



# **Windows Desktop Service**

## **From computer to user centric IT**

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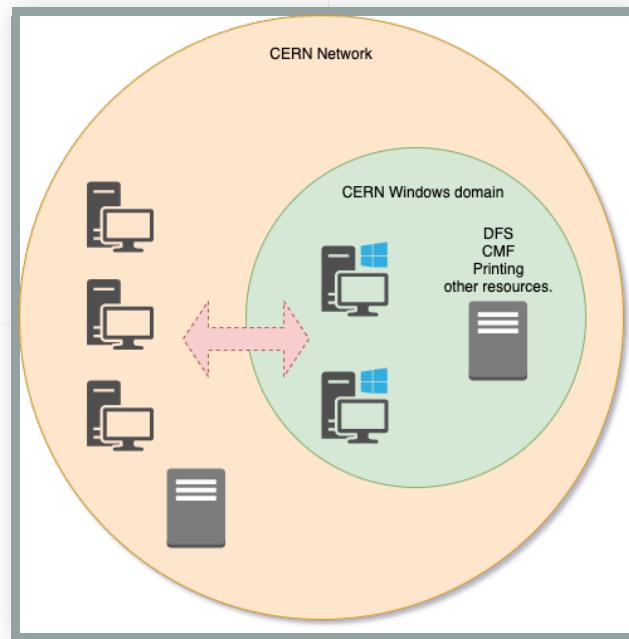
# Agenda

- The “CERN-managed devices” model
- The new management model
- What are the motivations behind this change?
- What are the user’s needs in this new model ?
- New services available
- Soon to come

# The “CERN-managed devices” model

## Overview

- Every single Windows computer needing direct access to central resources was enrolled into the CERN Windows domain



# **Everything was restricted**

- Domain GPOs to apply restrictions and security settings
- Domain GPPs to modify default settings and populate resources such as network drives
- Software installation performed using a “Deployment Software Tool” (CMF at CERN)
- Security updates managed by WSUS but distributed using CMF on a forced schedule
- **Everything was monitored, under control, and we liked it...but at some point, we thought we could propose something better.**

# The new management model

- We are now proposing a **new management model** for both CERN-owned and user-owned Windows computers called "**self-managed devices**"
- This new model **give back the power to the user and let him manage his machine at his own pace**
- Users opting for this model receive
  - same support
  - same software offer than for the traditional management model
- **The current restricted model remain available** for tightly controlled machines (control rooms, experiments)

# **What are the motivations behind this change?**

- Nowadays, people are used to share usage of their devices between work and private life (smartphones, laptops)
- Users can bring their own devices (BYOD) onsite
- With actual IT resources and new ways of work, such as teleworking, the user's office with a workstation is not anymore the only place someone can work and be productive
- **It's the user, not the computer, that needs to be the center of attention**

# **Software licences assignment scheme changed from “per machine”, to “per user”.**

- **Microsoft, Adobe, Autodesk, etc.**, a lot of editors changed the rules and propose now **“per user” subscription by default**
- The same software can be available on different platform such as desktops computers, mobile devices or even online as a website, everywhere with the same licence.
- **Usages patterns have changed, more flexibility is both possible and required**

# **Windows 10 proved more security-aware than any other version before**

- Better antivirus protection (Microsoft Defender)
- Better identity protection (Windows Hello)
- Better data protection (Bitlocker)
- Better overall security (UEFI, secure boot)
- etc.

# **What are the user's needs in this new model?**

- Installing/using CERN software remotely
- Keeping the machine secure
- Accessing personal/shared files remotely
- Printing

# How do we address them?

- Based on existing services such as:
  - CERNBox
  - DFS Gateway
- And new services created (or under development) around this vision
  - Streamlined Windows Setup (SWS)
  - CERN Appstore
  - Print4Visitors (to be renamed)
  - EDR

# Streamlined Windows Setup

- The place where everything begins (<https://cern.ch/sws>)

Please choose the desired management model for your device.

This will affect how you install applications and whether it will be managed by CERN or not.

**Self-Managed**

Your device, with CERN apps.  
Recommended for most users.

