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Multiple Domino Version Coexistence on iSeries with LPAR

DP16

ITSO iSeries Technical Forum

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Redbooks

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Objectives

On "Multiple Domino Versions Coexistence on iSeries with LPAR" topic:

- Understanding its concepts and benefits
- Understanding how to plan and design
- Understanding how to setup

This presentation applies to:

- Domino 6 for iSeries or later
- OS/400 V5R1 or later

This presentation was made out of the Redbook, SG24-6593, whose authors include:

- Colin Stamp, Paul Wertzler, and Francine Wiener

LPAR Overview

Multiple Domino Versions on iSeries with LPAR:
Concepts and Benefits

Why multiple Domino versions?

Why multiple Domino version on the same iSeries server?

- Allowing you to easily install, test, and upgrade to Domino 6
- Moving quickly to Domino 6
- Managing the diversity of Domino
- Achieving greater flexibility using OS/400 V5R2 and LPAR
- Dynamic test bed for Domino and its Collaborative products
- Financial benefits from accurately predicting resource requirements
- Providing additional failover and high availability to Domino
- Allowing new OS/400 release testing
- True global multi-lingual support at OS/400 and Domino levels

Easy test and upgrade to Domino 6

Many Domino owners want opportunity to test Domino 6

- While their production environment continues to run Domino R5
- You can run only one version of Domino under one copy of OS/400
- One way to achieve this is to purchase a second iSeries for testing Domino 6
- By implementing LPAR, you can run multiple copies of OS/400
  - ***Multiple versions of Domino on the same iSeries server***

Key definitions

LPAR:

- Multiple versions and/or copies of OS/400 or other "guest" operating systems, such as Linux, running under an OS/400 "controlling" or "primary" partition within the same physical iSeries server

Domino Partition:

- Multiple Domino Servers, running in the same partition having the same version of Domino code

Subsystem:

- On iSeries, each Domino partition runs in an iSeries subsystem.

Key advantages of using LPAR

You can continue to run your existing Production Domino Servers separately

- By configuring your iSeries server to have more than one LPAR partition
- Especially useful with Domino R5 and Domino 6 coexistence
  - Currently, QuickPlace, Sametime, and Domino.doc run on Domino R5
- Create new LPAR partition
  - With minimal resources from the system
  - To load and install Domino 6 and test it
  - Once satisfied with your test results, you can then use Domino Clustering to upgrade the users to your new Domino 6 servers
  - During and after upgrading to Domino 6, you will re-allocate OS/400 resources from the older version of Domino R5 partitions
  - Once everything is completed, you can finally remove the old Domino R5 partitions

How Domino partitions differ from LPAR

Domino for iSeries is designed to run extremely efficient

- By maximizing its use of the key features within the iSeries architecture
  - Principally the ability to share memory
- Many Domino for iSeries customers run multiple copies of
  - "Instances" (Domino partitions) of the Domino Server
  - Without any risk of them interfering with each other
  - By each Domino partition running in its own OS/400 subsystem
- To maximize the efficient use of iSeries memory:
  - Some of the Domino code shares memory with other instances of the Domino code
  - Current implementation of Domino is limited such that only one version of the Domino code can run under any single OS/400 operating system.
- LPAR allows to overcome this limitation

Moving quickly up to Domino 6

Domino 6 benefits:

- New optimized on disk structure (ODS) version 43 on disk file structures
- Improved Transaction Loggin including view logging for faster restart and recovery times
- Improved indexing, file management, and file-locking to improve file I/O and throughput
- LZ1 data compression when storing attachments
- LZ1 data compression over network links between Domino 6 Servers to Notes 6 Clients
  - This significantly reduces network bandwidth and speeds up replication and access times.

Managing diversity of Domino

Needs to run multiple Domino versions

- Lotus has added significant new features to Domino and expanded its range with additional collaborative products
  - such as QuickPlace and Sametime
- Sometimes, these collaborative products are not compatible with latest releases of Domino server products

LPAR provides nice solution

- Especially the latest version of OS/400 V5R2 provides great flexibility
  - Dynamic resource allocation between LPARs
    - Solving the potential problem of Domino customers with under or over utilization of resources
    - As customers move Domino and other Lotus collaborative products from one version to another across LPARs, they can allocate resources accordingly.

Dynamic test bed for Domino

Tool for stress test and capacity planning

- Developers and Quality Testing engineers can now deliberately choose to gradually starve test implementations of Domino and Domino collaborative products
  - To see how they will behave under load and stress
  - Also able to accurately predict the future resource requirements of these new version whey they eventually go live

Financial benefits from accurately predicting resource requirements

- Being able to more precisely predict future resource needs
  - Together with dynamic resource sharing and realtime load balancing
- Enabling much more accurate forecast for what additional resources will have to be purchased

Additional high availability to Domino

Domino and LOB insulation at OS level

- By using LPAR, you can insulate Domino and LOB (Line-Of-Business) applications from a failure at the operating system level
  - Provide higher availability
  - Avoid a single point of failure
- Using OS/400 V5 LPARs, the failure of OS in one secondary LPAR would not affect any other LPAR partition
- You can even enhance high availability
  - This level of insulation together with the Domino Clustering feature
    - Users can continue working from an alternate LPAR in the event of an OS level failure

Thin primary LPAR

All secondary partitions go off when primary OS/400 partition goes down

Thin primary partition can enhance high availability

- Simply never using the primary (controlling) OS/400 partition for any actual work
- Set it up skinny with the barest minimum resources as a holding point for all the working active secondary LPARs
- OS/400 has an extremely mature and robust software architecture
  - Actual fatal OS/400 failures are extremely rare

New OS/400 release testing

Secondary OS/400 partition is also the place to test new versions of OS/400

- As well as its affect on existing or test versions of Domino
- And its collaborative products
- New PTFs to both OS/400 and Domino can also be tested
  - This should never be done in the primary partition if you have one to minimize risk

