



# University of Victoria

## Improving NetOps Productivity and Data Quality with Modern IPAM



University  
of Victoria

### Project Objectives

- Overcome operational issues brought by in-house IPAM solution
- Simplify system access permissions management to eliminate security risks
- Enhance data quality to enable automation of workflows
- Enable centralized management of multi-vendor DNS & DHCP services
- Speed up problem resolution time by improving network visibility

### Main Benefits

- Significant NetOps productivity gains by streamlining repetitive tasks
- Strengthened security thanks to advanced rights delegation
- Enhanced network automation capability using IPAM as Network Source of Truth
- Comprehensive network visibility and control, including error-free configurations
- Important cost savings from decommissioning of servers

The University of Victoria (UVic) is a medium-sized comprehensive university (teaching & research) located on Canada's stunningly beautiful west coast. UVic employs approximately 5,000 faculty and staff. Student enrollment is about 22,000 (combined graduate and undergraduate). While the university is situated in Victoria, Canada, partnerships and research collaborations extend worldwide. The student population is also drawn from all corners of the globe.

**"Our IT staff now benefit from the ease of use, consistency, and integrity of the data brought by EfficientIP IPAM"**

Ron Kozsan, Director of IT Infrastructure, University of Victoria



## Situation and Challenges Being Faced

Just like many universities which have a strong do-it-yourself culture, UVic were relying on an in-house IPAM solution originally written by student employees. The core functionality of the system had seen few improvements in over two decades, so the system was slow and suffered from numerous usability issues. The inability to modernize or implement new features was also raising concerns around UX and operational risk.

The system would allow IP subnet allocations to overlap, without alerting administrators to these configuration errors. Complex permissions management for administrators often resulted in inappropriate levels of access being granted to IT support staff, causing security risk. Making bulk changes was impractical for Tier1 support staff, which resulted in additional workload for senior technical people in the form of scriptwriting and development of ad hoc automation tools.

Lastly, many challenges resulted from siloed, poor quality data - informational discrepancies between the central IT IPAM solution and the overlapping databases in other departments hampered visibility of the data and problem resolution. In addition, the inconsistent information regarding the intended usage of IP subnetworks (e.g. student vs staff vs secured applications), as well as the correspondingly divergent security and access profiles of each, led to many issues.

Taking all the stated challenges and risk factors together, UVic concluded that migrating to a modern, vendor-supported solution was essential.

**“The EfficientIP licensing model stood out from the competition, being far more affordable than the linear license model based on the number of IP addresses offered by others.”**

Ron Kozsan, Director of IT Infrastructure, University of Victoria

## The Selected EfficientIP Solution

EfficientIP's SOLIDserver™ DDI solution was selected after being recommended to UVic's Director of IT Infrastructure, Ron Kozsan, by another Canadian university. The recommendation had been echoed by other contacts in the higher education sector, many of whom had moved to EfficientIP from other contending solutions.

