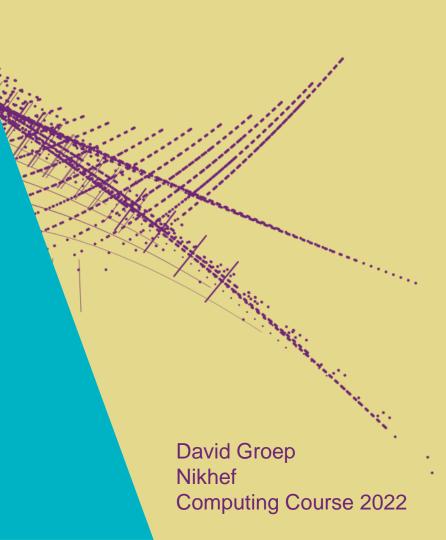


Maastricht University

how to work together

You, your laptop, and somebody else

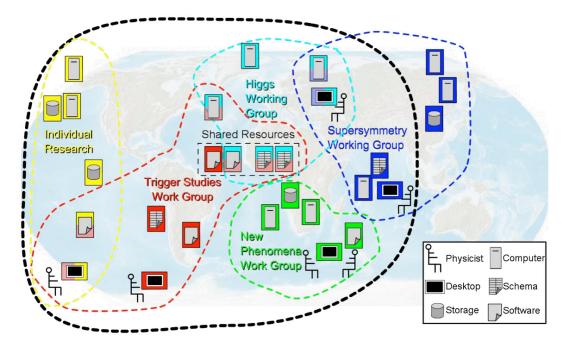


Objectives for this session

- Know how to send big files: Surf File Sender
- Know how to find and use SurfDrive and CernBox
- Understand which services are safe to use and which are not
- Know how to use Identity Services & Federated Login
- Know how to use Zoom and Mattermost



Actual collaborations



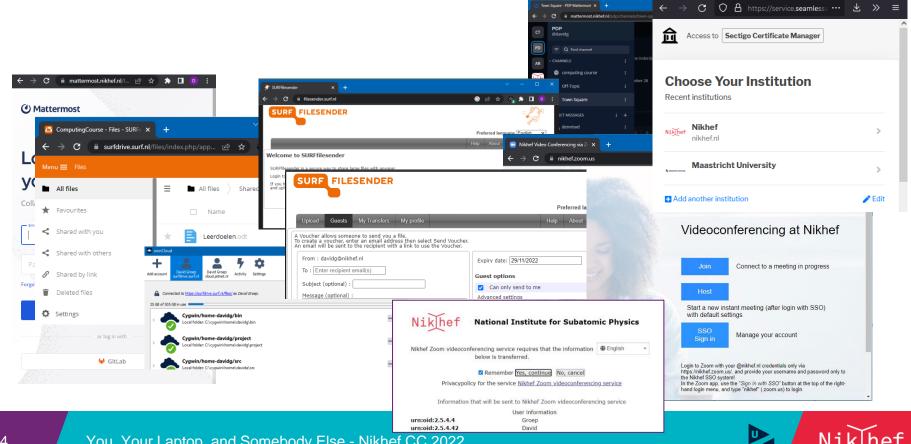


Left image source: GGF 2003, by way of Ruth Pordes: Paradyn and Condor Week 2004; Photo on the right by Valiant Made on Unsplash

You, Your Laptop, and Somebody Else - Nikhef CC 2022



Services for collaboration



You, Your Laptop, and Somebody Else - Nikhef CC 2022

The most simple service to get out of your laptop

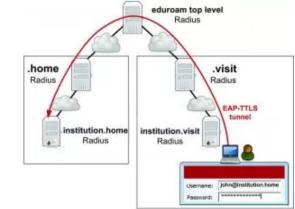
Global WiFi access for research & education

- same SSID everywhere
- same authentication method (802.1x + EAP)
- your name and password are never revealed to the visited site, only to Nikhef
- Through an encypted tunnel (TTLS) to send your credentials (PAP), or asymmetric authentication with certificates (TLS)

Many places: all Dutch R&E sites, a private home in Utrecht, Geneva airport, all bus stops in Poznan, Australia, UNLP La Plata ...

eduroam: Klaas Wieringa et al., image from https://eduroam.org/how/, GEANT ; use the eduroam CAT tool, the Nikhef helper app, or go to https://wiki.nikhef.nl/ct/Eduroam

Do you also have a UvA account? Login to eduroam using Nikhef credentials or use the "NIKHEF" network – otherwise you cannot print here (but your printing will go to the UvA