True global multi-lingual support

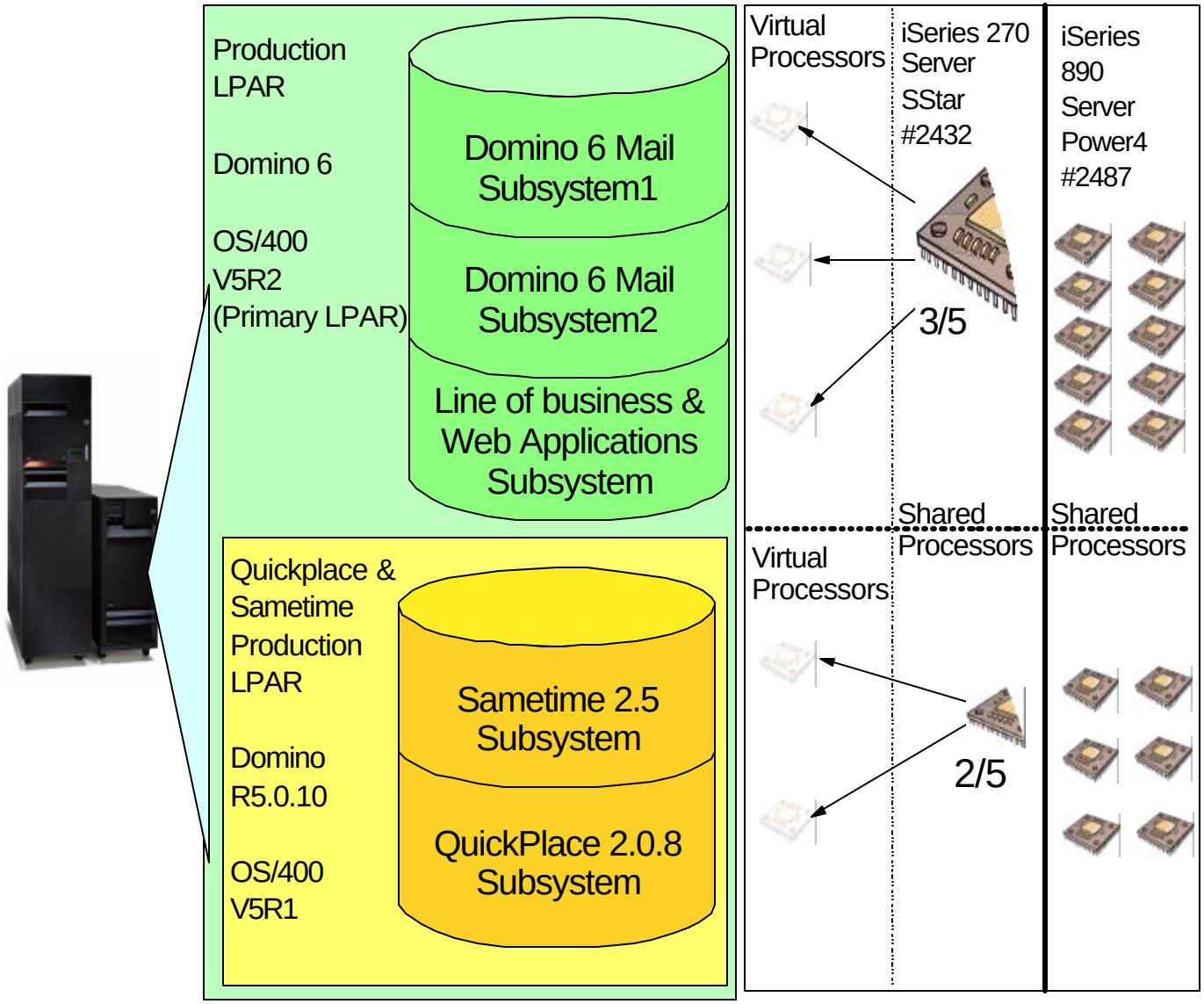
Both at OS/400 and Domino levels

- Every LPAR partition runs a discreet and separate version of OS/400 and a specific Domino revision
- Large multinational companies can now offer multiple local languages across multiple time zones all on a single piece of hardware

Multiple Domino Versions on iSeries with LPAR:

Common Scenarios

Scenario 1: Simply Two Domino Versions



Scenario 1: Simply Two Domino Versions

Scenario description:

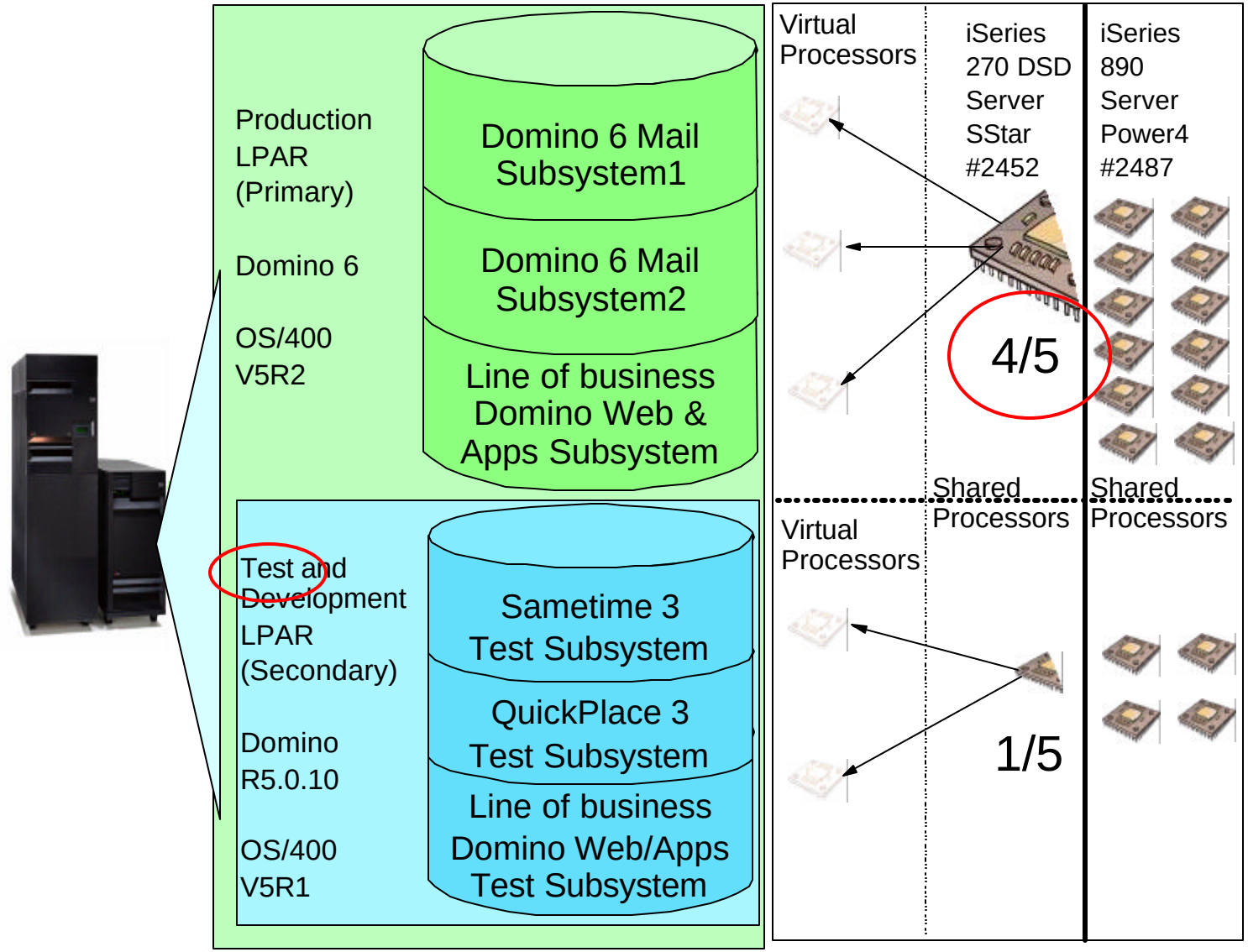
- On primary LPAR, we
  - have upgraded both OS/400 and Domino to the latest versions
  - are running two Domino Mail subsystems which coexist with LOB application subsystem
- We then add a secondary LPAR where we
  - installed Domino R5 with Sametime and QuickPlace subsystems
  - Later, we could parallel test the latest versions of Sametime or QuickPlace or any other collaborative products in the same LPAR partition
    - They only need to run in separate OS/400 subsystems but still within the same LPAR partition.

Scenario 1: Simply Two Domino Versions

Scenario benefits and solutions:

- We can run multiple versions of Domino on a same, single iSeries server even on a uni-processor model
- Larger server model customers can have the same benefits of LPAR.
- Possible performance gain
  - Virtual processors can significantly improve overall performance of multi-threaded and multi-tasking applications such as Domino
    - Some of Domino "background" and "housekeeping" tasks, such as Update and AgentMgr, tend to hog a single CPU when they run
    - Virtual processors can create illusion that there are multiple processors so that OS/400 can successfully schedule other tasks to an "alternate processor"

Scenario 2: Performance Gain and Test



Scenario 3: International Enterprise

BostonP
(Timezone: GMT-5)
LPAR

Domino 6

OS/400 V5R2
(US English)

Domino 6 (US Eng)
BostonM Mail Subsystem

BostonW Web Application and Line of Business Subsystem

Domino Cluster Replication via Virtual LAN

LondonP
(Timezone: GMT)
LPAR

Domino R5.0.10

OS/400 V5R1
(Int. English)

Domino R5 (Int Eng) LondonM Mail Subsystem

WW Domino R5 Corp Apps Subsystem

WW Sametime 2.5 Subsystem

WW QuickPlace 2.0.8 Subsystem

TokyoP
(Timezone: GMT+9)
LPAR

Domino 6

OS/400 V5R2
(Japanese)

Domino 6 (Katakana) TokyoM Mail Subsystem

TokyoB Line of Business Subsystem

Virtual Processors

iSeries 270 Server SStar #2434

7/10

Virtual Processors

Shared Processors

Virtual Processors

Shared Processors

3/10

Scenario 3: International Enterprise

Scenario description:

- BostonP: Primary LPAR
  - OS/400 V5R2; US English; GMT-5
  - BostonM: Domino 6 (US Eng) Mail subsystem
    - Domino Cluster Replication via Virtual LAN to LondonM
  - BostonW: Web and LOB subsystem
- LondonP: Secondary LPAR
  - OS/400 V5R1; International English; GMT
  - LondonM: Domino R5 (Int Eng) Mail subsystem
    - Domino Cluster Replication via Virtual LAN to BostonM
  - Other Domino R5 products and applications
- TokyoP: Secondary LPAR
  - OS/400 V5R2; Japanese; GMT+9
  - TokyoM: Domino 6 (Katakana) Mail subsystem
  - Tokyo LOB subsystem

Scenario 3: International Enterprise

Scenario benefits and solutions:

- Global setting
  - Multiple languages, time zones, etc.
  - 24x7 shift working is not necessary for global ongoing operations
    - Each region can manage their LPAR during their respective working day
- High availability
  - Failover options across multiple Domino partitions + LPAR partitions

Scenario 4: Quite Comprehensive

iSeries 840
Server SStar
#2352 8-way

OS/400 V5R1
("Thin" Primary Controlling Partition)

New Production LPAR
Domino 6
OS/400 V5R2

- Domino 6 Mail Subsystem
- Domino 6 Appl Subsystem
- Web Applications & Line of Business Subsystem

Current Production LPAR
Domino R5.0.10
OS/400 V5R1

- Domino R5 Mail Subsystem
- Sametime 2.05 Subsystem
- QuickPlace 2.0.8 Subsystem

Test & Dev LPAR
Domino 6 with Sametime & Quickplace 3
OS/400 V5R2

- Sametime/Quickplace 3 Test Subsystem
- Line of Business Test Subsystem

Legacy Production LPAR
OfficeVision for AS/400
OS/400 V4R5

- OfficeVision for AS/400

	Virtual Processors	Shared Processors
New Production LPAR		1/10
	2	3/10
Current Production LPAR		2 2/5
Test & Dev LPAR		1 1/5
Legacy Production LPAR		Dedicated Processor

Scenario 4: Quite Comprehensive

How many Domino partitions can I have?

