

**INTEROP** **ABILITY**

Novell.

*Microsoft*

FUJITSU

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# What This Means for Customers

Customers asked for ...	Microsoft / Novell delivering ...
Microsoft & open source community to work together	Microsoft / Novell collaboration to build bridges between two worlds
Solutions for better Microsoft and open source interoperability	<ul style="list-style-type: none"><li>✓ Better Windows and SUSE Linux Enterprise interoperability</li><li>✓ Better cross-virtualization support</li><li>✓ Microsoft Office and OpenOffice document interoperability</li><li>✓ Joint interoperability lab</li></ul>
Vendor Cooperation on IP Issues	Patent assurances for both Microsoft and Novell customers
One-call support	Microsoft / Novell joint support for solutions
Lower costs for cross-platform integration	Microsoft & Novell working together to address Windows / Linux integration

# Customers Have Embraced the Alliance



## Accomplishments

- Key Customers and Partners
  - Sample Customers: AIG, Credit Suisse, Wal-Mart, Fujitsu Services, Gulfstream Aerospace, hi5 Networks, BMW, Siemens, Host Europe, Nationwide, Reed Elsevier, Save Mart Supermarkets, State of California
  - Partners: Dell
  - More than 20 major customer deals signed as of August 2007
  - Very strong customer pipeline
- 70,000+ support certificates activated
- Overwhelming customer support data\*
  - More than 90% of respondents approve of the Microsoft and Novell collaboration
  - 97% said they wanted platform providers to improve interoperability
  - 67% said they're more likely to consider deploying SUSE® Linux Enterprise

\* Source: Jointly commissioned Microsoft / Novell survey by Penn, Schoen & Berland Associates

# Collaboration Progress and Results

Key Areas	Original Goal	Current / Future Status
TCA: Virtualization	Develop optimized cross-OS support on both Novell and Microsoft virtualization platforms.	SUSE® Linux Enterprise Server supported on Virtual Server. Windows supported on SUS Linux Enterprise Server 10. On track for bi-lateral Windows Server 2008 virtualization.
TCA: Standards-based system management	Development of WS-Management-based solutions for cross-management scenarios.	Implementing open source WS-MAN stack for Linux. Linux mgmt of Windows virtualization via WS-MAN in 2008.
TCA: Directory and Identity Federation	Enable cross-directory federated authorization and access control for Web applications.	Demonstrated cross-directory federation at BrainShare. based on common WS-* implementations. Open source info card identity selector being developed.
TCA: Document Format Compatibility	Create plug-ins to allow Office document compatibility using OpenXML and ODF	Word processor versions of translators available now, spreadsheet and presentation translators by end of year.
Cooperation on IP issues	Patent covenants for Novell and Microsoft customers	In place.
Microsoft providing SUSE Linux Enterprise Server support certificates	Microsoft to sell up to 70,000 SLES certificates for 1 or 3 year support plans	70,000+ certificates already delivered to customers for support from Novell.
Joint sales and marketing programs	Commitment to establish joint sales and marketing programs	Sales and marketing staff in place. Sales collateral created. Ads running. Numerous customer / partner announcements. Focused events and roadshows taking place.
Joint support programs	Establish joint support programs	Initial single call support in place for virtualization.
Joint interoperability lab	Commitment to establish joint interop lab	2500 sq ft lab established and staffed in Cambridge, MA with 80 servers. Initial focus on virtualization.
NEW! Microsoft Silverlight technology to be implemented on Linux as "Moonlight" with Novell	Not part of original agreement	Announcement of new joint collaboration on Sept 4. Linux version to release 6 months after Silverlight (i.e. March '08).

# Virtualization Goals

Support optimized hosting and management of Windows Server 2008 and SUSE Linux Enterprise Server in Microsoft Virtual Server, Windows Server Virtualization and Novell Xen

Goal	Status
Host SUSE Linux Enterprise Server 10 as a fully virtualized guest on Microsoft Virtual Server 2005	Complete. Public download available of SUSE Linux Enterprise Server 10 VHD image.
Host Windows Server 2003 and Windows XP as a fully virtualized guest on SUSE Linux Enterprise Server 10	Complete.
Host SUSE Linux Enterprise Server 10 as a enlightened guest on Windows Server 2008 with Windows Server Virtualization technology	Ongoing and on track. Will be released when Windows Server Virtualization is released (0-180 days after Windows Server 2008 release in Feb. 2008).
Host Windows Server 2008 as a paravirtualized guest OS on SUSE Linux Enterprise Server 10 with Xen* technology	Ongoing and on track. Will be released when Windows Server 2008 is released (Feb. 2008).
Provide enhancements Novell ZENworks Virtual Machine Management	Currently supports enhanced management of Windows and Linux VMs on Xen, Virtual Server and VMware
NEW! Microsoft System Center Virtual Machine Manager now supports management of Linux VMs	Now available.