Federated Authentication and Authorization Infrastructure

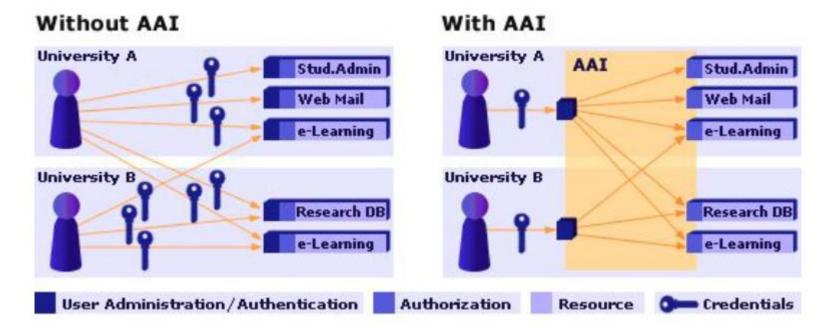
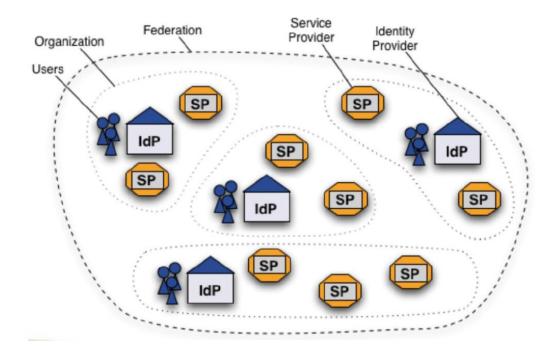


Image: AARC NA2 training module "Authentication and Authorisation 101" - https://aarc-community.org/training/aai-101/

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Many organisations



Shibboleth IdP image and SAML2 auth flow by SWITCH (CH)



Federated identity - SURFconext

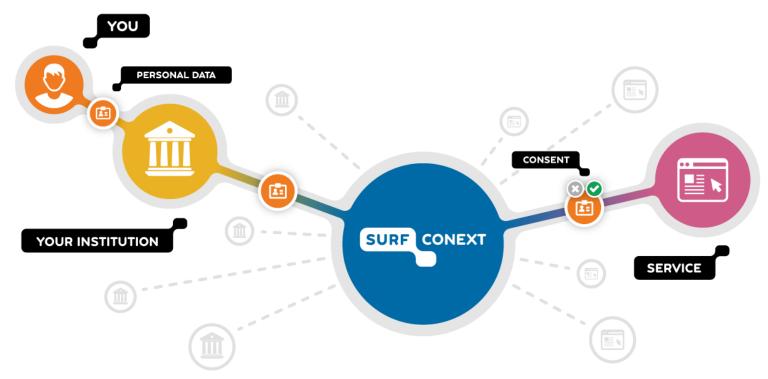


Image: SURFconext dashboard, https://profile.surfconext.nl/



Authentication – who are you

To a single system or service relatively simple

- per-system identity (username) and secrets (e.g. password or TOTP token)
- server-side: list of valid users and (salted and hashed) secrets







Authorization: what you are allowed to do

- you may need to 'collect' assertions bound to your identity to gain access to services
- like visa, bound to your entity through either Nikhef, or
- a community attribute authority (VOMS, IAM Proxy, ...)
- in the collaboration cases here the assertions you collect from the Nikhef Identity Provider ('SSO') are enough
- Service provider ultimately determines access
- although some have a very 'open' policy, like we do for eduroam network access

USA visa image source: https://2009-2017.state.gov/m/ds/rls/rpt/79785.htm





SAML federation and Nikhef SSO

Attributes	Values
E-mail	davidg@nikhef.nl
Affiliation	employeememberfaculty
Targeted ID	https://sso.nikhef.nl/sso/saml2/idp/metadata.php!https://attribute- viewer.aai.switch.ch/shibboleth!b9f858169ea28dc68b6753baa10 84d8c039e36a7
Common Name	David Groep
Display Name	David Groep
Principal Name	davidg@nikhef.nl
Home organization (international)	nikhef.nl
Home organization type (international)	urn:mace:terena.org:schac:homeOrganizationType:int:other

User Credentials sent for verification Displays Requests protected logon page resource User Unauthenticated user is redirected Database to IdP with AuthN request Sends verification SAML IdP response 6 IdP sends response Service Provider

"SAML2.0" login flow

Try at https://attribute-viewer.nikhef.nl/

SAML WebSSO flow image: SWITCH, CH

You, Your Laptop, and Somebody Else - Nikhef CC 2022



Not all services are created equal

Although you may not think about it all the time ...