Application Support

Access to CERN websites

Install apps from CERN AppStore

✓ **Update at your own pace**

✓ **No reinstallation required, just install an app!**

✗ **No direct access to CERN resources**

[Learn More](#)

**CERN-Managed**

The traditional way of managing Windows.

Ideal for tightly controlled machines (experiments, control rooms).

Application Support

Access to CERN websites

Install apps from CMF

✗ **CERN policies and restrictions apply**

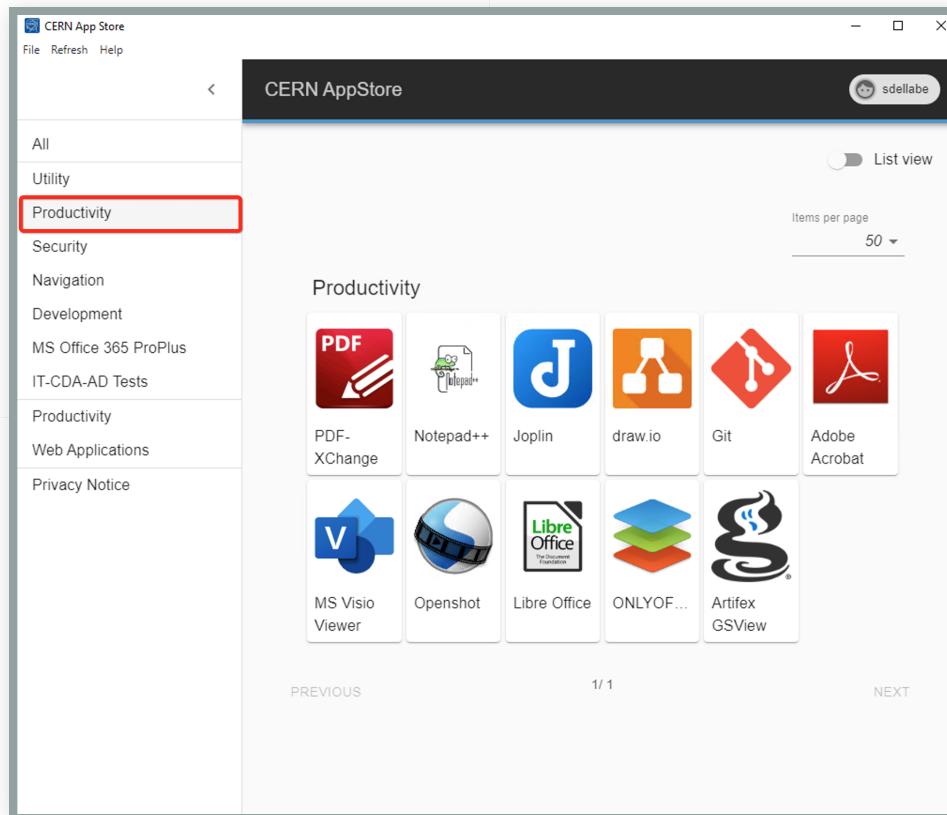
✗ **Windows reinstallation required**

✓ **Direct access to CERN resources**

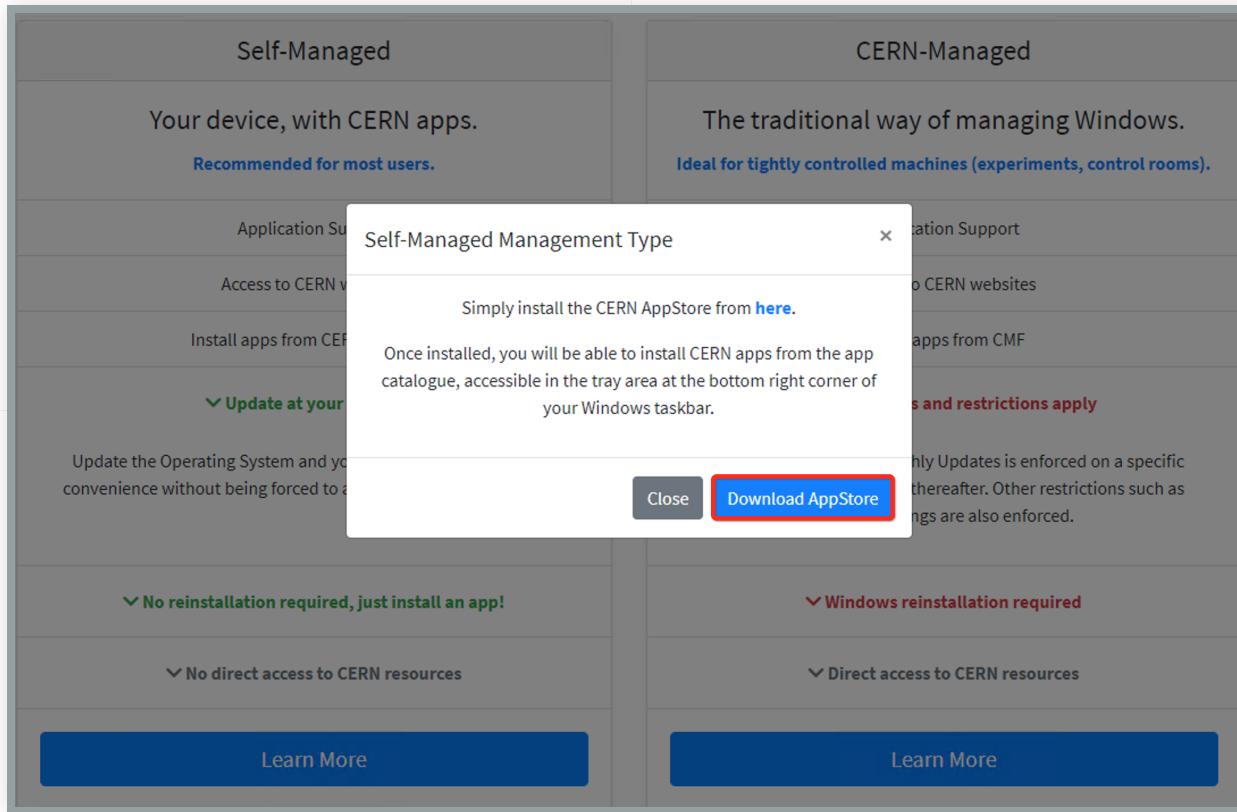
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# Installing/using CERN software remotely