# Virtualization Milestones



## Collaboration on software to enable SUSE Linux Enterprise Server 10 to run as fully virtualized guest on Virtual Server 2005 R2 SP1

- SUSE Linux Enterprise Server 10 add-ins



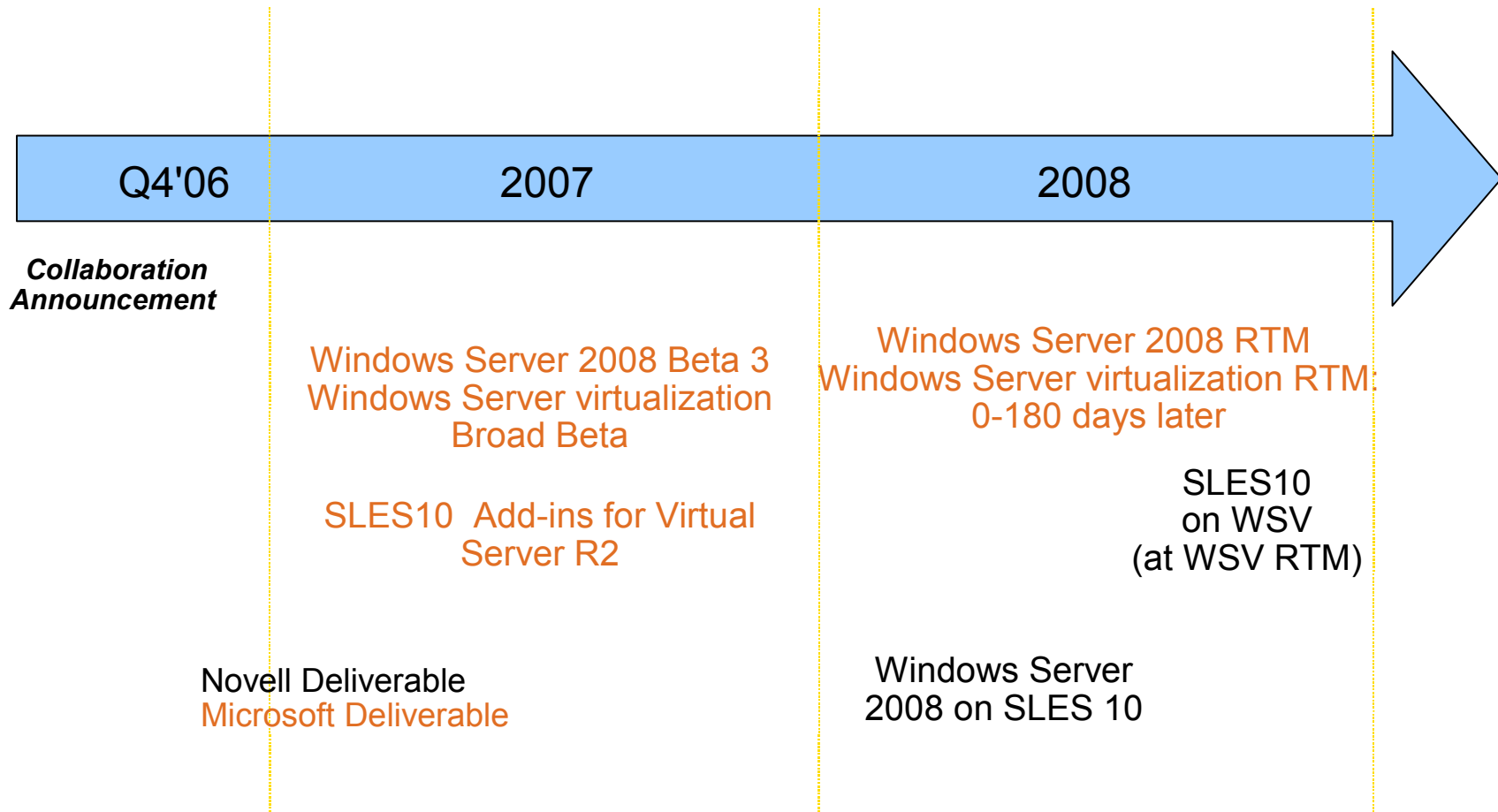
## Collaboration on software that translates between virtualization technologies

- Host Windows Server 2008 as a paravirtualized guest OS on SUSE Linux Enterprise Server 10 with Xen technology<sup>1</sup>
- Host SUSE Linux Enterprise Server 10 as a enlightened guest on Windows Server 2008 with Windows Server Virtualization technology<sup>2</sup>

