Application Administrators Handbook



Installing, Updating and Troubleshooting Software Kelly Bourne

Application Administrators Handbook

Installing, Updating and Troubleshooting Software

Kelly C. Bourne



AMSTERDAM • BOSTON • HEIDELBERG • LONDON NEW YORK • OXFORD • PARIS • SAN DIEGO SAN FRANCISCO • SINGAPORE • SYDNEY • TOKYO

Morgan Kaufmann Publishers is an imprint of Elsevier

Table of Contents

Cover image
Title page
Copyright
Dedication
Acknowledgments
Chapter 1. What Does an Application Administrator Do?
Abstract
1.1 Overview of the Position
1.2 Qualities of an Application Administrator
1.3 Where Do Application Administrators Come from?
1.4 What Jobs Can an Application Administrator Move up to?
1.5 Examples of Commercial off the Shelf (COTS) Software
1.6 Dealing with People, Lots of People
1.7 Questions to Ask If Responsibility for an Application Is Dropped on You
1.8 Administering Multiple Applications
1.9 Training Your Replacement or Backup
1.10 Summary
Chapter 2. Design
Abstract

- 2.1 Specifications
- 2.2 Interaction with Other Software Packages

2.3 Capacity Planning

- 2.4 Legacy Systems
- 2.5 Types of Hosting Models
- 2.6 Web Applications vs. Client-Server Applications
- 2.7 The Total Cost of Ownership (TCO) of Your Application

Chapter 3. Architecture

Abstract

- **3.1 Application Architecture**
- 3.2 Through Thick and Thin
- 3.3 Tiers
- 3.4 Computers, CPUs, and Cores
- 3.5 Virtual Servers
- 3.6 Fault Tolerant
- 3.7 Running Multiple Applications on a Server
- 3.8 Virtualized Desktops
- 3.9 High Availability/High Performance
- 3.10 Operating Systems
- 3.11 Windows vs. UNIX vs. Linux
- 3.12 Storage
- 3.13 What Does Your Server Look Like?
- 3.14 Scaling Up
- 3.15 Databases
- 3.16 Code Base
- 3.17 Middleware

Chapter 4. Features Common to Many Applications

- 4.1 Multiple Modules in an Application
- 4.2 Customizations and Configuration Changes
- 4.3 Reporting for Users
- 4.4 Reporting for Application Administrators
- 4.5 E-mail

4.6 User Preferences

4.7 Data

4.8 Feed Me! Getting Large Quantities of Data into or out of Your Application

- 4.9 Application Administration Tools
- 4.10 Console Administrator Tools for Support Software
- 4.11 Log Files
- 4.12 Navigation
- 4.13 Error Messages
- 4.14 Dashboards
- 4.15 Limitations
- 4.16 Workflow
- 4.17 Time Zone Trouble
- 4.18 Cookies

Chapter 5. Specifics About Your Application

Abstract

- 5.1 Browsers Supported by Your Application
- 5.2 Is Your Application Brittle?
- 5.3 Does the Application "Play Well" with Others?
- 5.4 Integrates well with Other Applications
- 5.5 License Keys
- 5.6 Troubleshooting Assistance
- 5.7 Using the Application in Unexpected Ways
- 5.8 Source Code
- 5.9 Phoning Home
- 5.10 Tracking Down Changes
- 5.11 Using Disk Space

Chapter 6. Taking Responsibility for an Application

- 6.1 Overview of the Application
- 6.2 Availability
- 6.3 Performance

- 6.4 User Base
- 6.5 Backups
- 6.6 Production Support
- 6.7 Hardware
- 6.8 Software
- 6.9 Database
- 6.10 Security
- 6.11 Training
- 6.12 Disaster Recovery
- 6.13 The Vendor
- 6.14 Interactions with Other Applications
- 6.15 Outputs: Reports
- 6.16 Outputs: Logs
- 6.17 Changing the Application
- 6.18 Monitoring

