

### Hanover School Division

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Hanover School Division (HSD) is a rural school division in Manitoba, Canada. It has its major centre in Steinbach, Manitoba. The division is located southeast of the city of Winnipeg. There are 18 schools in the division that service the communities of Landmark, Niverville, Bothwell, Blumenort, Mitchell, Kleefeld, Grunthal, Crystal Springs, and Steinbach. Hanover School Division is the 8<sup>th</sup> largest school division in the province of Manitoba with more than 7,700 students and over 1,100 staff.

HSD takes great pride in providing students with access to a variety of programs that accommodate their different abilities, interests, and ambitions.

### The Challenge

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As one of the largest school divisions in Manitoba, Hanover School Division makes extensive technology resources available to its students and staff.

HSD relied on **Novell eDirectory** for directory services and central access to information systems and resources throughout the division. While Novell directory services platform is an enterprise solution, Novell eDirectory did not suit the direction HSD was taking as related to collaboration, information sharing, and information systems integration. For example, Novell eDirectory was not suitable for the following reasons:

- **Security:** Novell eDirectory does not natively support more scalable logical access approaches, such as Role-Based Access Control (RBAC), thereby requiring higher level management and maintenance as well as longer cycle time to address business unit needs.
- **Microsoft Office 365:** A software business and collaboration suite offered by Microsoft. This solution is dependent on integration with Microsoft Active Directory and Microsoft Exchange. It is not suitable for integration with Novell eDirectory.
- **Voice-over-IP:** The Division was evaluating several vendors and technologies associated with a Voice-over-IP (VoIP) solution. One of the potential solutions was the integration of Microsoft Skype for Business. This platform requires Microsoft Active Directory and Microsoft Exchange as the backend to function properly.
- **Market Trend:** Novell eDirectory is losing more and more market share, and it is approaching end of life. Most organizations that rely on Novell eDirectory have migrated or are in the process of migrating to a different directory services solution.
- **Integration:** Most third-party vendors have stopped providing integration solutions for Novell eDirectory as part of their standard offerings. While customizable interfaces and integrations are available, they are generally not supported as part of their off-the-shelf solutions.

HSD - Novell to Microsoft Migration

### Novell to Microsoft Migration

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HSD had chosen to migrate to **Microsoft Active Directory** – a scalable directory services platform that facilitates the authentication and authorization of all users across the enterprise. Microsoft AD is supported by the vast majority of third-party vendors and is the market leader across all sectors.

The migration scope, however, included much more than just Novell eDirectory. HSD Technology Services used a wide range of Novell solutions to deliver services required by the division:

- Directory Services (Novell eDirectory)
- Print Services
- File Services
- Name Services (Novell DNS)
- Application and OS Deployment and Management (Novell ZENworks)

Hanover School Division engaged iRangers to plan and design Microsoft infrastructure and then help HSD to migrate from Novell to Microsoft services.

### Why iRangers

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First, HSD helped iRangers to understand the aspects of the division's business, processes, goals and vision.

Next, **iRangers IT Research & Strategy** advisors performed the discovery and assessment of HSD's Novell infrastructure and supporting services. iRangers helped HSD to envision the new Microsoft environment taking into consideration the existing Novell environment, business needs and future vision, planned IT initiatives and HSD's IT staff skillset. Through collaboration with HSD's IT and business professionals, and iRangers technology experts, the project team mapped the existing Novell and related services to Microsoft solutions:

- Microsoft Active Directory
- Microsoft Print Services
- Microsoft File Services (DFS, DFS-R)
- Microsoft DNS
- Microsoft System Center Configuration Manager (SCCM)

After that, **iRangers IT Solutions** architects designed the new Microsoft infrastructure which was then built by iRangers consultants. The iRangers team worked with HSD IT professionals to ensure that all the requirements were met and old functionality was translated or enhanced. iRangers IT Solutions made sure the Microsoft environment was built in accordance to Microsoft best practices and, what is even more important, in accordance with iRangers Microsoft standards, carefully developed by the iRangers team of experts based on the decades of experience.

iRangers developed the migration plan and overall Microsoft technology roadmap for HSD. The HSD Microsoft technology roadmap included:

### HSD - Novell to Microsoft Migration

- Replacement of Novell eDirectory services by Microsoft Active Directory
- Replacement of old logon scripts with AD Group Policies for printer and network drive mappings
- Migration to the revised and consolidated DNS infrastructure and DHCP services
- Migration to the revised and enhanced file and sharing services, highly available, replicated and distributed across multiple sites and servers
- Transition of HSD's unique printing architecture developed and adjusted over the years to custom-designed new Microsoft printing infrastructure consisting of the blend of print services, GPOs/GPPs, collections and scripts
- Transition of Novell ZENworks desktop OS and application management system to Microsoft SCCM
- Training schedule for HSD IT staff to ensure the new system is supported effectively after the migration

Finally, HSD and iRangers implemented the migration plan using the procedure developed to allow the unattended and transparent user transition to the new environment. The process was designed to automatically initiate user and workstation migration triggered by a simple workstation reboot. During the workstation migration process, the complete user experience including user name, password, profile and settings, network drives and printers was transitioned to the new environment making sure the user was in the state as if no changes were made to his or her computer.

During the initial environments synchronization, co-existence period and migration itself, iRangers utilized in-house custom-developed tools. iRangers tools allowed HSD to achieve:

- File Services permissions and folder creation automation
- The initial creation of Novell eDirectory groups and user objects in Microsoft Active Directory
- User password synchronization
- Continuous synchronization of Novell eDirectory and AD objects
- Workstation migration, including user experience
- Post-migration workstation cleanup

No third-party products or technologies were used in the migration process allowing significant savings for HSD.

Overall, the migration to Microsoft infrastructure has been a great success for Hanover School Division.

### Next Step

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To learn more about how iRangers can help your enterprise IT needs, visit our web site:  
[www.irangers.com](http://www.irangers.com)