<sup>1</sup> Available when Windows Server 2008 releases

<sup>2</sup> Available when Windows Server virtualization releases (within 180 days of Windows Server 2008)

# Virtualization Roadmap



# Standards-based Management Goals

Adopt a common framework for solutions to enable management of mixed environments based on the WS-Management standard

Goal	Status
Novell and Microsoft will identify items from the WS-Management specifications for implementation and interoperability of WS-Management stacks. At the same time, we will verify interoperability between our WS-Management implementations via joint interoperability scenarios and test plans.	Microsoft and Novell have adopted a common framework for implementing WS-Management based solutions and will enable future products – including third-party products – to leverage this framework for development of cross-platform management products.
Novell will work with the open source community to contribute to and ensure the availability of an open source implementation of the WS-Management specification.	Novell is working directly with the open source community to develop an open source implementation of the WS-Management specification. Significant new contributions to the openwsman.org open source project, which is creating an open source version of the WS-Management standard. By adopting these standards, any Linux distribution will be able to interoperate with the Microsoft Systems Management framework.

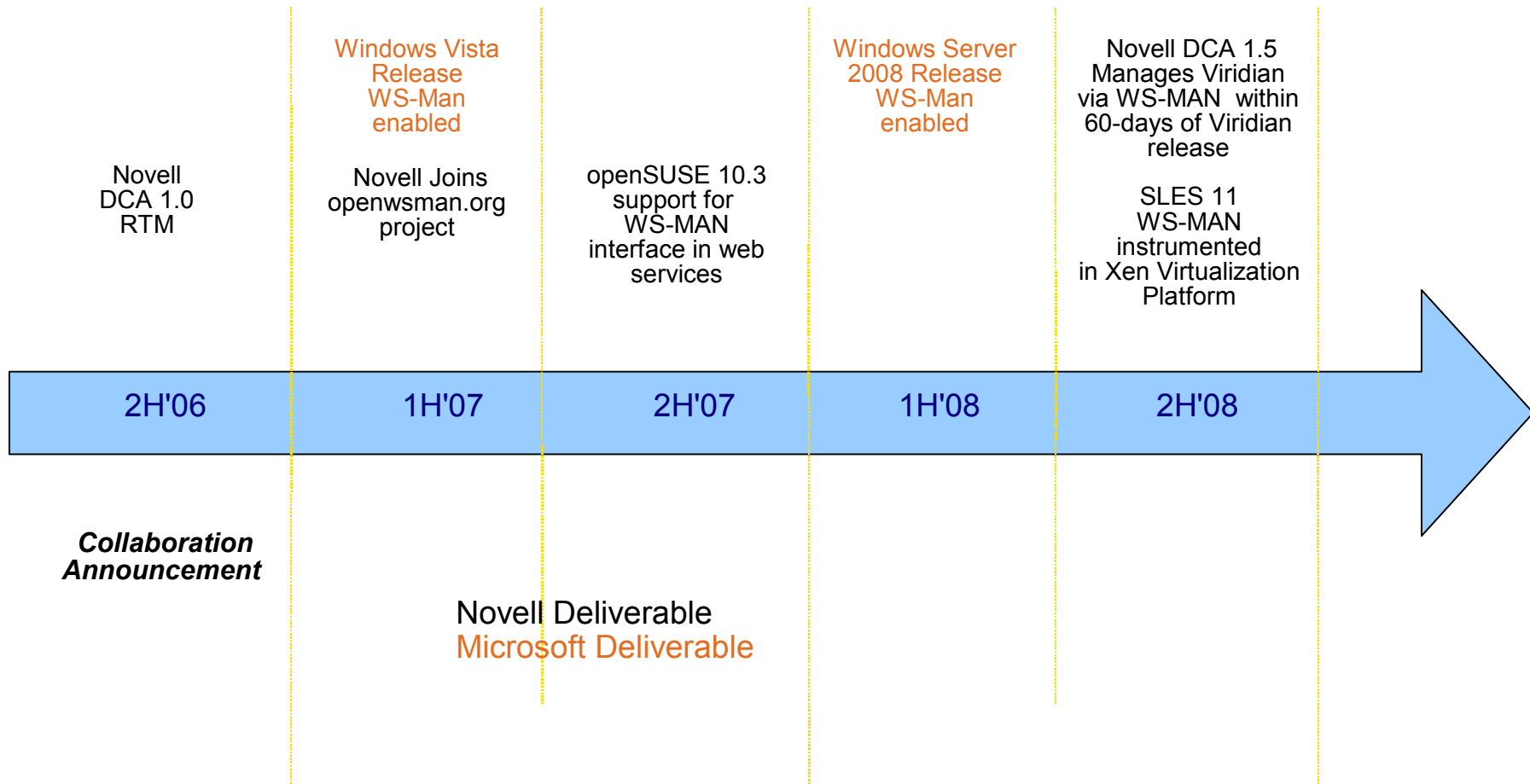
# WS-Management Implementations



## WS-Management Highlights ...

- Novell working directly with the open source community to develop MS-compatible open source implementation of the WS-Management specification.
- openSUSE 10.3 in 2H'07 will include technology to instrument web services for WS-Man (flowing into SLES11 2H'08)
- Novell ZENworks® Orchestrator will manage Microsoft Virtualization Platform (“Viridian”) within 60 days of Viridian release
- Novell Virtualization Platform will be instrumented for WS-Man in SUSE Linux Enterprise Server 11 in 2H'08
- Novell will use WS-Man as the management protocol moving forward

# Systems Management Roadmap



# Directory and Identity Interop Goals

Improve federated identity management between Microsoft Active Directory® and Novell eDirectory™ using web services protocols such as WS-federation and related WS-Security

Goal	Status
Improved access control for IT resources managed with either Novell eDirectory or Active Directory.	Development of an implementation of an open source identity selector for SUSE Linux Enterprise providing similar functionality and compatibility with Windows CardSpace identity selector. Novell will submit this to the open source community as part of the “Bandit” project.
Authorized users can seamlessly access Web-based services whether their user accounts principally reside in Novell eDirectory or Active Directory.	Demonstrated Web application single sign-on based on cross-directory federation at BrainShare 2007.

# Directory and Identity Interoperability



**Access Manager 3.1** (1H 2008), Novell's single solution for enterprise security and access control, will include several new features that will enhance interoperability with Windows environments.

- **Open-source implementation of identity selector**
