

Switch_

Roam Play

An interactive game to understand federated eduroam authentication

Trust & Identity in Action @ TNC 2026

Frederic Gerber, 11 June 2026



Roadmap

1. eduroam
2. How people learn
3. Roam Play

Who knows how eduroam works?



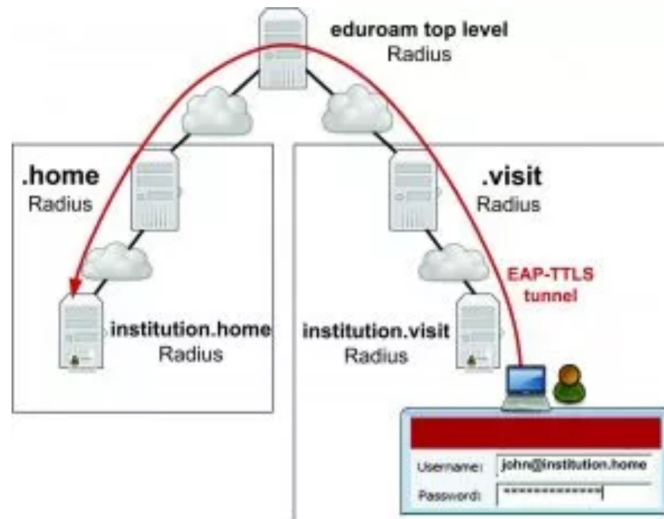
How does eduroam work?

