

**NotesBench Disclosure Report**  
**for**  
**IBM Netfinity 5600**  
**using**  
**Lotus Domino Server 5.01**  
**and**  
**Windows 2000 Advanced Server**

**Results Certified July 20, 2000**

**IBM Corporation**



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***Edition Notice***

## Executive Summary

The IBM Netfinity\* 5600 server demonstrated leadership performance running Lotus\*\* Domino\*\* Server Release 5.01 on Microsoft\*\* Windows 2000 Advanced Server. The results detailed in this report were obtained using the NotesBench R5Mail-Only workload.

Test Script	Maximum Users	NotesMark (tpm)	Ave. Response Time (sec)	\$/User	\$/NotesMark
R5Mail-Only	8,600	11,799	3.068	\$7.03	\$5.12

The IBM Netfinity 5600 server was configured with two 933MHz<sup>1</sup> Intel\*\* Pentium\*\* III processors, 4GB<sup>2</sup> of memory, and 26 hard disk drives. All configuration details are provided in Appendix A: Overall Test Setup and Software Versions.

The server under test supported an R5Mail-Only workload of 8,600 active mail users (see price/performance results<sup>3</sup> above).

IBM's Netfinity Server Performance Laboratory in Research Triangle Park, NC, conducted the benchmark in June, and KMDS Technical Associates, Inc., audited the results in July 2000.

NotesBench provides an objective method for evaluating the performance of different platforms running Lotus Domino Server. NotesBench generates a transactions-per-minute (tpm) throughput metric, called a NotesMark, for each test, along with a value for the maximum capacity (number of users) supported, and the average response time.

## Benchmarking Objectives

The benchmark objective was to provide customers with information on how to fully utilize the capability of the IBM Netfinity 5600 system as a Domino Server 5.0 mail server configured with the Netfinity ServeRAID-3L Ultra2 SCSI Adapter for RAID-1 data redundancy.

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<sup>1</sup> MHz only measures microprocessor internal clock speed, not application performance. Many factors affect application performance.

<sup>2</sup> When referring to hard drive capacity, GB stands for one thousand million bytes. Total user-accessible capacity may vary depending on operating environments.

<sup>3</sup> The price/performance results are based on IBM's estimated reseller pricing. IBM resellers set their own prices, and actual prices may vary.

## Test Methodologies

### *Test Setup and Hardware/Software Configuration*

The IBM Netfinity 5600 system under test (SUT) was configured with two 933MHz Pentium III processors (256KB of ECC full-speed L2 write-back cache and 133MHz frontside bus per processor), 4GB of memory, twenty-six 9.1GB 10K rpm hard disk drives. Each of four RAID-1 arrays, which contained the mail files, was connected to a channel on a Netfinity ServeRAID-3L Ultra2 SCSI Adapter. Six drives, five of which were contained in a RAID-1 array, and one of which was used as the boot disk, were connected to a ServeRAID-3L Ultra2 SCSI Adapter. A more detailed description of the configuration of the RAID-1 arrays is provided in Appendix A.

The network consisted of a CISCO\*\* Catalyst 5505 switch with two 24-port 10/100 modules. All child drivers, parent and SUT were connected to a port on the switch. The IBM Netfinity 5600 system under test ran Microsoft Windows 2000 Advanced Server and Domino Server 5.01.

The RAID controller configuration value for Stripe Unit Size was set at 16KB. Write-back cache was enabled for all RAID-1 arrays.

The following NOTES.INI parameters were modified as recommended in the NotesBench operator's manual.

<b>R5Mail-Only Workload</b>
Server_Max_Concurrent_Trans=1000
MailMaxThreads=2
NSF_DBCache_MaxEntries=10000
SetMailLogToEventsOnly=1
Log_MailRouting=10
Log_Sessions=0
Mail_Number_Of_MailBoxes=2
Server_Pool_Tasks=100
Max_Users=10000
DBMaxEntries=10000

The following parameters were added to suppress database activity logging after long runs and to capture server console output:

```
No_Force_Activity_Logging=1
Server_Show_Performance=1
Debug_Outfile=\\Parent1\Results\SUTINFO.TXT
```

All Notes server tasks were disabled except Router.

All Domino data files were located on the D:, E:, F:, G: and J: RAID-1 arrays. The Domino executable codes and data link files were located on the J: RAID-1 array.

## ***Test Procedures***

Several trial runs were conducted starting with a single Domino server to attempt to exhaust at least one of the system resources: processor, memory or disk subsystem. When average user response time reached an unacceptable level before any one of these resources had been fully utilized, an additional resource was installed. System resource utilization was monitored using Windows 2000 Performance Monitor (PERFMON), which enabled the system configuration to be optimized while balancing system resources.

