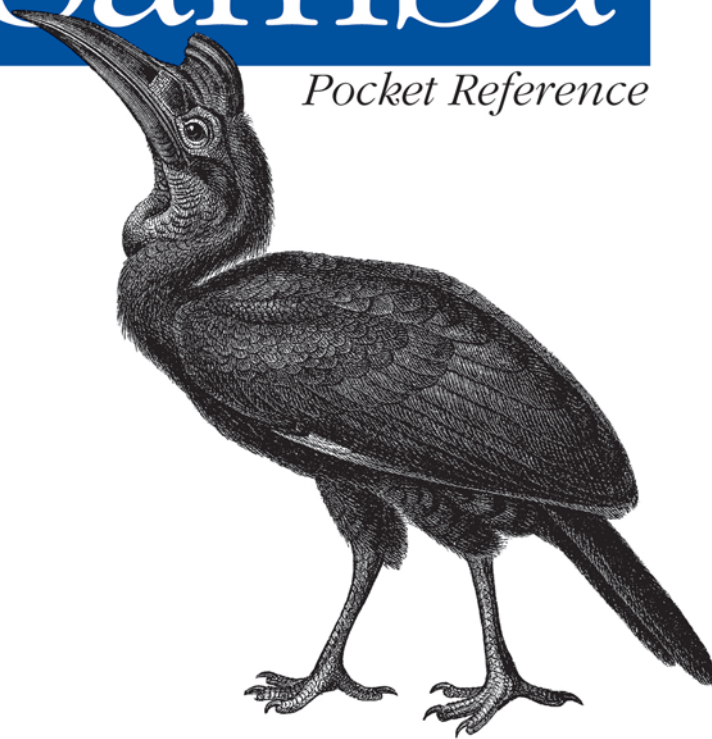


*A Unix-to-Windows
File & Print Server*

2nd Edition
Covers 2.2 & 3.0

Samba

Pocket Reference



O'REILLY®

*Jay Ts, Robert Eckstein
& David Collier-Brown*

Samba Pocket Reference



Samba is a cross-platform triumph: it turns a Unix or Linux system into a file and print server for Microsoft Windows network clients. This book describes all the options for Samba's configuration file in quick-reference format. It also contains command-line options and related information on the use of the Samba daemons (*smbd*, *nmbd*, and *winbindd*) and the utilities in the Samba distribution.

The current edition covers Samba 2.2 and the most important features of Version 3.0. New options pertain to Samba's acting as a primary domain controller and as a domain member server, built-in support for the use of Windows NT/2000/XP authentication and filesystem security on the host Unix system, and access to shared files and printers from Unix clients.

System administrators who are familiar with Samba and want a handy reminder of how to administer it without the bulk of a full-sized book will find this pocket reference invaluable.

"An ultraconcise guide to the contents of the smb.conf file as well as to smbd and nmbd, this book also covers utilities like smbclient, smbstatus, smbtar, and rpcclient. It'll jog your memory and save you a trip through the man pages."

—David Wall and Teri Kieffer,
Amazon.com Delivers Computer Networking & Operating Systems

ISBN 0-596-00546-6

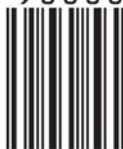


9 780596 005467

US \$9.95

CAN \$14.95

90000



Visit O'Reilly on
the Web at
www.oreilly.com



6 36920 00546 9

SECOND EDITION

Samba
Pocket Reference

*Jay Ts, Robert Eckstein,
and David Collier-Brown*

O'REILLY®

Beijing • Cambridge • Farnham • Köln • Paris • Sebastopol • Taipei • Tokyo

Samba Pocket Reference, Second Edition

by Jay Ts, Robert Eckstein, and David Collier-Brown

Copyright © 2003, 2001 O'Reilly & Associates, Inc. All rights reserved.
Printed in the United States of America.

Published by O'Reilly & Associates, Inc., 1005 Gravenstein Highway North,
Sebastopol, CA 95472.

O'Reilly & Associates books may be purchased for educational,
business, or sales promotional use. Online editions are also available
for most titles (*safari.oreilly.com*). For more information, contact our
corporate/institutional sales department: (800) 998-9938 or
corporate@oreilly.com.

Editor:	Andy Oram
Production Editor:	Philip Dangler
Cover Designer:	Ellie Volckhausen
Interior Designer:	David Futato

Printing History:

April 2001:	First Edition.
April 2003:	Second Edition.

Nutshell Handbook, the Nutshell Handbook logo, and the O'Reilly logo are registered trademarks of O'Reilly & Associates, Inc. Many of the designations used by manufacturers and sellers to distinguish their products are claimed as trademarks. Where those designations appear in this book, and O'Reilly & Associates, Inc. was aware of a trademark claim, the designations have been printed in caps or initial caps. The association between the image of a North African ground hornbill and the topic of Samba is a trademark of O'Reilly & Associates, Inc.

