Lotus on Linux Report

Technical Edition

Presenter: Bill Malchisky Jr.
Company: Effective Software Solutions, LLC

- Introduction

- IBM's Commitment to Linux

- Server-side Goodness with Domino, Sametime, et alia

- Partitioning -- Disk and Domino

- Resources

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Straight talk. Pure and simple. No fluff, no fairy tales and no unicorns or rainbows in this session.

- Working with Notes since 3.0c, in 1993
- Architect, admin, auditor, trainer, process engineer, team lead, "reformed developer"
- Co-authored two IBM Redbooks on Linux; several publications
- Frequent speaker; active in Lotus Community
- Significant regulatory compliance and Domino specialty project experience
- Linux aficionado

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- The state of Linux at IBM is:

 Strong

IBM's Linux Timeline – Part I

- 1999: Linux community involvement

- 2000: Linux on all IBM hardware pledge
  - Invested $1B (£621M) into long-range planning

- 2001: $40M (£25M)software donation to form Eclipse organization
  - 1200 developers in 63 countries contribute

- 2003: Inaugural keynote—Linux Desktop Consortium

- 2003: Kicks-off its internal desktop conversion

- 2005: IBM donates intellectual capital
  - 500 Patents to Open-Source Developers

- 2007: IBM joins OpenOffice Team
  - Announced IBM Open Collaboration Client solution with Red Hat, Novell

- 2008: IBM announced open virtual client with Canonical and Virtual Bridges (VB)

- 2009: IBM announced IBM Client for Smart Work in Africa and USA
  - Canonical, Virtual Bridges, and Red Hat
  - Linux Cloud offerings:http://tinyurl.com/ykvossk
  - zLinux value boost: "Linux saved the mainframe"
- 2010: IBM Announces leaving IE for Firefox
  - 145,000 internal users immediately switch
- 2010: Reaffirms "500 Patent Pledge" from 2005
  - http://tinyurl.com/29gt8d5
- 2011: Announces Virtual Desktop Initiative with Virtual Bridges, running on SLES11
- 2011: IBM Watson wins Jeopardy! (Linux-based system)

Major human capital investment too

- Committed 600+ people, all dedicated to open-source development
- Actively contributing to Linux and <u>over 150</u> other open source projects and communities

  - KVM and Xen
  - Linux Toolchain -- contribues to: GCC, GLIBC, GDB, oprofile
  - Apache and Apache projects
  - Eclipse, Mozilla Firefox
  - Samba
  - Ubuntu, Debian, Fedora, Asianux, et alia
  - OpenOffice.org, Document Foundation (LibreOffice; project fork)

Source: "IBM & the Linux Community",
  http://www-03.ibm.com/linux/community.html

- Linux Technology Center (LTC)
  - Houses the 600+ people working on open-source initiatives
  - IBM Technical competency center for Linux
  - http://www-03.ibm.com/linux/ltc/index.html
- Linux Information Center (LIC)
  - Dedicated to bringing Linux technology to the marketplace
  - Helps new midmarket customers looking to deploy Linux solutions
  - Assists BPs seeking to develop and deliver Linux-based integrated solutions
  - http://www-03.ibm.com/linux/lic.html

Provides Valuable Legal Support

- Software Freedom Law Center

  – Legal representation and related services to protect and advance Free, Libre and Open Source Software (FLOSS)

  – Represents the best in well-established free software and open source projects

- Open Invention Network

  – Intellectual property company formed to promote Linux through patent utilization, creating a collaborative ecosystem

- Free Software Foundation

  – Mission is to preserve, protect, and promote the freedom to freely utilize software

Ten Years of Support Prove Rewarding

- Focused Linux investment yields
    - All IBM servers supporting the Linux operating system
    - 500+ IBM software products on Linux – and climbing
    - A full line of implementation, support, and migration services for Linux
    - Lotus software brand supports the three major Linux flavors