- You can have up to 99 Domino partitions in a single LPAR
- And maximum number of LPARs is a theoretical 256
- But the dependency is requirement of a dedicated disk IOP/IOA and disks for each LPAR
- Still, you have enough flexibility to configure your Domino runtime environment to best meet your specific needs on a single iSeries server

Scenario description

- "Thin" primary LPAR partition
  - To maximize high availability
- Secondary LPAR with dedicated processor
  - To run OfficeVision for AS/400 which requires OS/400 V4R5

Scenario 4: Quite Comprehensive

Scenario benefits and solutions:

- High availability
  - Primary LPAR is a clearly defined single point of failure
    - When primary, or controlling LPAR goes down, so do all secondary LPARs
  - Thin primary LPAR is simply leaving the primary LPAR with no applications or workload
    - Which makes it real hard to go down
- In case you need to run OfficeVision for AS/400 on the same server:
  - It requires OS/400 V4R5
  - For secondary LPAR with OS/400 V4R5, primary LPAR needs to be V5R1

Multiple Domino Versions on iSeries with LPAR:

Planning and Design

Planning for LPAR

Consideration points:

- Detailed physical roadmap
  - Processor, memory, disk, towers, network, tape, etc.
- Assigning of new IP addresses to each LPAR and new server level hostnames
  - As if you install a brand new separate physical platform
- From OS/400 V5R1, we have Virtual Ethernet LAN
  - Which emulates 1Gb Ethernet
  - Establish multiple high speed TCP/IP connections between LPARs without additional comm HW and SW
- From OS/400 V5R2:
  - LPAR partition can operate just 10% of a processor
  - When LPAR partition is not needed at any time, its entire resources can be taken away either by manual intervention or as a scheduled task

Planning for Domino Products

Domino release and OS/400 version compatibility

Domino Revision	OS/400 V4R5	OS/400 V5R1	OS/400 V5R2
Domino R5.0	yes	Not Supported	Not Supported
Domino R5.0.1	yes	Not Supported	Not Supported
Domino R5.0.2	yes	Not Supported	Not Supported
Domino R5.0.3	yes	Not Supported	Not Supported
Domino R5.0.4	yes	Not Supported	Not Supported
Domino R5.0.5	yes	yes (5.0.5.02)	Not Supported
Domino R5.0.6	yes	yes (5.0.6a.01)	Not Supported
Domino R5.0.7	yes	yes	Not Supported
Domino R5.0.8	yes	yes	yes (Except Model 890)
Domino R5.0.9	yes	yes	yes
Domino R5.0.9a	yes	yes	yes
Domino R5.0.10	yes	yes	yes
Domino R5.0.11	yes	yes	yes
Domino 6	Not Supported	yes	yes

Domino APIs and Application

LPAR does not affect Domino APIs and application

- Domino will be unaffected by the change of underlying OS physical architecture from non-LPAR to LPAR
  - There areas are completely transparent to Domino

Only possible issue which may arise is

- If OS/400 version change is required to support LPAR

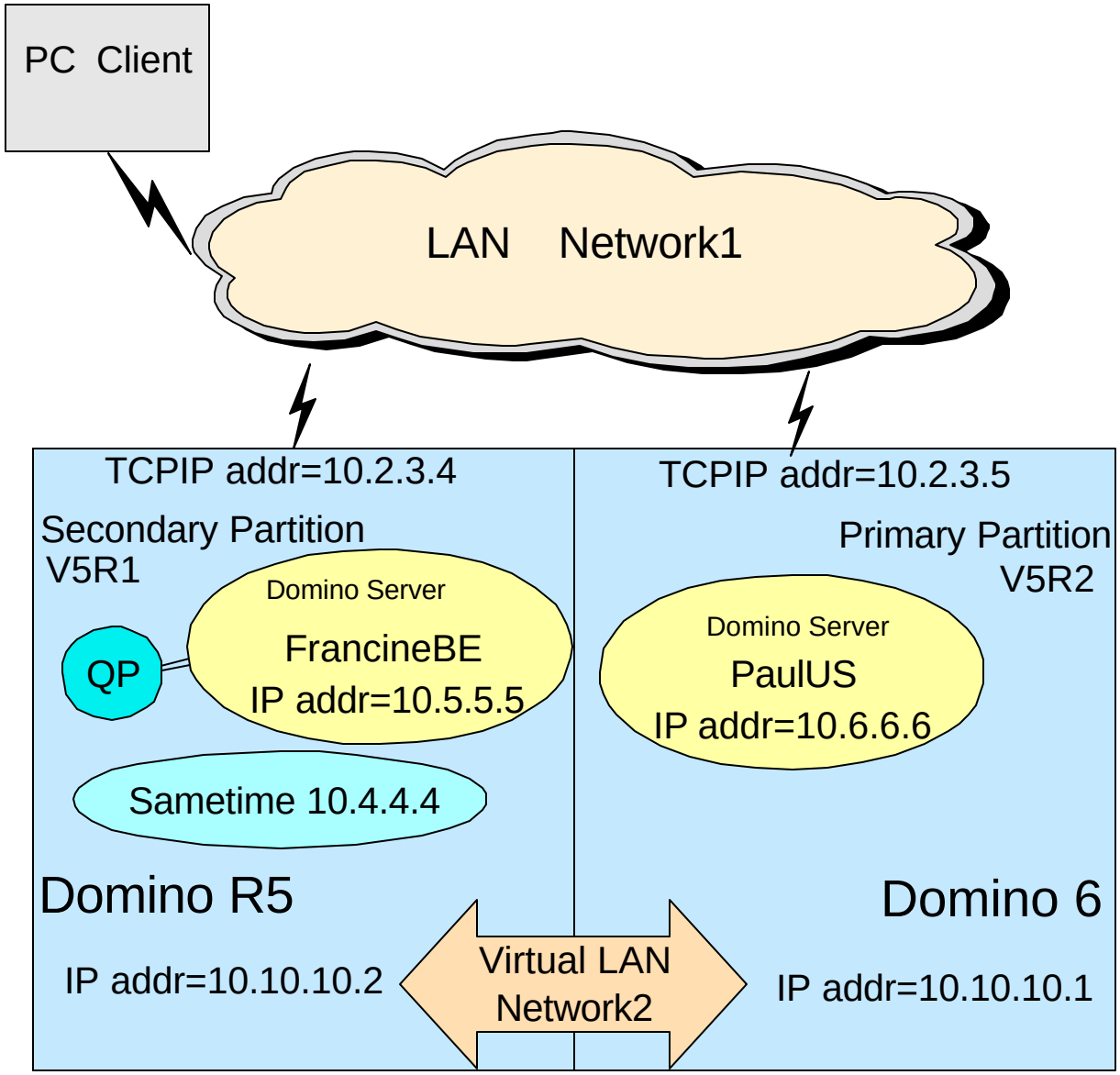
Simplistic Roadmap Outliner

- Create a complete list of combined HW and SW roadmap including Domino and collaborative products' versions
- Plan HW upgrade adding sufficient resources for whole project
- Plan installation of appropriate OS/400 version(s) in various LPARs
- Check which PTFs are needed for each product and for each stage of upgrade
- Take backups of all systems before starting to change your iSeries platform
- Do not rely on SAVSYS backup
  - Your new OS/400 LPAR is likely to be a very different configuration and SAVSYS will not be able to restore it
- Implement your HW changes and add any new resources
- Setup your new system with LPARs and reload required operating systems
- Recover your Domino servers and data from backup or copy across from another server
- Install or upgrade collaborative products to their new version when ready
- Upgrade to Domino 6 in place or using replication and clustering when ready