While every precaution has been taken in the preparation of this book, the publisher and authors assume no responsibility for errors or omissions, or for damages resulting from the use of the information contained herein.

This updated and revised edition is based on material from O'Reilly's *Using Samba*.

Contents

Introduction	1
Configuration File Options	3
Glossary of Configuration Value Types	58
Configuration File Variables	60
Samba Daemons	61
smbd	62
nmbd	64
winbindd	66
Samba Distribution Programs	67
findsmb	67
make_smbcodepage	68
make_unicodemap	68
net	69
nmblookup	77
pdbedit	79
rpcclient	80
rpcclient commands	82
smbcacls	87
smbclient	89
smbcontrol	97
smbgroupedit	99
smbmnt	100

smbmount	101
smbpasswd	103
smbsh	106
smbspool	107
smbstatus	108
smbtar	109
smbumount	111
testparm	111
testprns	111
wbinfo	112
Example Configuration Files	113
Samba in a Workgroup	114
Samba in a Windows NT Domain	116
Index	121

Samba Pocket Reference

Introduction

Samba is an extremely useful networking tool for anyone who has both Windows and Unix systems on a network. When run on a Unix system (including Linux, BSD, or Mac OS X), Samba allows Windows to access files and printers shared by the Unix host, and permits Unix users to access resources shared by Windows systems.

This pocket reference, which is based on *Using Samba* (O'Reilly), summarizes the many commands and tools available to Samba administrators. It provides examples of proper command syntax and can help you choose the best configuration options for your network.

WARNING

This book does not include enough information for an inexperienced Samba administrator. Running Samba entails operational and security concerns, and its options have subtle interactions and side effects. Even if you are starting from an example or existing configuration file, please study *Using Samba* or another introductory book before trying to administer Samba.

A Samba server offers the following services:

- Share one or more directory trees
- Share one or more Distributed filesystem (Dfs) trees

- Share printers installed on the server among Windows clients on the network
- Assist clients with network browsing
- Authenticate clients logging onto a Windows domain
- Provide or assist with Windows Internet Name Service (WINS) name-server resolution

The Samba suite also includes client tools that allow users on a Unix system to access folders and printers offered by networked Windows systems and Samba servers.

Contents

“Configuration File Options” lists the types of lines you can put in your Samba configuration file, usually named *smb.conf*.

“Samba Daemons” lists command-line options and related information for running the Samba daemons. “Samba Distribution Programs” lists various commands included in the Samba distribution that you can run from the Unix shell on the system hosting Samba.

“Example Configuration Files” shows how the configuration options fit together in typical environments. Use these as guides; do not copy them blindly.

Font Conventions

The following font conventions are followed throughout this book:

Italic

Used for filenames, file extensions, URLs, executable files, commands, Samba daemons, and emphasis

Constant width

Used to indicate Samba configuration options, code that appears in the text, variables, and command-line information that should be typed verbatim on the screen

Constant width bold

Used for commands that are entered by the user, and new configuration options that we wish to bring to readers' attention

Constant width italic

Used to indicate replaceable content in code and command-line information

[]

Used to indicate optional elements in code

Configuration File Options

This section lists each option that can be used in a Samba configuration file, which is usually named *smb.conf*. Most configuration files contain a global section of options that apply to all services (shares) and separate sections for various individual shares. If an option applies only to the global section, [global] appears to the right of its name in the following reference section.

Except where noted, when specifying elements of a list, the elements can be separated by spaces, tabs, commas, semicolons, escaped newlines, or escaped carriage returns.

Following this reference section is a glossary of value types, and a list of variables Samba recognizes.

abort shutdown script = command

[global]

Allowable values: command

Default: (null)

Specifies a command that stops the shutdown procedure started by `shutdown script`. The command will be run with the UID of the connected user. New in Samba 3.0.

add machine script = command

[global]

Allowable values: command

Default: (null)

Specifies a command that adds a computer to the Samba server's domain. New in Samba 3.0.

add printer command = command

[global]

Allowable values: command

Default: (null)

Specifies a command that creates a new printer on the system hosting the Samba server. This command runs as root when the Windows NT/2000/XP Add Printer Wizard is run. The command will be passed a printer name, share name, port name, driver name, Windows NT/2000/XP driver location, and Windows 95/98/Me driver location, in that order. It will need to add the printer to the system and a share definition for the printer to *smb.conf*. See also `add printer wizard`, `printing`, and `show add printer wizard`.

add share command = command

[global]

Allowable values: command

Default: (null)

Specifies a command that creates a new share on the Samba server. This command runs as root when a share is created using the Windows NT/2000/XP Server Manager. The client user must be logged on as the root user. The command will be passed the name of the Samba configuration file, the name of the share to be created, the full pathname of a directory on the Samba server (which must already exist), and a string to use as a comment for the share, in that order. The command must add a share definition for the share to *smb.conf*. See also `add printer command`, for adding a print share.

add user script = command

[global]

Allowable values: command

Default: (null)