- your personal data is sensitive (and can be used for identity theft)
- the data you store and share can also be sensitive
- your appraisals and C3 documents should probably not be world-readable by a random 'free', 'cloud' provider- not should your email (since you mail those documents)
- Nikhef data can be sensitive as well: we got it under 'non disclosure agreements' from suppliers, or work with industry (e.g. in Detector R&D)
- Or can be dual-use (even if you don't realise it)

So, while you collaborate freely:

- never, ever, put your Nikhef password in another service than @Nikhef (that's why we have federation)
- use Nikhef-endorsed services for sharing personal and sensitive data, which includes email
- we want you to collaborate, and rely on your cooperation

See https://wiki.nikhef.nl/nikhef/ctb/NikIDM/Services (accessible from within Nikhef and on eduVPN) for federated services and attribute release



'I want to send a big file to Jane Doe'

FileSender



Sending larger files

Email is only for very small files

- order kilobytes (and less than 1MByte)
- only to one recipient otherwise the size just multiplies
- and even then: how many times did you discover a mistake just after sending?

For sharing larger files

- SURF FileSender: trusted, and potentially encrypted, sending of large files
- can be even a terabyte or so \odot
- you can also issue vouchers so others can upload files to you
- SURFdrive (or CERNbox) sharing links
- you can still update the documents after sending the mail
- integrated in your sync-n-share environment
- total file size up to 500 GByte

14





https://filesender.surf.nl/

- Unlimited file size
- Federated login
- Download notification and statistics, overview of pending transfers
- Can send mail directly or give you a link
- 3 week download period, 2 months upload window
- Safe and private storage at SURF (Amsterdam)
- Transfers can be encrypted (send key out of band)
- Endorsed, trusted service (obviously ad-free)

	Preferred language English
Upload Guests My Transfers My profile	
Voucher allows someone to send you a file. o create a voucher, enter an email address then select Send Voucher. n email will be sent to the recipient with a link to use the Voucher.	
From : davidg@nikhef.nl	Expiry date: 29/11/2022
To : Enter recipient email(s)	Guest options
Subject (optional) :	Can only send to me
Message (optional) :	Advanced settings
	 Notify me when upload starts
	Notify me when guests access the upload page
1	Notify creation to guest
	Notify me of the guest creation
	Created transfers options
	Notify me upon downloads
	Include me as a recipient
	 Get a link instead of sending to recipients
	Advanced settings



Collaborative Sync & Share Services, a.k.a. 'CS3'

SURFdrive and CERNbox

Collaborative Sync-and-Share Service ('CS3') for files

Sharing files and collaborative documents, results, papers, or your photos

- SURFdrive (and CERNbox that uses the same technology)
- 500 GByte
- you can create project/group folders (but use wisely)
- share with people in NL universities and institutes, with invited guests, or fully public links for everyone else in the world
- collaborative editing using Collabra OpenOffice
- web-based and sync-client access
- not encrypted at rest (but the people at SURF are not looking at your data)

Then

- Nikhef AUP is pretty open on how to use that 500 GByte on SURFdrive
- CERNbox subject to OC5 and OC11

SURFdrive ownCloud × + Files - SUREdrive David Groep David Groep → C a surfdrive.surf.nl/files/index.php/apps/files/?dir=/&fileid=77492117 Add account Activity **Quit ownCloud** Settings surfdrive.surf.i cloud.pitnet.n SURF DRIVE Menu 🚍 🛛 Files Connected to <u>https://surfdrive.surf.nl/files/</u> as David Groep. Account-All files All files + 35 GB of 505 GB in use ★ Favourites Cygwin/home-davidg/bin ••• Shared with you UXdavidg-home-davidg local folder: C:\cygwin\home\davidg\bin Shared with others 8 Travel 8: vawin/home-davida/project ••• Shared by link dg\project Shared SURFdrive: store and share your files securely in the cloud Cygwin ••• dg\src Store, synchronise and share your documents easily with SURFdrive. SURFdrive is a Instant personal cloudservice for the Dutch education and research. Your documents are kept safe and sound in our communitycloud. ••• dg\tmp Also provides Log in SURFdrive 30-day roll-back ••• of changed or deleted files SURFdrive For administrators Download Tutorials FAO For users

Web interface at https://surfdrive.surf.nl/ - client download at https://www.surf.nl/en/downloads-for-surfdrive or use the OwnCloud client (if you already run OwnCloud)

Downloads for SURFdrive

 limited protection against ransomware (restore of 'everything' is quite hard)

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Downloads



Folder sync connection and VFS virtual file systems

	Ider Sync Connec	tion			×
/var/emp	ntoider on your con	npater to sync			Choose
Warning:	You don't have per	mission to write to	the selected fold	er! Please pick ar	nother one!
			Cancel	< Back	Next >

try it live!