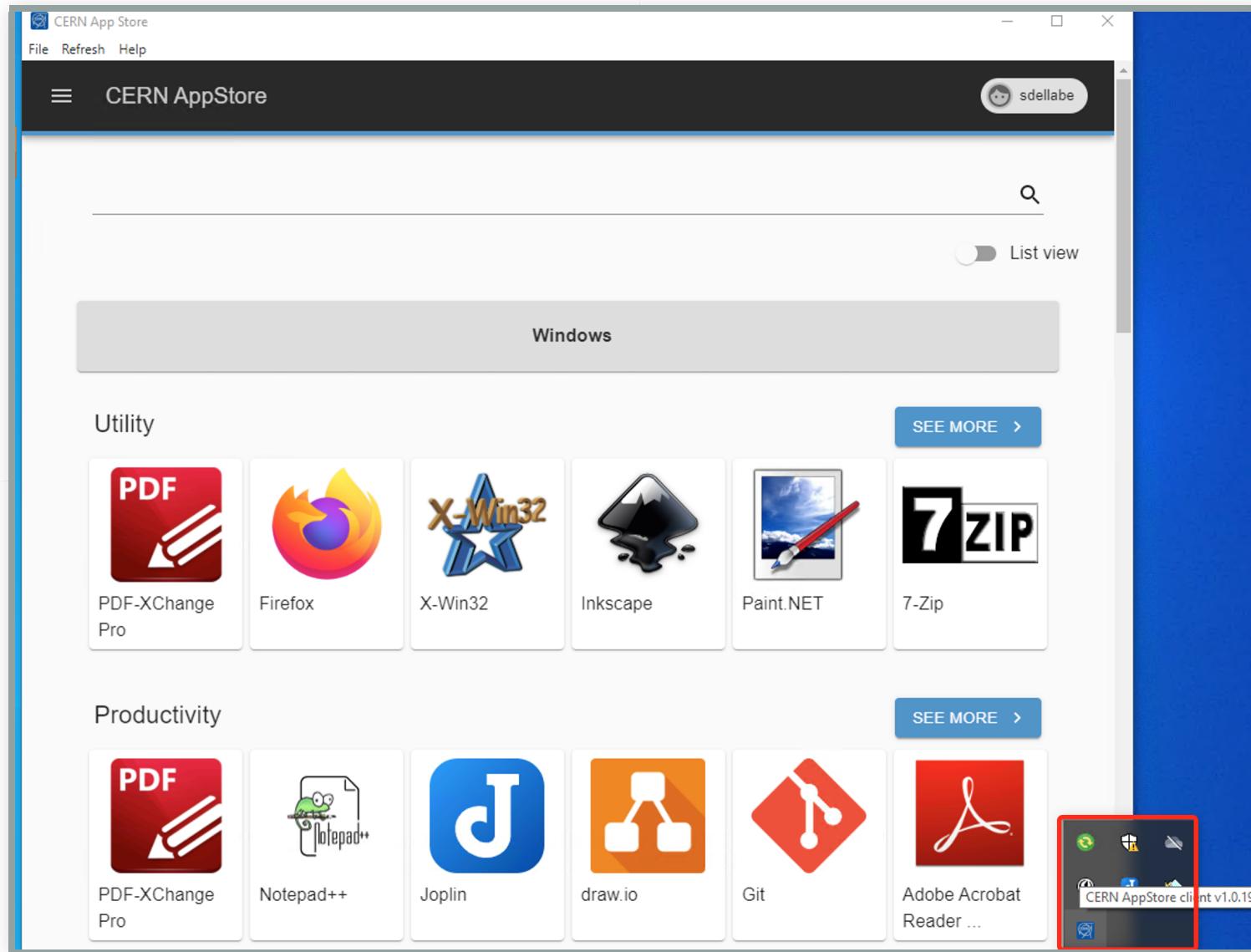
## The CERN Appstore