Get connected, wherever you are

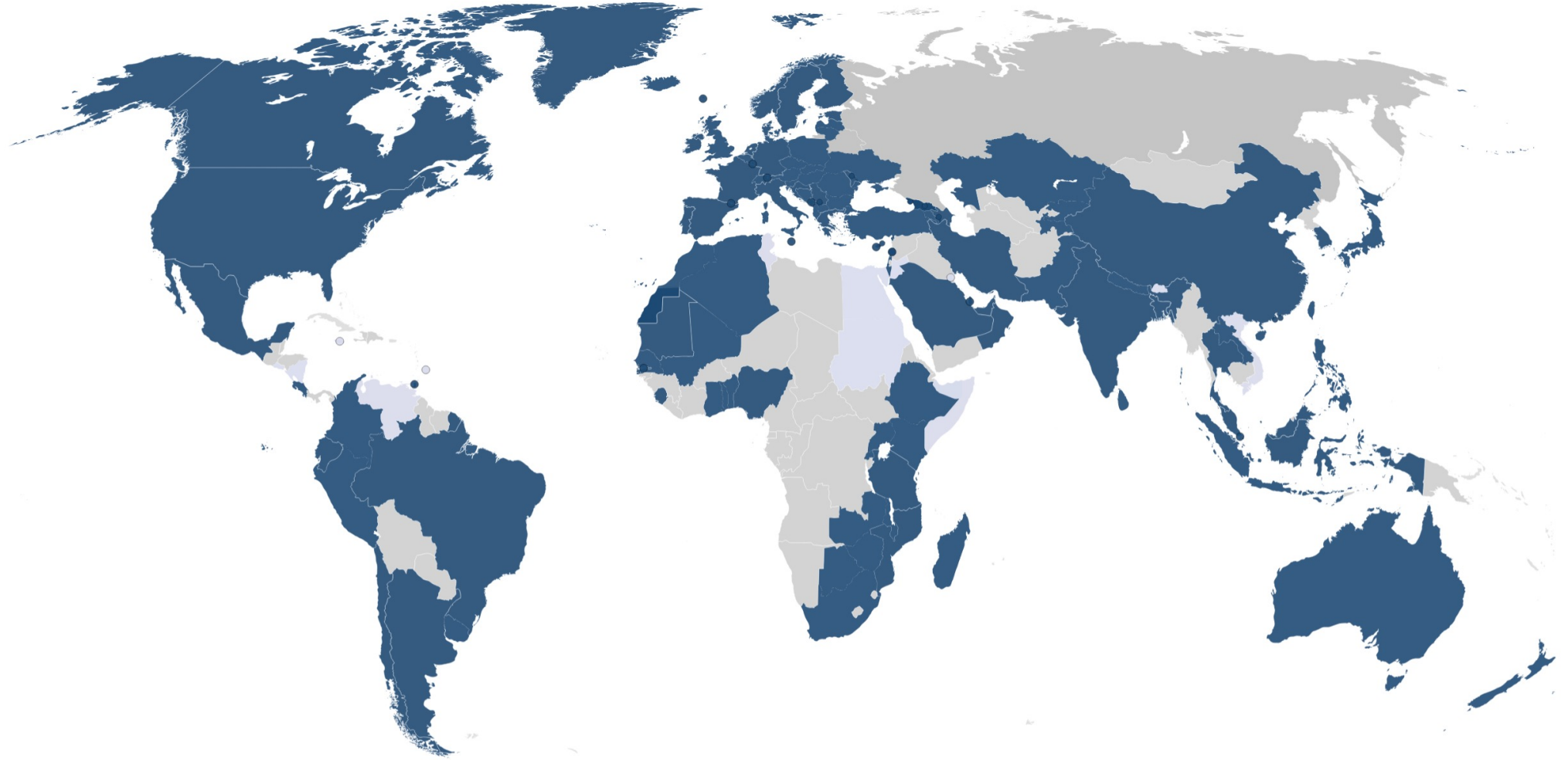
The Technology

eduroam is based on 802.1X* and a linked hierarchy of RADIUS servers containing users' data (usernames and passwords). Participating institutions must have operating RADIUS infrastructure and agree to the terms of use. eduroam can be set up in three easy steps:

1. Set up a RADIUS server connected to your institutional identity server (LDAP).
2. Connect your access points to your RADIUS server.
3. Federate your RADIUS server.



Where can I eduroam?



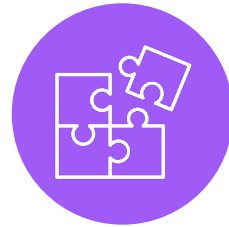
How do people learn effectively?



How people learn



Interactive



Constructive



Active



Passive

Reference

The ICAP Framework: Linking Cognitive Engagement to Active Learning Outcomes

Michelene T. H. Chi and Ruth Wylie (2014)

EDUCATIONAL PSYCHOLOGIST, 49(4), 219–243, 2014
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The ICAP Framework: Linking Cognitive Engagement to Active Learning Outcomes

Michelene T. H. Chi and Ruth Wylie

*Mary Lou Fulton Teachers College
Arizona State University*

