

Queries, Patterns, Trends

Lightning Talk on eduroam data for TNC 2026

eduroam collects data

SERVICE LOCATIONS

Name	Latitude	Longitude	Encryption Type	Tags
Main Campus	42.3008188	-83.6914256	WPA2+WPA	IPv6 Enabled
Washington, DC	38.9045344	-77.04198209999998	WPA2+WPA	IPv6 Enabled
Denver	39.7447003	-104.9887066	WPA2+WPA	IPv6 Enabled
Washington, DC	38.9045344	-77.04198209999998	WPA2+WPA	IPv6 Enabled

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Authentication Logs						
VISINSTID ▼	REALM ▼	NEXTHOP ▼	RESULT ▼	FAILURE ▼	VISCOUNTRY ▼	EAPTYPE ▼
Denver						
Washington, DC	painless-security....	internet2.edu	internet2.edu	OK	US	TLS
	painless-security....	internet2.edu	internet2.edu	OK	US	TLS
	painless-security....	internet2.edu	internet2.edu	OK	US	TLS
	painless-security....	internet2.edu	internet2.edu	OK	US	TLS
	painless-security....	internet2.edu	internet2.edu	OK	US	TLS
	painless-security....	internet2.edu	internet2.edu	OK	US	TLS
	painless-security....	internet2.edu	internet2.edu	OK	US	TLS

eduroam collects data

SERVICE LOCATIONS

Name	Latitude	Longitude	Encryption	Secret	Auth Port	Order
Main Campus	42.3008188	-83.6914256	WPA2+WPA			
Washington, DC	38.9045344	-77.04198209999998	WPA2+WPA			
Denver				*****	1812	1
Washington				*****	1812	1
				US	TLS	
				US	TLS	
				US	TLS	

Authentication Logs

VISINSTID	REALM	NEXTHOP	RESULT	FAILURE
painless-security...	internet2.edu	internet2.edu	OK	
painless-security...	internet2.edu	internet2.edu	OK	
painless-security...	internet2.edu	internet2.edu	OK	
painless-security...	internet2.edu	internet2.edu	OK	
painless-security...	internet2.edu	internet2.edu	OK	
painless-security...	internet2.edu	internet2.edu	OK	
painless-security...	internet2.edu	internet2.edu	OK	

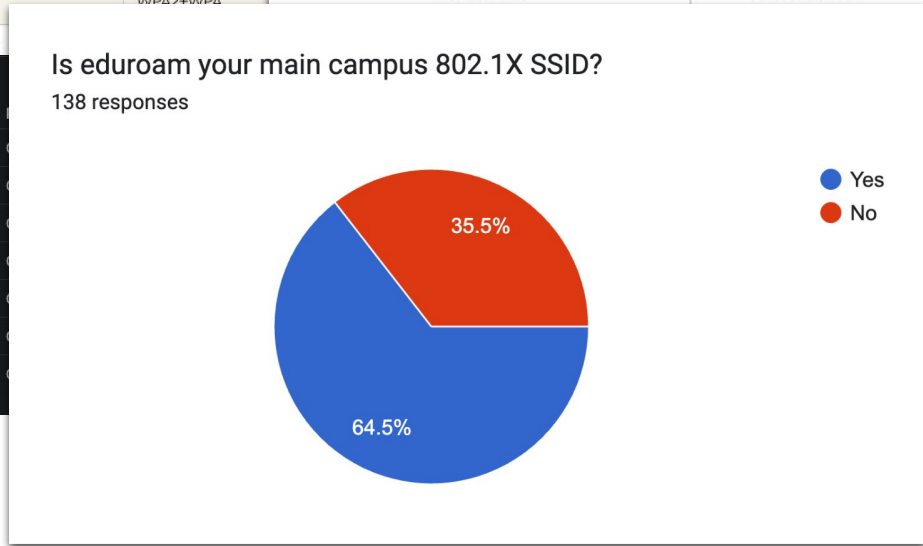
eduroam collects data

SERVICE LOCATIONS

Name	Latitude	Longitude	Encryption	Secret	Auth Port	Order
Main Campus	42.3008188	-83.6914256	WPA2+WPA			1
Washington, DC	38.9045344	-77.04198209999998				1
Denver						
Washington						

Authentication Logs

VISINSTID	REALM	NEXTHOP
painless-security...	internet2.edu	internet2.edu
painless-security...	internet2.edu	internet2.edu
painless-security...	internet2.edu	internet2.edu
painless-security...	internet2.edu	internet2.edu
painless-security...	internet2.edu	internet2.edu
painless-security...	internet2.edu	internet2.edu
painless-security...	internet2.edu	internet2.edu



queries

“As a member of the Internet2 eduroam US program leadership team, I want to know each site’s traffic, as well as submitted sites with no traffic, so that I can understand the current state of the service and provide value to active customers.”

queries

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what is traffic

queries

“As a member of the Internet2 eduroam US program leadership team, I want to know each site’s traffic, as well as submitted sites with no traffic, so that I can understand the current state of the service and provide value to active customers.”

