Welcome Your Campus Visitors with eduroam!

Julie Menzies, CAF Program Manager | Chris Phillips, CAF Technical Architect

BCNET Conference | May 1, 2019

What is CANARIE's Canadian Access Federation (CAF)?

Federated Identity Management (FIM): secure and controlled access to digital resources through a federated framework

eduroam: secure Wi-Fi for research and education; allows users to instantly gain internet access from participating sites throughout the world, using their home institution's login credentials

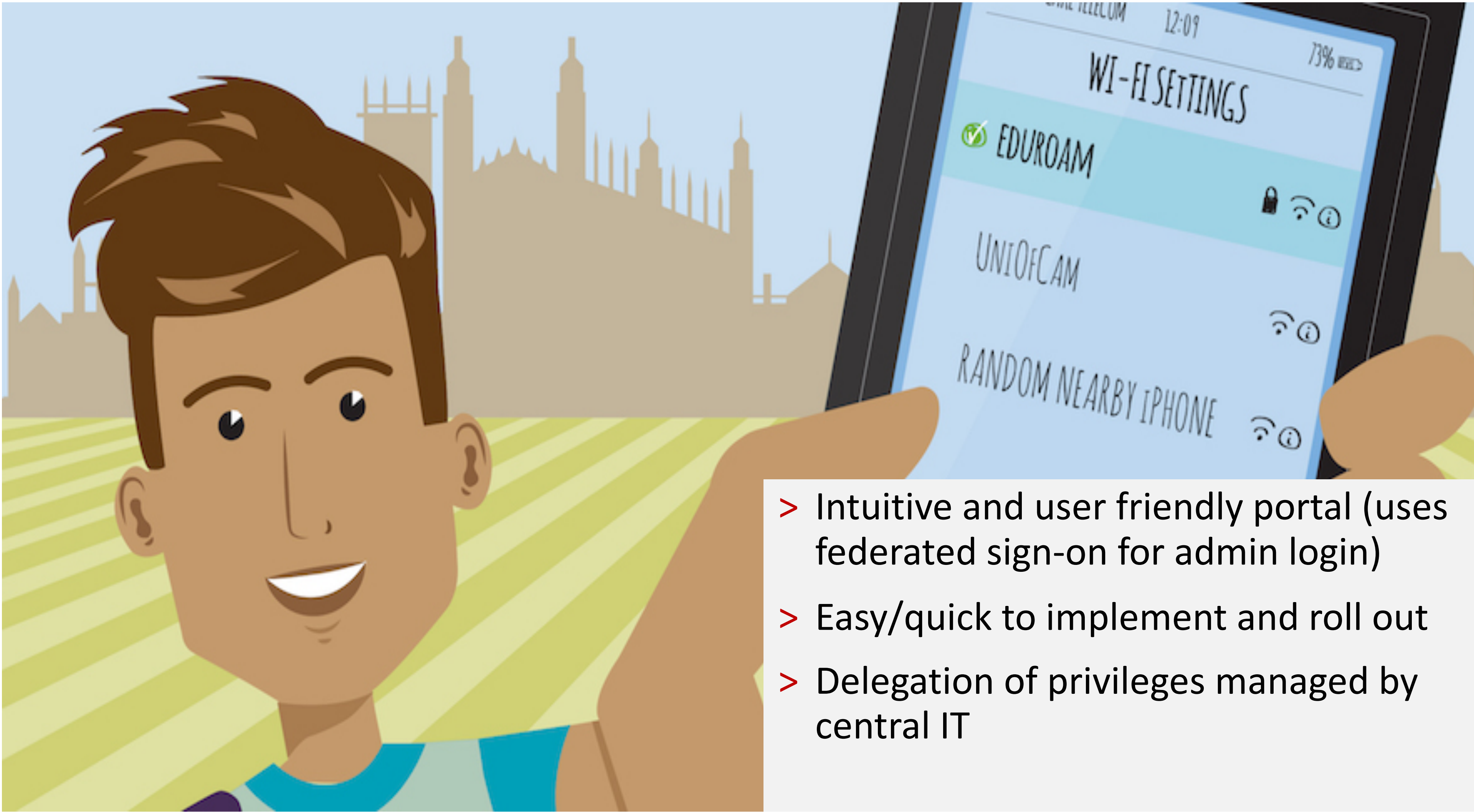
What is eduroam Visitor Access (eVA)?