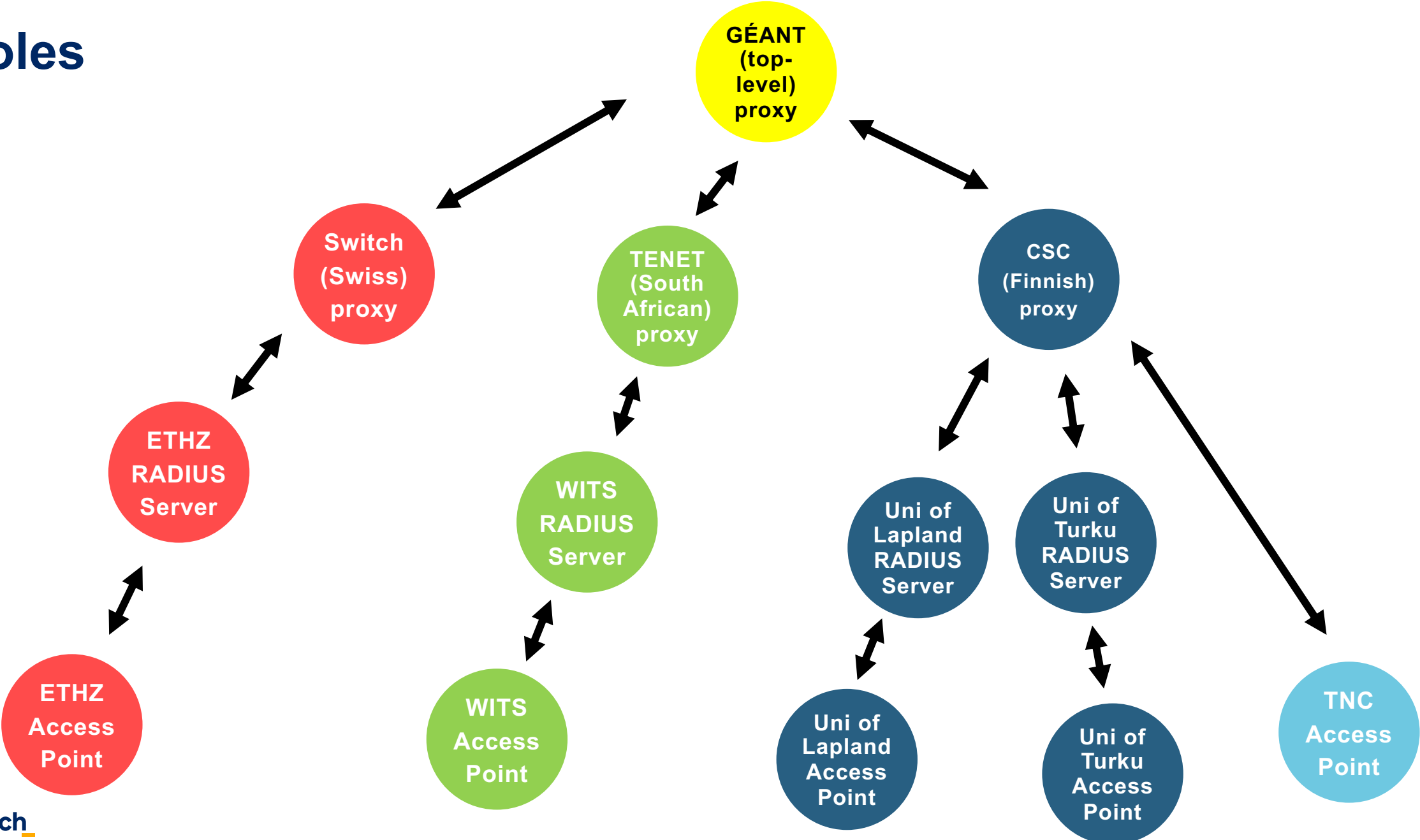
This article describes the ICAP framework that defines cognitive engagement activities on the basis of students' overt behaviors and proposes that engagement behaviors can be categorized and differentiated into one of four modes: *Interactive*, *Constructive*, *Active*, and *Passive*. The ICAP hypothesis predicts that as students become more engaged with the learning materials, from *passive* to *active* to *constructive* to *interactive*, their learning will increase. We suggest possible knowledge-change processes that support the ICAP hypothesis and address the limitations and caveats of the hypothesis. In addition, empirical validation for the hypothesis is provided by examining laboratory and classroom studies that focus on three specific engagement activities: note taking, concept mapping and self-explaining. We also consider how ICAP can be used as a tool for explaining discrepant findings, dictate the proper choice of a control condition, and evaluate students' outputs. Finally, we briefly compare ICAP to existing theories of learning.

