

Appendix A: Migration Resources

This appendix provides a compendium of Microsoft tools, third-party tools, Web sites, and other resources that will help you migrate and manage your Windows 2000 (Win2K) and Exchange 2000 (E2K) environment. Many of these tools have been discussed in this book, but this appendix consolidates them into one document for easy reference.

Microsoft Tools

This list includes the key Microsoft tools. It isn't comprehensive, primarily because the tools in the resource kits come with their own documentation. The most important places to look for tools from Microsoft are, perhaps obviously:

- The Microsoft Web site (<http://www.microsoft.com/>)
- The Exchange Web site (<http://www.microsoft.com/exchange/>)
- The Win2K and E2K installation CD-ROMs (including release notes and support directories)
- The Win2K and E2K resource kits.

This information is updated regularly at <http://www.directoryservice.com/> under the Microsoft link.

For Windows 2000

The Win2K resource kit support tools are bundled with the standard distribution of Win2K Server. The tools listed in Table A.1 below are available as part of the base Win2K installation, and they're located in the Support\Tools folder on the Win2K Server CD-ROM. To install these tools, run Support\Tools\Setup.exe, and then install them using the Support\Tools\2000RKST.MSI file. Or extract the files from the DEPLOY.CAB or SUPPORT.CAB file.

While documentation and Help files are available as part of the Win2K installation, you can also buy the full resource kit, which includes printed documentation.

This Tool	Does This
ACL Diagnostics (Acldiag.exe)	Diagnoses and troubleshoots issues associated with Active Directory (AD) problem permissions. It reads access control list (ACL) security attributes and outputs the results in either text or tab-delimited format. You can then review this data using a text editor or a spreadsheet.

This Tool	Does This
Clone Principal (Clonepr.dll)	Allows you to move users from Windows NT to Win2K. This tool is particularly helpful when you want to move users to Win2K incrementally. It also gives users an emergency fallback to the older NT policies if Win2K fails during migration. You must run this tool on the destination Win2K domain controller. Objects are duplicated (and not moved) from the NT domain controller to the Win2K domain controller. Clonepr.dll works in conjunction with Movetree; while this tool doesn't recognize a user's password, Movetree retains the password.
Dependency Walker (depends.exe)	A graphical utility that lists all modules (such as DLLs) that an application calls. This allows you to determine which DLL version and file is called and what entry points are used. You can then research the occasional "Entry point not found" error.
DNS Troubleshooting Tool (Dnscmd.exe)	Allows you to view and diagnose Domain Name System (DNS) settings and the properties of DNS servers, zones, and resource records.
Domain Controller Diagnostic Tool (Dcdiag.exe)	Analyzes domain controllers and outputs any problems. It encapsulates detailed knowledge of how to identify abnormal behavior in the system. DcDiag.exe is a shell used in executing tests. The available tests review domain controller problems with connectivity, replication, topology, logon rights, domain controller locator, intersite state, and trust verification.
Domain Controller Diagnostics (Dcdiag.exe)	Analyzes the state of domain controllers in a forest or enterprise and reports any problems to assist in troubleshooting. It's an end-user reporting program that encapsulates detailed information on identifying abnormal behavior in the system.
Domain Manager (Netdom.exe)	A command-line utility that manages domains and trust relationships. You can use it to join Win2K domains with either an NT or Win2K domain and to create one-way explicit trusts.
Kerberos Client Configuration (Ksetup.exe)	A command-line tool that configures Win2K Server or Win2K Professional clients to be used by a Massachusetts Institute of Technology (MIT) Kerberos server. The Win2K client thus uses an MIT-based Kerberos realm instead of a Win2K domain. This establishes a single sign-on to the MIT Key Distribution Center (KDC) and a local Win2K client account.
Memory Profiling Tool (Memsnap.exe)	Allows you to capture information about what memory is being used by the active processes. The data is dumped to a log.
MS System Information Tool (Msinfo32.exe)	Gathers system configuration data, including data on hardware, software, and other system components. Msinfo32.exe rapidly gathers data that is necessary to potentially resolve system conflicts or other problems.
Netdiag.exe	Helps isolate networking and connectivity problems by performing a series of tests to determine the state of your network client and whether it's functional. These tests and the key network status information they expose give network administrators and support personnel a more direct means of identifying and isolating network problems.
Network Connectivity Tester (Netdiag.exe)	Identifies network connectivity problems, allowing you to test clients' network connectivity.