The 8,600 users were distributed over 15 clients. Each client added 200 to 600 users to the system under test. The test ran for 9 hours and 15 minutes, including ramp-up. Child 1 through child 14 simulated 600 users each and child 15 simulated 200 users. The actual ramp-up period from startup of child 1 to the point when all 8,600 users were shown on the server console was approximately 3 hours. The test ran for more than 6 hours after ramp-up. During the test runs, the tools used to determine steady state included the child driver RES files, Notesizer command outputs, and Domino Server statistics output to the server console on a minute-by-minute basis.

To confirm steady state, we verified the number of users at the server and its logs. We confirmed steady state when the number of users on the SUT Domino Server console reached the intended number of users. We also used the Show Stat Mail command on the server to verify that at least 90 percent of the mail generated during the test period was delivered to the local mail databases during the test period..

To ensure that the test results were reproducible, all tests were repeated, and the results were compared and were found to be consistent.

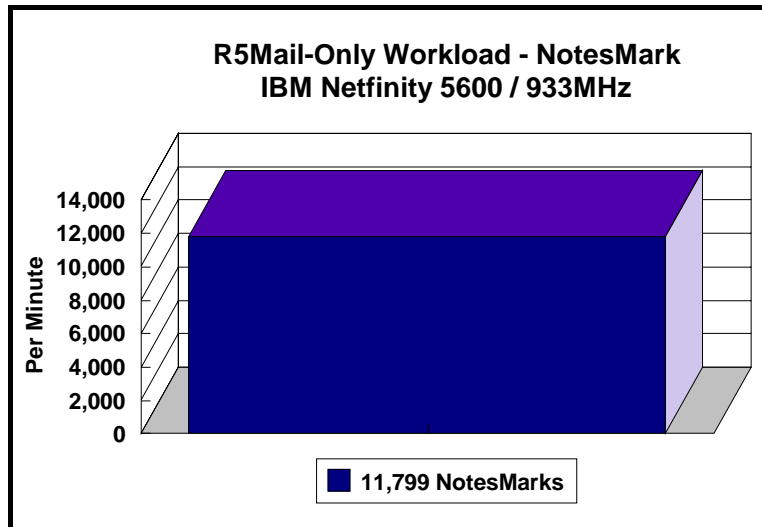
## ***Other NotesBench Tests***

IBM intends to continue conducting NotesBench measurements to further optimize and exploit the performance capability of the Netfinity product line running Domino Server 5.0.

## Data

### ***IBM Netfinity 5600 NotesMark Value for R5Mail-Only Test***

The IBM Netfinity 5600 server demonstrated that it can support 8,600 concurrent active users with this workload. The NotesMark throughput value was 11,799. Average response time was 3.068 seconds. The test ran error-free for a period of 9 hours and 15 minutes.



The R5Mail workload executes Notes transactions that model a server for mail users at sites that rely only on mail for communication. The resulting capacity metric for a mail-only server is the maximum number of users that can be supported before the average user response time becomes unacceptable.

The Domino R5Mail-Only test script models an active user who is reading and sending mail. The script contains an average of 15 minutes of waiting; thus, the average user would execute this script a maximum of four times each hour. For each iteration of the test script, there are 5 documents read, 2 documents updated, 2 documents deleted, 2 documents added, 1 view scrolling operation, 1 database opened and closed, 1 view opened and closed, looking up of recipients and sending an invitation every 30 minutes, as well as some miscellaneous operations. In sending messages, each user creates and sends a mail message to NumMessageRecipients no more frequently than every 90 minutes. About every 90 minutes, each user creates a meeting invitation and responds to an invitation.