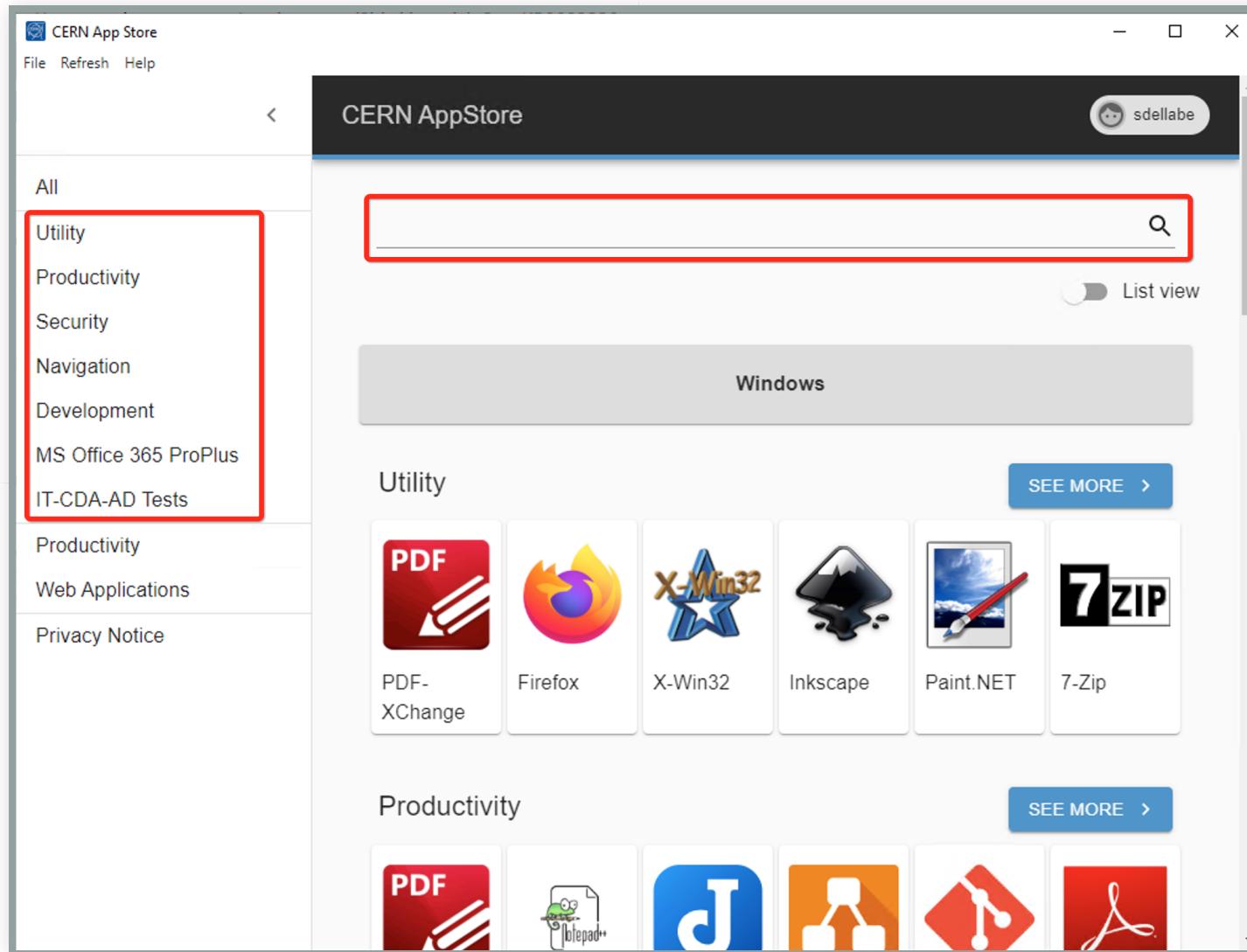
- Only require installation of a client on the machine



