

# Microsoft + Novell, an interoperability journey



Case study of the Microsoft and  
Novell strategic alliance

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## INTRODUCTION

Interoperability between computer systems can be engineered at many levels; most fundamentally between two different operating systems.

Achieving *effective operating system interoperability* – between Linux and Microsoft Windows, for example – lets NCC members adopt a multiplatform strategy if such helps them get optimised computing performance *and* a better return on IT investments. Effective interoperability also leads to easier pathways for the evolution of computing systems as a whole and can avoid, or at least defer, (i) disruptive wholesale change, or (ii) having to persist with a less than optimal choice.

The Microsoft+Novell interoperability alliance – established in November 2006 – is broadly aimed at making Microsoft's Windows and Novell's SUSE Linux systems interoperate most effectively. Most recently this has meant developing:

- efficient virtualisation of each upon the other;
- cross platform management of live systems;
- the federation of directory services and, importantly;
- deploying a common means of technical support for the benefit of their respective customers.

Such technical collaboration *and* market competition together can be a hard act to pull off. As the partnership continues into its 4<sup>th</sup> year: What has it achieved? What was the journey like? Where are they going next? And what benefits and opportunities are there in this initiative for NCC members?

To find the answers to these questions, NCC accepted an invitation to visit the Microsoft+Novell Joint Interoperability Laboratory in Cambridge, Boston USA and spoke to members of the joint management team and software engineers.

Briefly, we find:

- Microsoft and Novell are, in effect, closely collaborating together to develop interoperable solutions and marketing the value of their relationship in competition against the offerings of other suppliers. Microsoft is also selling cost effective Novell SUSE Linux subscriptions to promote the joint strategy.
- The Joint Interoperability Laboratory is a unique facility very effectively developing original technologies while engaging with two different company cultures and that of the open source developer community.
- NCC members can benefit from the partners' substantial investments and there are opportunities to mitigate the costs of proof of concept studies, access training and support packages. This all adds up to a good offer.

## WHAT HAVE MICROSOFT AND NOVELL ACHIEVED

### **Microsoft+Novell Joint Interoperability Lab (JIL)**

After one year of setting up and two more of delivery, the Microsoft+Novell Joint Interoperability Lab (JIL) exists and it is a unique facility.

The JIL is a technical and collaboration bridge between the partner companies and, by extension, a model for the same between open source communities and proprietary software development companies.

Significantly, the JIL is a joint *internal* lab, focused on development: it has not replaced any of the existing Customer Centers run by either company for conventional, competitive marketing and product demonstration purposes.

In the first instance, the JIL tackled replicating and then solving customers' complex Windows + Linux interoperability problems that could not be easily handled by each others' customer support services. That role continues today, serving as third tier support for large-scale customers adopting a Windows + Linux dual platform strategy.

As a consequence of its growing skills and experience, the JIL is increasingly participating in new product development and testing for both partners—the objective being to find and eliminate actual or potential cross-platform or cross-product interoperability problems *before* they get into products released to market.

As it establishes itself as a competence centre in its own right, the JIL is careful to complement and extend the partners' other in-house labs—for example, Microsoft's Open Source Technology Centre<sup>1</sup> and Novell's Software Quality Assurance Labs and its Performance Benchmarking Lab. The JIL now has its own, self-generated, workstreams making original contributions into both the open<sup>2</sup> and proprietary source<sup>3</sup> development communities:

**“This makes for a very start-up like environment, very conducive to inter-community collaborations.” (JIL staff member)**

### Market competition

Viewed from an NCC member perspective, the partners are working as a single unit in this space and, like others in the marketplace, developing offerings of enterprise-ready mixed source operating systems software *and* support services.

They are jointly competing against other Linux Distributions to attract customers to Novell's SUSE Linux based products and enterprise Linux support services:

<sup>1</sup> The Microsoft OSTC has three primary objectives: (i) making Windows Server an open source software friendly computing platform, (ii) researching and understanding open source trends, (iii) make available and or incorporate open source best practices into Microsoft's own products and development cycles.