What kind of site

what is traffic

queries

“As a member of the Internet2 eduroam US program leadership team, I want to know each site’s traffic, as well as submitted sites with no traffic, so that I can understand the current state of the service and provide value to active customers.”

Service provider only?

What kind of site

what is traffic

queries

Time span?

Rejected traffic too?

“As a member of the Internet2 eduroam US program leadership team, I want to know each site’s traffic, as well as submitted sites with no traffic, so that I can understand the current state of the service and provide value to active customers.”

count EAP sessions?

Service provider only?

what is traffic

What kind of site

queries

Time span?

Rejected traffic too?

What about devices that get rejects and accepts?

“As a member of the Internet2 eduroam US program leadership team, I want to know each site’s traffic, as well as submitted sites with no traffic, so that I can understand the current state of the service and provide value to active customers.”

count EAP sessions?

Service provider only?

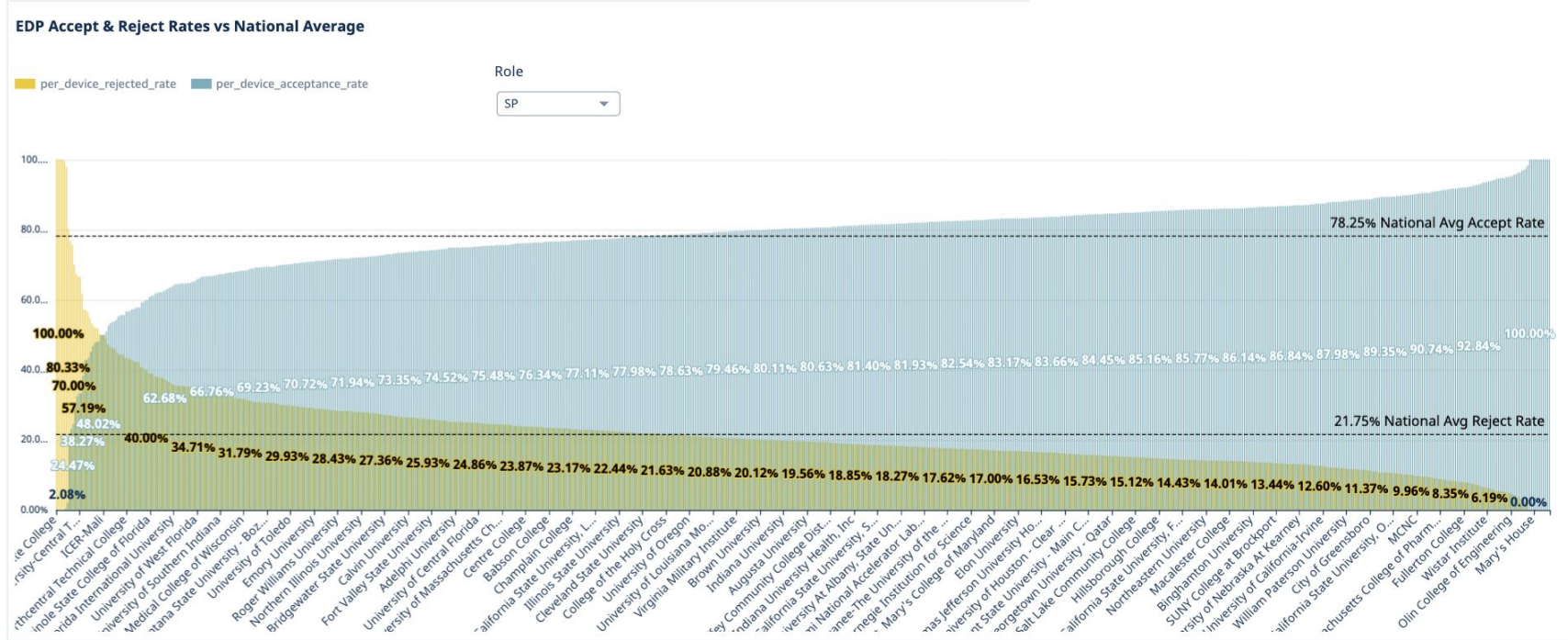
what is traffic

What kind of site

queries

“...I want to know the **accept** and **reject %** rate of traffic normalized on device calculated per eduroam US subscriber, with a **national accept** and **reject %** based on adding together all the **per-subscriber rates** and dividing by the **number of subscribers...**”