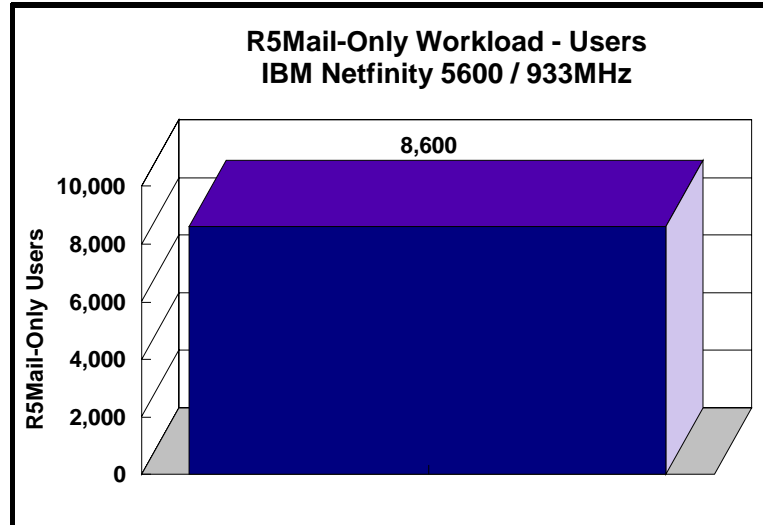
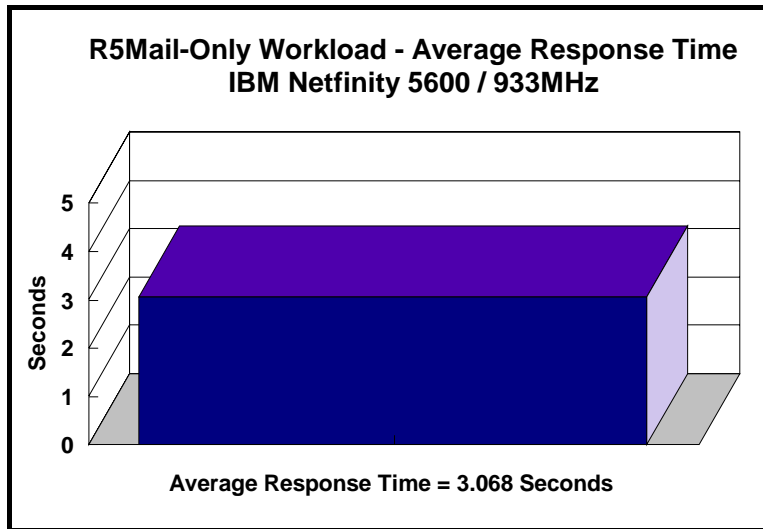
### NotesNum Output for R5Mail-Only Test

Min Start Time = 07/03/2000 08:33:39 AM Max Stop Time = 07/03/2000 05:59:47 PM

Total Test Errors = 0

Total Test Time = 33960 sec

Test Run: Users = 8600 NotesMark = 11799 Response Time = 3068 msec (07/03/2000 11:35:00 AM to 07/03/2000 05:40:00 PM)



## Analysis

When configured optimally as described in this report, the IBM Netfinity 5600 server demonstrated that it can manage the intense resource usage during ramp-up to 8,600 concurrent R5Mail users with no errors at the clients. During the steady-state period on one of the successful 8,600-user runs, the average CPU utilization was 89 percent. The average available memory was 1.34GB.

The transaction logging option was not enabled for this audit run. When this option is enabled, we recommended placing the transaction logging directory on a dedicated disk that is attached to a less-busy adapter on a less-busy PCI bus to improve response time.



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## Conclusions

The test results demonstrate that the IBM Netfinity 5600 configured as described in this report can support up to 8,600 concurrent, active R5Mail users with a response time well below that permitted by the test criteria. The server's architecture provides many options that can expand its capability. With existing available memory, and upgradable CPU and I/O subsystems, the system can be further expanded to accommodate additional Domino server tasks and other applications..

These results are based on running the IBM Netfinity 5600 as a dedicated Domino server. The addition of other application workloads will affect the number of users supported as well as the response time. Achieving optimum performance in a customer environment is highly dependent upon selecting adequate processor power, memory and disk storage as well as balancing the configuration of that hardware and appropriately tuning the operating system and Domino software.

These results represent leadership performance in a two-processor hardware platforms for the Domino Server 5.0 environment.

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## **Statement by Auditor**

The original “Lotus NotesBench Test Results Report Certification Letter” was signed by Daryl K. Thompson, NotesBench Auditor for KMDS Technical Associates, Inc., and is on file at IBM.

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## **Appendix A: Overall Test Setup and Software Versions**

### ***Number of Client Systems***

For the R5Mail-Only test, 16 driver systems were used. Fifteen of those systems were configured as child drivers (child 1 through child 15). A parent system was used for debug\_output data collection and to control the run.

The disk configuration used for the child systems is as follows:

- Child drivers 1-15
  - C: Partition (512MB - NTFS) - Windows NT 4.0.
  - D: Partition (1.5GB - NTFS) - Notes 5.01 code and data

### ***Number of Server Platforms***

One server platform, the IBM Netfinity 5600 with two 933MHz Pentium III processors and 4GB of memory was benchmarked.

