

# Installation and Planning Guide

## Microsoft Internet Information Server

**Version 1.0**

**Windows NT Server 3.51**

Information in this document is subject to change without notice. Companies, names, and data used in examples herein are fictitious unless otherwise noted. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of Microsoft Corporation.

Microsoft Corporation may have patents or pending patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document. The furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property rights except as expressly provided in any written license agreement from Microsoft Corporation.

© 1995 Microsoft Corporation. All rights reserved.

Microsoft, MS, Windows, and Visual C++ are registered trademarks and Windows NT is a trademark of Microsoft Corporation in the USA and other countries.

Alpha AXP is a trademark of Digital Equipment Corporation.

IBM is a registered trademark and PowerPC is a trademark of International Business Machines Corporation.

Intel and Pentium are registered trademarks of Intel Corporation.

Macintosh is a registered trademark of Apple Computer, Inc.

MIPS is a registered trademark of MIPS computer Systems, Inc.

UNIX is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company, Ltd.

**Microsoft Corporation**

Document No. 68540

---

# Contents

## **Before You Begin ix**

- About the Installation and Planning Guide x
- About Online Help x
- About the Online Examples xi
- What You Should Know xi
- Finding Further Information xii
- Accessibility for People with Disabilities xiii
  - Microsoft Services for People Who Are Deaf or Hard-of-Hearing xiii
  - Access Pack for Microsoft Windows xiv
  - Keyboard Layouts for Single-Handed Users xv
  - Microsoft Documentation on Audio Cassettes and Floppy Disks xv
  - Products for People Who Are Blind or Have Low Vision xvi
  - Customizing Windows xvi
  - Getting More Information xvii

## **Chapter 1 Installing Internet Information Server 1**

- Installation Overview 1
  - Installation Requirements 2
  - Windows NT Configuration and Security Checklists 3
    - Windows NT Configuration Checklist 3
    - Windows NT Security Checklist 4
  - Contents of the Compact Disc 4
  - How to Install Internet Information Server 5
  - How to Install Internet Explorer or Internet Service Manager 9
  - Unattended Setup When Installing from a Network Directory 9
  - The IUSR\_computername Account 10
- How to Publish Information 10
  - How to Test Your Internet Information Server Installation 11

**Chapter 2 Understanding the Internet and Internet Information Server 13**

- What is the Internet? 13
- What is an Intranet? 14
- What is Internet Explorer? 14
- What is Internet Information Server? 14
  - What Can I Do with Internet Information Server? 15
  - How Does Internet Information Server Work? 15
  - Browser Requests 15
    - URL Syntax 15
    - Request Syntax 16
  - Information Server Response 16
    - Static Pages 16
    - Dynamic Pages 17
    - Directory Listings 18
  - How Do I Use Internet Information Server? 19
    - Intranet Scenarios 19
    - Internet Scenarios 20

**Chapter 3 Configuring and Managing Your Internet Information Server 23**

- Microsoft Internet Service Manager 23
  - Report View 23
  - Servers View 25
  - Services View 25
  - Property Sheets 26
    - The Service Property Sheet 26
    - The Directories Property Sheet 27
    - The Logging Property Sheet 29
    - The Advanced Property Sheet 30
- Using Other Windows NT Tools 31
  - Configuring Server Options with Control Panel 31
    - The Network Applet 31
    - The Services Applet 33
  - The ODBC Applet 33
  - Setting File Access with File Manager 34
  - Setting User Access with User Manager for Domains 34
  - Tracking Problems with Event Viewer 34