Chapter 7. Change Control Management

- Abstract
- 7.1 What Is Change Control Management?
- 7.2 Software Configuration Management (SCM) or Change Control Management?
- 7.3 Change Control Board
- 7.4 Environments
- 7.5 When to Move Changes into Production
- 7.6 Moving a Change into Production
- 7.7 Sarbanes-Oxley or SOX
- 7.8 Subverting the Change Control Process
- 7.9 Exceptions
- 7.10 Testing
- 7.11 Application Version Numbers

Chapter 8. Installing Software

Abstract

8.1 Be the Man, or Woman, with a (Project) Plan

8.2 How Many Installs have to Be Done?

8.3 Preparing for the Installation

8.4 User Acceptance Testing—UAT

8.5 Test Data

Chapter 9. Support Software

Abstract

9.1 Support Software on Application Servers

9.2 Support Software on User Workstations

Chapter 10. Updates and Patches

Abstract

10.1 What Needs to Be Updated?

10.2 Types of Upgrades and Patches

10.3 Who will Be Doing the Updates?

10.4 How Updates Can Be Distributed

10.5 Approaching Upgrades

10.6 Maintenance Weekends, aka Patch Weekends

10.7 Automatic Updates

10.8 Testing Software Updates

Chapter 11. Supporting Your Application

Abstract

11.1 What Is a Support Role?

11.2 SLA (Service-Level Agreement)

11.3 Support Staff

11.4 Odd Hours

11.5 Maintenance Windows

11.6 Supporting a 24 × 7 Operation

11.7 Support Tiers

11.8 Remotely Accessing Your Servers

11.9 Who Is Supporting You?

11.10 Succession Planning

Chapter 12. Disaster Recovery

Abstract

- 12.1 Disaster Recovery Is Not Business Continuity
- 12.2 What Constitutes a Disaster?
- 12.3 Types of Disasters that Must Be Prepared for
- 12.4 Organization-Wide Disaster Recovery Plan
- 12.5 DR Plan for Your Application
- 12.6 The DR Site
- 12.7 Keeping DR up with the Production Site
- 12.8 Testing the DR Environment
- 12.9 Comparing Production and DR Environments
- 12.10 Communications
- 12.11 Making the Decision to Activate the DR Site
- 12.12 Returning to Your Production Site

Chapter 13. Handling Problems with an Application

- Abstract
- 13.1 Handling an Outage
- 13.2 Contacting the Vendor
- 13.3 Preventing or Mitigating an Outage
- 13.4 Alerting Users About Problems
- 13.5 Is There a Work-Around to Avoid the Problem
- 13.6 Should You Gather Details or Immediately Get the System Back up

Chapter 14. Operational Activities

- Abstract
- 14.1 Daily Tasks
- 14.2 Weekly Tasks
- 14.3 Monthly Tasks
- 14.4 Quarterly Tasks
- 14.5 Annual Tasks

14.6 Tasks That Are Done on Demand

14.7 Checklists for Repetitive Activities

Chapter 15. Security

Abstract

- 15.1 Users Accounts
- 15.2 Best Practices for Users Accounts
- **15.3 Application Security**
- 15.4 Servers
- 15.5 Firewalls
- 15.6 Where Is Your Server Located?
- 15.7 Web Browsers
- 15.8 Hacking
- 15.9 Testing

Chapter 16. The Server

Abstract

- 16.1 Differences Between Servers
- 16.2 Server Hardware
- 16.3 Background Processes
- 16.4 What's Running on Your Server?
- **16.5 Environment Variables**

16.6 Path

- 16.7 Accounts on the Server
- 16.8 Troubleshooting Server Problems
- 16.9 Rebooting the Server

Chapter 17. Performance Tuning

- 17.1 What Tuning Goals Are Desired?
- 17.2 Tools to Measure Performance
- **17.3 Potential Bottlenecks**
- 17.4 Maintenance Tasks Can Help Performance