The disk configuration used for the system under test is as follows:

- C: Single disk drive (9.1GB - NTFS) - Windows 2000 Advanced Server (Boot Partition)
- D: Partition (22.5GB - NTFS) - Domino mail files
- E: Partition (22.5GB - NTFS) - Domino mail files
- F: Partition (22.5GB - NTFS) - Domino mail files
- G: Partition (22.5GB - NTFS) - Domino mail files
- J: Partition (22.5GB - NTFS) - Domino executables and Domino mail data subdirectory

### ***Network***

The network consisted of a single segment. All child drivers, parent and SUT were connected to one of 24 ports on a CISCO Catalyst 5505 switch.

### ***Software Versions***

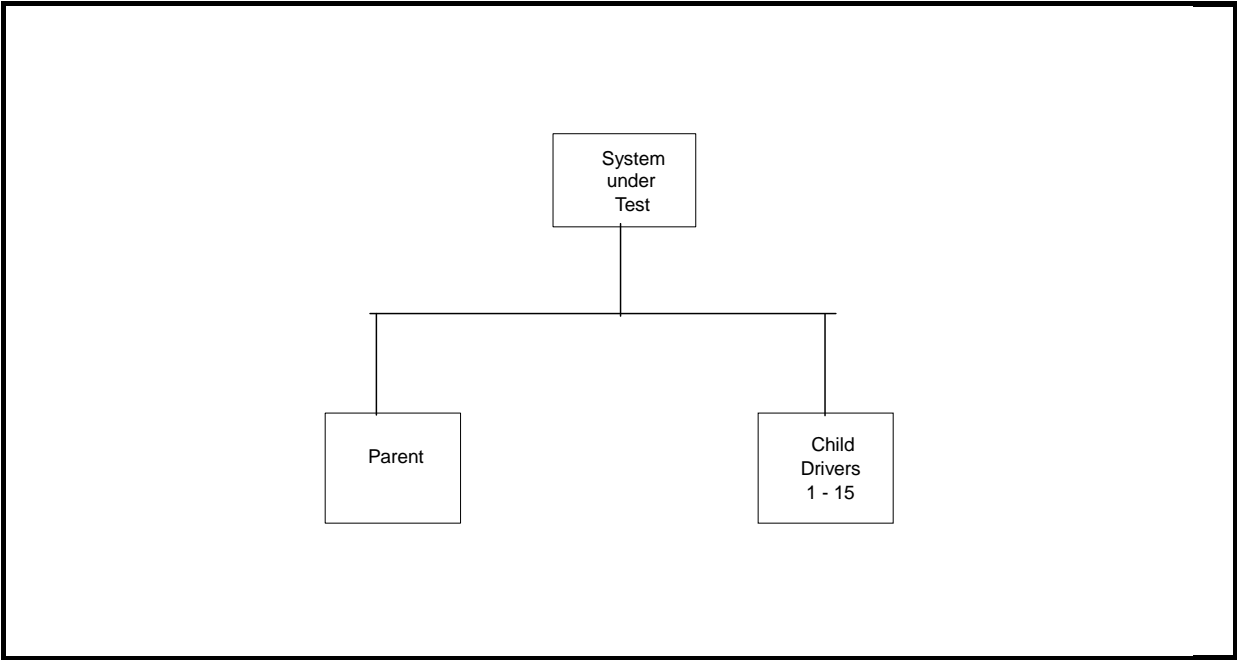
Software versions used on the system under test were as follows:

- Microsoft Windows 2000 Advanced Server
- Lotus Domino Server Release 5.01
- NotesBench Version 5.0 - Windows/32, released March 12, 1999

Software versions used on the child and parent drivers were as follows:

- Microsoft Windows NT Workstation 4.0 and Service Pack 5
- Lotus Domino Client Release 5.01 for Windows NT
- NotesBench Version 5.0 - Windows/32, released March 12, 1999

**Test Setup Diagram**



**Details of Configuration**

System Under Test	Child Drivers 1-15	Parent Source Driver
IBM Netfinity 5600	IBM PC 365	IBM PC Server 325
2 x 933MHz Pentium III Processor	1 x 200MHz Pentium Pro Processor	1 x 200MHz Pentium Pro Processor
4GB Memory	128MB Memory	128MB Memory
26 x 9.1GB Drives (5 RAID-1arrays)	1 x 2GB Drive	1 x 4.5GB Drive
5 x ServeRAID-3L Ultra2 SCSI Adapter		
Integrated 10/100 Ethernet Controller	1 x Intel EtherExpress 10/100 PCI TX Adapter	1 x Intel EtherExpress 10/100 PCI TX Adapter
Windows 2000 Advanced Server	Windows NT Workstation 4.0 with Service Pack 5	Windows NT Workstation 4.0 with Service Pack 5