Educators have long recognized that, although students can and negative reactions to teachers, classmates, academics,

Let's Roam Play!



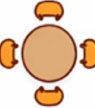



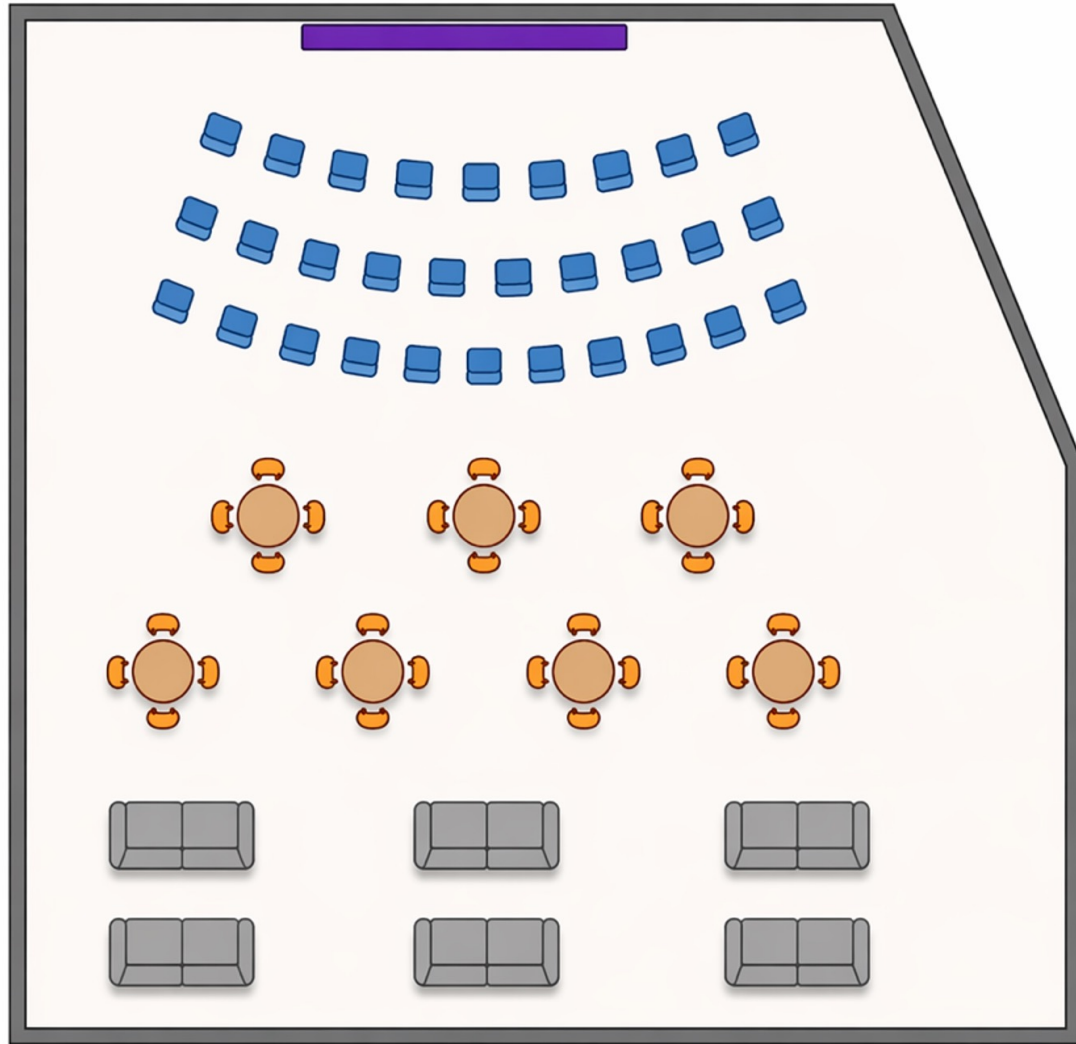
Roles



COMMUNITY HUB



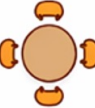

Space Layout

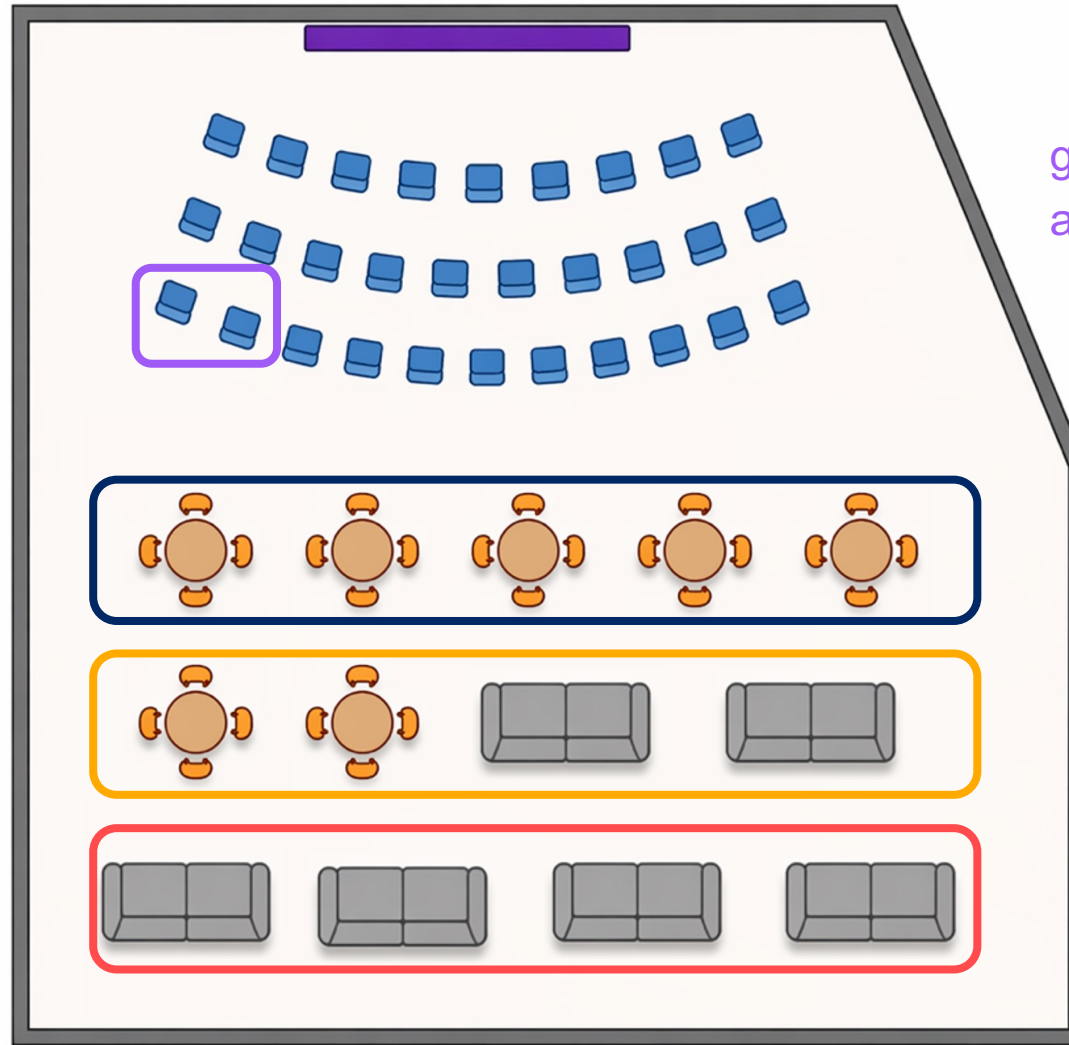
-  **SCREEN**
Main display for presentations
-  **CHAIRS**
Audience seating
-  **HIGH TABLES & CHAIRS**
For networking, demos and discussions
-  **MOVEABLE SOFAS**
Lounge area for conversations and informal sessions