Chapter 18. The Network

Abstract

- 18.1 LANs, WANs, and Other "AN's"
- 18.2 Addresses
- 18.3 Domains
- 18.4 DNS—Domain Name System

18.5 Firewalls

- 18.6 DMZ—Demilitarized Zone
- 18.7 What's on Your Network

Chapter 19. Your Organization

Abstract

19.1 Whom Does the IT Department Report to?

19.2 Innovation

- 19.3 Technology Groups that Support You
- 19.4 Does Your Organization have a Data Center?
- 19.5 Are There Similar Applications in the Organization?
- 19.6 Learn from Other Application Administrators
- **19.7** Application Prioritization
- 19.8 Change Control
- **19.9 Documentation**
- **19.10** Documentation Location
- 19.11 Data Dictionary
- 19.12 Chargebacks
- **19.13 Impact of Other Applications**
- 19.14 The Culture of the Organization

Chapter 20. Users

Abstract

20.1 User Count

20.2 Tips for Dealing with Users

20.3 The User's Viewpoints

- 20.4 User Complaints
- 20.5 Handling User Requests for Changes
- 20.6 User Preferences
- 20.7 Training
- 20.8 Workflow Processes
- 20.9 Remotely Accessing the Application

Chapter 21. Leveraging the Vendor Relationship

- Abstract
- 21.1 Licensing
- 21.2 What Support Does the Vendor Offer?
- 21.3 Making the Most of Vendor Contacts
- 21.4 Challenges with Vendors
- 21.5 Worst Case Scenarios

Chapter 22. The Government Gets Involved

Abstract

- 22.1 Multiple Levels of Government
- 22.2 Government Agencies
- 22.3 Regulations
- 22.4 Privacy
- 22.5 Protecting Personally Identifiable Information
- 22.6 Disclosure After Data Loss Incidents
- 22.7 Uncovering Discovery
- 22.8 Data Retention Requirements

Chapter 23. Windows Tools

- 23.1 Windows Tools
- 23.2 Using Command Prompt
- 23.3 Learning more about the Computer
- 23.4 What's Running on the Computer

23.5 Starting GUI Tools from a Command Prompt

23.6 Tools to Work Remotely

23.7 Tools to Test Connectivity

23.8 Windows Tips

Chapter 24. UNIX Tools

Abstract

24.1 Introduction to UNIX

24.2 Basic UNIX Commands

24.3 Help at the Command Line

24.4 Running Jobs

24.5 Scheduling Jobs

24.6 Tools to Learn about the Server

24.7 Basic UNIX Security

24.8 Text Editors

24.9 Tuning Tools

24.10 Connectivity

Chapter 25. Linux Tools

Abstract

25.1 Introduction to Linux

25.2 Shells

25.3 Directory Structure

25.4 Environment Variables

25.5 Basic Linux Commands

25.6 Help at the Command Line

25.7 Running Jobs

25.8 Scheduling Jobs

25.9 Tools to Learn About the Server

25.10 Basic Linux Security

25.11 Text Editors

Chapter 26. Tools for Your Toolbox

26.1 Don't Reinvent the Wheel

26.2 Examples of Tools

Chapter 27. Third-Party Tools

Abstract

- 27.1 Sysinternals Utilities
- 27.2 Remote Sessions
- 27.3 Session Sharing
- 27.4 Moving Files
- 27.5 Monitoring Tools
- 27.6 Manipulating Files
- 27.7 The Screen
- 27.8 Browsers
- 27.9 Database Access Tools
- 27.10 Project Manager Tools

Chapter 28. Troubleshooting Tips

Abstract

- 28.1 Overview of Troubleshooting
- 28.2 Identify the Problem
- 28.3 Gather Information on the Problem
- 28.4 Test Possible Solutions
- 28.5 Seek Specialized Assistance
- 28.6 Document the Problem and the Solution