Add Folder Sync Connection							
Select a remote	destination folder						
	EY-audit-Nikhef Federated HTC cloud GPT Grid_Compute_Accounting_National_Infrastructure	Create Folder Refresh					
> > >	Hepix herfst 2019 infraeosc07a1 IOTA PIPs ISGC18						
< /Shared/Federa Warning: You <i>HTC doud</i> .	ted HTC cloud u are already syncing /Shared/, which is a parent folder of /Shared/	Federated					
	Cancel < <u>B</u> ack	<u>N</u> ext >					



You, Your Laptop, and Somebody Else - Nikhef CC 2022

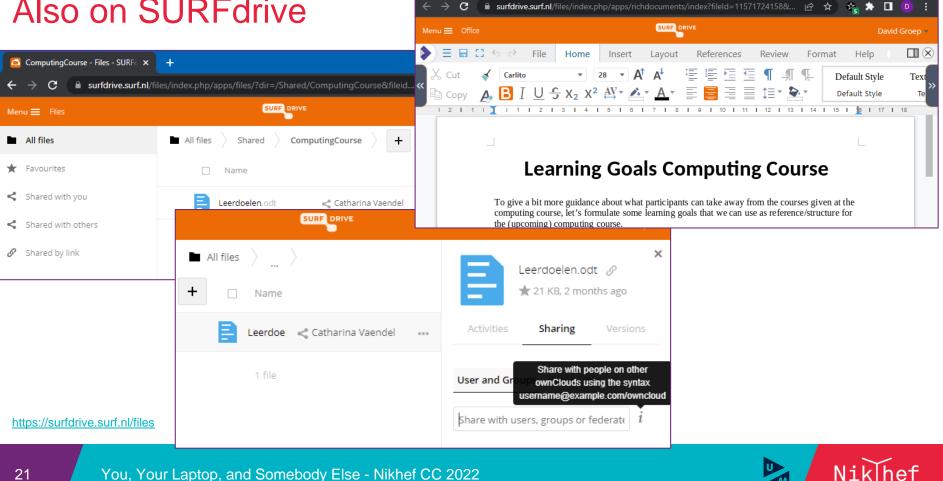
But this is also a great way of working on documents

	C O A = https://cernbox.cern.ch/external/eos/user/g/groep/Docum∈ 130% ☆ Q Searc	h 🕑 assp kma 🙆 asdm kma 🕝 File 🌀 Home 🛔 👼 🚱 🤞 🎄 🚿 😑
~ 7	C C C C C C C C C C C C C C C C C C C	
	CERNBOX CERNBOX	Light mode 🔆 🔉 DG
E Co	odiMD 🖉 🔲 👁 😉 😰 🗞	🖵 Slide Mode 🛛 Menu 👻 🔛 ONLINE
B <i>I</i> 1 × 2 3	୫ ዞ	O CHANGED 2 MINUTES AGO ✓ FREELY This is a collabortive editing
4	The key elements of collaborative editing, are	example
5 6 7	 that you change a document, and that you do that together with somebody else. 	The key elements of collaborative editing, are 1. that you change a document, and
8	If both of these conditions are met, you engage in collaborative editing.	2. that you do that together with somebody else.
9	Since it is rather obvious that only one person is on-line now, we hereby clarify that such editing does not have to be time-synchronous.	If both of these conditions are met, you engage in collaborative editing. Since it is rather obvious that only one person is on-line now, we hereby clarify that such editing does not have to be time- synchronous.

Example above from CERNbox, editing a markdown file. It also works on Word documents, spreadsheets, and presentations.



Also on SURFdrive



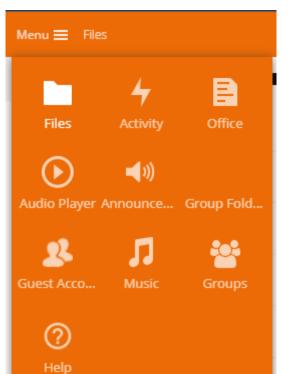
🔼 ComputingCourse - Files - SURFo 🗙

С

🦲 Leerdoelen.odt - Office - SURFdri 🗙

☆

SURFdrive allows to share with groups, and more



- you can share with all SURFdrive users
- groups also can contain 'anyone in NL'



- group folders are like '/project' for collaboration
- are 500 GByte each, max 5 per person,
- are charged per group folder, so don't overdo it ☺
- it is possible to create guest accounts for external collaborators (ask the helpdesk for now)



CERNbox – same technology, with some extras @CERN

CERNBOX For CERN users only – sorry for

- CERNbox is linked to SWAN and EOS
- usually 1 TByte
- share with CERN users only (or fully public links)