- Introduction

- IBM's Commitment to Linux

- Server-side Goodness with Domino, Sametime, et alia

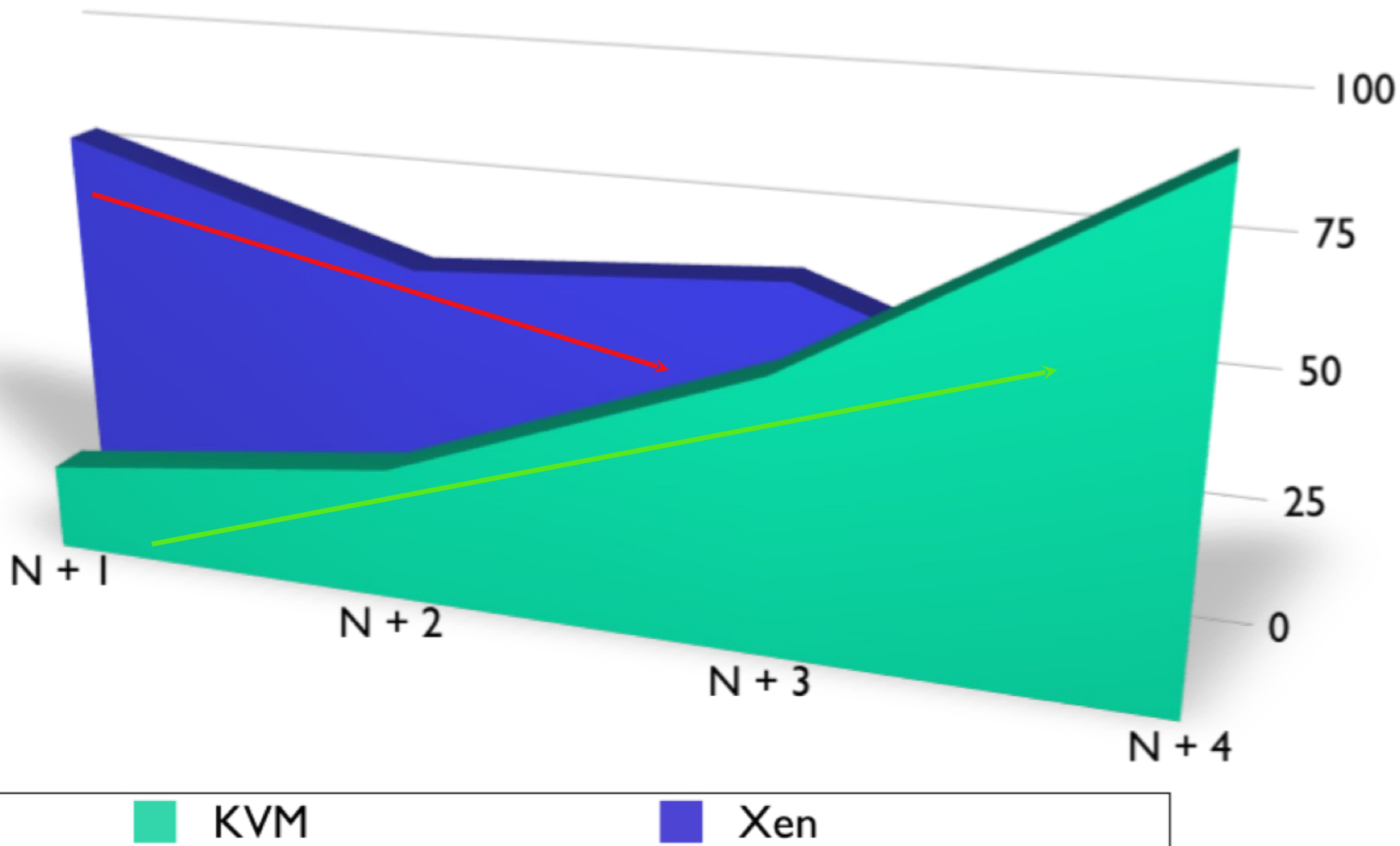- Partitioning -- Disk and Domino

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Lotus Domino Development Perspectives

- x64 Domino for Linux is in the plan, but not in D8.5.x
  - Mostly testing at this point
- Lotus Development is looking to upgrade their compilers
  - Been using the same compilers for a long time, want more functionality
- Source pack is shared amongst all platforms
  - Linux, AIX, Windows: take source, dump to the desired platform, and compile
  - So, typically, one mistake here can impact all builds

- No Ubuntu server till sufficient demand
  - Really do not see a need for it
  - Red Hat and SUSE are more than adequate
- Canonical needs to improve their build model for Domino consideration
  - Canonical lacks enterprise support model for Ubuntu server
  - Novell offers eight (8) years for SLES, which Canonical lacks
  - Missing enterprise server-class support model
    - Need to provide service packs, fixes over the lifespan
    - Just no major development

- KVM is definitely in an upward market

  – Xen's marketshare is lacking

- The software group provides the direction on supported products

- Domino 8.5.3 technote in the works on which virtualization supported

  – Next point release will be mostly core group fixes

- Solaris is still supported on D8.5.x
  - i386 only
  - No plans for x64
    - But it is not needed, as Domino runs great as is
- Domino next support is being considered

- Designed to work out-of-the-box

- Just simple tuning is all that is needed

  – Respective file systems

  – Operating system

- Lotus Development works hard on making that happen well

- Have changed my position here...Domino on UNIX/Linux really doesn't need one,
  - but I understand why people think they want one
- How often do you reboot a Linux server versus a Window server?
  - People want a script as a security blanket, as it makes sense in Windows to have the auto restart option
- "Well, we store a server.ID password."
  - Then you definitely do not want a script
  - Scripts here, would store the password in plain text

- Use Daniel Nash's version
  - http://www.nashcom.de/nshweb/pages/startscript.htm
- Or build your own
  - Have several clients that create their own script
- "We want a console."
  - A script---on any platform---won't help much
  - But Daniel does allow for this with his script

  - Note: We will review one shortly

- If running Daniel's wonderful script...avoid the "clean" option with Symantec
  - Especially in a multi-server (DPAR) setup
  - Symantec uses semaphores and links all DPARs back to the first server launching the Symantec instance
  - Domino does not know of the other DPARs, so running clean will wipe all the semaphores to the other instances with Symantec up and then...
  - ***CRASH***
- A quick way to drop your entire Domino network

- Make sure you adjust the file descriptors

  – Domino provides a convenient pop-up message on the server console and log when you start your server

- "If Lotus knows it needs to be done, why don't they do it?"