A CANARIE hosted service that allows institutions to create temporary eduroam accounts for their visitors.

eduroam
Visitor Access

eVA will be rolled out in 2019.

What is eduroam Visitor Access (eVA)?



- Intuitive and user friendly portal (uses federated sign-on for admin login)
- Easy/quick to implement and roll out
- Delegation of privileges managed by central IT

eVA Benefits

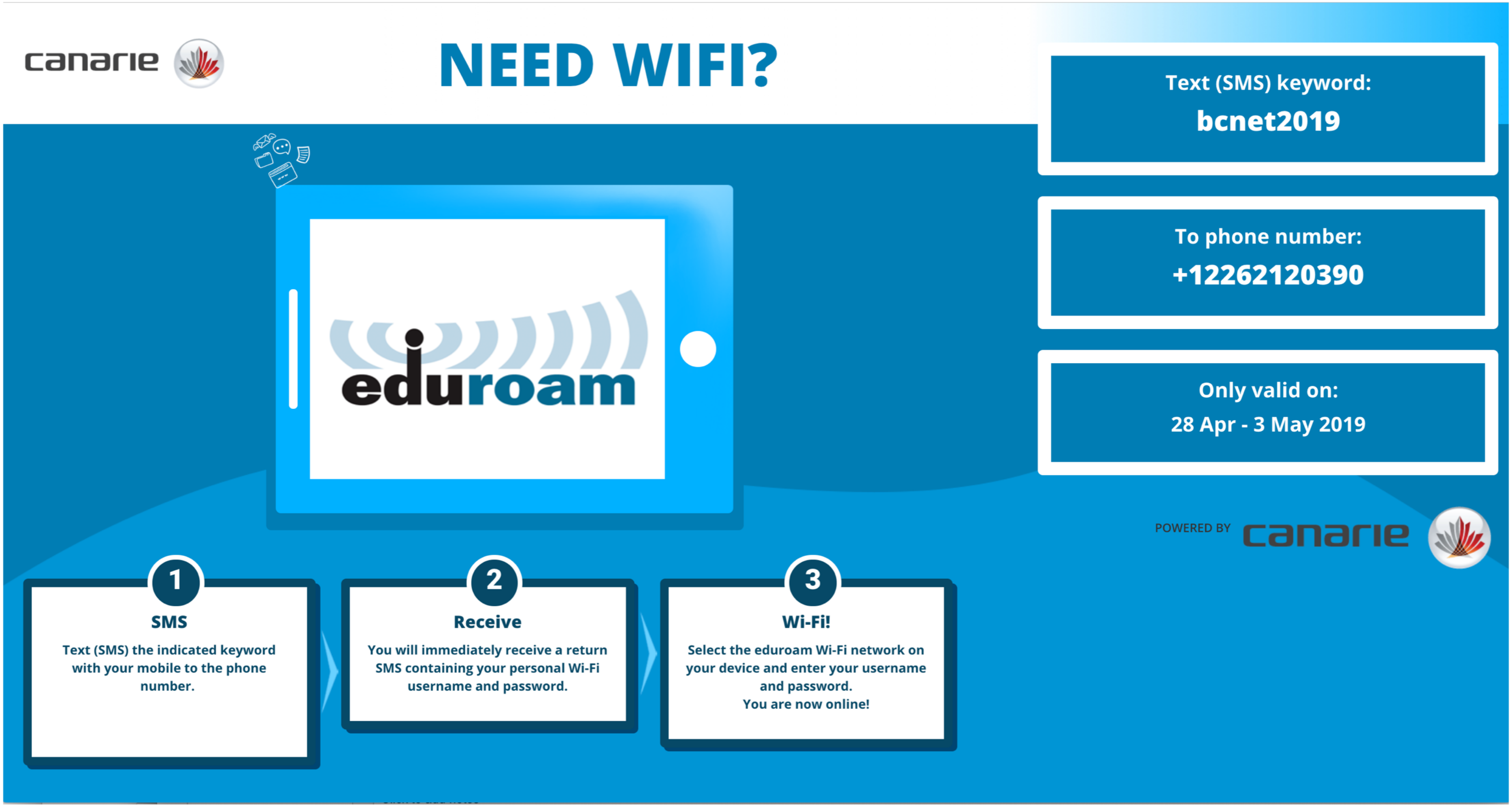
1. Security of eduroam available to <u>all</u> campus Wi-Fi users
2. Reduces the number of transient credentials
3. Lowers operational costs and speed of deployment for guest Wi-Fi
4. Nationally consistent and familiar service benefits frequent guest Wi-Fi users