Multiple Domino Versions on iSeries with LPAR:

Setup Guide

Setup Example Scenario



Scenario Description

Primary LPAR partition runs

- Domino 6 and some other Domino applications

Secondary LPAR partition will host

- iSeries LOB applications, some of which are interactive
- Domino R5, Sametime, and QuickPlace

Two Domino servers, or partitions

- FrancineBE for Domino R5 in secondary LPAR partition
- PaulUS for Domino 6 in primary LPAR partition

We enable replication and clustering between two Domino servers over Virtual LAN

Step 1: Validating scenario using LVT

LVT (LPAR Validation Tool):

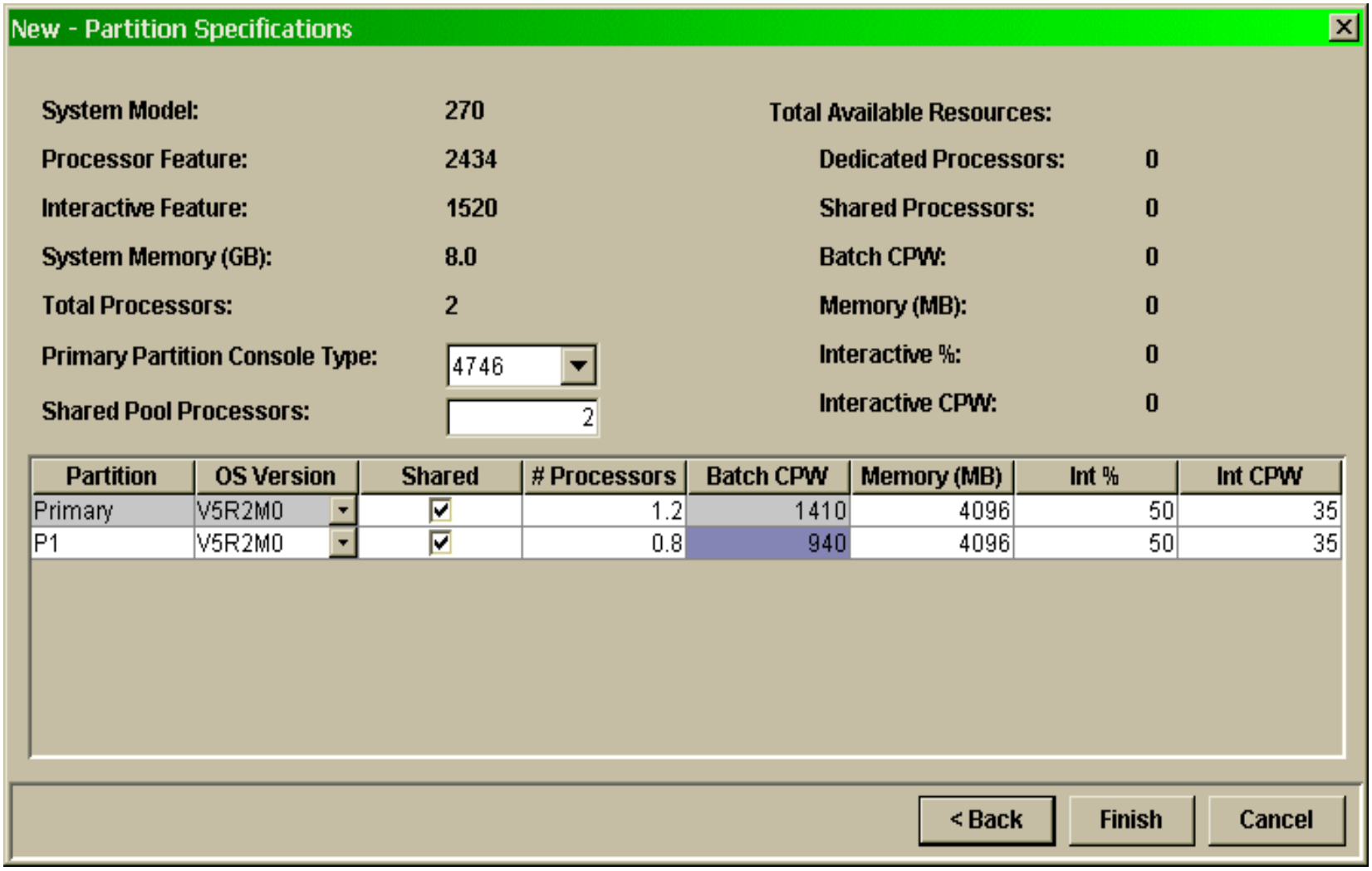
- Helps you to prepare Planning Worksheet for LPAR system
- Is not a configurator
  - For HW pre-reqs and co-reqs, refer to iSeries and AS/400e System Builder
- LVT and its User's Guide are available for download:
  - http://www.iseries.ibm.com/lpar

Scenario environment to validate

- iSeries Model 270 #2434
- OS/400 V5R2
- 12 x 17 GB disks with Raid-5
- Two OS/400 LPAR partitions
  - Primary partition: 4GB memory
  - Secondary partition: 4GB memory

Step 1: Validating scenario using LVT

LVT system specification



Step 1: Validating scenario using LVT

LPARValidater - C:\Program Files\IBM\LPARValidater\perfect 270.xml

File Edit Report Validate Help

OS Level for Part Selection: V5R2M0

IOPs | IOAs | Drives | Linux

2792 Integrated Netfinity Server (1.6 GHz)
2799 Integrated xSeries Server (1.0 GHz)
2892 Integrated Netfinity Server (1.6 GHz)
2899 Integrated xSeries Server (1.0 GHz)
2842 32 MB IOP (270)
2843 64 MB IOP
9943 64 MB Base IOP

270-0 | 5075-1

Add/Remove	Slot	IOP/IOA/Dev	Partition	Description
Add	DB3		Primary	Disk Drives for #7123 DASD Expansion Unit
Add	DB2		Primary	Disk Drives for #7104 System Unit Expansion
Remove	DB1	4318x6	Primary	17.54GB 10k RPM Disk Unit
Remove	D08	4583	Primary	16 GB 1/4 inch Cartridge Tape
Remove	D07	4525	Primary	CDROM
Remove	EMB	284x	Primary	Embedded IOP
Remove	C07	9793	Primary	Base 2-Line WAN with Modem
Remove	C06	4746	Primary	Twinaxial Workstation
Remove	C05	2744	Primary	100/16/4 Mbps Token-Ring
Add	C04		Primary	IOP/IOA/IXS
Add	C03		Primary	IOP/IOA
Add	C02		Primary	IOA
Remove	C01	4778	Primary	RAID Disk Unit Ctlr

All partition requirements have been satisfied.

LVT for Tower Properties

Step 1: Validating scenario using LVT

LPAR¥alidater - C:\Program Files\IBM\LPAR¥alidater\perfect 270.xml

File Edit Report Validate Help

OS Level for Part Selection: V5R2M0

IOPs | IOAs | Drives | Linux

2792 Integrated Netfinity Server (1.6 GHz)
2799 Integrated xSeries Server (1.0 GHz)
2892 Integrated Netfinity Server (1.6 GHz)
2899 Integrated xSeries Server (1.0 GHz)
2842 32 MB IOP (270)
2843 64 MB IOP
9943 64 MB Base IOP

270-0 5075-1

Add/Remove	Slot	IOP/IOA/Dev	Partition	Description
Remove	DB1	4318x6	P1	17.54GB 10k RPM Disk Unit
Add	C08		Primary	IOA (Short)
Add	C07		Primary	IOP/IOA
Add	C06		Primary	IOA
Add	C05		Primary	IOP/INS
Add	C04		P1	IOA
Remove	C03	2768	P1	Magnetic Media Ctlr
Remove	C02	4746	P1	Twinaxial Workstation
Remove	C01	4778	P1	RAID Disk Unit Ctlr
Remove	EMB	284x	P1	Embedded IOP

All partition requirements have been satisfied.

LVT for Expansion Tower

Step 1: Validating scenario using LVT

Version.....: 2.8
Description.....: LVT - Summary
File.....: D:\Yessong\DomLPAR\SG246593_DomLPAR\pictures\LVT.txt
Date.....: Thu Nov 14 14:11:10 CST 2002
Status.....: Valid configuration
Disclaimer.....: This LPAR validation is provided "as is" without warranty of any kind. IBM is not responsible for items ordered or not ordered as a result of this output.