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get new requests +
ask questions here

access points

RADIUS servers

proxies
(national + GÉANT)

Rules of the game

- Some people play the roles mentioned
 - Access Points: forward the requests to their RADIUS servers and write their name and the next hop
 - RADIUS Servers: accept / reject requests or forward them (write next hop) if the realm (domain) is from another
 - Proxies: forward the requests to the corresponding proxy and write the next hop
- The remaining people play requests
 - Come get your requests from our pool of requests
 - Keep your requests once done. Let's see who gets the most requests through (accepted or rejected)!

Access Point

- If status is not filled
 - Write my own name at hop 1
 - Write down the name of my RADIUS server at hop 2
- If status is filled
 - Tell the person carrying the request that they can / cannot access the internet with eduroam

fred@ethz.ch

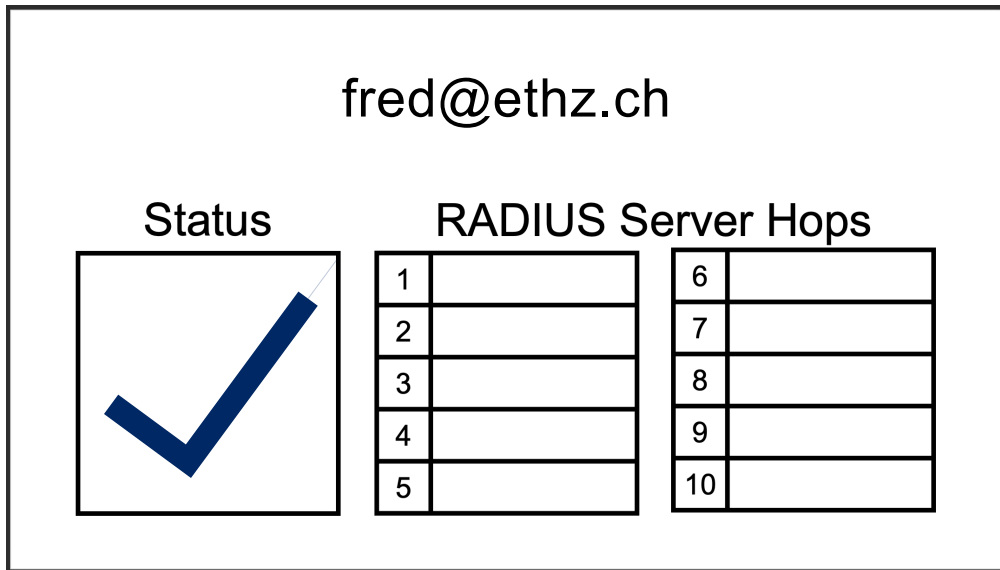
Status	RADIUS Server Hops	
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	