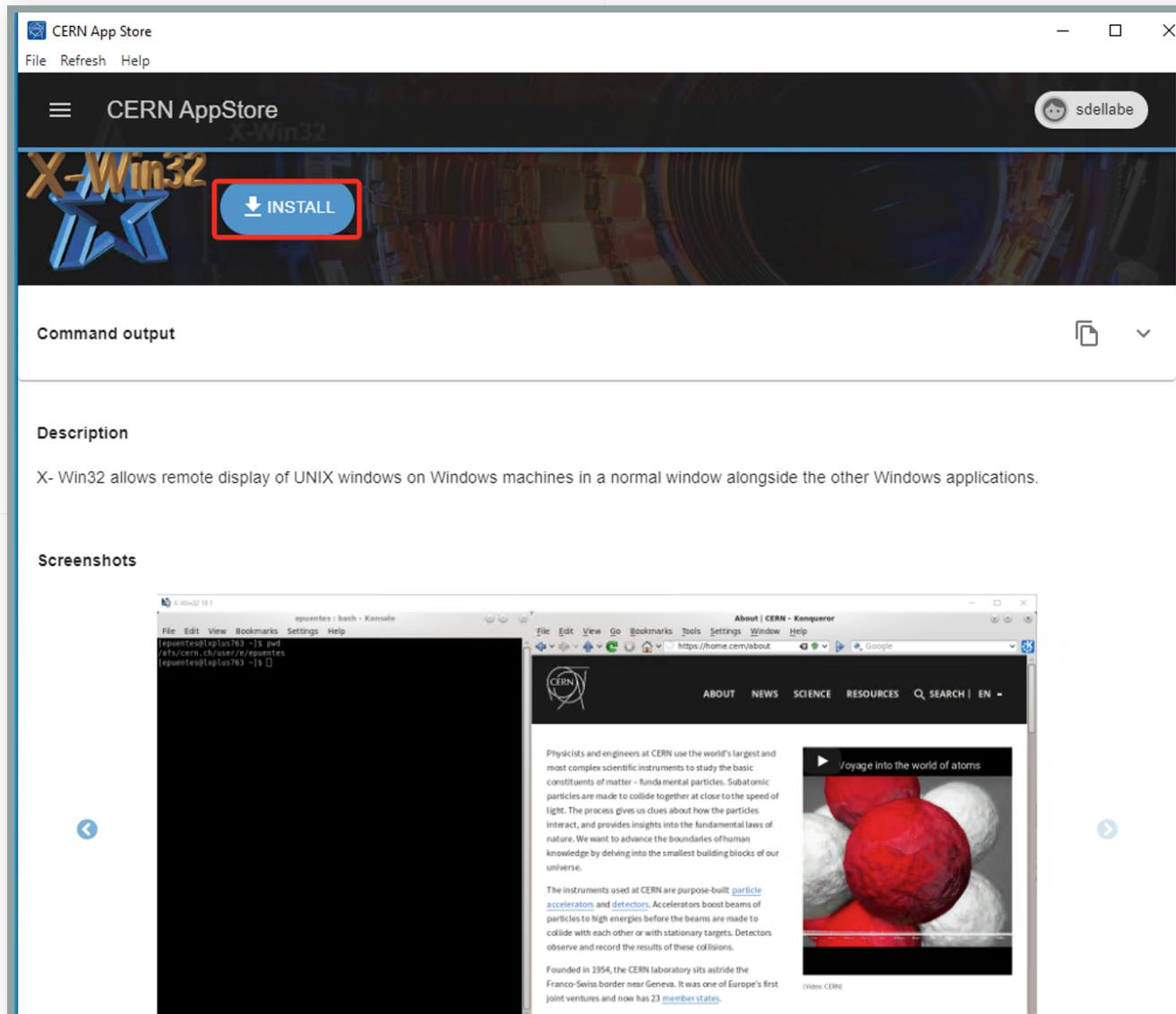
- Update itself automatically



- Comprehensive UI with categories on the left tab and search bar at the top



- Major part of applications are available both in CMF and the CERN Appstore



# The CERN Appstore

- The CERN Appstore is based on:
  - Chocolatey (<https://chocolatey.org>)
  - Nexus repository (<https://www.sonatype.com/>)
- It uses chocolatey community feed for well-known packages
- CERN specific feed for CERN licenced softwares
- It's multi-platform : Windows, Android, Linux, etc.