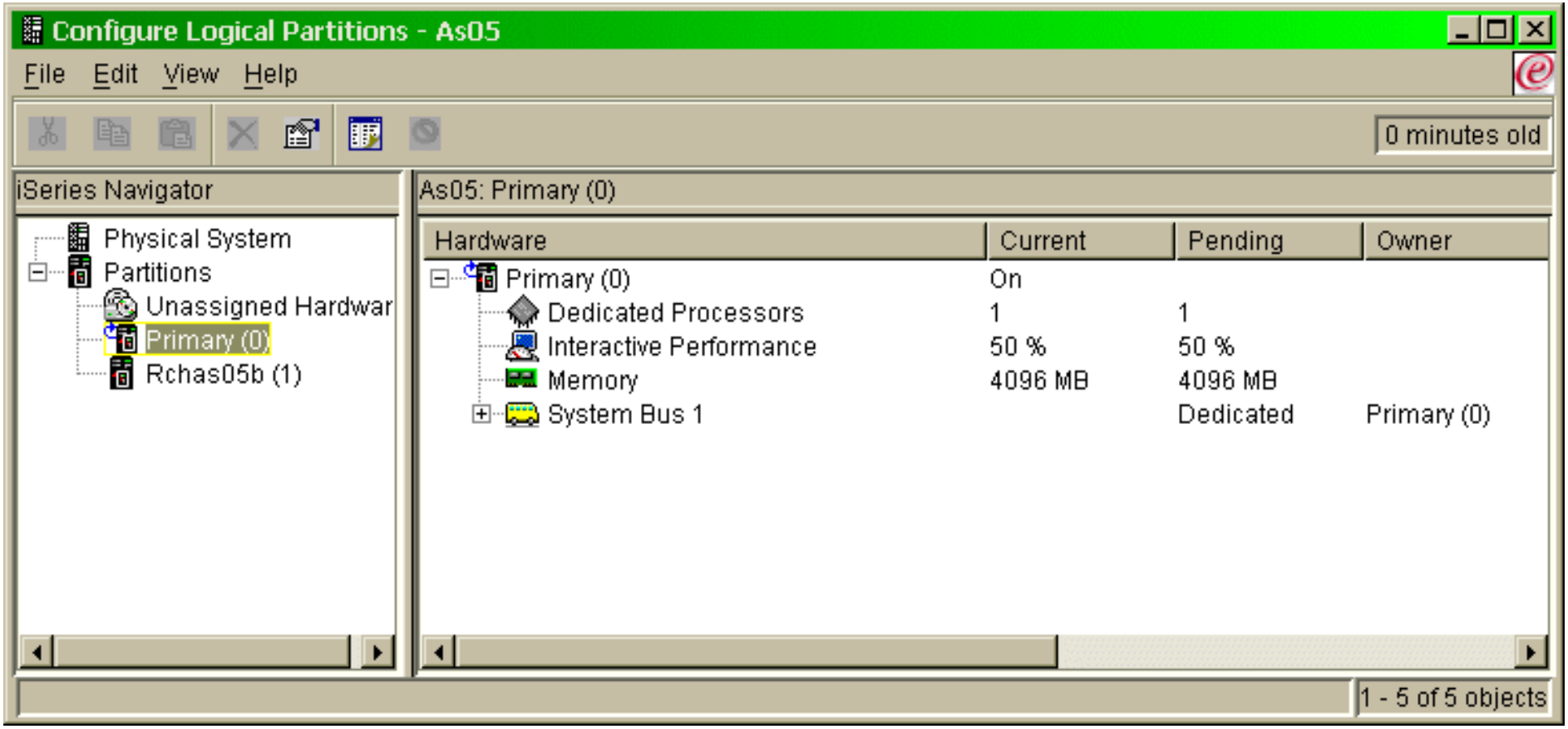
Step 2: LPAR Partition Setup

Two ways to configure OS/400 LPAR partitions

- 5250 CL command interface
- iSeries Navigator (recommended)
  - iSeries Navigator (known as Ops Navigator for V5R1) is a component of iSeries Access for Windows
  - Enables you to use your Notes admin workstation to manage both your iSeries servers and Domino servers
  - Use this to:
    - Determine the status of all OS/40 and/or Domino partitions on your iSeries server
    - Manage the OS/400 partitions, with such tasks as allocating the resources and analyzing the performance
    - Use a simple drop-down menu to perform admin tasks on a Domino server, such as starting and stopping the server, determining the properties of a server, and changing the notes.ini file for the server
  - It not only provides you GUI interface but also guide you automatically in a step by step approach that will greatly reduce potential errors