	CENTRON				
	<	CERNBox > eos > user > g > groep > SWAN_projects > pybindings_cr	•		
	All files	X Download & Cut Copy			
\star	Favorites	□ Name ↓	Shares	Size	Modified
*	Shares	minuit2src		1 MB	4 years ago
	Projects	pybind11		1.8 MB	4 years ago
Ô	Deleted files	🕑 🖹 BindingMinuit2.ipynb 🖉		23 kB	4 years ago
		cython.png		5 kB	4 years ago
		pybind11.png		47 kB	4 years ago
		pybindingstimeline.png		1.1 MB	4 years ago
		PyHEPTalk.jpynb		26 kB 2	3 seconds ago
		pysimple.c		732 B	4 years ago

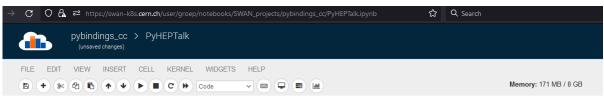
-bash-4.2\$ hostname lxplus753.cern.ch -bash-4.2\$ ls -1 /eos/user/g/groep/SWAN projects/pybindings cc/PyHEPTalk.ipynb -rw-r--r-. 1 groep c3 25984 Nov 6 21:15 /eos/user/g/groep/SWAN projects/pybindings cc/PyHEPTalk.ipynb -bash-4.2\$

https://cernbox.cern.ch/

23



SWAN K8S



Tools to Bind to Python

Henry Schreiner

PyHEP 2018

This talk is interactive, and can be run in SWAN. If you want to run it manually, just download the repository: github.com/henryiii/pybindings_cc.

Open in 🔝 SWAN

Either use the menu option CELL -> Run All or run all code cells in order (don't skip one!)

Focus

- · What Python bindings do
- · How Python bindings work
- What tools are available

https://swan.cern.ch





From a distance ...

A multitude of options

Our community has a long tradition of remote collaboration

- Zooms (many of these) ... after having VRVS, Evo, and Vidyo
- Indico ... based on CDS Agenda
- lately: many chat clients as well

Also here, not all tools are appropriate for what we need

- especially for video, which is very personal, use endorsed systems
- we and CERN reviewed Zoom as 'ok'. If your university has settled on Teams, OK as well
- for chat discussing personal or sensitive matters, use a trusted system
- realise that 'who talks to whom' is *also* sensitive, so e.g. Signal is *much* better than WhatsApp



Video conferencing

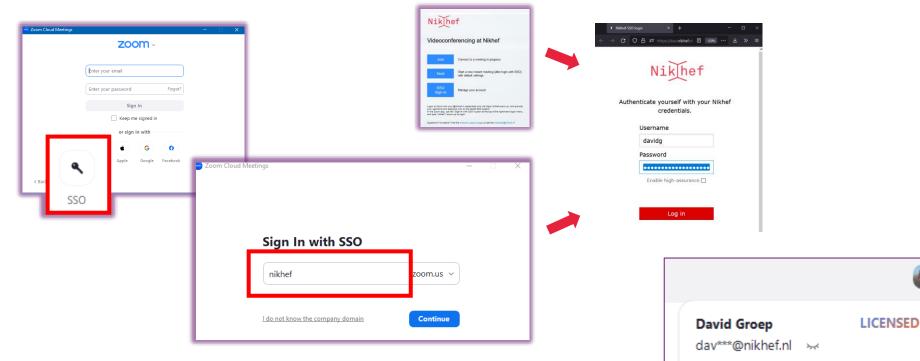
Every employee (incl. staff at all partners and all PhDs) at Nikhef can get a licensed zoom membership (although the number of licenses *is* limited)

- up to 500 attendees per meeting
- up to 500 in a webinar
- recording included (will be visible to participants)
- unlimited duration
- everyone can create meetings and webinars
- use Nikhef SSO login to get the right privileges

https://nikhef.zoom.us/



Zoom login – use SSO to get the Nikhef benefits!



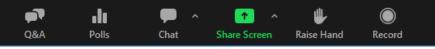
https://nikhef.zoom.us/ for web management interface.



Creating zoom meetings

On Zoom you create 'meetings', and thus is unlike VRVS or Vidyo 'rooms'

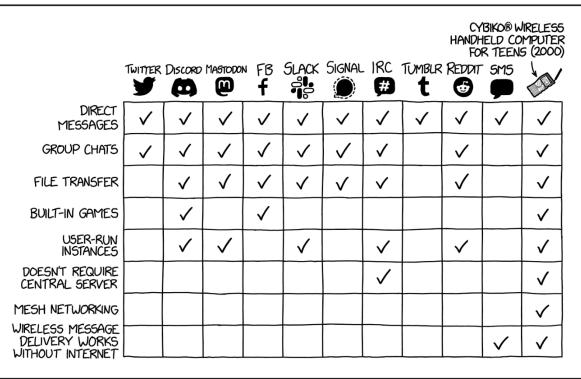
- meetings can be one-off, recurring, or continuous
- you can create meetings as needed, also a new one every time
- you must protect your meetings with either a passcode, or a waiting room (after all the incidents with 'Zoom Bombing' in early 2020)
- invite link can include the pass-token as well
- for webinars (few talking, many listening), you can create series of 20 and webinars do **not** need a password to listen in (and you 'promote' speakers &c)