Chapter 29. Things to Do or Know How to Do in Advance

- 29.1 Who's Logged into the Application
- 29.2 Terminating User Sessions
- 29.3 Preventing User Sessions
- 29.4 Bringing Down the System
- 29.5 Automate Maintenance Tasks

29.6 User FAQs

29.7 Log Files

- 29.8 Things to Know About a Server and How to Learn Them
- **29.9 Emergency Situations**
- 29.10 "Read_Me.txt" Files
- 29.11 Version Please
- 29.12 Performance
- 29.13 Application Administrator's Manual Template

Chapter 30. Things Will Happen That You Don't Want to Think About

- Abstract
- 30.1 The Application Hangs Up
- 30.2 Server Crashes
- 30.3 Database Dilemmas
- 30.4 Moving
- 30.5 Vendor Changes
- 30.6 Consolidation, Mergers, and Acquisitions
- 30.7 Adding a New Office, Department, or Division
- 30.8 Input and Output Files
- 30.9 Running Low on Disk Space
- 30.10 Disaster Recovery (DR) Plans
- 30.11 Ramping Up and Ramping Down
- 30.12 Getting a New Computer

Chapter 31. The End of Days—Decommissioning an Application

- 31.1 Reasons to Retire an Application
- 31.2 Who Has the Final Decision-Making Authority?
- 31.3 What about the Data?
- 31.4 Steps to Shut Down an Application
- 31.5 No Application Is an Island
- 31.6 Documentation
- 31.7 Security

- 31.8 Releasing the Server
- **31.9 The Replacement Application**
- 31.10 User Acceptance Testing of the New Application
- 31.11 Parallel Testing Is Even Harder than Parallel Parking!
- 31.12 Recommissioning the Application

Chapter 32. Things Every Application Administrator Should Know

Abstract

32.1 Understand the Application!

32.2 Files

32.3 UNIX vs. Windows

- 32.4 Command Line Components
- 32.5 Pipes and Redirects
- 32.6 DOS Commands That Can Save Time and Trouble
- 32.7 Testing Basics
- 32.8 Basic SQL
- 32.9 Advanced Uses of Excel
- 32.10 URLs
- 32.11 HTML

32.12 XML

32.13 WANs, LANs, and VLANs

Chapter 33. Education

Abstract

33.1 Areas Where Application Administrators Might Need Improvement

- 33.2 Opportunities for Education
- 33.3 Potential Personal Goals Related to Education
- 33.4 Educating the Users

Chapter 34. Parting Advice

- 34.1 Do No Harm
- 34.2 Always Try to Be in the Driver's Seat

- 34.3 Don't Use the Admin Logon Unless It's Absolutely Necessary
- 34.4 Understand What You're Doing
- 34.5 Do Things the Easy Way
- 34.6 The Eyes Have It
- 34.7 Document, Document, Document
- 34.8 Be Consistent
- 34.9 Clean up After Yourself Right Away
- 34.10 Always Check Your Junk E-mail Folder
- 34.11 Trust but Verify
- 34.12 Don't Run Scheduled Jobs Under Your Account
- 34.13 Don't Try to Hide Your Mistakes
- 34.14 Get the Most out of Vendor Technicians
- 34.15 Things Always Take Longer than Expected
- 34.16 Final Words

Index

Copyright

Acquiring Editor: Steve Elliot Editorial Project Manager: Lindsay Lawrence Project Manager: Priya Kumaraguruparan Cover Designer: Russell Purdy

Morgan Kaufmann is an imprint of Elsevier 225 Wyman Street, Waltham, MA, 02451, USA

© 2014 Elsevier Inc. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system, without permission in writing from the publisher. Details on how to seek permission, further information about the Publisher's permissions policies and our arrangements with organizations such as the Copyright Clearance Center and the Copyright Licensing Agency, can be found at our website: www.elsevier.com/permissions.

This book and the individual contributions contained in it are protected under copyright by the Publisher (other than as may be noted herein).