<sup>2</sup> For example, the JIL has produced and donated source code to the open source community for inclusion in the Linux kernel for 'Linux Integration Services for Hyper-V' components – a set of drivers that allows SUSE Linux Enterprise Server and other Linux distributions to run in a paravirtualised mode on Microsoft's Hyper-V hypervisor running on Windows Server 2008 R2. Microsoft has a web site dedicated to the Microsoft Open Source community at <http://port25.technet.com/>

<sup>3</sup> For example, the OSTC and JIL provided security advice to the product group responsible for the development of the Microsoft's Windows 7 operating system.

**“Where the objective is to integrate virtualisation into an existing data centre environment running either company’s operation system right now, you start with the fact that you’ve already got an operating system running in the data centre. It might be Windows or it might be a Linux; but both now come with a hypervisor - Hyper-V for Windows, Xen for Linux<sup>4</sup> - so why [complicate matters and] bring in third party tools when you have this infrastructure right here already?”**

**“The idea of our interoperability partnership is that each company’s operating system is optimised to run on top of the other’s hypervisor and take advantage of that fact. Some of our customers have computing loads that work better in Windows, others in Linux, and they don’t want to deploy two different sets of hypervisors; we can avoid that scenario for them.” (JIL staff member)**

### **New business solutions deployed**

Each company maintains, develops and competes fiercely in sales of their own products that work independently. However, where an actual or potential customer—e.g. an NCC member—already has a mixed platform environment, or is inevitably headed in that direction, they have pragmatically resolved to offer joint interoperability solutions that avoid simplistic and perhaps unrealistic ‘either or decisions’. Their joint objective is that the customer has the genuine choice of a ‘have both’ option that is a ‘win+win+win’ for all three parties.

Thus far the joint effort has produced products or services for:

- heterogeneous virtualization;
- cross platform, standards based systems management;
- LDAP to Microsoft Active Directory federated identity interoperability;
- document format compatibility between OpenXML and ODF standards;
- an open source implementation of Microsoft Silverlight called Moonlight that runs on Linux;
- interoperability between the Windows and Linux user interfaces for people with disabilities;
- new means of customer support in a heterogeneous environment—a customer support service that is seamless from the customer’s perspective irrespective of first point of contact with either partner. The JIL’s role is as back-up to both company’s primary customer support teams should the issue not be resolved there;
- testing in a heterogeneous environment—e.g. the JIL itself, technical validation of interoperability solutions, and collaboration in technical development to ‘design in’ interoperability.

The partners have designed an original commercial offering<sup>5</sup> to promote uptake that includes training resources and a migration support package for those already using another Linux Distribution.

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<sup>4</sup> It is worth noting that, only recently, the KVM ‘hosted hypervisor’ has been incorporated into the Linux software kernel and can be run on machines with hardware virtualization support as an alternative to Xen. Xen is a ‘bare metal hypervisor’ – software that runs directly on the machine hardware and is therefore more closely coupled to the latter.

<sup>5</sup> See the Microsoft and Novell websites for details of this.

As an example of this in practice, Novell will support a customer's current Red Hat, CentOS, Oracle or Scientific Linux environment while enabling the customer to acquaint themselves with Novell's own enterprise Linux support capabilities, if they choose to do so:

**"A lot of the things we've done in this joint collaboration agreement, in fact, most of them, are not specific to Novell and Microsoft products, even the virtualisation piece." (JIL staff member)**

## WHAT HAS THE JOURNEY BEEN LIKE

Physically, the JIL is now a team of six very broadly and deeply experienced senior developers, representing the coming together of pyramids of other labs and expertise stretching back into the two companies and the wider open source communities. As a consequence of this unique positioning, the JIL is influential and it bears significant responsibilities on behalf of its corporate sponsors. How has the journey been for the JIL team?