example@ethz.ch

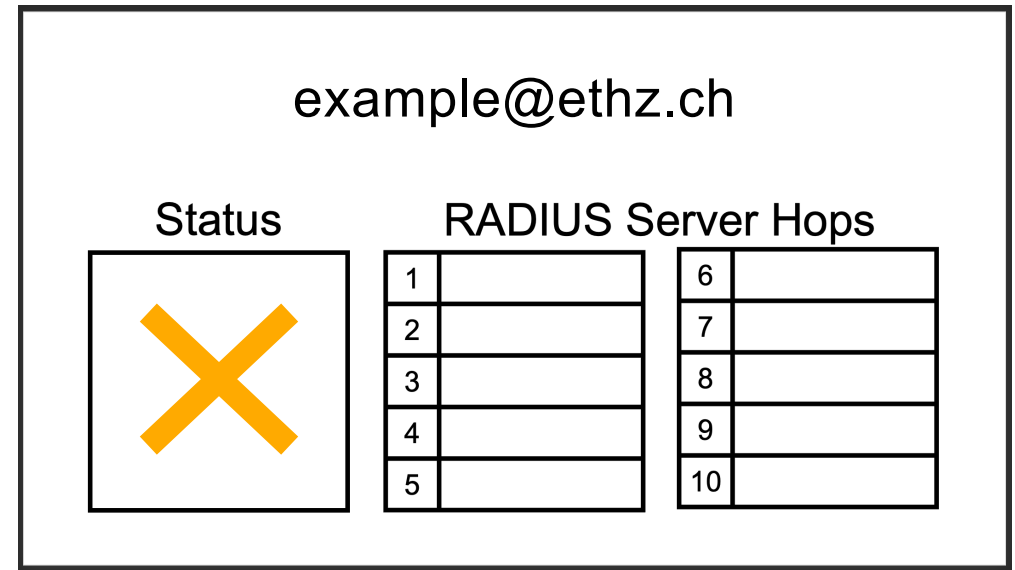
Status	RADIUS Server Hops	
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	

RADIUS Server

- If status is not filled
 - If realm corresponds to my domain, accept all valid first names and reject the rest
 - If realm does not correspond to my domain, write down my federation-level proxy in the next free hop
- If status is filled
 - Forward the person back to the access point before my previous entry