This Tool	Does This
NLTest—the Domain Secure Channel Utility	A command-line utility that allows you to test trust relationships and the state of domain controller replication in an NT domain. It also allows you to report the availability of primary domain controllers (PDCs) and synchronize user-account information between NT and Win2K systems.
Process Monitor (Pmon.exe)	A character-based command-line utility that allows you to view processes and identify problems like memory leaks. It monitors and creates a snapshot of process resource usage and allows you to measure paged and non-paged pool usage. It tracks central processing unit (CPU) and memory usage and is particularly useful in identifying kernel-mode memory leaks.
Process Viewer (Pviewer.exe)	Allows you to view processes and identify problems like memory leaks.
Replication Diagnosis Tool (Repadmin.exe)	A command-line utility that permits you to view the replication topology (also called ReplsFrom and ReplsTo) from each domain controller. It also allows you to manually create the replication topology.
Replication Monitor (Replmon.exe)	A graphical utility that provides a view of AD replication status and topology. You can also use it to force replication. It isn't loaded as part of the default AD installation. It's used specifically to identify replication partners and map transitive replication partners and can thus be a very useful system administration tool.
SIDWalker (Sidwalk.exe)	Takes a mapping file as input and scans the ACLs in the Registry, file system, file and print shares, and local group membership. You can use this mapping file for Sidwalk conversion on multiple computers.
Task Killing Utility (Kill.exe)	Allows you to terminate one or more processes based on their process identifier (PID) number.
Task List Viewer (Tlist.exe)	Lists the currently executing processes (tasks) and outputs information such as the PID and process name.

Table A.1: Win2K resource kit support tools.

For Exchange 2000

Table A.2 below describes the support tools contained in the E2K resource kit. You can find documentation for the resource kits (as well as the Exchange 5.5 resource kit) from <http://www.microsoft.com/exchange/techinfo/reskit/default.asp>.

I described many of these tools in chapters 4, 6, 7, and 8, but for quick reference, I list most of them again here. Some of this information is available from Knowledge Base (KB) article Q272603, "XGEN: List of Tools Included with the Exchange 2000 Server Resource Kit," located at <http://support.microsoft.com/support/kb/articles/Q272/6/03.ASP>.