To connect use a Zoom client, web browser, PSTN phone, or H.323 room system

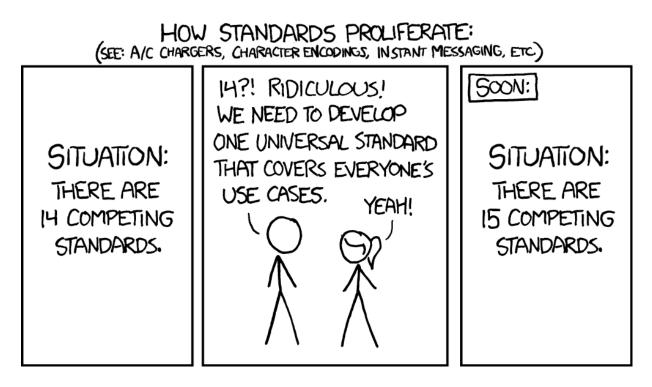


Now what about ... 'just chat'?



https://xkcd.com/2699/ (thanks for finding this, Dennis!)

But of course we know ...



https://xkcd.com/927/

The 'Nikhef default' chat system: mattermost

Nikhef hosts its own mattermost server for everyone

- linked also to Gitlab@Nikhef to have project chats
- login (via Gitlab) using Nikhef SSO
- you can invite anyone from the academic community on Mattermost
- some new domains will have to be whitelisted they can already authenticate
- ask the helpdesk to enable new domains for Gitlab

https://mattermost.nikhef.nl/

CERN also has Mattermost linked to SSO (https://mattermost.web.cern.ch/)

- On the desktop client, you can have multiple servers
- For android, use the Mattermost beta client

32

<u>https://play.google.com/store/apps/details?id=com.mattermost.rnbeta</u>



Mattermost login dance (saves us € 36000 per year)

🎱 Mattermost × + 😒 – 🗆 ×	\leftrightarrow \rightarrow C O A https://gitlab.nikhef \cdots \checkmark \gg \equiv	C O A https://wyl.nibief.ef.tos./module.php/discopower/discup/priently/Dishtops: 100% Q Q Search & meetine and the Office Office of Home • G d A
← → C O A https://mattermost.nikhef.nl/log ···· ± » ≡	Î l	● English ・
() Mattermost		Preferred Global Infrastructures IGTF Pan-European AL AM AT AU AX BD
	GitLab Community Edition	BE BG BR BY CA CH CL CN CO CY CZ DE DK DZ EC
	Username or email	EE ES FI FO FR GE GI GL GR HK HR HU IE IL IN
Log in to		IR IS IT JP KG KR LB LI LK LT LU LV MA MD MK
		MO MT MX MY NC NG NL NO NZ OM PF PK PL PT RO RU SA SE SG SI SK TH TR UA UG UK US ZA ZM
your account	Password	Experimental Outsourced KE RS AZ
Collaborate with your team in real-time	Remember me Forgot your password? Sign in	Incremental search User Certificate from the Interoperable Global Trust Federation IGTF User Certificate from the Interoperable Global Trust Federation IGTF User Certificate from the Interoperable Solution Nikhef SSO National Institute for Sub-atomic Physics Nikhef SSO Nati
Password Forgot your password? Log in	By signing in you accept the Terms of Use and acknowledge the Privacy Policy and Cookie Policy. Don't have an account yet? Register now	an and an abd degreement Media Toking Media/Media Metrochagetig Doleccels Ing? toxic Dole ''GAN' Research degreement Media Toking Media/Media Metrochagetig Doleccels Ing? degreement Media Media Media/
or log in with	Sign in with Federated login	Image: State Classic Classic Classics Image: State Clas

