White Paper:

eduroam...the only campus wireless network you need

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Introduction

Most Canadian post-secondary institutions provide several campus-wide wireless networks for their students and faculty, in addition to eduroam.   This requires the IT staff to manage credentials and permissions for each network, in addition to the configurations required to offer eduroam.

Institutions that participate in CANARIE's Canadian Access Federation can reduce operating costs and simplify access management for their users by simply migrating to eduroam as their primary wireless service set identifier (SSID).

Benefits

Users gain access to all the benefits of eduroam
- Users will be pleasantly surprised to find themselves automatically online while visiting other premises world-wide.
- All users will have eduroam-configured devices from the start, avoiding frustrations with configuring eduroam for the first time while offsite.
- All the features of your existing wi-fi service for users are maintained, with the added seamless roaming benefits of eduroam.

Lower operating costs
- Managing only the eduroam SSIDs is easier than managing multiple SSIDs plus eduroam.
- A single SSID facilitates IP allocation management and reduces the number of IP addresses used.
- Troubleshooting is greatly simplified, as a single SSID eliminates the need to identify which SSID and IP space a user is on before determining the root cause of their issue.
- Remote eduroam troubleshooting is easier, as users will have properly-configured eduroam devices.
- CANARIE's "IDP Installer" tool makes eduroam set-up easy.
- CANARIE's QR-code based Device Configuration Assistance Tool makes it easy for users to configure their devices themselves.

Higher network performance, optimizing radio/Wi-Fi spectrum

- Each extra SSID adds overhead from management frames, thereby increasing channel utilization and decreasing overall wireless network performance[1].

Easier security policy management

- Maintaining your security policy using eduroam and VLANs is easier and more effective than implementing multiple SSIDs.

Secure access for all users

- Separate groups of users into VLANS, thereby tailoring access permissions to internal applications.
- If using Microsoft NPS, you can also fine-tune permissions for user groups based on Active Directory settings.

When do multiple SSIDs including eduroam make sense?

In cases where only a small percentage of an organization's users are affiliated with research and education (and therefore eligible for eduroam), it is necessary to continue to operate multiple SSIDs for non-R&E users. Government agencies and hospitals often fall into this category.

Getting started

Ready to make eduroam your primary SSID on campus? Here are a few tips to help you get started:

- eduroam.org offers marketing materials that can be incorporated into your own eduroam messaging campaign.
- CANARIE has several tools available to help you connect your institution to eduroam, and test and deploy eduroam to a variety of device types.
- Ensure your security policy is up-to-date and clearly defines which types of users can access internal resources.

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[1] https://kb.meraki.com/knowledge_base/multi-ssid-deployment-considerations

- To support home users who are not already configured for eduroam, create an "eduroam-help" SSID that links to your custom eduroam installer.
- Detailed technical deployment guidance is available at this link[2]

For more information, contact: caf@canarie.ca

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[2] https://tts.canarie.ca/otrs/public.pl?Action=PublicFAQZoom;Subaction=DownloadAttachment;ItemID=1;FileID=15