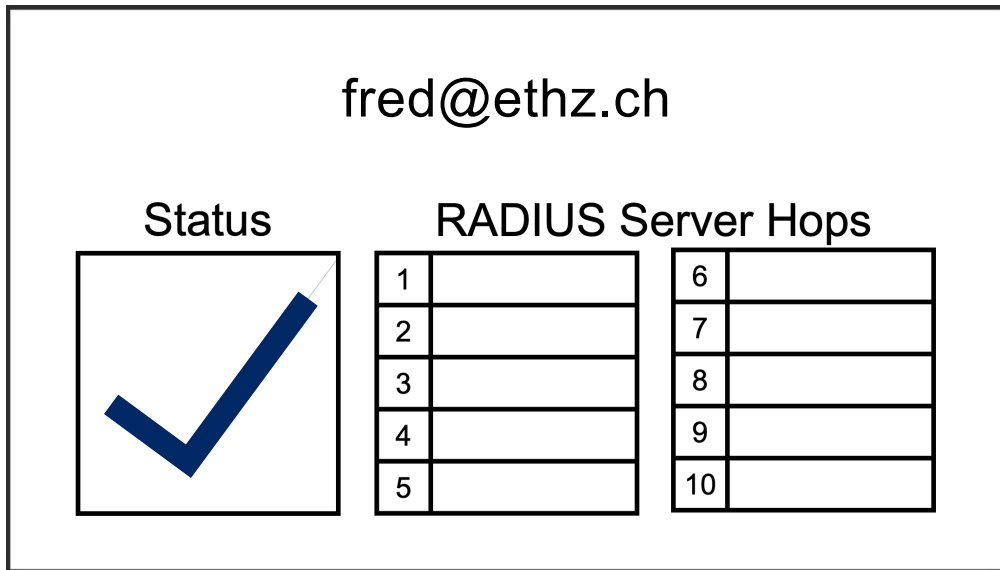
Access-Accept



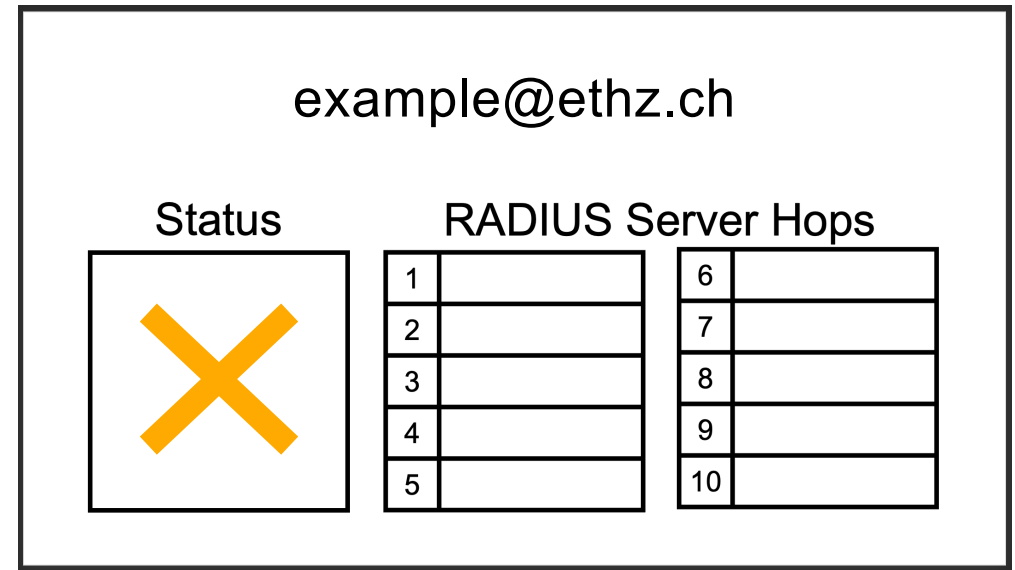
Access-Reject

Proxy (national)

- If status is not filled
 - If realm corresponds to my top-level domain, forward to the appropriate university RADIUS server (write it down)
 - If realm does not correspond to my top-level domain, write down the GÉANT top-level proxy in the next free hop
- If status is filled
 - Forward the person back to the RADIUS server before my previous entry



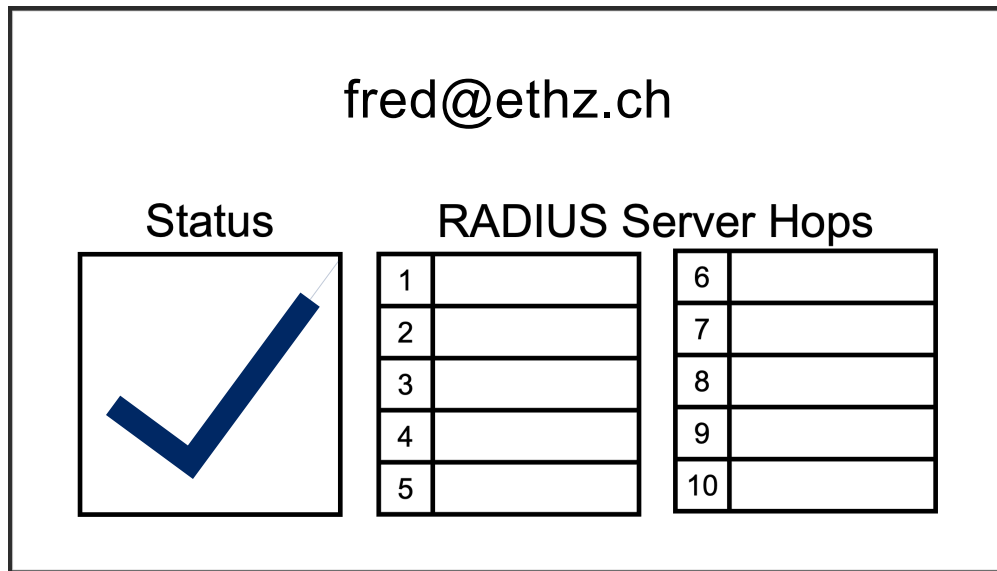
Access-Accept



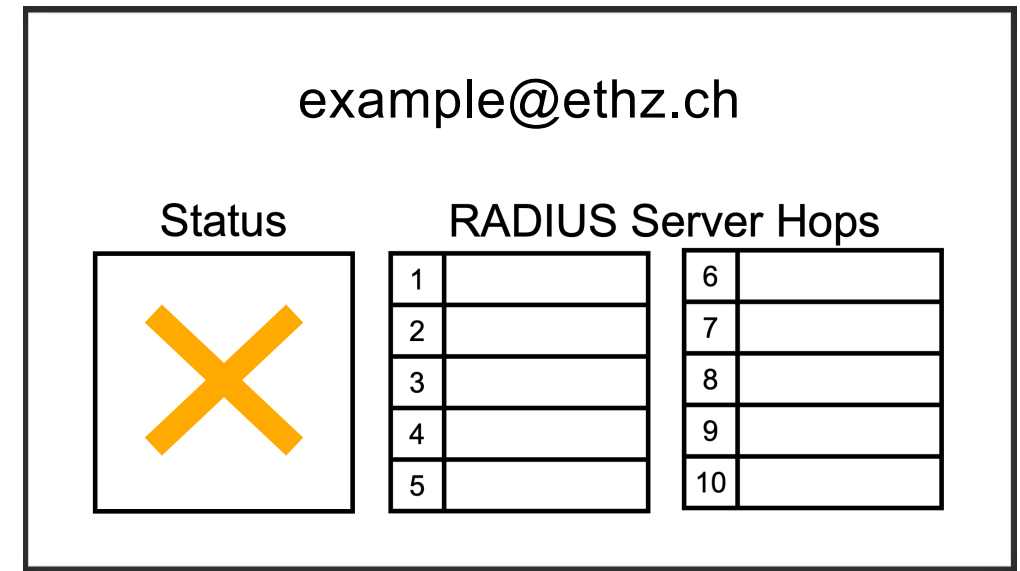
Access-Reject

Proxy (GÉANT)

