Application Administrators Handbook

Installing, Updating and Troubleshooting Software

Kelly Bourne

MK
MORGAN KAUFMANN

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Table of Contents

Cover image

Title page

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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

Abstract

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

Abstract

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

11.11 Callings Lists for Support Personnel

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

Abstract

17.1 What Tuning Goals Are Desired?

17.2 Tools to Measure Performance

17.3 Potential Bottlenecks

17.4 Maintenance Tasks Can Help Performance

17.5 Changing the Landscape

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

Abstract

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

Abstract

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

Abstract

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

Abstract

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

Abstract

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

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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.

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CHAPTER 1

What Does an Application Administrator Do?

Abstract

This chapter describes tasks performed by an Application Administrator. Their job functions include installing software licens 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 th 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 (Enterpri Resource Planning), CRM (Customer Relationship Management), POS (Point of Sale), BPM (Busine Process Management), budgeting and forecasting, HR (Human Resources), legal matter managemer AP (Accounts Payable)/AR (Accounts Receivable), payroll, general ledger, SOX (Sarbanes Oxle 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 effo 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 th package up and running. If errors occur, someone has to report them to the vendor and work wi vendor technicians to correct the problems. These are all tasks that an Application Administrato handles.

In many cases, corporations are absolutely dependent that these applications be kept running. Wh would be the response of employees if the payroll application broke down? What would happen to th organization's financial situation if invoices weren't sent out to customers? What if new employe couldn't be added to the HR system? The importance of Application Administrators and their level 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 "Applicatio Administrator." A job title of "system application administrator" might be for a position that cove 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 Administrato 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 suppo

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 hav 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 o 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 lon 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 communicatio skills, troubleshooting ability, problem solving and/or analytical skills, flexibility, and understandin 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 Windov 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 th 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 jo description gets widened to include more and more responsibilities as time goes by. Some of th 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, ar 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 escalati 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 ar diverse and plentiful. It's an interesting job. It's a challenging job. It's certainly not a boring jo 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 organizatio 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 Administrato

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