



The Abdus Salam  
**International Centre  
for Theoretical Physics**



# Passwords @ ICTP

Security Requirements and Tips

# Outline

- Introduction
- Choosing a password
- How to change your password
- Managing passwords
- Password recovery



# Introduction

# Motivation

- UNESCO ICT requirements
- Secure passwords protect you AND the institute
- Stolen or guessed passwords can be used for
  - Theft of sensitive information
  - Spamming
  - Identity theft

# Password requirements

- Minimum length 15 characters
- Use at least 3 of the 4 categories:
  - Lower case letters a-z
  - Upper case letters A-Z
  - Digits 0-9
  - Non-alphanumeric characters (e.g. /-\_,%#@)
- Must not contain first or last name, username
- Must be changed periodically

*Note: password must differ sufficiently from previous ones*

# Passwords in use

## ICTP password

ICTP PC: Linux &  
Windows



Web services:

- Webmail
- Portals (ICTS, Personnel,...)
- Nextcloud storage

email



WiFi



VPN



## UNESCO SSO

Outlook  
Tulip, MyTalent,  
etc.

## UNESCO FABS

## ICTP laptop



## Apple desktop





Choosing a password

# Choosing a password (1)

**Don't** build a password with blocks that could be retrieved from publicly available information, such as:

- First or last name, office number, user name
- Data published on social media (pet name, hobby)
- Birth place, details from CV if published



# Choosing a password (2)

**Don't** use simple key combinations:

- `qwertyQWERTY123`
- Repeated letters or numbers like `ggggggGGGGG11111`
- Single words, even if long enough: `Unimaginatively2`

# Choosing a password (3)

You could use combinations of

- First letters of a song or poem  
E.g. refrain of "When I'm 64" -> **Wysnmwysfmwlm64**
- Some equation similar to (but less famous than):  
**energy=mass\*c^2**
- Some interspersed digits or symbols, non-obvious capitalization, e.g. instead of **Grignano023121987** use **gri23Gna12No1987**



Changing the password

# Before changing your password

If you have an ICTP Macbook for teleworking, ensure that the app **VPN\_ICTP Setup** is present.

You will need it to update the VPN configuration with your new password.

If the app is not there, connect your VPN (if outside the campus) and check for updates in the **Managed Software Centre**.

Verify it's working correctly for you.

[VIDEO DEMO](#)

# Changing your password (1)

**ICTP network password** (email, WiFi, VPN, PC login):

[https://icts.ictp.it/password\\_form](https://icts.ictp.it/password_form)

You will be asked to log in first!

As a Linux user you can instead use the command **passwd** in a Terminal window.

[VIDEO DEMO](#)

# Changing your password (2)

## **UNESCO password:**

Log in to <https://connect.unesco.org/> and follow the link for changing the password

If you don't remember the current password:

<https://pass.unesco.org/>

# Changing your password (3)

**Local Mac password:**

[VIDEO DEMO](#)

System Preferences... ->

Users & Groups ->

Change Password...



# After changing your password

Verify that the password has been changed successfully.

Update the password in all the places where it's stored:

- Thunderbird (will prompt you when it can't log in)
- WiFi
- Firefox
- VPN (on Macs use the app **VPN\_ICTP Setup**)