This Tool	Does This
Archive Sink	A transport sink that archives all messages coming into and going out of an E2K server. Archive Sink's output is triggered by two transport events: OnMessageSubmission and OnPostCategorizeArchive.
AutoDL	Provides an automated method of managing distribution lists. By using technologies like AD and Microsoft SQL Server, this tool can give your users the ability to create, delete, and manage distributions lists.
AWP	A simple command-line tool that removes all passwords used by Active Directory Connector (ADC).
Compare	Compares entries in two directory services. It queries the first directory service with a Lightweight Directory Access Protocol (LDAP) query. For each returned entry, it attempts to find an entry that has a matching attribute in the second directory service. It displays the attributes that you specify for both entries.
DNPParser	A code sample that parses AD distinguished names (DNs). It's designed to handle every kind of DN that was discovered when E2K Server was being developed.
DSCFlush	A simple command-line tool that clears the E2K DSAccess cache.
Duplicate Proxy	Enables you to search for AD directory entries that contain duplicate proxy addresses.
Dxafix	Displays or deletes a record or range of records from the Xdir.edb database based on its unique sequence number.
Exchange Mailbox Merge (ExMerge)	Allows an E2K administrator to extract data from mailboxes on an E2K Server computer, then merge this data into mailboxes on another E2K Server computer.
Exchange Topology Diagrammer (ExMap)	Reads the AD and uses Microsoft Visio 2000 to draw a diagram of the E2K site topology. ExMap draws a simple, editable diagram showing all of the sites, servers, and connectors in the E2K organization.
GAL Modify	Enables users to modify personal information displayed in the global address list.
HTML4MAT	Makes a Hypertext Markup Language (HTML) stream more readable by inserting spaces, line breaks, and indents into an HTML file or HTML stream. HTML4MAT is useful if you capture an HTML stream from the network because one line of HTML can be several hundred bytes long, especially if Extensible Markup Language (XML) and Web Distributed Authoring and Versioning (WebDAV) are present.
IM Superman	A Microsoft Visual Basic (VB) application that you can use to add contacts to your Instant Messaging Service from the Exchange global address list.
Loadsim	Allows you to test how your messaging server performs under different message loads. You can define specific workloads to test servers in a controlled manner. This enables you to accurately study server behavior under specific conditions. You can use this information to help determine the optimum number of users for each server, locate performance bottlenecks, and evaluate server hardware performance.
LPADC	Identifies password problems with ADC connection agreements.
Mailbox Statistics	Allows you to gather data about e-mail usage patterns. This Messaging

This Tool	Does This
	Application Programming Interface (MAPI) tool analyzes a user's mailbox, then develops statistics such as the number of rules in a folder and the amount of mail sent and received daily.
Mailbox Store Finder	Finds all of the E2K mailbox stores in an AD forest. It simplifies migration to E2K from another messaging system by helping you create a control file for each mailbox store.
MailQ	A Web page that summarizes the mail queue lengths for a custom set of E2K Server computers.
Mailtest	Sends mail using the MAPI interface or Internet Protocol (IP) suite. This tool was originally designed for message transfer agent (MTA) testing; Internet support was added later. Mailtest helps you test components efficiently and effectively, and it performs stress testing.
MAPISend (Mapisend.exe)	Sends messages with optional file attachments using E2K Server.
MTAView	Enables users to view the contents of the E2K Server MTA database and the objects that it contains. The objects on each queue are displayed along with the attributes for each object and their descriptions. You can use this information to determine the originator and destination addresses for objects in the database. For example, you can identify the sender of a particular message.
NET2STRM	Converts Network Monitor–display information into a readable file. For example, you can copy the Hypertext Transfer Protocol (HTTP) portions of a series of Network Monitor packets into a single file and use NET2STRM to produce that file as a stream of HTML-formatted text with line breaks in a stream.
Password Expiry Warning	A command-line application that you can use to warn E2K clients seven days before their user-account passwords expire. This application exists because Windows 3.x clients that use the NetWare Netx redirector and Macintosh-based clients don't receive password-expiration warnings from Win2K domain controllers.
Profile Generation	Creates messaging profiles for roving users by automatically editing profile descriptor files (.prf). This tool also uses Automatic Profile Generator (Newprof.exe) to create profiles based on edited .prf files.
Public Folder Administration	Helps you manage public folders. You can change the replicas and permissions on a folder or folder tree.
Public Folder Tree Information	Counts all of the messages in a selected folder and its subfolders. This tool is useful for verifying public folder replication among servers.
Storage Management Snap-in sample	A Microsoft Management Console (MMC) snap-in that is built using the snap-in designer for VB. This tool provides a subset of the storage management functionality in Exchange System Manager (ESM). It demonstrates how to write a stand-alone snap-in using the VB snap-in designer.
Web Monitor	Provides a monitoring and status Web page that gives you access to information about your organization's E2K Server computers by using Windows Management Instrumentation (WMI) information and VB. This information includes details about server status, queues, disks, memory, CPU, and services.