**"It's real. We have products, we have projects, and people are committed. We're always looking to the next thing. Where should we be going? What should we be doing next? The realisation has come through that we need to make sure that we're working on the right things and let's continue this. This is important to our business."**

**"Because we are using open source technology and leveraging knowledge from diverse fields [via the JIL], we're doing something that is unique here and we share it widely within the Microsoft Open Source Technology Centre and Novell Labs. For example, our charter was to go GPL<sup>6</sup> with the Linux Integration Components (a set of synthetic device drivers that allow paravirtualisation of Linux on MS Hyper-V) and we did in June 2009, under GPL version 2. That was historic from a Microsoft perspective: the first time Microsoft had released kernel code to the community. So, are we really changing the culture inside Microsoft? Seeing is believing."**

**"We want to persuade customers that SUSE Linux Enterprise Server is a better choice than the Linux they have already. [We realise that, for example,] a migration from Solaris Unix to RedHat Linux is not necessarily an intrinsically anti-Microsoft decision; in most cases it's simply an evolutionary process for that customer—perhaps just the path of least resistance? Now Microsoft has the alliance with Novell SUSE Linux, the benefit of that alliance is that there's an extra option down the line via virtualisation and multiplatform solutions in which Microsoft Windows Server based solutions can play a part, if the customer so wishes. That's a huge paradigm shift from our direct selling only Microsoft's products."**

**"There are definitely challenges to this position, but the satisfaction at the end of the day is in knowing that you have affected a major mind shift and changes in both organisations. That is worth something." (JIL team members)**

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<sup>6</sup> General Public Licence

## WHERE NEXT

Microsoft's four interoperability principles<sup>7</sup> are: (i) Open Connections to Microsoft Products, (ii) Support for Standards, (iii) Data Portability, and (iv) Open Engagement. These are all manifest in the alliance with Novell, not least through the JIL's products to date and its activities current and planned:

**"We recognized that it's a mixed IT world and our customers wanted their technologies to work better together. Our customers told us that interoperability is a significant obstacle—and that they need better support, both from us and other vendors, to resolve many of these issues." (Microsoft Senior Vice President, Server and Tools Business, Bob Muglia<sup>8</sup>)**

The partnership continues to bring strategic value for Novell too:

**"The agreement...works really well. Our core assumption is that customers are [not just] Microsoft customers...So our strategy is built on that assumption of heterogeneity." (Novell, Chief Executive, Ron Hovsepian<sup>9</sup>)**

The scope of the collaboration continues to grow beyond its original objectives. The plan includes further technical investments to advance interoperability solutions and investments to continually introduce attractive commercial offers. The website [www.moreinterop.com](http://www.moreinterop.com) describes the current position and future plans:

- more improvements of SUSE Linux Enterprise Server (SLES) running on Hyper-V. While the stated performance is only slightly different today, the ultimate goal is parity with the operating system running on 'bare metal' and no performance degradation when moving to SLES on Hyper-V;
- more Linux Integration Components developments, released to the Linux community;
- System Center Management Packs will continue to evolve with support for advanced Linux support triggers and analysis tools, i.e., analysing clusters, connectivity, security compliance, update deployments, etc.;
- continued support of Novell for future enhancements to Moonlight, including support for some Silverlight v3 features;
- and possibly some more native translators for Microsoft Office documents.

In addition, Microsoft's Open Source Technology Centre will, with JIL inputs, be focusing on:

- better enabling the Windows platform to support open source software;
- researching open source trends to inform business decisions and technology roadmaps;

<sup>7</sup> [www.microsoft.com/interop/principles/](http://www.microsoft.com/interop/principles/)

<sup>8</sup> <http://www.microsoft.com/presspass/features/2010/jan10/01-29InteropExecCouncil.msp> - Extract from a report of a meeting of the Interoperability Executive Customer Council (founded by Microsoft in 2006).

<sup>9</sup> [www.computing.co.uk/computing/analysis/2255694/novell-story](http://www.computing.co.uk/computing/analysis/2255694/novell-story) on 6 January 2010.

- leveraging open source projects and resources in Microsoft's development practices.

### Commercial Offers

The commercial offerings available to customers currently running Linux can include:

- Microsoft Linux Certificates which customers can redeem with Novell for support of SUSE, CentOS, Red Hat et al., at levels of 'Priority' (7x24) or 'Standard' (5x12), both in 1 year and 3 year constructs.
- Proof-of-Concept investments to enable qualified customers to:
  - 'try or buy' Novell support services for other Linux Distributions;
  - test heterogeneous virtualization solutions of Novell's SLES running as a guest on Microsoft's Hyper-V hypervisor;
  - test cross-platform systems management solutions for Windows and Linux with Microsoft's Systems Center product. (Such a 'single pane of glass' between the manager and the multiple systems under command has long been an industry goal.)