  – Legacy applications

  – Backward compatibility

  – They do not know what is sitting on your server

- Know that on Windows 2008 server, it does not display the Domino console anymore
  - There exists a session 0 issue
  - All services run as session 0, which is not the desktop (session 1)
  - So, you need the Java console here

What about market share?

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- Linux is close to even with Windows now in the enterprise for Domino
  - People want to cut costs
  - You can migrate without changing hardware
  - Increase hardware investment longevity
  - Extremely attractive option overall

- LotusLive Notes is running x64 Linux on Series x servers to keep costs low
  - Stated at LS in a session as well
  - No IMAP, DIIOP available; no C-API or LS Toolkit -- so adjust your test plans
- The future is x64 and the cheapest implementations of that are on Intel/AMD

- Traveler needs x64 OS for heavier workloads
  - Can exceed the 4GB memory limit in testing with a high number of users
- In the mail space x64 is not really needed, outside of Traveler
  - Mail is very well behaved
- But, on application servers, or if running anti-virus like Trend Micro or Symantec, or backup software, you need x64
  - Running all of the JVM and process all of the I/O demands x64 in production

- Supports all three major Linux distros

- Minimal feature lag across all releases
  - And improving, through hard work by Lotus

- New for Linux in 8.5.2 – Modular RSS Feed
  - Choose to install or not, via a separate file
  - Awesome new features across all clients
  - Ubuntu 10.04 LTS officially supported (Nov 2010)

- Installs client in multi-user mode only
  - Places data in an intuitive location
  - Allows for easy Domino roaming profile
- Separate files for each module: RPM/DEB
    - lotus_notes852_linux_RI_en.tar
    - lotus_notes852_linuxUb_en.tar

Notes Install Package Set Contrast

Red Hat & SuSE	Ubuntu
ibm_lotus_activities-8.5.2.i586.rpm	ibm_lotus_activities-8.5.2.i586.deb
ibm_lotus_symphony-8.5.2.i586.rpm	ibm_lotus_symphony-8.5.2.i586.deb
ibm_lotus_cae-8.5.2.i586.rpm	ibm_lotus_cae-8.5.2.i586.deb
ibm_lotus_feedreader-8.5.2.i586.rpm	ibm_lotus_feedreader-8.5.2.i586.deb
pub_ibm_lotus_notes.gpg	
ibm_lotus_notes-8.5.2.i586.rpm	ibm_lotus_notes-8.5.2.i586.deb
ibm_lotus_sametime-8.5.2.i586.rpm	ibm_lotus_sametime-8.5.2.i586.deb
license.tar	
smartupgrade.sh	

- Supports Firefox 3.x up to 3.6 in 8.5.2
  – Version 4.0 when patched
- Increased control through Policy docs
- Works with ID Vault
- Can force remote desktop data cleanse
  – Important for regulated companies' users
- That iNotes provides separate hot fixes independent of Domino server hot fixes
  – Each is tied to the Fix Pack
  – Get rolled-up into the next Fix Pack

- Click here --> **IBM.Lotus.iNotes.**

- And you'll see a lot of good info, including the iNotes build version
  - (Fortunately, IBM is now combining the iNotes build with the respective Domino flavor in the filenames, for now)

Lotus iNotes – What You See

About ✕

IBM.

Lotus. iNotes.

IBM Lotus iNotes 8.5.2 **Build 401.3** October 20, 2010

Database title:	W███████████
Filename:	mail,███████
Server:	████████████████
Template:	StdR85Mail
Language:	English
Documents:	7901
Size:	709 MB
Quota size:	none
Warning threshold:	none

Getting iNotes Patches

- Visit Fix Central: http://www-933.ibm.com/support/fixcentral/

- See if there are any iNotes patches, after every fix pack is applied

- For the server in previous slide, we are fine, as the fix below is for 8.5.1 FP4, which runs a different iNotes build (304.8)
  - Always verify this; can save you and your users hours of frustration

1. interim fix: dwahf_v8.5.1.4_304.8CHF1
dwahf_v8.5.1.4_304.8CHF1

More Information

- Available with the interim fix to iNotes FP2
  - Will be in the upcoming FP3
- Technote: 1474006
- Fix ID: iNoteshf_v8.5.2.2_401.8HF6
- This iNotes interim fix is compatible with both a Domino 8.5.2 server with FP2 or FP2 and a hotfix applied
- Before applying this interim fix, if you are running any iNotes hotfix, call IBM Tech Support and get a custom interim fix combining 401.8HF6 and your hotfix
  - Otherwise, you will lose the the benefit of the preceding patch