This Tool	Does This
Winroute	Connects to the link-state port on an E2K Server computer and extracts the link-state information for an E2K organization. Although link-state information is usually a series of globally unique identifiers (GUIDs), Winroute matches the GUIDs of connectors and bridgehead servers to objects in AD and presents the information in a readable format.

Table A.2: E2K resource kit tools.

Third-Party Tools

Third-party vendors provide many tools that you can use during migration. Table A.3 lists these third parties and their Web sites.

Vendor	Web Site
Aelita Software Corporation	http://www.aelita.com/
BindView Corporation	http://www.bindview.com/
BMC Software	http://www.bmcsoftware.com/
Brightmail	http://www.brightmail.com/
Elron Software	http://www.elronsw.com/
NetIQ Corporation	http://www.netiq.com/
Network Associates	http://www.nai.com/
Quest Software	http://www.quest.com/
Symantec	http://www.symantec.com/
Systems Internals	http://www.sysinternals.com/
SystemTools.com	http://www.systemtools.com/
Trend Micro	http://www.trendmicro.com/
Winternals Software	http://www.winternals.com/

Table A.3: Third parties and the tools they provide.

Web Sites

The Web sites in this section are useful resources for both Win2K and E2K support. The “Holy Grail” of Web sites for this support is obviously www.microsoft.com/, more specifically www.microsoft.com/exchange/. Nevertheless, many other sites offer a wide variety of information, support, and, perhaps more important, independent viewpoints that you may find useful for understanding how to deploy your environment. These sites are listed in Table A.4.

This Site	Provides
DevX exchange.devx.com/	A great developer and support site for many technologies. It's the <i>Exchange & Outlook</i> magazine Web site, and it offers the <i>Exchange & Outlook</i> Product Catalog.

This Site	Provides
<i>Exchange and Outlook Administrator</i> www.exchangeadmin.com/	A channel site of the <i>Windows 2000 Magazine</i> network, providing specific content from the <i>Exchange & Outlook</i> newsletter. It also provides access to discussion groups on related subjects.
<i>Exchange & Outlook magazine Workshop</i> www.exchangeworkshop.com/	Built on the base of E2K, this site represents the efforts of <i>Exchange & Outlook</i> magazine to help you use and understand E2K.
Exchange Resource Center www.amrein.com/eworld.htm	A reasonable site whose goal is to collect a complete list of all available resources for Exchange.
Microsoft Exchange Internals www.exinternals.com/	A portal to technical information and tools for E2K—for example, white papers, fixes, books, products, service packs, and so on. Information and links are filtered in order to provide only the very best technical resources. (This site isn't related to Winternals.com.)
Simpler Webb www.swinc.com/resource/e2kfaq.htm	Provides valuable Frequently Asked Questions (FAQs) on both Exchange 5.5 and E2K.
Slipstick Systems www.slipstick.com/	An excellent site operated by Sue Mosher, a long-time Most Valuable Professional in Microsoft technologies. Slipstick's major activity is researching and solving problems with Outlook and Exchange Server.
WebStorageD2D.com www.wsd2d.com/	A useful resource for E2K, offering developer tools and a search engine to access all of the information available on related products and services.
<i>Windows 2000 Magazine</i> www.win2000mag.com/	Publishes information on Windows NT, Win2K, and related applications and technologies. The online articles are a great resource for your migration.

Table A.4: Web sites for Win2K and E2K support.

Resources for Fighting Spam

There are a number of useful resources around for fighting Unsolicited Commercial E-mail (UCE), more commonly known as spam. These organizations and their Web sites are listed in Table A.5.

This Site	Provides
CAUCE—Coalition Against Unsolicited Commercial Email www.cauce.org/	An ad hoc, all-volunteer organization created by Internet users to advocate for a legislative solution to the problem of spam.
Mail Abuse Prevention System (MAPS) www.mail-abuse.org/	A not-for-profit California organization whose mission is to defend the Internet's e-mail system from abuse by people who send spam.
Network Abuse Clearinghouse www.abuse.net/	Helps the Internet community report and control network abuse and abusive users.
Sam Spade.org www.samspace.org/	A Web site and collection of tools for combating Internet and network abuses.