## Appendix B: System Configurations

<b>Server under Test</b>	
<b>System</b>	IBM Netfinity 5600
<b>Processor</b>	2 x 933MHz Pentium III
<b>Memory</b>	4GB
<b>Cache</b>	256KB ECC Full-Speed L2 Cache per Processor
<b>RAID Controller</b>	5 x Netfinity ServeRAID-3L Ultra2 SCSI Adapters
<b>Disk Drive</b>	26 x 9.1GB 10K rpm (configured as five RAID-1 arrays)
<b>Network Interface</b>	Integrated 10/100 Ethernet Controller
<b>I/O</b>	PCI Bus
<b>Operating System</b>	Microsoft Windows 2000 Advanced Server
<b>Notes</b>	Lotus Domino Server Release 5.01 for Windows NT
<b>NotesBench</b>	NotesBench Version 5.0 - Windows/32, released March 12, 1999

<b>Child Drivers 1 - 15</b>	
<b>System</b>	IBM PC 365
<b>Processor</b>	1 x 200MHz Pentium Pro
<b>Memory</b>	128MB
<b>Disk Drive</b>	1 x 2GB
<b>Network Interface</b>	1 x Intel EtherExpress 10/100 PCI TX Adapter
<b>I/O</b>	PCI Bus
<b>Operating System</b>	Microsoft Windows NT Workstation 4.0 with Service Pack 5
<b>Notes</b>	Lotus Domino Client Release 5.01 for Windows NT
<b>NotesBench</b>	NotesBench Version 5.0 - Windows/32, released March 12, 1999

<b>Parent</b>	
<b>System</b>	IBM PC Server 325
<b>Processor</b>	1 x 200MHz Pentium Pro
<b>Memory</b>	128MB
<b>Disk Drive</b>	1 x 4.5GB
<b>Network Interface</b>	1 x Intel EtherExpress 10/100 PCI TX Adapter
<b>I/O</b>	PCI Bus
<b>Operating System</b>	Microsoft Windows NT Workstation 4.0 with Service Pack 5
<b>Notes</b>	Lotus Domino Client Release 5.01 for Windows NT
<b>NotesBench</b>	NotesBench Version 5.0 - Windows/32, released March 12, 1999

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## Appendix C: Operating System Parameters

In the system under test, the following registry variables were changed from their default values of 2 to 0:

HKEY\_LOCAL\_MACHINE/System/CurrentControlSet/Control/PriorityControl/Win32PrioritySeparation:  
REG\_DWORD:0

HKEY\_LOCAL\_MACHINE/System/CurrentControlSet/Control/SessionManager/MemoryManager/  
LargeSystemCache: REG\_DWORD:0

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## Appendix D: NOTES.INI Settings

### *NOTES.INI for System under Test*

```
[Notes]
;           Server Performance
;
DBMaxEntries=10000
MailMaxThreads=2
Mail_Number_Of_MailBoxes=2
Max_Users=10000
NSF_DBCache_Maxentries=10000
;(IRIS recommended 2 params: 100 &1000)
;Server_Pool_Tasks=100
;Server_Max_Concurrent_Trans=1000
Server_Pool_Tasks=100
Server_Max_Concurrent_Trans=1000
;View_Rebuild_dir=m:\view_dir
;
;MailUseThreads=1
LOG_SESSIONS=0
MailLogToEventsOnly=1
LOG_MAILROUTING=10
SERVER_SHOW_PERFORMANCE=1
No_Force_Activity_Logging=1
DEBUG_OUTFILE=\\parent1\c$\results\sutinfo.txt
;Server_MaxSessions=8000
;Server_Session_timeout=15
;           end performance parameters
Directory=j:\notes5\data
KitType=2
SetupDB=Setup.nsf
UserName=sut
CompanyName=IBM
NotesProgram=j:\notes5
InstallType=3
CONSOLE_Lotus_Domino_Server=80 25 7 0 66 652 397
WinNTIconPath=j:\notes5\data\W32
Timezone=5
DST=1
$$HasLANPort=1
WWWDSPP_SYNC_BROWSERCACHE=0
WWWDSPP_PREFETCH_OBJECT=0
EnablePlugins=1
Preferences=2147486833
AltNameLanguage=en
ContentLanguage=en-US
WeekStart=1
ViewWeekStart=2
NavWeekStart=2
XLATE_CSID=52
SPELL_LANG=1033
Region=en-US
Passthru_LogLevel=0
Console_LogLevel=2
VIEWIMP1=Lotus 1-2-3 Worksheet,0_IWKS,,WKS,.WK1,.WR1,.WRK,.WK3,.WK4,,4,
VIEWIMP3=Structured Text,0_ISTR,,LTR,.CGN,.STR,,1,
VIEWIMP4=Tabular Text,0_ITAB,,PRN,.RPT,.TXT,.TAB,,1,
VIEWEXP1=Lotus 1-2-3 Worksheet,0_XWKS,,WKS,.WK1,.WR1,.WRK,,4,
VIEWEXP3=Structured Text,0_XSTR,,LTR,.CGN,.STR,,1,
VIEWEXP4=Tabular Text,1_XTAB,,LTR,.RPT,.CGN,.TAB,,1,
EDITIMP1=ASCII Text,0_ITEXT,,TXT,.PRN,.C,.H,.RIP,,1,
EDITIMP2=Microsoft RTF,0_IW4W_IRTF,.DOC,.RTF,,2,
EDITIMP3=Lotus 1-2-3,0_IW4W_IWKSE,.WKS,.WK1,.WR1,.WRK,.WK3,.WK4,.123,,4,
EDITIMP4=Lotus PIC,0_IPIC,,PIC,,8,
EDITIMP5=CGM Image,0_IFL,,GMF,.CGM,,8,
```