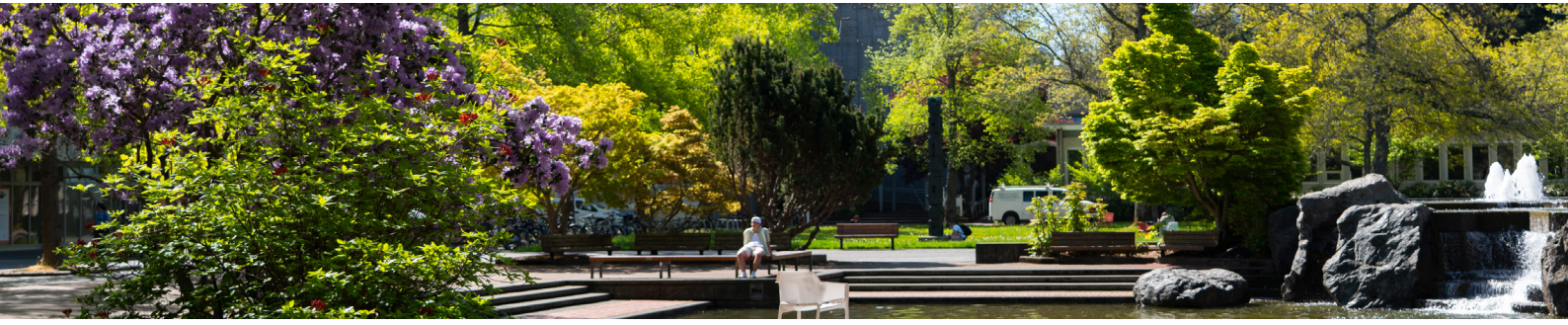
The DDI appliance - integrating DNS, DHCP, and IP Address Management (IPAM) into a single, unified console - provided single-viewpoint visibility over network devices (including zombie assets), simplified network management and streamlined network operations. At the same time, it brought significantly improved data quality, as all information could be aggregated into the IPAM to build an accurate, effective Network Source of Truth (NSoT). In addition, the Multi-Vendor Services Management (MVSM) functionality of SOLIDserver™ DDI gave UVic central management of DNS/DHCP services for both BIND and Linux servers.

As stated by Ron Kozsan, Director of IT Infrastructure: “The EfficientIP licensing model stood out from the competition, being far more affordable than the linear license model based on the number of IP addresses offered by others.”

Access to a full API was another determining factor, as was the ability to have fully redundant servers to help ensure business continuity.

Being a large and complex migration, EfficientIP Professional Services were engaged to assist with the implementation, providing exceptional support both before and during the main cutover. Two senior technical people from UVic benefited from advanced system administration training, as well as two people on more user-oriented training sessions.





## Main Results

Having all IT support staff at the university using the same toolset has brought UVic significant qualitative benefits. Implementing EfficientIP DDI gave central IT a strong, stable IPAM service and allowed them to retire three «shadow» IPAM implementations being maintained by staff in academic departments. All in all, 10 to 15 servers were able to be decommissioned, bringing important cost savings. Significant gains in productivity were seen with improved usability for Tier1 support personnel in Network Operations, Helpdesk and Desktop Support. Time-consuming, repetitive tasks for front-line workers became much more streamlined. Also, some system administration time was freed up by eliminating duplicate IPAM solutions across the university.

UVic are particularly happy with the new ability to do bulk operations through the GUI and to run batch changes through the API which has greatly benefited their data consistency. Previously existing configuration errors have been easily detected and corrected, and new ones prevented from occurring by the SOLIDserver™ DDI solution. “Our IT staff now benefit from the ease of use, consistency, and integrity of the data brought by EfficientIP IPAM”, said Ron Kozsan. At the same time, security of the system has been enhanced thanks to the advanced rights delegation provided. Permissions management for administrators has now become far more straightforward.

## In the Future

Looking ahead, UVic will be replacing its campus network backbone, upgrading from 10G to 100G, as well as improving use of automation for IT processes. The university will continue performing clean-up work, decommissioning of old services, and completing the integration of other locally developed tools into EfficientIP. At the same time, they are working towards EfficientIP DDI as being the Network Source of Truth for their VLAN information.

And of course, like many organizations, the university is fully engaged in understanding the impacts and preparing to leverage potential benefits of AI in the education and research space.



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As one of the world's fastest growing DDI vendors, EfficientIP helps organizations drive business efficiency through agile, secure and reliable network infrastructures. Our unified management framework for DNS-DHCP-IPAM (DDI) and network configurations ensures end-to-end visibility, consistency control and advanced automation. Additionally, our unique 360° DNS security solution protects data confidentiality and application access from anywhere at any time. Companies rely on us to help control the risks and reduce the complexity of challenges they face with modern key IT initiatives such as cloud applications, virtualization, and mobility. Institutions across a variety of industries and government sectors worldwide rely on our offerings to assure business continuity, reduce operating costs and increase the management efficiency of their network and security teams.

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