  - Compatible, with Microsoft's CardSpace identity selector
  - Available in Java, C++ and C# versions
  - Browser plug-in to Firefox, allowing those users to authenticate against a Windows backend.
  - Open source reference implementation (via Bandit™)
- **Implementation of WS-Federation**
  - Specification for standardizing identities among disparate authentication and authorization systems
  - Standard employed by Microsoft's Active Directory Federation Services (ADFS) that enables federation with Windows
  - Allows organizations with heterogeneous environments to securely share a user's identity information over federation trusts

# Directory Interop Roadmap

ADFS v1  
Windows Server 2003 R2  
WS-Federation

Interop Demo  
Brainshare  
2007

Interop Demo  
Catalyst 2007

Novell Access  
Manager 3.1  
WS-Federation  
OS Identity Selector

Bandit project

Windows  
CardSpace  
In .NET  
Framework 3.0  
Identity Selector  
(for Windows)

OSIS/CardSpace  
Interop Demo  
Digital ID World  
2007

ADFS v2  
Beta in 1H'08  
WS-Trust STS  
OSP Identity  
Selector server)

2H'06

1H'07

2H'07

1H'08

2H'08

**Collaboration  
Announcement**

Novell Deliverable  
Microsoft Deliverable

Novell.

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**Microsoft**

# Document Compatibility Goals

Enhance interoperability for Open XML format and ODF documents between Microsoft Office and OpenOffice

Goal	Status
Develop plug-ins for OpenOffice to allow documents to be saved in Open XML format as well as native ODF.	Word processor translator now available. Novell® has resourced projects to provide native built-in converters and re-use existing OpenOffice.org code to provide Open XML import/export capabilities by mid CY 2008.
Develop plug-ins for Microsoft Office to allow documents to be saved in ODF as well as native Open XML	Open Source (BSD) versions of translator add-ins for Word, Excel and PowerPoint® now available on SourceForge.net. Enhanced version of translators to be released in October. Novell contributed to project.
NEW! Open XML standardization.	Open XML format, the default document format for Office 2007 documents, has adopted as a standard by ECMA in Dec. 2006

# Silverlight for Linux (Moonlight)



## What is “Silverlight™”?

- Media experiences and rich interactive applications for the Web that incorporate stunning vector-based graphics, media, text, animation & overlays
- Enable seamless integration of graphics and effects into any existing Web application
- Fast installation for all leading browsers
- Consistent experiences between Windows, Mac (and soon Linux)
- Takes greater advantage of the client for increased performance
- Enhance existing standards/AJAX-based applications with richer graphics and media, and improve performance and capabilities

## What is “Moonlight”?

- Silverlight for Linux
- Announced a formal partnership with Novell to provide a Silverlight implementation for Linux
- Microsoft will be delivering Silverlight Media Codecs for Linux
- Novell will be building compatible Silverlight runtime implementation called “Moonlight”
- Moonlight will run on major Linux distributions
- Support for FireFox, Konqueror and Opera browsers
- Moonlight will support both the JavaScript programming model available in Silverlight 1.0, as well as the full .NET programming model enabled in Silverlight 1.1