ServerKeyFileName=server.id  
Domain=IBM  
Admin=CN=admin/O=IBM  
TemplateSetup=62  
Setup=60  
ServerSetup=50  
DESKWINDOWSIZE=-4-4 648 460  
MAXIMIZED=1  
ECLSetup=3  
PhoneLog=2  
Log=log.nsf, 1, 0, 7, 40000  
ShowCertifierRecoveryWarning\_j:\notesr5\data\cert.id=1  
SERVERS\_FRAME\_PERCENT=20  
MONITOR\_SCALE=1  
ADMINWINDOWSIZEWIN=09 616 447  
ADMINMAXIMIZED=0  
WinNTIconCommonConfig=Universal  
WinNTIconSize=2  
WinNTIconPos=2  
WinNTIconHidden=1  
WinNTIconRect=0 0 0 24  
FileDialogDirectory=J:\notesr5\data  
AdminSetup=502  
CleanSetup=1  
TRANSLOG\_AutoFixup=1  
TRANSLOG\_UseAll=0  
TRANSLOG\_Style=0  
TRANSLOG\_Performance=2  
TRANSLOG\_Status=0  
MTEabled=0  
MAILUSEPROCESSES=0  
MAILUSETHEADS=1

## **NOTES.INI for Child 1**

[Notes]

```
; NotesBench parms
;*****
NodeName=nchild1
ResultsDirectory=\\parent1\c$\results
DEBUG_OUTFILE=\\parent1\c$\results\res 1
ThreadStagger=0.6
*****
Directory=D:\NotesR5\data
KitType=1
InstallType=1
WinNTIconPath=D:\NotesR5\data\W32
Timezone=5
DST=1
$$HasLANPort=1
WWWDSPP_SYNC_BROWSERCACHE=0
WWWDSPP_PREFETCH_OBJECT=0
EnableJavaApplets=1
EnablePlugins=1
Preferences=-2147480463
AltNameLanguage=en
ContentLanguage=en-US
WeekStart=1
ViewWeekStart=2
NavWeekStart=2
XLATE_CSID=52
SPELL_LANG=1033
Region=en-US
Passthru_LogLevel=0
Console_LogLevel=2
VIEWIMP1=Lotus 1-2-3 Worksheet,0_IWKS,,WKS,.WK1,.WR1,.WRK,.WK3,.WK4,,4,
VIEWIMP3=Structured Text,0_ISTR,,LTR,.CGN,.STR,,1,
VIEWIMP4=Tabular Text,0_ITAB,,PRN,.RPT,.TXT,.TAB,,1,
VIEWEXP1=Lotus 1-2-3 Worksheet,0_XWKS,,WKS,.WK1,.WR1,.WRK,,4,
VIEWEXP3=Structured Text,0_XSTR,,LTR,.CGN,.STR,,1,
VIEWEXP4=Tabular Text,1_XTAB,,LTR,.RPT,.CGN,.TAB,,1,
```



```

NumMessageRecipients=3
NumMailNotesPerUser=100
AttachmentSize=500000
LargeMessageSize=32000
MAXDocToDelete=10000
NumNotesLocalReplica=90
NumSharedNotes=900
MailTemplate=Mail50.NTF
Domain=IBM
UseServerNAB=1
PhoneLog=2
Log=log.nsf, 1, 0, 7, 40000
SMTPHOST=sut.raleigh.ibm.com
LDAPHOST=sut.raleigh.ibm.com
IMAPHOST=sut.raleigh.ibm.com
RecipientDomain=raleigh.ibm.com
IMAP_session_timeout=15
R5IMAP_Loop_N=100
MessageLineSize=100
MailRecipientPercentUser=50
MailRecipientPercentVolume=50
MailRecipientBeginNumber=1
MailRecipientEndNumber=1000
FileDlgDirectory=D:\NotesR5\data
NewMailSeqNum=233