- Simply put: every Sametime product and access point they have works well with Linux servers and desktops

- Although FP1 came out in Oct 2010...there are two interim fixes released in April 2011
  - Technote:1455860
    - 8.5.1.0-Lotus-ST-IF-GMOH-8DXC9B -- Addresses ST Community Server awareness in mixed environments
  - Technote:1469735
    - 8.5.1.0-Lotus-ST-IF-EAVM-8EGM4F -- Addresses name change operations that become problematic with 8.02. through 8.5.1.1

- The Sametime Gateway (STGW) requires DB2, LDAP, and DNS
  - Ensure in production all the necessary access ports are available with appropriate firewall rules in-place
  - The STGW uses both internal and external ports
- Test the DNS connection from the box that will be hosting the STGW
  - `dig <ip_address>`
  - `dig sip.oscar.aol.com`
  - `dig -t any -c any _xmpp-server._tcp.google.com`

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Port	Firewall	Description
1516	Internal	Port to each Sametime community server in the local Sametime community, allowing both inbound and outbound traffic between Sametime Gateway and each community server.
389 or 636	Internal	Port 389 or 636 (SSL) to LDAP server that services the local Sametime community. **Note:** Port 389 or 636 should be opened for all deployed nodes, including the SIP proxy.
50000	Internal	Port to DB2 server.
5269	External	Port to Google Talk and Jabber connections.
5061	External	Port to external Lotus Sametime, AOL, or Yahoo! Messenger communities.
5060	External	Port to external Lotus Sametime communities not using TLS/SSL.
53	External	Port to external DNS servers to resolve the fully qualified domain name of external community servers.

Sametime Gateway Requirements Continued

- STGW naming introduces considerations

  – Chosen name must be portable in environment

  – Chosen name should neither equal the hostname nor STGW

- External community connections require SSL

- Google uses SRV DNS entries

  – Does not require SSL certs

- Chosen certifier provider must support both protocols (each end)

As the STGW uses WAS6, which DB2 version should be utilized?

- A <u>new</u> Gateway installation should use DB2 9.5 LU, which is provided in the ST8.5.1 package.

- An <u>existing</u> Gateway installation that is being upgraded to ST8.5.1 should keep the DB2 9.1 ESE installed and continue to utilize it

Source: *IBM ST8.5.1 System Requirements*

- "Linux to eclipse Microsoft's 'all-in' tablet enthusiasm" by 2015

- Linux-powered non-smartphone mobile devices will comprise 62% market
  - Google's Android and Chrome OS will lead
  - Followed by:
    - Intel and Nokia MeeGo joint effort

- "Windows just does not scale down"
  - Source – ABI Research, The Register UK
  - http://tinyurl.com/3axj8m4

Lotus Travels Well with Penguins

- Lotus ND8.5.2 – Traveler Linux build
  - Installs as a GUI or TUI via the command-line (preferred)
- Supports a multitude of devices
  - Android (FP1)
  - Apple iPhone/iPad/iPod
  - Nokia Symbian & MS Windows Mobile devices
- Unofficially supports
  - Palm Pre
  - Any phone supporting an EAS connection
- Latest Fixes
  - New Fixpack: LNT_852_FP2_LINUX
- Traveler APAR Listing
  - http://www-10.lotus.com/ldd/dominowiki.nsf/dx/Lotus_Notes_Traveler_APAR_listing

Traveling Is Better with Text

- Use of the scripted installation for Traveler simplifies a lot of items for admins
  - Easy to install onto multiple servers simultaneously
  - Use your same script for applying Traveler patches
  - Less files to update on the server – Keep It Clean!

- If you run your installer as silent, you will also run the uninstall silent

- Fatal errors are logged in `./InstallError.log`

- Remaining install details placed in the install log file found here:
  `<DOMINO_DATA_DIRECTORY_1>/IBM_TECHNICAL_SUPPORT/traveler
  /logs`

- ALWAYS run the install as root

- Make changes to the locale in the *silentInstall* file

  – New install feature in 8.5.2

- Under the covers

  – `[root@server traveler.fp1]# `**`cat silentInstall`**

- `./TravelerSetup -i SILENT -l en -f
  ./installer.properties`

- But what a different one release makes
  - Version 8.5 runs on Domino Linux and Websphere Portal
  - Officially Supports SLES/SLED
    - Unofficially supports Red Hat
      - Note: Websphere Portal Supports RHEL
- Domino 8.5.1 Support
  - Memory 4GB in production
- Firefox 3.5+ with patches for access

- For the Domino 8.5.1, use FP4
    - File: 8.5.1-Quickr-Domino-FP4-LINUX
    - Supersedes other interim fixes and fix packs
    - Technote: 4029024
- Installation and Fix List -- Technote:7020499

- When pulling patches for Quickr, IBM provides a cross-product compatibility option
  - Let's you see how changes in Quickr affect the other Lotus brand products
  - Great to see!