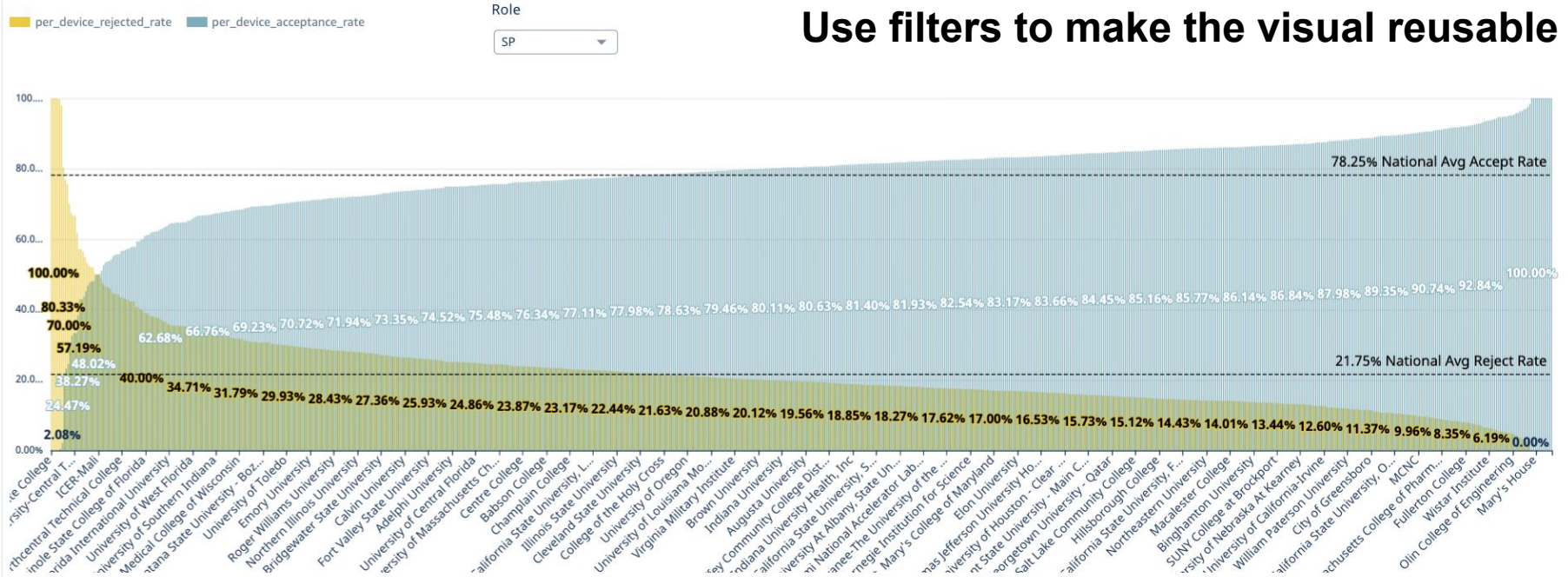
edu roam US Accept & Reject Rates - National Average



eduroam US Accept & Reject Rates - National Average

Start Date: 2026/01/01
End Date: 2026/03/31
So or Basic: Non-SO
EDP Name: All

EDP Accept & Reject Rates vs National Average



Use filters to make the visual reusable

What does 100% accept mean? Is that bad?

Does 0% mean no traffic or no failures?

Is there a school missing?

Active subscribers with no traffic?

Who gets access to this data?

Why are the failing sites failing?

dashboard documentation

Can I filter by US state? Does it matter?

Can I identify failure patterns?

What about by realm?

Thank you!

Thomas Pratt

Nadia Efimova

Swathi Gudipalli

Thank you!

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InCommon Data Analytics

Thank you!

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Nadia Efimova

Swathi Gudipalli



InCommon Data Analytics

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Follow-up

Tell me how you define effective and successful service!

Mary Bull, **eduroam US** technical service manager
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