- If status is not filled
 - If top-level domain exists (ch, za, fi), forward to the appropriate national proxy (write it down)
 - If top-level domain does not exist, reject by marking a cross and forward back to the previous hop
- If status is filled
 - Forward the person back to the proxy before my previous entry



Access-Accept



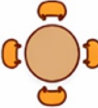



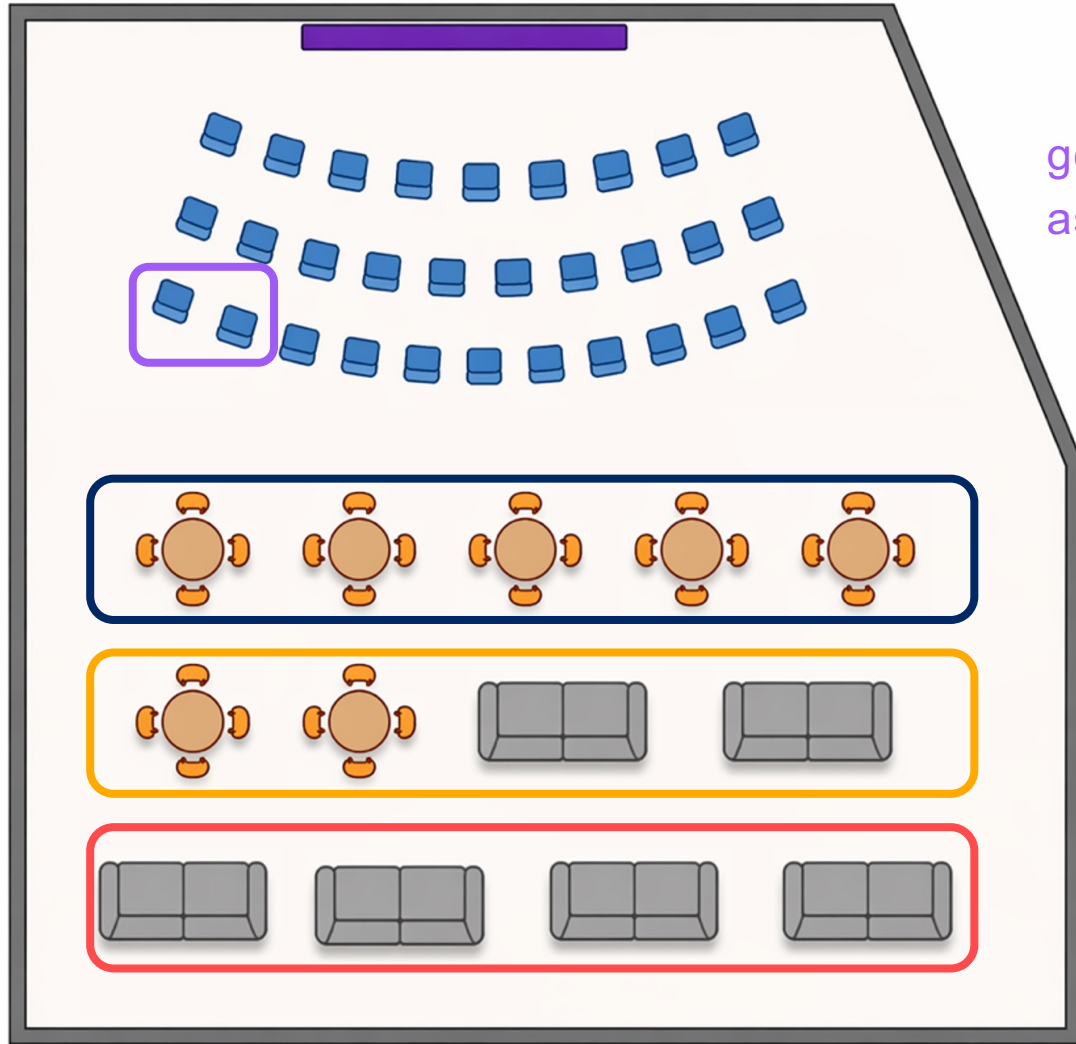
Access-Reject

Do you have any questions?

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How did you like the game?

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