```

## **NOTES.INI for Parent Source Driver**

[Notes]

```

;
; Begin Notesbench variables for PARTITION 1
;
; *****
NodeName=parent1
; Runtime in minutes
; for 13 nbs (530)
Runtime=555
; for ?? nbs
;Runtime=400
ChildStagger=6,1-2;7,3;8,4;9,5;10,6;11,7;12,8;13,9;14,10;15,11;16,12;17,13;18,14;19,15
;ChildStagger=9,1-9;12,10-13
NumClients1=600
NumClients2=600
NumClients3=600
NumClients4=600
NumClients5=600
NumClients6=600
NumClients7=600
NumClients8=600
NumClients9=600
NumClients10=600
NumClients11=600
NumClients12=600
NumClients13=600
NumClients14=600
NumClients15=200
;NumClients16=700
;NumClients17=700
;NumClients18=100
; NumClients19=400
; NumClients20=100
ResultsDirectory=c:\results
DEBUG_OUTFILE=c:\results\notesnum.txt
;-----End
; *****
;
; Multirun Variables
; *****

```

```

; ProbeIntervalDelay=wait after end of one run before starting next
; ProbeWaitTime=wait to start Probe (default=15mins)
; ProbeRunTime=#minutes probe will collect stats
;;Probe_Interval=2800,2900,3000
;;ProbeIntervalDelay=30
;;ProbeWaitTime=30
;;ProbeRunTime=180
; ProbeRunTime=2 because we want 240 minutes of runtime after ramp-up
; without overhead of PROBE
; Next line cause command 'show stat' to execute on SUT console
; before start of each multi-run and when ramped up for that run
; Mail statistics required for audit at ramp-up and before ramp-down
;;ProbeTestIncrementCMD=show stat mail
;;ProbeTestIncrementCMD=show stat database
;;NBTestReset=1
.*****
;
; Server.Planner Variables
.*****
;;CPDatabase=c:\notesb3\data\Server.Planner.nsf
;;SUTMachineID=Teton600
;-----End

```

```

Directory=c:\notesr5\data
KitType=1
InstallType=1
WinNTIconPath=c:\notesr5\data\W32
Timezone=5
DST=1
$$HasLANPort=1
WWWDSPP_SYNC_BROWSERCACHE=0
WWWDSPP_PREFETCH_OBJECT=0
EnableJavaApplets=1
EnablePlugins=1
Preferences=-2147480463
AltNameLanguage=en
ContentLanguage=en-US
WeekStart=1
ViewWeekStart=2
NavWeekStart=2
XLATE_CSID=52
SPELL_LANG=1033
Region=en-US
Passthru_LogLevel=0
Console_LogLevel=2
VIEWIMP1=Lotus 1-2-3 Worksheet,0_IWKS,.,WKS.,WK1.,WR1.,WRK.,WK3.,WK4.,4,
VIEWIMP3=Structured Text,0_ISTR,.,LTR.,CGN.,STR.,1,
VIEWIMP4=Tabular Text,0_ITAB,.,PRN.,RPT.,TXT.,TAB.,1,
VIEWEXP1=Lotus 1-2-3 Worksheet,0_XWKS,.,WKS.,WK1.,WR1.,WRK.,4,
VIEWEXP3=Structured Text,0_XSTR,.,LTR.,CGN.,STR.,1,
VIEWEXP4=Tabular Text,1_XTAB,.,LTR.,RPT.,CGN.,TAB.,1,
EDITIMP1=ASCIIText,0_ITEXT,.,TXT.,PRN.,C.,H.,RIP.,1,
EDITIMP2=Microsoft RTF,0_IW4W,._IRTF,.,DOC.,RTF,.,2,
EDITIMP3=Lotus 1-2-3,0_IW4W,._IWKSE,.,WKS.,WK1.,WR1.,WRK.,WK3.,WK4.,123.,4,
EDITIMP4=Lotus PIC,0_IIPC,.,PIC.,8,
EDITIMP5=CGM Image,0_IFL,.,GMF,.,CGM,.,8,
EDITIMP6=TIFF5.0 Image,0_ITIFF,.,TIF,.,18,
EDITIMP7=BMP Image,0_IBMP,.,BMP,.,18,
EDITIMP8=Lotus Ami Pro,0_IW4W, W4W33F/V0,.,SAM,.,2,
EDITIMP9=HTML File,0_IHTML,.,HTM,.,HTML,.,1,
EDITIMP17=WordPerfect 5.x,0_IW4W, W4W07F/V1,.,DOC,.,WPD,.,2,
EDITIMP21=Lotus Word Pro,0_IW4W, W4W12F/V0,.,LWP,.,2,
EDITIMP22=PCX Image,0_IPCX,.,PCX,.,18,
EDITIMP28=Binary with Text,0_ISTRNGS,.,*,1,
EDITIMP29=WordPerfect 6.0/6.1,0_IW4W, W4W48F/V0,.,WPD,.,WPT,.,DOC,.,2,
EDITIMP30=Microsoft Excel,0_IW4W, W4W21F/V4C,.,XLS,.,4,
EDITIMP31=Microsoft Word,0_IW4W, W4W49F/V0,.,DOC,.,2,
EDITIMP32=GIF Image,0_IGIF,.,GIF,.,18,
EDITIMP33=JPEG Image,0_IJPE,.,JPG,.,18,