“Regular eduroam” vs. eVA accounts

- > No technical differences
- > Access is equivalent to roaming eduroam users
- > Risk profile is on-par or better than regular eduroam

eVA Account Creation Methods

1. Individual Visitor Accounts
2. Batch/Group Accounts
3. SMS for Events



NEED WIFI?

Text (SMS) keyword:
bcnet2019

To phone number:
+12262120390

Only valid on:
28 Apr - 3 May 2019

POWERED BY canarie

1 SMS
Text (SMS) the indicated keyword with your mobile to the phone number.

2 Receive
You will immediately receive a return SMS containing your personal Wi-Fi username and password.

3 Wi-Fi!
Select the eduroam Wi-Fi network on your device and enter your username and password.
You are now online!

Next Steps

> Determine if eVA is the right fit for your organization

> Start planning for your eVA deployment

> Stayed tuned for the CAF eVA production release announcement and introductory webinars (currently planned for Summer 2019)!

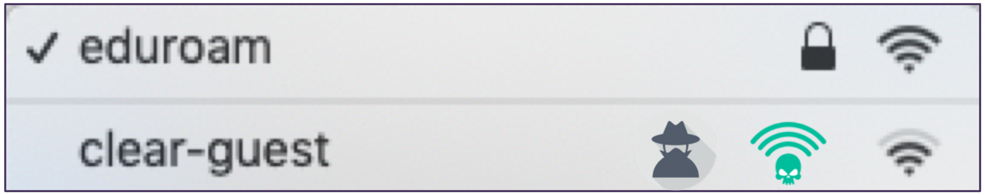
eduroam Network Security

Security is a not a thing but a practice.

A "defense in depth" approach allows for best security practices to evolve and be applied.

eduroam - Security Best Practice #1

Use eduroam Visitor Access and do not offer open SSIDs.



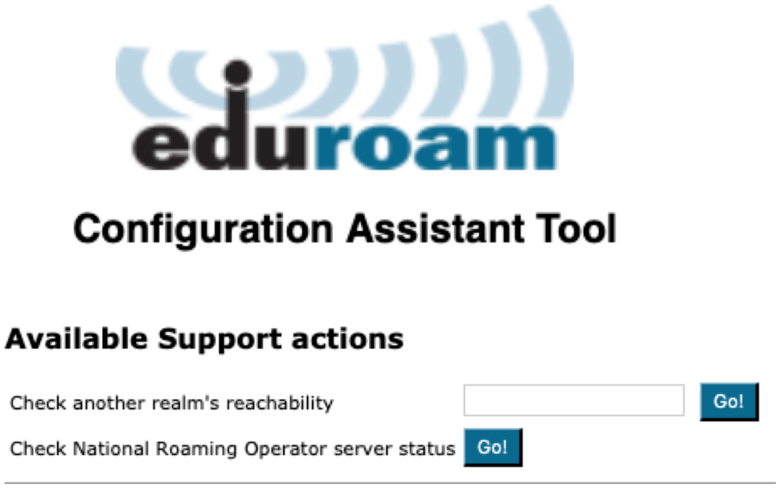
✓ eduroam

clear-guest

Open SSIDs put users at risk of rogue access points, man-in-the-middle (MITM) attacks, and data capture.

eduroam - Security Best Practice #2

Use cat.eduroam.org to offer a security-first configuration as the easiest path to connect.