https://mattermost.nikhef.nl/

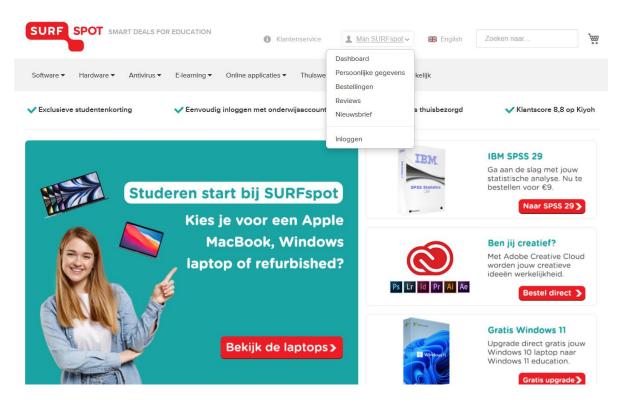




Collaborative services just to make folk happy



Cheap or free software and hardware ... SURFspot



https://surfspot.nl/



Being kind to your colleagues' fingers

For short messages on mastodon, or for persistent URLs to (changing) destinations

https://edu.nl/

2022 06 10

Note: bitly and others rely on click tracking behaviour and collect lots of data from visitors, abusing your friends. And only works with JavaScript. Edu.nl is ad-free as well

- tracking-free short links
- can change after creating the shortcut
- get high-level statistics
- save fingers and characters on (social) media

edu.nl

Dé URL-shortener voor onderwijs en onderzoek met respect voor privacy.

Shorten a link:

1. A second state of the second set of the second set of the second s

Enter the original link (URL) here

Shorten it!

Previously created links:

		39	edu.ni/kc63d	2022-06-10	rttps://surrarive.surr.ni/files/index.php/s/vcc
	8 💼	16	edu.nl/taecv	2022-06-07	✓ https://surfdrive.surf.nl/files/index.php/s/t62
2	i 💼	170	edu.nl/envyq	2022-03-16	☑ https://docs.egi.eu/providers/operations-ma



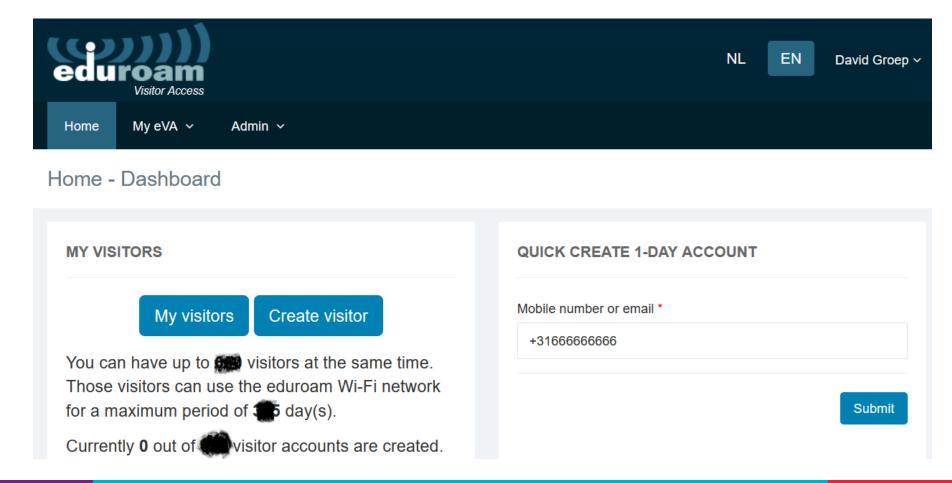
eduroam visitor access – gets you instant popularity

"eduroam Visitor Access enables higher education and research institute visitors to access the secure and trusted eduroam Wi-Fi network. The service can provide temporary access to the eduroam network on a simple and suitable manner."

https://eva.eduroam.nl/en/

- you get one, or a range, of temporary accounts (lile "awfcu@edu.nl")
- identified by email (kind-of a recursive loop), or SMS on their mobile
- by default: 10 visitors per Nikhef user at a time, max. 9 days validity
- need more? ask the helpdesk to enable it for your
- our secretariat can create large (600 people) events
- also useful for temporary 'loan' laptops or other non-personal devices when off-site
- federated service through SURFconext









the recipient gets a mail or text message

Toegangsgegevens U heeft de volgende toegangsgegevens nodig bij het aanmelden op het wifi netwerk: Gebruikersnaam: <u>awfcu@edu.nl</u> Wachtwoord: trhbi Wifi netwerk (SSID): eduroam

Uw heeft netwerktoegang vanaf 16-11-2022 00:00 tot en met 16-11-2022 23:59 (CET).

De tijdelijke toegang tot het wifi netwerk verloopt via uw gastheer/gastvrouw David Groep (Nationaal instituut voor subatomaire fysica). Heeft u vragen over deze toegang of het netwerk neemt u dan contact op met hem/haar.