```



NumNotesLocalReplica=90  
NumSharedNotes=900  
MailTemplate=Mail50.NTF  
Domain=IBM  
UseServerNAB=1

## ***nbconfig.ini***

```
.*****  
; NotesBench parms  
.*****  
NthIteration=6  
;NthIteration=9999  
Tmp=Notestmp  
MaxSessions=100  
NumAddLocalReplica=1  
NumDeleteLocalReplica=1  
NumStampLocalReplica=1  
NumUpdateLocalReplica=1  
NormalMessageSize=10000  
NumMessageRecipients=3  
NumMailNotesPerUser=100  
AttachmentSize=500000  
LargeMessageSize=32000  
MAXDocToDelete=10000  
; *****  
; * MaxUsers=9000 total *  
; * NumNotesLocalReplica=1% MaxUsers *  
; * NumSharedNotes=10% MaxUsers *  
; *****  
NumNotesLocalReplica=90  
NumSharedNotes=900  
MailTemplate=Mail50.NTF  
;NormalMessageSize=10000  
Domain=IBM  
UseServerNAB=1
```

---

## **Appendix E: Network Configuration**

The standard TCP/IP stack provided by Microsoft Windows 2000 Advanced Server was used.

In the system under test, the network adapter speed for the integrated 10/100 Ethernet controller was changed from the default 'Auto' to 100Mbps. This forced the Duplex Mode to 'full'.

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## **Appendix F: Guidelines for Information Usage**

This report is intended for IBM Business Partners, customers, and IBM marketing and technical support personnel. The report may be distributed in accordance with the requirements stated in the Edition notice.



## Appendix G: Pricing

The table provides the IBM Estimated Reseller Price to end users for the U.S. only. Actual Reseller prices may vary, and prices may also vary by country. Prices are subject to change without notice. For additional information and current prices, contact your local IBM representative.

*Note:* Lotus Domino Server ships with the Netfinity 5600 at no charge.

Item Description	Order Number	Qty	IBM Estimated Reseller Unit Price	IBM Estimated Reseller Extended Price
<b>IBM Netfinity 5600</b>	8664-7RY	1	\$5,533	\$5,533
1 x 933MHz Pentium III Processor with 256KB L2 Cache (one 128MB RDIMM included); integrated 10/100 Ethernet controller.				
933MHz / 256KB L2 Cache Processor Upgrade	19K4631	1	1,815	1,815
1GB 133MHz ECC SDRAM RDIMM Memory	33L3064	4	6,995	27,980
Netfinity ServeRAID-3L Ultra2 SCSI Adapter	19K0564	5	659	3,295
9.1GB 10K-3 Wide Ultra2 SCSI Hard Disk Drives	36L9748	26	479	12,454
Netfinity EXP200 Rack Storage Expansion Enclosure	35301RU	2	2,595	5,190
IBM E54 15" (13.8" Viewable) Color Monitor	6331B2N	1	173	173
<b>Software</b>				
Windows 2000 Advanced Server		1	3,999	3,999
Lotus Domino Server Release 5.01		1	NC	
<b>Total System Price</b>				<b>\$60,439</b>

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## Appendix H: Vendor-Defined Information

None.

## **First Edition - July 2000**

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