Specifies a command that creates a new user on the system hosting the Samba server. This command runs as root when access to a Samba share is attempted by a Windows user who does not have an account on the hosting system, but does have an account maintained by a primary domain controller on a different

system. The command should accept the name of the user as a single argument that matches the behavior of typical *adduser* commands. Samba honors the %u value (username) as the argument to the command. Requires security = server or security = domain. See also delete user script.

admin users = user list

Allowable values: user list **Default:** (null)

Specifies users who will be granted root permissions on the share by Samba.

ads server = value [global]

Allowable values: DNS hostname or IP address **Default:** (null)

Specifies the Active Directory server, used by Samba 3.0 for authenticating clients. Requires security = ads. New in Samba 3.0.

algorithmic rid base = number [global]

Allowable values: positive integer **Default:** 1000

Specifies the base value that Samba uses when calculating Windows domain relative identifier (RID) equivalents to Unix UIDs. See also non unix account range. New in Samba 3.0.

allow hosts = host list

Allowable values: list of hosts or networks **Default:** (null)

Specifies systems that can connect to the share or shares. If null, any system can access the share unless there is a hosts deny option. Synonym for hosts allow.

allow trusted domains = boolean [global]

Allowable values: YES, NO **Default:** YES

Allows access to users who lack accounts on the Samba server but have accounts in another, trusted domain. Requires security = server or security = domain.

announce as = value

[global]

Allowable values: NT, Win95, WFW

Default: NT

Instructs Samba to announce itself as something other than an NT server. Discouraged because it interferes with serving browse lists.

announce version = value

[global]

Allowable values: two numbers separated by a dot character

Default: 4.5

Instructs Samba to announce itself as a different version SMB server. Discouraged.

auth methods = list

[global]

Allowable values: guest, sam, ntdomain

Default: (null)

Specifies what methods Samba tries in turn to authenticate users. New in Samba 3.0.

auto services = service list

[global]

Allowable values: service list

Default: (null)

Specifies a list of shares that always appear in browse lists. Also called preload.

available = boolean

Allowable values: YES, NO

Default: YES

If set to NO, denies access to a share. The share appears in the browse list, but attempts to access it will fail.

bind interfaces only = boolean

[global]

Allowable values: YES, NO

Default: NO

If set to YES, shares and browsing are provided only on interfaces in an interfaces list (see `interfaces`). If you set this option to YES, be sure to add 127.0.0.1 to the interfaces list to allow `smbpasswd` to connect to the local system to change passwords. This is a convenience option; it does not improve security.

block size = number

Allowable values: integer

Default: 1024

Sets the size of disk blocks as reported by *smbd* to the client. Obsolete starting with Samba 3.0.

blocking locks = boolean

Allowable values: YES, NO

Default: YES

If YES, honors byte range lock requests with time limits. Samba will queue the requests and retry them until the time period expires.

browsable = boolean

Allowable values: YES, NO

Default: YES

Allows a share to be announced in browse lists. Also called browseable.

browse list = boolean

[global]

Allowable values: YES, NO

Default: YES

If YES, serves the browse list to other systems on the network. Avoid changing.

browseable = boolean

Allowable values: YES, NO

Default: YES

Synonym for browsable.

case sensitive = boolean

[global]

Allowable values: YES, NO

Default: NO

If YES, uses the exact case the client supplied when trying to resolve a filename. If NO, matches either upper- or lowercase name. Avoid changing. Also called casesignames.

casesignames = boolean

[global]

Allowable values: YES, NO

Default: NO

Synonym for case sensitive.

change notify timeout = number

[global]

Allowable values: positive number

Default: 60

Sets the number of seconds between checks when a client asks for notification of changes in a directory. Avoid lowering.

change share command = command

[global]

Allowable values: command

Default: (null)

Specifies a command that modifies a share definition on the Samba server. This command runs as root when a share is created using the Windows NT/2000/XP Server Manager. The client user must be logged on as the root user. The command is passed the name of the Samba configuration file, the name of the share to be modified, the full pathname of a directory on the Samba server (which must already exist), and a string to use as a comment for the share, in that order. The command modifies the share definition for the share in *smb.conf*. See also `add share command` and `delete share command`.

character set = name

Allowable values: ISO8859-1, ISO8859-2, ISO8859-5, KOI8-R **Default:** (null)

If set, translates from DOS code pages to the Western European (ISO8859-1), Eastern European (ISO8859-2), Russian Cyrillic (ISO8859-5), or Alternate Russian (KOI8-R) character set. The `client code page` option must be set to 850. Obsolete starting with Samba 3.0.

client code page = name

Allowable values: 437, 737, 850, 852, 861,
866, 932, 936, 949, 950

Default: 850 (MS-DOS Latin 1)

Sets the DOS code page explicitly, overriding any previous `valid chars` settings. Examples of values are 850 for Western European, 437 for the U.S. standard, and 932 for Japanese Shift-JIS. Obsolete starting with Samba 3.0.