1. fix pack: 8.5.1-Quickr-Domino-FP4-LINUX
  8.5.1-Quickr-Domino-FP4-LINUX

  View cross product recommendations for this fix

Cross-product relationship information
Lotus Quickr for Domino (8.5.1, Linux)

Versions

Select a level.

Lotus Quickr for Domino   8.5.1

The following products have one or more relationships to your selected product. This information should be viewed as guidance only, and should not be considered to represent a complete list of relationships.

Select the currently installed level of those products that are used in your environment.

☑ Lotus Connections   3.0.1

☑ Lotus Domino   8.5.2 FP1

☑ Lotus Quickr Connectors   8.5.0.HF3

☑ Lotus iNotes   8.5.2

☐ Tivoli Access Manager for e-business   Select

☐ Tivoli Directory Server   Select

☐ WebSphere Application Server Network Deployment   Select

☐ WebSphere Portal Server   Select

Submit

Cross-product relationship information

The following consolidated information is for guidance purposes only. This information was obtained from generally available product support documentation. These combinations of product levels are supported by IBM.

Date: 2011.05.23   Relationship database last updated 2011.05.23.

Your selected levels		
Product	**Version/Release**	**Status**
Lotus Quickr for Domino	8.5.1	Note
Lotus Connections	3.0.1	⚠
Lotus Domino	8.5.2 FP1	⚠
Lotus Quickr Connectors	8.5.0.HF3	✔
Lotus iNotes	8.5.2	⚠

Seeing the Respective Details

Detailed results

Note	**Lotus Quickr for Domino**	8.5.1

Note: Quickr Domino 8.5.1 supports Lotus Quickr Connectors 8.5.0 HF3

⚠ Lotus Connections   3.0.1

Note: Recommended levels. The following are compatible versions:
3.0
2.5

⚠ Lotus Domino   8.5.2 FP1

Note: Recommended levels. The following are compatible versions:
8.5.1
8.0.2   View package

✔ Lotus Quickr Connectors   8.5.0.HF3

⚠ Lotus iNotes   8.5.2

Note: Recommended levels. The following are compatible versions:
8.5.1

- It's <u>new</u>! It's <u>improved</u>!
  - Long-gone is the rolling boring spreadsheet
  - Kudos to IBM for making a serious, useful, intuitive information extraction portal
- IBM offers 500 middleware products
  - All Linux ready
  - Across all six brands and five platforms
  - With more distributions available than you thought were there
- Source: IBM Middleware Available on Linux, Mar 2010 edition
  - http://www.ibm.com/linux/matrix

Sample Report

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Products supported by
Red Hat Enterprise Linux (RHEL) 5.0 Advanced Platform x86-64

⬤ This operating system is supported by all parts of the product

⊖ This operating system is supported by some of the parts of the product

Information Management

	Name	Version
⬤	Cognos 8 Business Intelligence	8.4, 8.4.1
⬤	Cognos Business Intelligence	10.1

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	Name	Version
⬤	IBM Collaboration Accelerator	6.1, 7.0
⬤	IBM Collaboration Accelerator and WebSphere Portal Server	6.1, 7.0
⬤	IBM Connections	3.0.1

Rational

	Name	Version
⬤	IBM Installation Manager	1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.4, 1.4.1, 1.4.2
⊖	Rational Application Developer Standard Edition for WebSphere Software	8.0, 8.0.1, 8.0.2

Tivoli

	Name	Version
⬤	IBM License Metric Tool	7.2, 7.2.1
⬤	IBM System Storage Archive Manager	6.1, 6.2

WebSphere

	Name	Version
⬤	IBM HTTP Server	6.1, 7.0
⬤	IBM ILOG AMPL	12.2

Multi-OS Compatibility Matrix

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Compatibility matrix
software/operating systems

● All product components support the operating system
◑ Some of the product components support the operating system
○ Operating system is not supported by this product
N/A Operating system is not applicable to the product

Your Server OS

1	CentOS 5.3 x86-32
2	OpenSUSE 11.2 x86-32
3	OpenSUSE 11.2 x86-64
4	Ubuntu Server 7.04 x86-32

Your Agent/End-point OS

1	CentOS 5.3 x86-32
2	OpenSUSE 11.2 x86-32
3	OpenSUSE 11.2 x86-64
4	Ubuntu Server 7.04 x86-32

Your Desktop OS

1	CentOS 5.3 x86-32
2	OpenSUSE 11.2 x86-32
3	OpenSUSE 11.2 x86-64
4	Ubuntu Server 7.04 x86-32

The Products you are interested in	1	2	3	4		1	2	3	4		1	2	3	4
Lotus Domino 8.5.2	○	○	○	○		N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A
Lotus Notes 8.5.2	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A		○	○	○	○

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The support shown in this report may require a particular maintenance level for the products.
For further information please visit the IBM Software Support web page.