Configuration Assistant Tool

Available Support actions

Check another realm's reachability

Check National Roaming Operator server status

Site admins can secure access to 23 different device profiles and test their site reachability in real time.

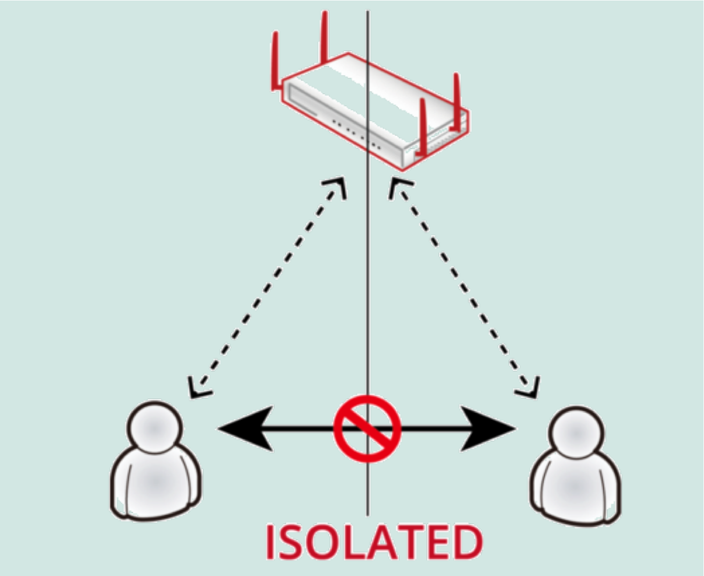
eduroam - Security Best Practice #3

Assign users by realm.

eduroam visitors outside your firewall;
trusted users inside.

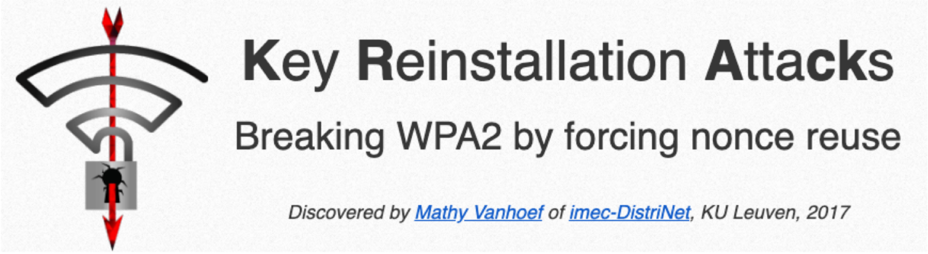
eduroam - Security Best Practice #4

Isolate APs to mitigate risk of traversal attacks.



eduroam - Security Best Practice #5

Layer defense mechanisms so that if one layer is challenged, the whole is protected.



Key Reinstallation Attacks

Breaking WPA2 by forcing nonce reuse

Discovered by Mathy Vanhoef of imec-DistriNet, KU Leuven, 2017

DragonBlood

Cracking WPA3 Wi-Fi Password

eduroam 802.1x and TLS certificates are unaffected by WPA2/3 threats.

eduroam - Security Best Practice #6

Use anonymous outer identities to protect personally identifiable information (PII).

eduroam - Security Checklist

- ✓ Use eduroam Visitor Access and do not use open SSIDs.
- ✓ Use cat.eduroam.org to offer most secure & easiest path to connect.
- ✓ Assign users by realm.
- ✓ Isolate APs to mitigate risk of traversal attack points.
- ✓ Layer defenses to mitigate risk of individual attacks.
- ✓ Use anonymous outer identities to protect PII.

Questions?

canarie

canarie.ca | @canarie_inc