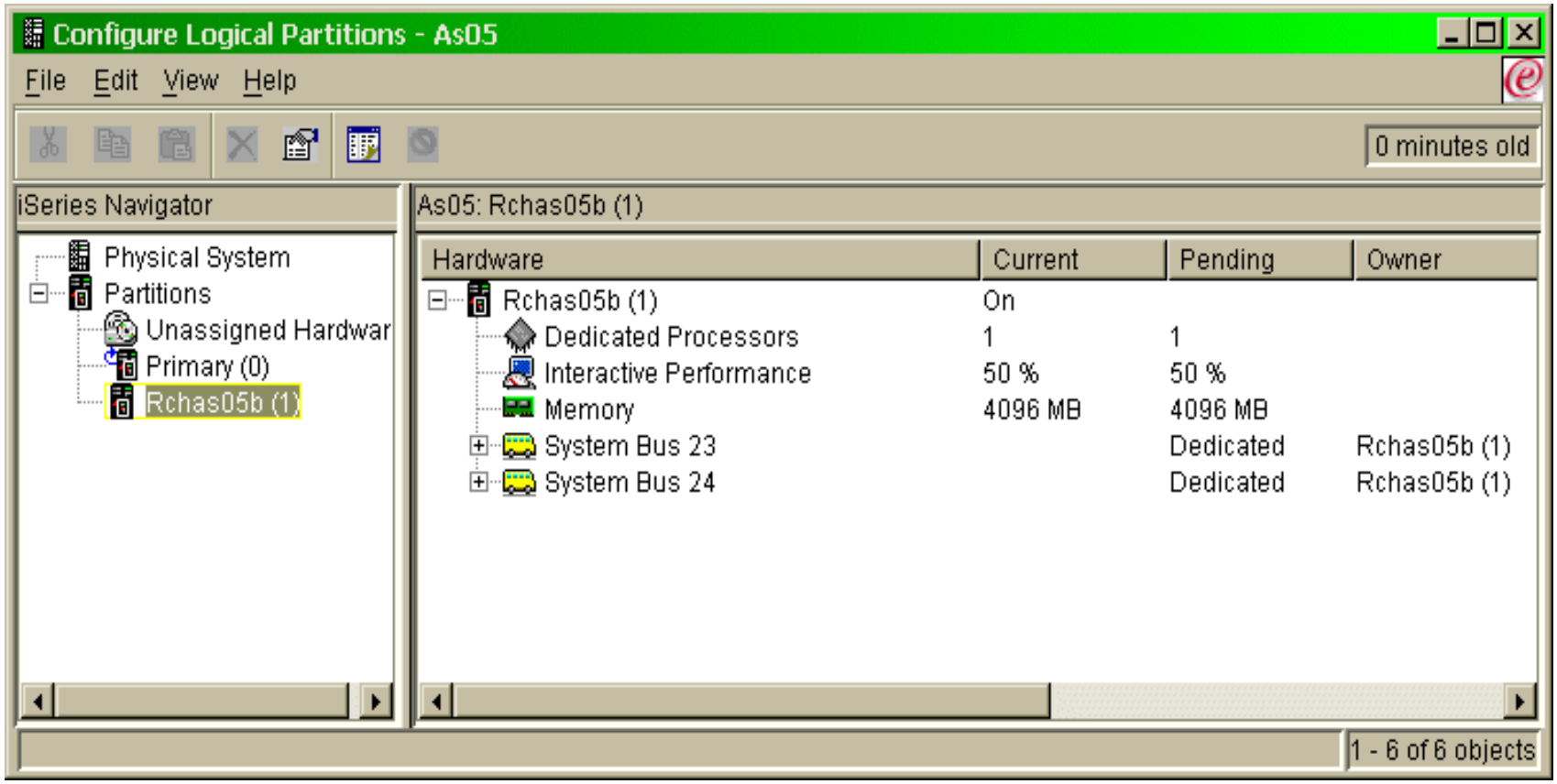
Step 2: LPAR Partition Setup

Primary partition setup review

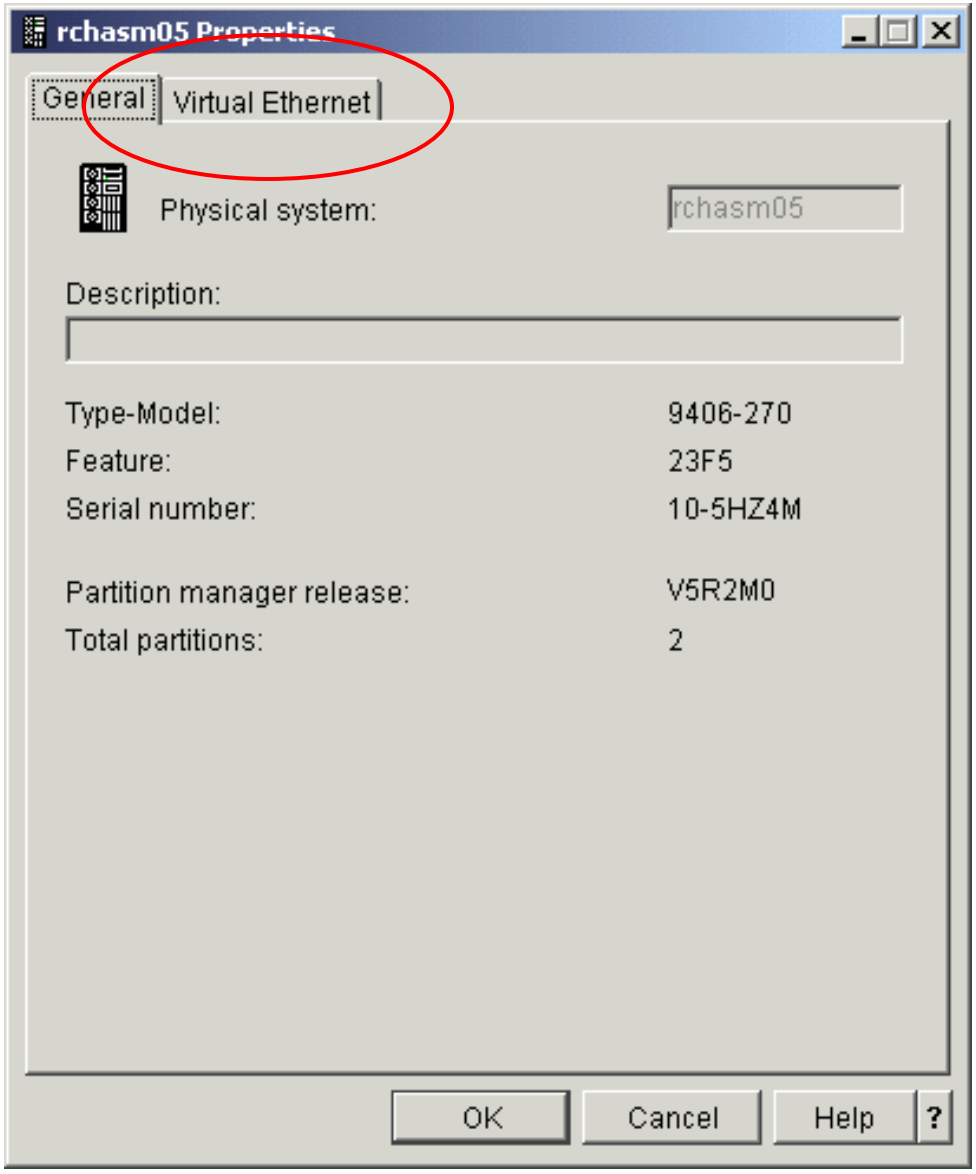


Step 2: LPAR Partition Setup

Secondary partition setup review



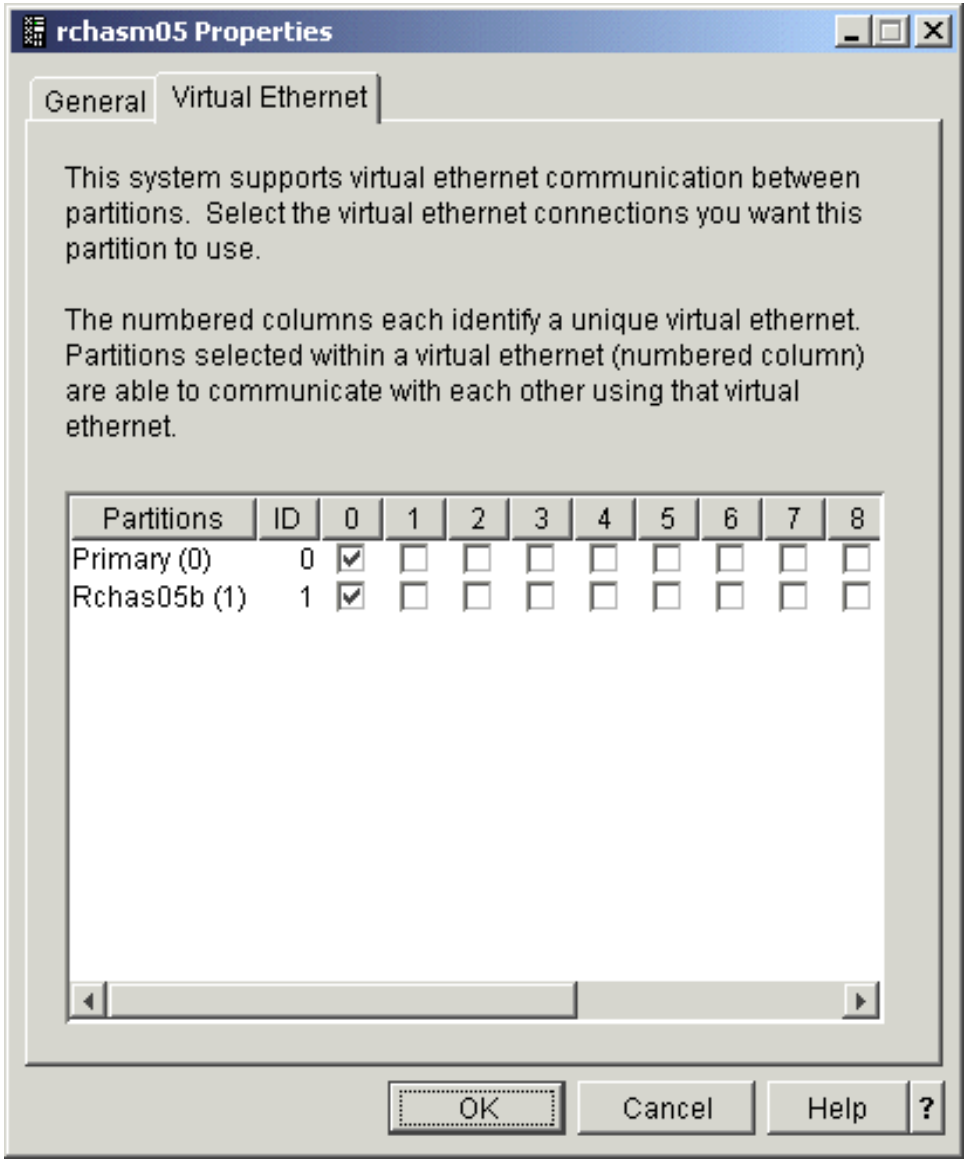
Step 3: Virtual LAN Setup



3a

My Connections ->
Select your Primary Partition Server ->
Configuration and Service ->
Logical Partitions,
right click and select Properties
Then go to "Virtual Ethernet" tab.

Step 3: Virtual LAN Setup



3b

Enable the Virtual LAN connection that you may require, and click OK.

This will create a port automatically under the appropriate LAN adapter within the partition.

Step 3: Virtual LAN Setup

3c **WRKHDWRSC *CMN**

```
                    Work with Communication Resources
                                                          System:   AS05
Type options, press Enter.
  5=Work with configuration descriptions   7=Display resource detail

Opt  Resource        Type  Status          Text
     CMB01           284E  Operational     Combined function IOP
       LIN01         2838  Operational      LAN Adapter
         CMN01       2838  Operational           Ethernet Port
       LIN02         2744  Operational           LAN Adapter
         CMN02       2744  Operational     Token-Ring Port
     CMB03           268C  Operational     Combined function IOP
       LIN03         268C  Operational     LAN Adapter
 5       CMN05       268C  Operational     Ethernet Port
         CMN06       268C  Operational      Ethernet Port


                                                              Bottom
F3=Exit   F5=Refresh   F6=Print   F12=Cancel
```

Step 3: Virtual LAN Setup

3d

Opt 1: to create LIND

```
                    Create Line Desc (Ethernet) (CRTLINETH)

Type choices, press Enter.

Line description . . . . . .   LIND                 > VIRT
Resource name  . . . . . . . .RSRCNAME    > CMN08
Online at IPL  . . . . . . . .   ONLINE               *YES
Vary on wait . . . . . . . . .   VRYWAIT              *NOWAIT
Local adapter address  . . .  ADPTADR              *ADPT
Exchange identifier  . . . . .EXCHID               *SYSGEN
Ethernet standard  . . . . . . THSTD               *ALL
Line speed . . . . . . . . . .   LINESPEED            1G
Duplex . . . . . . . . . . . . . DUPLEX             *HALF


                                                                  Bottom
F3=Exit   F4=Prompt   F5=Refresh     F10=Additional parameters   F12=Cancel
F13=How to use this display          F24=More keys
```

Step 3: Virtual LAN Setup

3e Assign an IP address to your new Ethernet Virtual LAN line description, VIRT.

```
CFGTCP... Option 1

or


ADDTCPIFC INTNETADR('10.10.10.1') LIND(VIRT)
                    SUBNETMASK('255.255.255.0')
```

3f Repeat 3c through 3e on the secondary partition.