CERN SSO proxy

For CERN services at assurance level '4' (e.g. Indico), you can use Nikhef SSO login

Sign in with a CERN account	Sign in with your e	email or organisation	Select your login provider You are authenticating to CERN (European Organization for Nuclear Research) Privacy Statement			
sername	Home organis	sation - eduGAIN				
assword	External email - Guest access		IGTF Certificate Proxy IGTF Certificate Proxy			
Forget Password? By clicking on the buttons below, you consent to CERN's		below, you consent to CERN's				
Sign In	transfer of your login request to the social provider and to receive your account name, name and e-mail for authenticating you. Click here for more details.		Nikhef			
Or use another login method	G Google	in LinkedIn	Niklhef Nikhef - Dutch National Institute for Subatomic Physics			
🔍 Two-factor authentication	G GitHub	f Facebook				
Kerberos			Start typing to search for your login provider or home institute			

however, works only for the 'new' CERN SSO services (and not for EDH or lxplus)



More federated collaborative services

3.1 Internal Services

- 3.1.1 Unix Login
- 3.1.2 Electronic Mail
- 3.1.3 Directory (phonebook)
- 3.1.4 Subversion and code management
- 3.1.5 Radius authentication service
- 3.1.6 Windows Domain AD FS Logon
- 3.1.7 Account Management
- 3.1.8 Nikhef Wiki
- 3.1.9 Gallery
- 3.1.10 Gitlab (public gitlab.nikhef.nl)
- 3.1.11 Travel and expenses
- 3.1.12 Timetell working hours registration
- 3.1.13 Website www.nikhef.nl
- 3.1.14 dCache storage access
- 3.1.15 NX TeamCenter
- 3.1.16 Matrix/Element (under construction)
- 3.1.17 Other Purposes

41

https://wiki.nikhef.nl/nikhef/ctb/NikIDM/Services from within Nikhef (eduVPN or on-site) 3.2 Necessary External Services
3.2.1 GEANT Trusted Certificate Service (TCS) by way of Sectigo
3.2.2 ORCID
3.2.3 PeopleXS
3.2.4 SURFspot
3.2.5 Elsevier Science Direct
3.2.6 SURFdrive
3.2.7 SURF FileSender
3.2.8 eduroam (as a user outside Nikhef)
3.2.9 eduroam Visitor Access (eVA)
3.2.10 eduVPN
3.2.11 Videoconferencing via Zoom
3.3 Optional External Services

Since logging in securely without passwords, we have a open authentication policy. Federated login is always safer than creating yet-another-password. But: please review what attributes get release on the SURFconext dashboard.

https://profile.surfconext.nl/ and on https://sso.nikhef.nl/

Please note that the necessity of attribute release may or may not have been reviewed by Nikhef or SURFconext. Please refer to the term and conditions (if displayed), the information presented about the entity, and any trust marks associated with the entity (such as "Research and Scholarship" as an entity category).

To review the attributes released to service providers, an overview of released attributes and their values for each user is managed by SURFconext at https://profile.surfconext.nl/ (user login required - you will be required to release the attribute above to access the Profile service)



SURFconext Profile

SURFCONEXT Profile			A Home	Services you accessed	
Your Account Change your password			Your personal data	This overview contains all services you have logged in to th It shows which subset of your personal data (attributes) ha service. Additionally it shows whether you or your institution	VOUR INSTITUTION SURF CONEXT
Change profile settings Connect your certificate	Federat	ed Services	Services you accessed	service.	
Review your account Federated Attributes viewer	Services via S SURFconext Your InAcade	permissions manage	My Connections	AAI Attributes Viewer - SWITCH	~
				CERN Online Services - CERN	~
Local services Complete time sheets Request WiFi guest accounts	UBW Expens	es, Finance and Trav	rel	CERN Service Provider Proxy - CERN	GARR Federated Cloud - GARR Federated Cloud provided by Consortium GARR
Register networked device Resolve email addresses	SURF Mail Fi SURFfilesen SURFdrive			CESNET e-Infrastructure - CESNET	Gravitational Wave Astronomy Community Registry - University of Wisconsin-Milwaukee
Commute reimbursement		duVPN Safe Browsing		CESNETs Filesender - CESNET	Gravitational Wave Astronomy Community Wiki - University of Wisconsin
Curfew attestations		itor Access (eVA) ail Certificates ('Nikbe	ef)	CILogon - National Center for Superco	Milwaukee
	Grid and email Certificates ('Nikhef')			Continuer Social	GÉANT SP Proxy - GÉANT
	ORCID SURFteams	Policy Policy documents		Cert Manager - Sectigo	Helmholtz AAI - Forschungszentrum Jülich GmbH
Attribute release s			Digital Curation Centre - DMP Online	IN2P3 - Gitlab - CNRS	
https://sso.nikhef.nl/ https://profile.surfconext.nl/my-services			obal log out	Donders Research Data Repository -	IOPscience - IOPscience

SURF CONEXT Profile



You

PERSONAL DATA

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