Notices

Knowledge and best practice in this field are constantly changing. As new research and experience broaden our understanding, changes in research methods or professional practices, may become necessary. Practitioners and researchers must always rely on their own experience and knowledge in evaluating and using any information or methods described herein. In using such information or methods they should be mindful of their own safety and the safety of others, including parties for whom they have a professional responsibility.

To the fullest extent of the law, neither the Publisher nor the authors, contributors, or editors, assume any liability for any injury and/or damage to persons or property as a matter of products liability,negligence or otherwise, or from any use or operation of any methods, products, instructions, or ideas contained in the material herein.

Bourne, Kelly C. Application administrators handbook : installing, updating, and troubleshooting software / Kelly C. Bourne. pages cm Includes bibliographical references and index. ISBN 978-0-12-398545-3 1. Software maintenance–Handbooks, manuals, etc. 2. Software engineering–Management– Handbooks, manuals, etc. I. Title. QA76.76.S64B677 2014 005.1'6–dc23 2013029165

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

ISBN: 978-0-12-398545-3 Printed in the United States of America

14 15 16 17 10 9 8 7 6 5 4 3 2 1



For information on all MK publications visit our website at *www.mkp.com*

Dedication

I am dedicating this book to my parents, Jack and Bev Bourne.

My parents are truly two extraordinary people.

They have been role models and an incredible inspiration to my six siblings and me as we grew up. I can still count on their wisdom and common sense to guide me through life.

Thanks Mom and Dad.

Acknowledgments

This book wouldn't be in your hands if not for the vision and faith that Steve Elliot of Elsevier shown in me and my proposal. Without his vision, this book would have remained just a dream. Lindsa Lawrence, also of Elsevier, has been incredibly helpful and supportive during the production an review phases of this effort. Last but certainly not least is Brian Jaffe, Technical Editor. Brian comments, suggestions, and always extremely constructive criticism were invaluable along the way.

CHAPTER 1

What Does an Application Administrator Do?

Abstract

This chapter describes tasks performed by an Application Administrator. Their job functions include installing software license from a vendor, updating software, tuning the application from a performance viewpoint, troubleshooting problems, and traini users.

Key Words

Application Administrator; install software; update; diagnose; troubleshoot; tune; document

1.1 Overview of the Position

Application Administrators aren't developers and they're not users, but they are critical to keeping the applications your organization relies on running. They install, update, tune, diagnose, and babysit bo internal and third-party applications. The applications they support can include ERP (Enterprise Resource Planning), CRM (Customer Relationship Management), POS (Point of Sale), BPM (Busine Process Management), budgeting and forecasting, HR (Human Resources), legal matter management AP (Accounts Payable)/AR (Accounts Receivable), payroll, general ledger, SOX (Sarbanes Oxleg compliance tracking, training, time tracking, supply chain, database engines, and messaging, i.e., mail.

While software can be readily licensed from a vendor, it still requires a significant amount of effor on the part of the acquiring organization. Someone has to prepare the servers that it will run on. The someone has to install it, configure it, load data into it, tune it, upgrade it, and generally keep the package up and running. If errors occur, someone has to report them to the vendor and work with vendor technicians to correct the problems. These are all tasks that an Application Administrate handles.

In many cases, corporations are absolutely dependent that these applications be kept running. Where would be the response of employees if the payroll application broke down? What would happen to the organization's financial situation if invoices weren't sent out to customers? What if new employees couldn't be added to the HR system? The importance of Application Administrators and their level of expertise shouldn't be overlooked. Since the trend of relying upon third-party software isn't going decrease in the foreseeable future, the role of Application Administrator won't be going away either.

Every company employs them even if their official job title doesn't sound at all like "Application Administrator." A job title of "system application administrator" might be for a position that cover both application administration and systems administration. Since there is a significant degree overlap between these two positions, this isn't uncommon.

Any software the organization relies upon is almost certain to have an Application Administrate supporting it. This includes software acquired from a third-party vendor or from an intern development team. Development teams typically develop the application and then hand support responsibilities off to another group within the organization. For better or for worse, they don't tend stick around indefinitely to provide ongoing production support.