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Disk Partitioning

Benefits

- Better control of your environment
- Segmented data and binary access
- Backdoor to back filesystem
- Easier disk management

Areas of Caution

- Takes more time to setup
- Careful with system rebuilds
- Need a plan
- Factor in Growth

Server Demo

- A well carved server with an LVM created, and granular control over disk access.

```
[root@roma ~]# df -h
Filesystem              Size   Used Avail Use% Mounted on
/dev/mapper/VolGroup00-LogVol00Root
                        3.3G   1.7G  1.6G  52% /
/dev/mapper/VolGroup00-LogVol02LotusBin
                        9.2G   6.3G  2.5G  73% /opt
/dev/mapper/VolGroup00-LogVol03LotusDat
                         41G    27G   13G  68% /local
/dev/mapper/VolGroup00-LogVol05Accounts
                        4.8G   3.1G  1.5G  69% /home
/dev/mapper/VolGroup00-LogVol04Logs
                        4.2G   2.5G  1.5G  64% /var
/dev/sda1                99M    32M   63M  34% /boot
tmpfs                   1.5G      0  1.5G   0% /dev/shm
```

What's Mounted Where

```
[root@roma ~]# mount
/dev/mapper/VolGroup00-LogVol00Root on / type ext3 (rw)
proc on /proc type proc (rw)
sysfs on /sys type sysfs (rw)
devpts on /dev/pts type devpts (rw,gid=5,mode=620)
/dev/mapper/VolGroup00-LogVol02LotusBin on /opt type ext3 (rw)
/dev/mapper/VolGroup00-LogVol03LotusDat on /local type ext3 (rw)
/dev/mapper/VolGroup00-LogVol05Accounts on /home type ext3 (rw)
/dev/mapper/VolGroup00-LogVol04Logs on /var type ext3 (rw)
/dev/sda1 on /boot type ext3 (rw)
tmpfs on /dev/shm type tmpfs (rw)
none on /proc/sys/fs/binfmt_misc type binfmt_misc (rw)
sunrpc on /var/lib/nfs/rpc_pipefs type rpc_pipefs (rw)
```

```
[root@roma ~]# swapon -s
Filename                                    Type          Size     Used    Priority
/dev/mapper/VolGroup00-LogVol01Swap         partition     4095992 335796  -1
```

Desktop Demo

- Basic setup
  - Per each Domino Partition on the same box
    - One config file
      - More efficient to separate the server specifics
      - Avoids pain during script upgrades
    - One *init.d* file
      - Points to main file
      - Name it however you like; make it consistent and intuitive
  - One main file (*rc_domino*) for all partitions
- With permission, the following screen shots utilize Daniel Nash's *Domino on Unix/Linux Start Script*

```
#!/bin/sh
# change this to #!/bin/ksh for AIX and Solaris
################################################################################
# RC RunLevel Entry Point
################################################################################
# Start/Stop Script for Domino on xLinux/zLinux/AIX/Solaris
# 2005-2010 Copyright by Daniel Nashed, feedback domino_unix@nashcom.de
# You may use and distribute the unmodified version of this script.
# Use at your own risk. No implied or specific warranties are given.
# You may change it for your own usage only
# Version 2.1 01.11.2010
################################################################################
# chkconfig: 345 66 19
# description: Lotus Domino Server

### BEGIN INIT INFO
# Provides: domino-qr
# Required-Start: $remote_fs $syslog $network
# Required-Stop:  $remote_fs $syslog
# Default-Start:  3 5
# Default-Stop:   0 1 2 6
# Short-Description: IBM Lotus Domino Server (Collab-QR)
# Description:      IBM Lotus Domino Server (Collab-QR)
#        Start/Stop Script V1.8 for xLinux/zLinux/AIX/Solaris
#        2005-2008 Copyright by Daniel Nashed (domino_unix@nashcom.de)

### END INIT INFO

# Optional get the name from script name e.g. 'domino_notes1"
```

```
#DOMINO_USER=`basename $0 | cut -f 2 -d _`

# Set default user to "notes" if no user is specified
if [ -z "$DOMINO_USER" ] ; then
   DOMINO_USER=usenotesqr
fi

# Specify the location of the main script
DOMINO_START_SCRIPT=/opt/ibm/lotus/rc_domino_script
SWITCH_USER=0

# Starting a server always needs a switch to the right run-time environment
if [ "$LOGNAME" = "$DOMINO_USER" ] ; then

   if [ "$1" = "start" ] ; then
      SWITCH_USER=1
   elif [ "$1" = "restart" ] ; then
      SWITCH_USER=1
   fi
else
   # If you are running on non-Solaris platforms you might get away without
   # changing the user. For Solaris this is mandatory. See readme for details.
   SWITCH_USER=1
fi


# Check Linux release
if [ -e /etc/SuSE-release ] ; then
 _LINUX_DISTRIBUTION=suse
```