This Site	Provides
Spam Abuse Net spam.abuse.net/	Another effort to try and legally ban spam.

Table A.5: Resources for fighting spam.

Appendix B: List of Acronyms and Abbreviations

Acronym	Meaning	Comments
ACE	access control entry	
ACL	access control list	
ACPI	Advanced Configuration and Power Interface	
AD	Active Directory	
ADSI	Active Directory Service Interfaces	
AG	Administrative Group	
API	application programming interface	
APM	Advanced Power Management	
ASP	Active Server Pages	
CDO	Collaboration Data Objects	
COM	Component Object Model	
COTS	Commercial Off-the-Shelf	
CRL	certificate revocation list	
CSR	Certificate Signing Request	
DAACL	discretionary access control list	
DC	domain Controller	
DDNS	Dynamic Domain Name System	Defined in Request for Comments (RFC) 2136
DfS	distributed file system	
DHCP	Dynamic Host Configuration Protocol	Defined in RFC 2131, 2132, and 2141
DNS	Domain Name System	Defined in RFC 1034 and 1035
E2K	Exchange 2000	
EFS	Encrypting File System	
EMW	Exchange Migration Wizard	
ERD	Emergency Repair Disk	
ESE	Extensible Storage Engine	
ESM	Exchange System Manager	
EVS	Exchange Virtual Server	
FAT	file allocation table	
FRS	File Replication Service	
GAL	Global Address List	
GC	Global Catalog	
GIF	Graphics Interchange Format	

Acronym	Meaning	Comments
GPE	Group Policy Editor	
GPO	Group Policy Object	
GUID	globally unique identifier	
GWART	Gateway Address Routing Table	
HCL	Hardware Compatibility List	
IETF	Internet Engineering Task Force	Maintain the RFC documents and process; you can search for RFCs at http://www.ietf.org/
IIS	Internet Information Services or Internet Information Server	
IM	Instant Messaging	
IMAP	Internet Message Access Protocol	IMAP4 represents version 4 of the protocol
IMS	Internet Mail Service	
IRC	Internet Relay Chat	
IS	Information Store	
ISV	independent software vendor	
KMS	Key Management Server	
LAN	local area network	
LDAP	Lightweight Directory Access Protocol	
MAPI	Messaging Application Programming Interface	
MBR	Master Boot Record	
MDB	message database	
MMC	Microsoft Management Console	
MTA	message transfer agent	
NTFS	NT File System	
NTLM	NT LAN Manager	
OAB	Offline Address Book	Offline Address List in Exchange 2000
OWA	Outlook Web Access	
PnP	Plug and Play	
POP	Post Office Protocol	POP3 represents version 3 of the protocol
PST	personal store	
PXE	Preboot eXecution Environment	
RAS	Remote Access Service	
RBFG	Remote Boot Floppy Boot Generator	

Acronym	Meaning	Comments
RFC	Request For Comment	A final standard document from the IETF
RIS	Remote Installation Services	
RPC	remote procedure call	
RRAS	Routing and Remote Access Service	
RSS	Remote Storage Service	
SAM	Security Account Manager	
SID	security identifier	
SLA	service level agreement	
SMS	Systems Management Server	
SMTP	Simple Mail Transfer Protocol	Defined in RFC 821
SSL	Secure Sockets Layer	
SSO	single sign-on	
UCE	unsolicited commercial email	
UID	unique identifier	
VDM	Virtual DOS Machine	
VPN	Virtual Private Network	
WBEM	Web-Based Enterprise Management	
WebDAV	Web Distributed Authoring and Versioning	
Win2K	Windows 2000	
WINS	Windows Internet Naming Service	
WMI	Windows Management Instrumentation	
WSS	Web Storage System	
X.509		A standard format for public key certificates and CRLs using X.500 naming conventions

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