3g Vary on LIND and start IP interface on both partitions. Your Virtual Lan should be ready to run!

Step 4: Domino Server IP Interface

4a Add TCP/IP interface for Domino server in primary partition.

```
ADDTCPIFC INTNETADR('10.6.6.6') LIND(PRILAN)
                  SUBNETMASK('255.255.255.0')
```

4b Add the name of Domino server, PaulUS '10.6.6.6'
to Host table entry of primary partition.

```
CFGTCP... Option 10 Work with TCP/IP host table entries
```

Step 4: Domino Server IP Interface

4c

Add host table information for secondary partition where your counterpart Domino server, FrancineBE, resides. Final host table entries should look like this:

```
                    Work with TCP/IP Host Table Entries
                                                                System: AS05
     Type options, press Enter.
       1=Add       2=Change     4=Remove     5=Display     7=Rename

       Internet                 Host
Opt    Address                  Name

       10.2.3.5                 AS05
                                AS05.acme.com
       10.10.10.2               AS05B
                                FRANCINEBE
       127.0.0.1                LOOPBACK
                                 LOCALHOST
       10.6.6.6                 PAULUS
```

Step 4: Domino Server IP Interface

4d Repeat steps 4a through 4c for secondary partition. Final host table entries for secondary partition should look like this:

```
                    Work with TCP/IP Host Table Entries
                                                              System: AS05B
     Type options, press Enter.
       1=Add       2=Change     4=Remove     5=Display     7=Rename

          Internet                Host
Opt       Address                 Name

          10.2.3.4                AS05B
                                  AS05B.acme.com
          10.10.10.1              AS05
                                  PAULUS
          127.0.0.1               LOOPBACK
                                   LOCALHOST
          10.5.5.5                FRANCINEBE
```

Step 5: Virtual LAN Verification

5a

Verify that domain information has:
HOSTSCHPTY=*local

so that host table entries to be used to resolve host IP address

```
                    Change TCP/IP Domain (CHGTCPDMN)

 Type choice, press Enter.

Host name . . . . . . . . . . . . . . . . . HOSTNAME          'AS05'
.
.
.
.
Host name search priority . . . .HOSTSCHPTY          *LOCAL
.
.
.
.
```

Step 5: Virtual LAN Verification

5b

For each LPAR partition, check that partition to partition communication line is ready. Type:

WRKCFGSTS *LIN

```
                    Work with Configuration Status

.
.
Opt  Description         Status          ----------------------Job----------------------
     VIRT               ACTIVE
       VIRTNET            ACTIVE
         VIRTTCP          ACTIVE          QTCPIP          QTCP            001826
.
.
.
.
```

Step 5: Virtual LAN Verification

5c Make sure that TCP/IP is started. If not, Start TCP/IP services:
STRTCPSVR *ALL

5d For each partition, check that TCP/IP connections are active. Try Ping command for all IP interfaces on each partition.

If all Pings run successfully, you are now ready to install and configure Domino code in each of the LPAR partition.

Step 6: Installing Domino on Each LPAR

Install Domino code on each OS/400 LPAR partition

- OS/400 partitions behave as if you are working with separate hardware servers
- Configuring Domino server is business as usual

However, once servers are configured

- You must update Domino server documents
  - To reflect Virtual LAN partition to partition communication
  - Otherwise, Domino server will utilize external network connection

Step 6: Installing Domino on Each LPAR

Recommended installation method depending on Domino version

- Domino R5, use
  - LODRUN to install code
  - CFGDOMSVR to configure server
- Domino 6, use
  - iSeries Navigator

Step 7: Final Setup

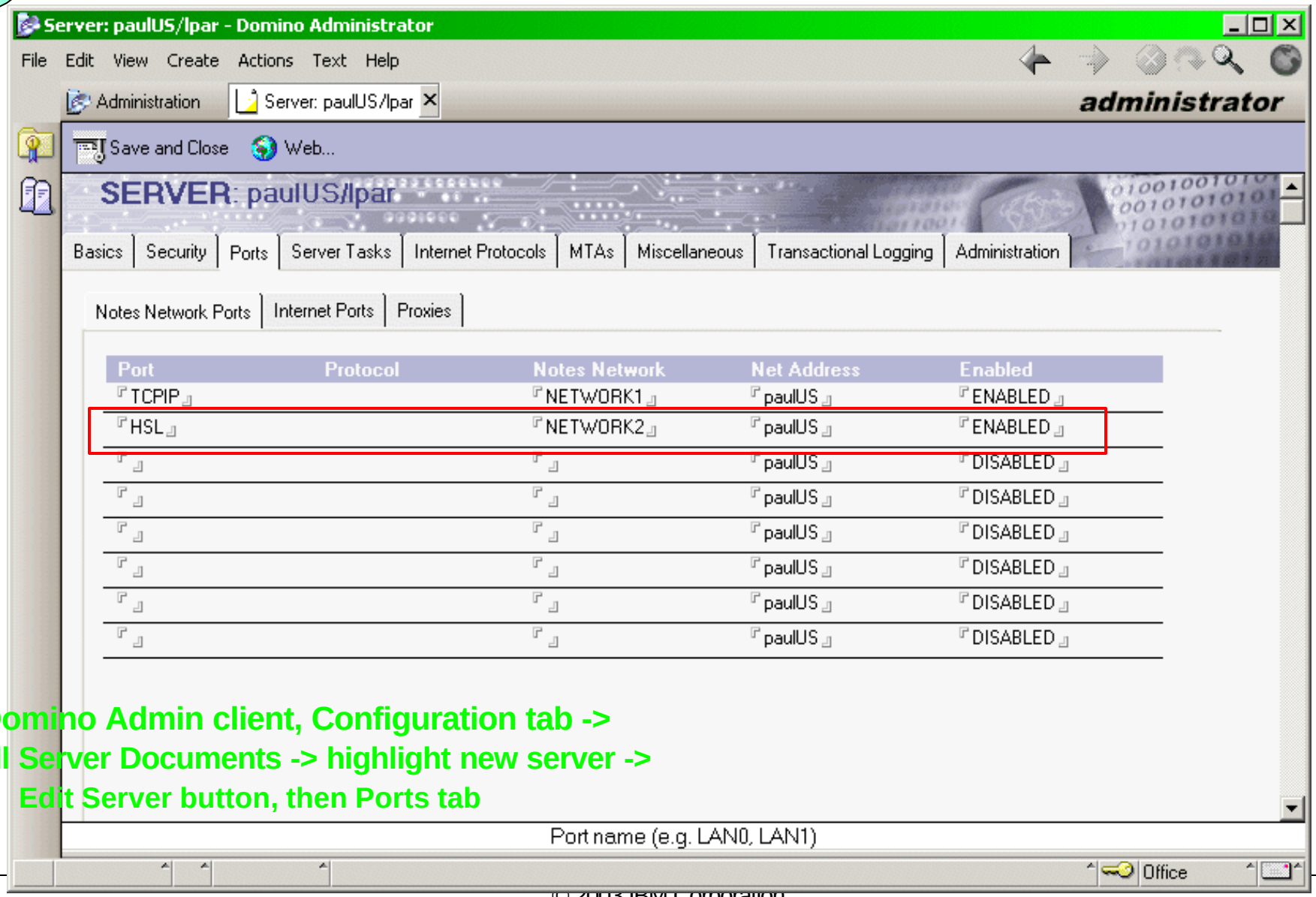
7a Install respective version of Domino on each LPAR partition.