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```
elif [ -e /etc/redhat-release ] ; then
  LINUX_DISTRIBUTION=redhat
else
  LINUX_DISTRIBUTION=unknown
fi

# Special handling for RedHat start/stop
if [ "$LINUX_DISTRIBUTION" = "redhat" ] ; then

  if [ "$1" = "start" ] ; then
   start_stop=1
  elif [ "$1" = "restart" ] ; then
   start_stop=1
  elif [ "$1" = "stop" ] ; then
   start_stop=1
  fi

  if [ "$start_stop" = "1" ] ; then
    if [ ! -w /var/lock/subsys ] ; then
      echo "On RedHat you can only start/stop the server with root-prmissions"
      whoami
      exit 1
    fi
  fi
fi

# Run the main startup script
if [ "$SWITCH_USER" = "0" ] ; then
  $DOMINO_START_SCRIPT "$1" "$2" "$3" "$4"
```

```
else
  echo Switching to $DOMINO_USER
  su - $DOMINO_USER -c "$DOMINO_START_SCRIPT '$1' '$2' '$3' '$4'"
fi


# Special handling for RedHat start/stop
if [ "$LINUX_DISTRIBUTION" = "redhat" ] ; then

  # Source function library.
  . /etc/rc.d/init.d/functions

  # Determine script name. for symbolic link check real name
  script_name=$0
  link_name=`readlink $script_name`
  if [ -z "$link_name" ] ; then
    link_name=$0
  fi
  prog=`basename $link_name`
  RETVAL=$?

  echo "Return Code: " $RETVAL

  if [ "$1" = "start" ] ; then
    touch /var/lock/subsys/$prog
  elif [ "$1" = "restart" ] ; then
    touch /var/lock/subsys/$prog
  elif [ "$1" = "stop" ] ; then
```

```
      rm -f /var/lock/subsys/$prog
    fi

    exit $RETVAL
fi
```

```sh
#!/bin/sh
# change this to #!/bin/ksh for AIX and Solaris
##############################################################################
# Main Start Script Logic
##############################################################################
# Start/Stop Script for Domino on xLinux/zLinux/AIX/Solaris
# 2005-2010 Copyright by Daniel Nashed, feedback domino_unix@nashcom.de
# You may use and distribute the unmodified version of this script.
# Use at your own risk. No implied or specific warranties are given.
# You may change it for your own usage only
# Version 2.1 01.11.2010
##############################################################################

# Determine Notes/OS level user
DOMINO_USER=$LOGNAME
# ##### [path]# logname -> return the user's login name
# ##### and is stored in the environment variable of same name

if [ -z "$DOMINO_USER" ]; then
    echo "Empty loging name. Please check your configuration"
    exit 1
fi

DOMINO_CONFIG_FILE=/etc/sysconfig/rc_domino_config_$DOMINO_USER

# Include config file if a exists and is readable
if [ -r "$DOMINO_CONFIG_FILE" ]; then
 . $DOMINO_CONFIG_FILE
 echo "Using Domino config File " $DOMINO_CONFIG_FILE
```

```
fi

# ###########################################################################
# ################### Handled partitions via respective config files
# ################### More time to setup, easier for future upgrades
# ###########################################################################
# --- Configuration per Domino Partition - if not already specified in separate config file -
--

if [ -z "$DOMINO_CONFIGURED" ]; then
  # Use configuration in this routine if no external configuration specified
  # Either in environment or in external config file
```

```
if [ "$DOMINO_USER" = "usenotesmail" ]; then

  # standard partition for standard user "notes"
  LOTUS=/opt/ibm/lotus
  DOMINO_DATA_PATH=/local/mail01data
  DOMINO_LANG=en_EN
  DOMINO_SHUTDOWN_TIMEOUT=180
  DOMINO_CONFIGURED="yes"
  # ### Changed timeout to 180 from 150 to allow for 30 secs for Traveler shutdown

elif [ "$DOMINO_USER" = "notes1" ]; then

  # ... cloned section for each domino partition ...
  DOMINO_CONFIGURED="yes"

else
```

```
        echo "Domino Server for '$DOMINO_USER' not configured"
        exit 1

    fi
fi

# --- Begin of special configuration parameters ---

# Base directory for domino server partitions
if [ -z "$DOMINO_DATA_PATH_BASE" ]; then
  DOMINO_DATA_PATH_BASE="/local/"
fi

# Enable to use the Java Controller
if [ -z "$USE_JAVA_CONTROLLER" ]; then
  USE_JAVA_CONTROLLER="no"
fi

# Broadcast a shutdown message to all users of the Domino Server
if [ -z "$BROADCAST_SHUTDOWN_MESSAGE" ]; then
  BROADCAST_SHUTDOWN_MESSAGE="no"
fi