The benefits that these offers provide are well described in the following customer quote:

**"ITV are increasingly standardizing on both Microsoft Windows Server and SUSE Linux Enterprise Server as the key components of our enterprise server strategy. We did not want to get into a situation where we had a huge variety of different Linux distributions installed as we wanted to minimize our Linux operational risks and costs by standardizing on just one widely supported distribution. The Microsoft Novell Partnership agreement means we can now concentrate on Microsoft Windows Server and SUSE Linux Enterprise Server across our enterprise and have greater assurance that these platforms will be optimized to interoperate with each other, particularly in respect of virtualization. The additional Intellectual Property warranties provided by the agreement are a bonus and contribute to the effective positioning of SUSE Linux Enterprise Server as an enterprise class Linux distribution. The recent extension of the agreement shows this was not a one off transaction but is part of a longer term arrangement between both Microsoft and Novell. Long may it continue, as it is setting the new benchmark in the technology industry that other suppliers must now work to meet." (Nick Leake<sup>10</sup>, Director of Operations at ITV)**

Furthermore, the public covenants not to sue one another's customers over intellectual property related to the partnership continue to apply to those subscriptions purchased through the life of the alliance. In addition to previous practice, this assurance will not only be offered to customers who use Novell's SUSE Linux Enterprise Server, but also to customers who purchase Novell delivered CentOS or Red Hat Enterprise Linux Server support through the Microsoft Linux Certificate program.

## NCC'S ASSESSMENT

There is general, clear and ever growing market pressure on suppliers for improved interoperability of computing systems. Some of this comes from NCC members needing to be ever more agile in their

<sup>10</sup> From the second anniversary announcement - quote provided to Microsoft by ITV.

ICT deployments in environments where organisational planning horizons seem to get ever closer yet fuzzier.

Time pressures are combining with severe economic pressure to place a premium on NCC members getting more out of what they've already got. New equipment and software acquisitions *must* easily integrate and interoperate with each other and or the existing estate; else, why risk buying a problem? Similarly, the new *must not* narrow future options by accident or design.

The sheer diversity of ICT applications across business and consumer spaces makes it impossible for any one supplier to have all of the best solutions all of the time. One answer for suppliers is to find ways to cooperate in serving joint customer bases and this is in turn leading to competition to find an optimally profitable way forward within such cooperation agreements<sup>11</sup>.

More than ever there is a premium on winning customer loyalty as opposed to lock in after the first sale. Reputation is crucial here: suppliers need actual and potential customers to understand and appreciate their position in respect of technical capability, innovation, developer, business and community participation.

In this challenging context, Microsoft's and Novell's actions to build new products with interoperability in mind from the outset, and establishing relevant industry and open source community alliances to that end, clearly makes good sense. Put another way, they have demonstrably 'got the message' and are finding ways to make it work for them, their customers and for the wider communities of software users and developers.

## NCC MEMBER OPPORTUNITY

Microsoft and Novell are, in effect, closely collaborating together to develop interoperable solutions and jointly marketing the value of their relationship in competition against the offerings of other suppliers. Microsoft is also selling cost effective Novell SUSE Linux subscriptions to promote the joint strategy.

The opportunity is there for NCC members to benefit from these substantial investments. Members can mitigate the costs of proof of concept studies to evaluate the technical and commercial possibilities for themselves, and, should they choose to go ahead to implementation, they can access packages of training, support for platform migrations and or support for the adoption of dual-platform strategies. This all adds up to a good offer.

As part of its commitment to open engagement, Microsoft is collaborating with Novell and the NCC in the delivery of a number of NCC Member Round Tables to further brief NCC members and give opportunity for in depth questioning.

(NCC, February 2010)

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<sup>11</sup> For a perspective on this trend see, "Google's half-open battle with Apple", Financial Times, 7 January 2010 ([www.ft.com/cms/s/0/5277fa04-fb2e-11de-94d8-00144feab49a.html](http://www.ft.com/cms/s/0/5277fa04-fb2e-11de-94d8-00144feab49a.html))