On primary partition, Domino server is
PaulUS/lpar

On secondary partition, Domino server is
FrancineBE/lpar

Step 7: Final Setup

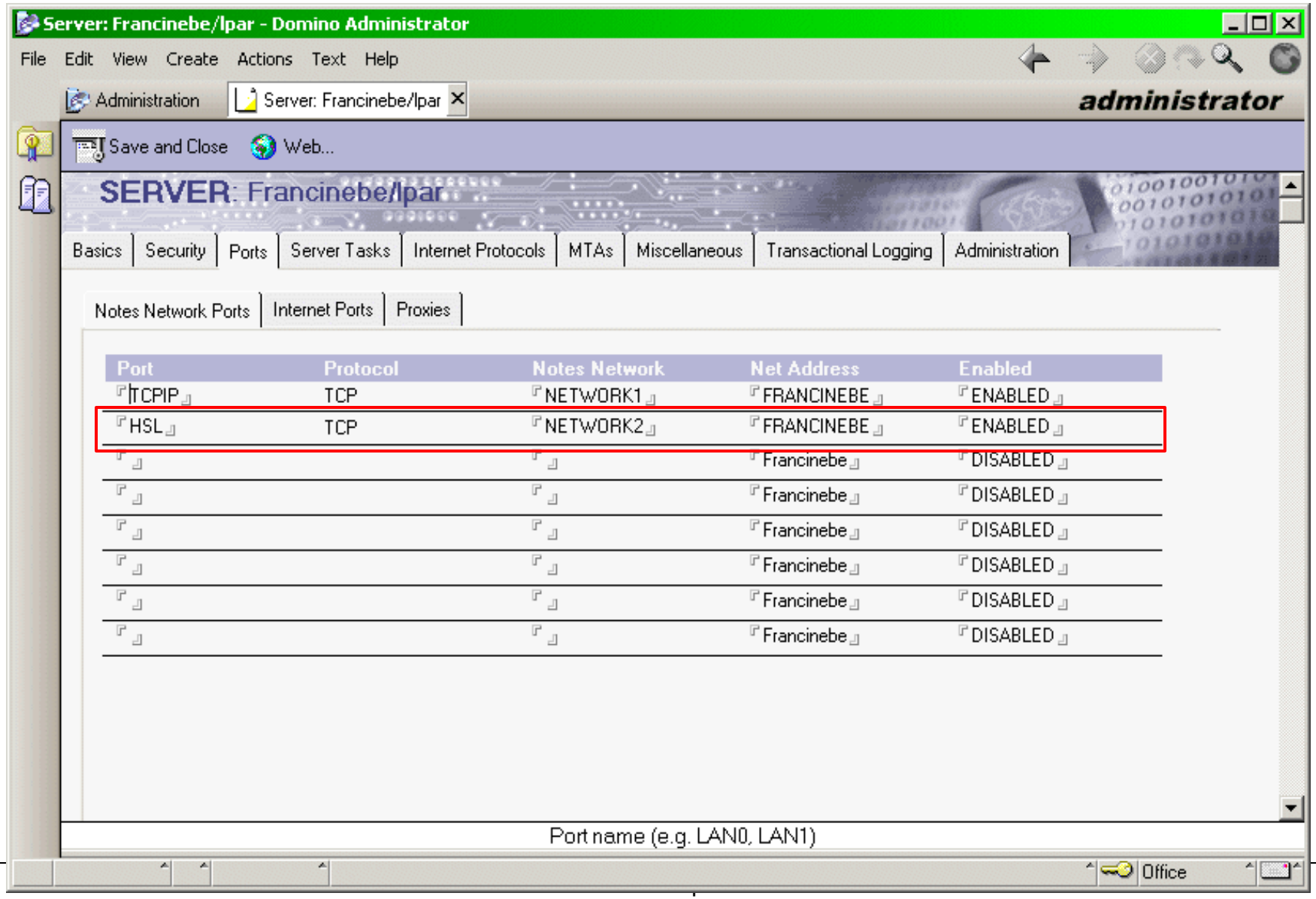
7b Update Domino server documents for Virtual LAN connectivity



On Domino Admin client, Configuration tab ->
All Server Documents -> highlight new server ->
Edit Server button, then Ports tab

Step 7: Final Setup

7c Repeat step 7b on the other LPAR partition.



Step 7: Final Setup

7d Update NOTES.INI file.

```
Edit File: /notes/data/NOTES.INI
 Record :     47   of     90 by   8         Column :    1     84 by  74
 Control :

CMD ....+....1....+....2....+....3....+....4....+....5....+....6....+....7....+
   Preferences=2147617905
   ServerTasks=ICM,Replica,Router,Update,Stats,AMgr,Adminp,Sched,CalConn,Event
   ServerTasksAt1=Catalog,Design
   ServerTasksAt2=UpdAll,Object Collect mailobj.nsf
   ServerTasksAt5=Statlog
   MailClusterFailover=1
   KillProcess=1
   ServerName=PaulUS/Ipar
   Ports=TCPIP,HSL
   TCPIP=TCP, 0, 15, 0
   HSL=TCP, 0, 15, 0
   HSL_TcpIpAddress=0,10.10.10.1:1352
   TCPIP_TcpIpAddress=0,10.6.6.6:1352
   Timezone=6
   DST=1

 F2=Save   F3=Save/Exit   F12=Exit   F15=Services   F16=Repeat find
F17=Repeat change  F19=Left  F20=Right
```

Step 7: Final Setup

7e Update NOTES.INI file on the other partition.

```
Edit File: /notes/data/NOTES.INI
 Record :     47   of     90 by   8         Column :    1     84 by  74
 Control :

CMD ....+....1....+....2....+....3....+....4....+....5....+....6....+....7....+
   Preferences=2147617905
   ServerTasks=ICM,Replica,Router,Update,Stats,AMgr,Adminp,Sched,CalConn,Event
   ServerTasksAt1=Catalog,Design
   ServerTasksAt2=UpdAll,Object Collect mailobj.nsf
   ServerTasksAt5=Statlog
   MailClusterFailover=1
   KillProcess=1
   ServerName=FrancineBE/lpar
   Ports=TCPIP,HSL
   TCPIP=TCP, 0, 15, 0
   HSL=TCP, 0, 15, 0
   HSL_TcpIpAddress=0,10.10.10.2:1352
   TCPIP_TcpIpAddress=0,10.5.5.5:1352
   Timezone=6
   DST=1

 F2=Save   F3=Save/Exit   F12=Exit   F15=Services   F16=Repeat find
F17=Repeat change  F19=Left  F20=Right
```

Step 8: Setup Verification

8a On Domino server console in primary OS/400 partition, issue Domino command:

trace FrancineBE

```
                                Work with Domino Console
                                                    Server: PAULUS
Previous subcommands and messages:

> trace francinebe

  Determining path to server FRANCINEBE
  Available Ports:  TCPIP HSL
  Checking normal priority connection documents only...
  Allowing wild card connection documents...
  Enabling name service requests and probes...
  Address found in local TCPIP names table for FRANCINEBE
  Connecting to FRANCINEBE over TCPIP
    Using address '10.10.10.2' for FRANCINEBE on TCPIP
  Connected to server FRANCINEBE

Enter a Domino subcommand.
===>

F3=Exit   F5=Refresh   F6=Print   F9=Retrieve
F17=Top   F18=Bottom   F21=Command line
```

Step 8: Setup Verification

8b On Domino server console in secondary OS/400 partition, issue Domino command:

trace PaulUS

```
                                Work with Domino Console
                                                    Server: FRANCINEBE
Previous subcommands and messages:

> trace paulus

  Determining path to server PAULUS
  Available Ports:  TCPIP HSL
  Checking normal priority connection documents only...
  Allowing wild card connection documents...
  Enabling name service requests and probes...
  Address found in local TCPIP names table for PAULUS
  Connecting to PAULUS over TCPIP
    Using address '10.10.10.2' for PAULUS on TCPIP
  Connected to server PAULUS

Enter a Domino subcommand.
===>

F3=Exit   F5=Refresh   F6=Print   F9=Retrieve
F17=Top   F18=Bottom   F21=Command line
```

Reference

Web sites

- http://www.ibm.com/iseries/lpar
- http://www.ibm.com/iseries/lpar/education.htm

Redbooks

- Multiple Domino Versions Coexistence on iSeries with LPAR, SG24-6593
- LPAR Configuration and Management Working with iSeries, SG24-6251
- Capacity Planning for Logical Partitioning on iSeries, SG24-6209
- Slicing AS/400 with Logical Partitioning: A How to Guide, SG24-5439
- HTTP Server (powered by Apache): An Integrated Solution for iSeries, SG24-6716