# Compress command used e.g. for log file compression
if [ -z "$COMPRESS_COMMAND" ]; then
  COMPRESS_COMMAND="gzip --best"
fi
```

```
# ### As per code in the rc_domino_script file, the config file must be
# ###     named with the respective DPAR's Linux username, not the Domino server
# ###     name.
# ##########################################
# mandatory configuration

LOTUS=/opt/ibm/lotus
DOMINO_DATA_PATH=/local/qrdata
DOMINO_LANG=en_EN
DOMINO_SHUTDOWN_TIMEOUT=275
DOMINO_CONFIGURED="yes"
# ### timed server shutdown on 26 Nov 2010 and the 'server' task took 120 to
# ###     shutdown just for itself; with traveler, ldap, etc. set to 275 for
# ###     a cushion and avoid needless brutality with shutdowns and potential
# ###     corruption

# -- remove loadmon.ncf on startup
DOMINO_RESET_LOADMON="yes"

# -- run NSD before killing the Domino server when DOMINO_SHUTDOWN_TIMEOUT has b
DOMINO_NSD_BEFORE_KILL="yes"

# -- Shared DPOOLSIZE for Linux Tuning
DOMINO_SHARED_DPOOLSIZE=20971520

# -- remove temp-files on startup
DOMINO_REMOVE_TEMPFILES="yes"

# -- Domino Server Name if is different from Linux/UNIX username
```

UKLUG

```
DOMINO_SERVER="Collab-QR"
# ### Changed typo in the comment above; set here if servername is different

# -- output/input log directory
DOMINO_LOG_DIR=/local/qrdata/script.logs
# ### This is used for the Input_File and Output_log now
# ### This negates my 13 Aug 2007 enhancements to v1.4 of Daniel's script to better
# ###   organize the files for the script and keep the data directory better managed

# -- backup log directory
DOMINO_LOG_BACKUP_DIR=/local/backup

# -- Start Script Debuging
#DOMINO_DEBUG_MODE="yes"

# -- Command to execute before shutting down the Domino server --
DOMINO_PRE_SHUTDOWN_COMMAND="tell traveler quit"

# -- Delay before shutting down the Domino server after invoking the pre-shutdown command
DOMINO_PRE_SHUTDOWN_DELAY=30
```

- Introduction

- IBM's Commitment to Linux

- Server-side Goodness with Domino, Sametime, et alia

- Partitioning -- Disk and Domino

- Resources

Vista
Great
pleague
from hell
of
Microsoft

- For those that think only Windows can exist on the desktop...
  - Here is a 10,000 seat win for Ubuntu
  - http://tinyurl.com/3gcamte
  - Ubuntu Linux boosted by 10,000 seat PC win
    - German insurance giant LVM embraces open

- Fairness...Swiss government in Solothurn switched back to Windows 7
  - http://tinyurl.com/3lgu4cw
  - Poor project management dragged out the project, forcing the hand to make a change
    - So, not a Linux issuer per se; any product that is poorly managed generally visits the trash receptacle

- Virtual Desktops via VERDE & Virtual Bridges
  - http://vbridges.com/wp/
  - http://www.kalarisys.com
  - http://midasnetworks.com/desktop.shtml
- TCO Calculators
  - ICSW on Ubuntu (on premise, on cloud, with appliance):
    - http://www.compariv.com/icsw
    - ICSW on Red Hat:
    - http://compariv.com/lotuslonredhat

- Lower the cost of your Data Center with IBM and Canonical -- Webcast
  - http://tinyurl.com/5wjjqgh
- Flexible, Scalable Business with Red Hat and IBM x - Powerful Performance and Improved ROI for Linux-Based Applications
  - http://tracking.onlineinc.com/sponsorhit.aspx?sponsorship_id=18733
- Flexibility with SUSE Linux Enterprise Server and IBM System x - Powerful Performance and Improved ROI for Linux-Based Applications
  - http://tracking.onlineinc.com/sponsorhit.aspx?sponsorship_id=18734

- IBM's Open source project list
  - http://tinyurl.com/2b9nsx
- IBM's Linux Site
  - http://www.ibm.com/linux
- IBM's LTC public bloggers' assemblage
  - http://www.planet-ltc.org/

Value-added Resources

- Project Liberate

  - http://www.ibm.com/software/info/liberate

  - http://tinyurl.com/436rwpl (Forrester Research)

    - "Should I renew my Microsoft enterprise agreement?"

- Turning Data into Insight with IBM and Linux Webcast

- http://tinyurl.com/255yz2h

- Smarter collaboration Cost Reduction Strategy Podcast

- IBM Linux Twitter accounts
  - http://www.twitter.com/linux_at_ibm
  - http://www.twitter.com/developerworks/

- IBM's Smart Work Initiative, Taking Notes Podcast

  - http://tinyurl.com/yeue5k2

THANK YOU!

Any Questions?

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