Monitoring Your Server with Performance Monitor 34

**Chapter 4 Networking for the Internet or an Intranet 37**

- General Networking Issues 37
  - Routers and Security Devices 37
  - Typical Network Configurations 38
    - Internet Sites 38
    - Intranet Sites 40
    - Integrating Your Intranet with the Internet 40
  - Administering Servers with Internet Service Manager 41
  - Finding Other Computers on Your Network or Subnet 41
- Publishing on the Internet 41
  - How to Choose the Right Internet Connection 42
  - Internet Connection Types 42
  - IP Addresses and DNS 43
  - Other Internet Client Services 43
- Publishing on an Intranet 44
  - Internet Explorer 44
    - What are the Differences Between Versions? 44
    - How Do I Distribute Internet Explorer to Users? 45
  - Name Resolution Systems 45
    - Using Computer Names with WINS Servers 46
    - Using Computer Names and LMHOSTS 46
    - Using Domain Names with DNS Servers 46
    - Using Domain Names and HOSTS 46
  - Using DHCP in Your Intranet 46
  - Using URLs and Creating HTML Links for Intranets 47
- SNMP Monitoring 47

**Chapter 5 Securing Your Site Against Intruders 49**

- Securely Configuring Windows NT Server 49
  - Preventing Intrusion by Setting Up User Accounts 50
    - Allowing Anonymous Access with the IUSR\_computername Account 50
    - Requiring a Username and Password 50
    - Choose Difficult Passwords 51
  - Maintain Strict Account Policies 51
  - Limit the Membership of the Administrator Group 51

- NTFS File Security 52
  - Enable Auditing 53
- Running Other Network Services 53
  - Run Only the Services that You Need 53
  - Unbind Unnecessary Services from Your Internet Adapter Cards 53
  - Check Permissions on Network Shares 53
- How Internet Information Server Security Works 54
  - IP Address Security 55
  - Username Authentication 55
  - Internet Server Permissions 55
  - NTFS Permissions 56
- Securely Configuring the WWW Service 56
  - Controlling Access by Username 57
  - Controlling Access by IP Address 57
  - Disable Directory Browsing 58
- Securing Data Transmissions with Secure Sockets Layer (SSL) 58
  - How to Acquire an SSL Digital Certificate 59
  - Suggestions for SSL Configuration and Operation 63
  - Setkey.exe Notes 63

**Chapter 6 Planning Your Content Directories and Virtual Servers 65**

- Configuring a Single Content Directory 65
- Setting the Default Document and Directory Browsing 66
- Creating Virtual Servers 67
  - Specifying Directories with Virtual Servers 69
  - Directory 70
- Configuring Content Directories 70
  - Home Directory 71
  - Virtual Directory 71
    - Specifying Directories with Virtual Servers 73
  - Account Information 73
  - Access Check Boxes 73

### **Chapter 7 Logging Server Activity 75**

- Configuring Logging 75
  - Logging Limits 76
  - Enable Logging 76
  - Log to File 76
    - Automatically open new log 76
    - Log file directory 76
    - Filename 76
  - Log to SQL/ODBC Database 77
- How to Read Log Files 77
- Viewing Logs in Databases 77
- Converting Log File Formats 78

### **Chapter 8 Publishing Information and Applications 79**

- Preparing Information for Publishing 79
  - Authoring HTML Files 79
  - Publishing HTML and Other File Formats 80
  - MIME Type Configuration 80
  - Including Other Files with the Include Statement 81
- Publishing Dynamic Applications 81
  - Creating the Applications or Scripts 81
    - Internet Server API 82
    - Common Gateway Interface 84
  - Installing Your Application on Internet Information Server 84
  - Running Your Application 85
    - Associating Interpreters with Applications 85
    - Security Implications 85
- Publishing Information and Using a Database 86
  - How the Internet Database Connector Works 86
  - Installing ODBC and Creating System Data Sources 87
  - Authoring Web Pages with Database Access 91



**Chapter 9 Using the FTP and Gopher Services 93**

What is the FTP Service? 93

- When Should I Use the FTP Service? 94
- How Does the FTP Service Work? 94
- Configuring Session Activity 94
- Configuring FTP Logon 94
- Configuring FTP Directories 95
  - Setting the Home Directory 95
  - Setting Listing Style 95
  - Setting Read and Write Permission 95
  - Creating Annotation Files 95
  - Special Directories in the Home Directory 96
- FTP Clients 96

What is the Gopher Service? 96

- Configuring the Gopher Server 97
  - Tag Files 97

**Index 101**