1.1.1 Application administrator backgrounds

The background of IT professionals working as Application Administrators varies widely. Some have a background in software development. Others became Application Administrators because a administrator was needed and they were in the right place at the right time. Individuals without form education or training in IT will benefit the most from this book. It will provide hands on advice of how to administer applications, troubleshoot them, and establish best practices for keepin applications running smoothly. But even the most experienced Application Administrator has wea areas that this book can help shore up.

1.1.2 Potential skillset

The list of potential skills that an Application Administrator might be required to have can be lor and diverse. The skills that are being sought range from very specific technical skills to skills that a considered "softer." Virtually every posting requires some variation of excellent communication skills, troubleshooting ability, problem solving and/or analytical skills, flexibility, and understandir business needs. Some examples of requested skills are:

- Expertise and experience in *XYZ* application is a must.
- Strong experience on failover, high availability, disaster recovery, business continuance.
- Strong experience in *XYZ* version control tool.
- Good knowledge and demonstrated troubleshooting abilities on connectivity issues due to firewall load balancer, proxy, and others.
- Experience with SOX compliance and methodologies.
- Hands on experience in process automation, best practice approach, technology efficiency, and effectiveness.
- Knowledge of Web Services and Services Oriented Architecture is desirable.
- Requires extensive knowledge of Windows 2000/2003 Server.
- Should be experienced with SQL Query Development as it relates to *XYZ* databases.
- Must demonstrate strong experience in designing, implementing, and maintaining current Window server products including Microsoft SQL 2005, IIS, Windows Clustering, Network Load Balance Net Environments, and ISA.
- Strong Linux experience including shell and Perl scripting for administration tasks.
- Experience with monitoring tools is a plus.
- Knowledge of Oracle Application Server, Apache Tomcat, and Microsoft IIS a plus.
- Excels at the highest technical level of all phases of applications systems analysis and programming activities.
- Understands software and hardware requirements of varied departmental systems.
- Understands the workflow and process requirements of complex application systems.
- Demonstrated ability to be the subject matter expert in supporting, maintaining, and administering complex applications.
- Excellent problem solving/analytical skills and knowledge of analytical tools.
- Display and execute logical and complex troubleshooting methods.

- Excellent verbal, written communication, and negotiations skills.
- Demonstrated soft skills required such as presentation of ideas and clearly articulate the concepts senior management.
- Ability to effectively interface with technical and nontechnical staff at all organizational levels.
- Strong customer services and problem solving skills.
- Ability to provide outstanding customer service, be a good listener and work well with others.
- Self-motivated, able to work independently, and takes initiative.
- Ability to multitask in a fast-paced environment.
- Outstanding attention to detail with superior time and project management skills.
- Demonstrated ability to work successfully with a diverse group of customers.
- Ability to learn new content areas and new skills quickly and well required.
- Professional attitude and work habits.
- Understands business function related to the application.
- Ability to work through ambiguous work situations.

1.1.3 Duties and responsibilities

The list of duties and responsibilities described in some job postings is as broad and diverse as the technical skills that are required of prospective job applicants. It wouldn't be realistic to expect single candidate to be responsible for this entire list of duties, but don't be surprised if your initial job description gets widened to include more and more responsibilities as time goes by. Some of the duties and responsibilities that an Application Administrator might be given include:

- The candidate shall monitor the *XYZ* software application, document and analyze problems, and publish maintenance schedule
- Sets up administrator and service accounts
- Maintains system documentation
- Interacts with users and evaluates vendor products
- May program in an administrative language
- Provides advice and training to end-users
- Maintains current knowledge of relevant technologies as assigned
- The candidate shall serve as part of a team responsible to maintain an *XYZ* system availability rate of 99%
- Troubleshoot, and resolve any reported problems
- Provide application performance tuning
- The candidate shall review the governing regulations to ensure proper program support
- The candidate shall monitor, update, and maintain existing legacy environment software systems interfaces to ensure that the interfaces exchange data properly and to support the current legacy environment
- This is a hands on senior technical position with Subject Matter Expertise (SME) on *XYZ* app
- Enable best practices
- Process automation
- Maintain SLA, System Availability, Capacity management, and Performance KPI
- Collaborate with hardware, OS, DBA technical teams to ensure proper integration of the environment
- Work closely with application development teams and vendors to tune and troubleshoot

applications

- Plan and coordinate testing changes, upgrades, and new services, ensuring systems will operate correctly in current and future environments
- Provides second level of technical support for all corporate systems and software components
- Provide Level 3 support for the application. Must be able to support 24 × 7. Also enable productio support team to tackle Level 2 support and issues
- Leads and participates in efforts to develop and implement processes for application and system monitoring
- Leads and participates in efforts to implement application updates to include upgrades, patches, an new releases
- Tests, debugs, implements, and documents programs. Assists in the modification of company products and/or customer/internal systems to meet the needs of the client and/or end-user
- Develops test plans to verify logic of new or modified programs
- Develop and maintain the reporting and dashboard infrastructure for the organization
- Develop work plans and track/report status of assigned projects/tasks
- Liaise with vendor support on all issues
- Fully responsible for problem management activities such as issue resolution and root cause analysis
- Daily monitoring and maintenance activities
- Assist in the day-to-day operations of Operations department
- Reviews and addresses assigned technical support tickets and calls, enters all updates related to such calls into the Help Desk ticketing system, and keeps team aware of any sensitive or escalatin issues
- Provides subject matter expertise for all applications
- Participate in security and application audits
- Occasionally supporting off-hours activities. This position may require a flexible schedule
- Promote changes through the use of *XYZ* adhering to SOX policies and procedures
- Identify, download and apply *XYZ* upgrades and patches
- Research issues with application middleware, database, etc., and recommend/apply solutions such as configuration changes to O/S, WebLogic, Tuxedo, Java, etc., additional hardware, memory, CPUs, etc.
- Identify problematic SQL and work with developers, analysts, and DBAs to resolve
- Optimize and tune the *XYZ* application components
- Work with customers and analysts to develop scripts used to perform load testing
- Use load testing tool to perform tests to determine application load capabilities

As the above list makes painfully obvious, the demands put upon an Application Administrator at diverse and plentiful. It's an interesting job. It's a challenging job. It's certainly not a boring job Every day will bring new challenges. Every problem is a learning opportunity. Every solution is a opportunity to educate your users, other professionals in the organization, or your successors.

1.1.4 Types of applications that need an administrator

Applications that are licensed from a third-party vendor and weren't custom built for an organization are frequently referred to by the acronym COTS—Commercial Off The Shelf Software. Because the are so many installations of COTS applications, they are primarily what Application Administrator

sample content of Application Administrators Handbook: Installing, Updating and Troubleshooting Software

- read online Crisis and Reflection: An Essay on Husserl's Crisis of the European Sciences (Phaenomenologica, Volume 174) book
- click Philippi 42 BC: The death of the Roman Republic (Campaign, Volume 199)
- read online Zapatos italianos (Andanzas) pdf, azw (kindle)
- read online The Paradise Snare (Star Wars: The Han Solo Trilogy, Book 1) pdf, azw (kindle)
- <u>http://cambridgebrass.com/?freebooks/Feminism-is-Queer--The-Intimate-Connection-between-Queer-and-Feminist-Theory.pdf</u>
- <u>http://test.markblaustein.com/library/Finding-Time-Again--In-Search-of-Lost-</u> <u>Time--Volume-6---UK-Edition-.pdf</u>
- http://schrolf.de/books/Art-and-Destruction.pdf
- <u>http://growingsomeroots.com/ebooks/The-Paradise-Snare--Star-Wars--The-Han-Solo-Trilogy--Book-1-.pdf</u>