SAPGUI. See SAPGUI
  SAPUI5, 177
  Screen Personas, 176-177
  UI Theme Designer, 177
Web IDE (integrated development environment), 177
WebGUI, 173
user sessions, 162
  SAPGUI, 164-165
users
  business. See business user careers
  high-activity, 269
  low-activity, 269
  medium-activity, 269
  reporting, 205-207
views, IMG (Implementation Guide), 294-296
virtualization
  versus cloud computing, 330
  LVM (Landscape Virtualization Management), 351
Visio, integration, 230
Visual Composer (NetWeaver), 91
VMs (virtual machines)
  exporting/importing, 331
  online transitioning, 331
volatile storage, 102
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