# Managing passwords

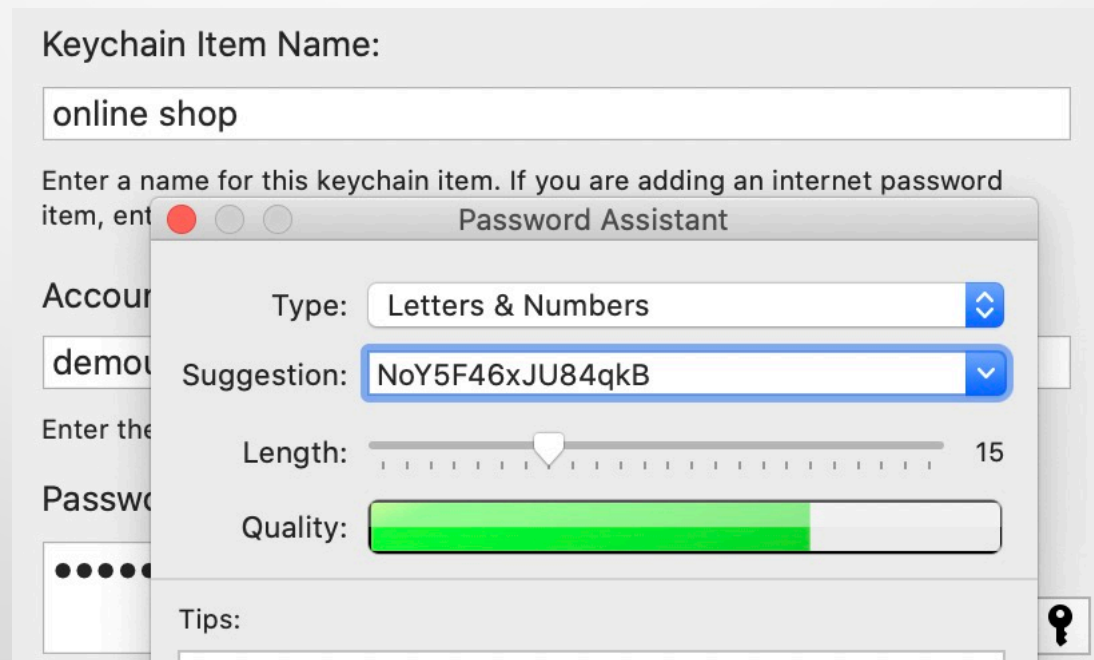
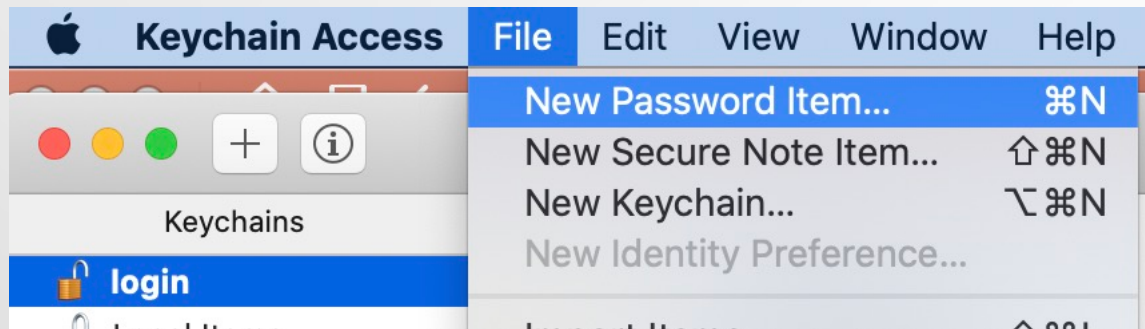
# Storing passwords

- Don't write them on paper
- Don't store them in text files
- Don't use the same password everywhere
- Remember that you should never share your password with anyone not even to IT staff.

# Password Managers

- There are many tools for safely storing or encrypting text files
- On the Mac, you can use the app **Keychain Access** to create a "secure note"
- **Credential Manager** in Windows
- **KeePass** (multi-platform)

# Keychain Access - password generator



# Keychain Access – secure notes



Keychain Item Name:

Enter a name for this note.

Note:

```
-service 1: demouser Fkskjfg7sk,09fGKKJ  
-service 2: me@gmail.com NiceLongPa527fkz
```



# Password recovery

# Password Recovery

- ICTP: open ticket via [https://icts.ictp.it/help/submit\\_form](https://icts.ictp.it/help/submit_form)
  - remember to provide phone number or alternate email
- UNESCO
  - your smartphone (REC DB) for SMS a confirmation code for resetting the password via <https://pass.unesco.org>
  - password reset: ICTP HR/Personnel office



Tips



# Tips

- If your laptop (or smartphone) gets lost or stolen, **change** the passwords that are stored there
- Remember to lock your screen when leaving the device
- As safety feature ICTP typically blocks all access from an offending IP after too many login failures

# References (1)

- Mandatory UNESCO ICT Security Training for staff

<https://unesco.csod.com/ui/lms-learning-details/app/course/17971420-eb49-4d85-b804-d844b6541db1>

- UNESCO 10 Tips for Teleworking Securely

<https://unesco.sharepoint.com/sites/ICT-Security/SitePages/top-10-tips-on-teleworking.aspx>

- Cyber Security! Everyone's Business!

<https://unesco.sharepoint.com/sites/intranet/en-US/news/Pages/La-cyber-sécurité-étant-l-affaire-de-tous.aspx>

# References (2)

- UNESCO ICT Security Booklet

<https://teams.unesco.org/ORG/kmi/Shared Documents/Presentations/ICT Security Booklet - English.pdf>

- Password manager

[https://en.wikipedia.org/wiki/Password\\_manager](https://en.wikipedia.org/wiki/Password_manager)

- PASSWORD: CONSIGLI PER L'USO (in Italian)

<https://www.cert.garr.it/it/faq/cert-faqs?tag=password>