- **It's open-source !**
  - The gitlab will become public in the first half of the year

# **Keeping the system secure**

## **System updates**

- Switching back to vendor update mechanism
- With follow-up, if necessary

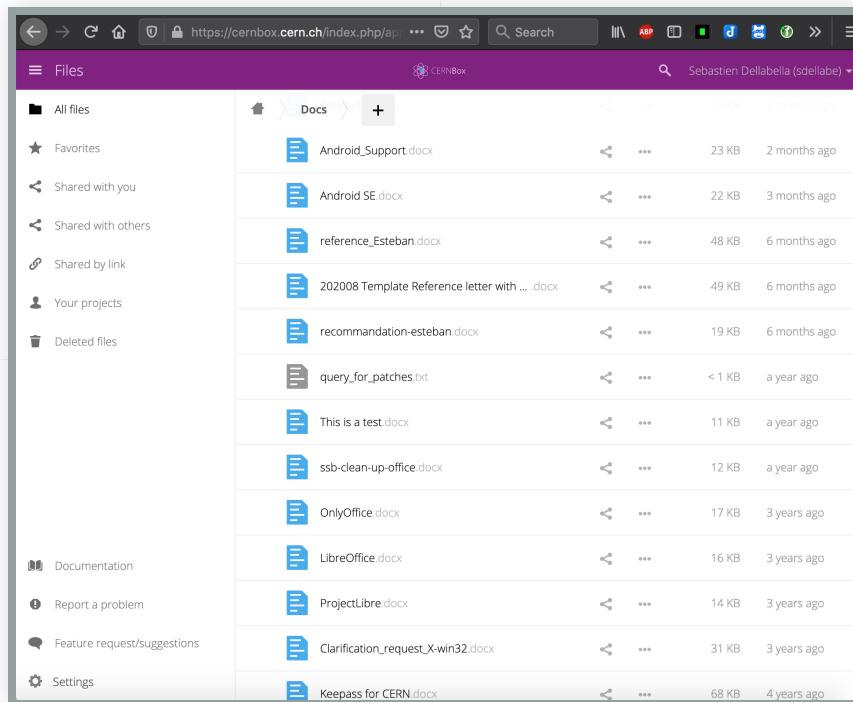
## **EDR**

- Endpoint detection and response: technology to continually monitor and respond to mitigate cyber threats.
- Selection process is in progress
- With the intention of making it available to both CERN-managed and Self-managed devices

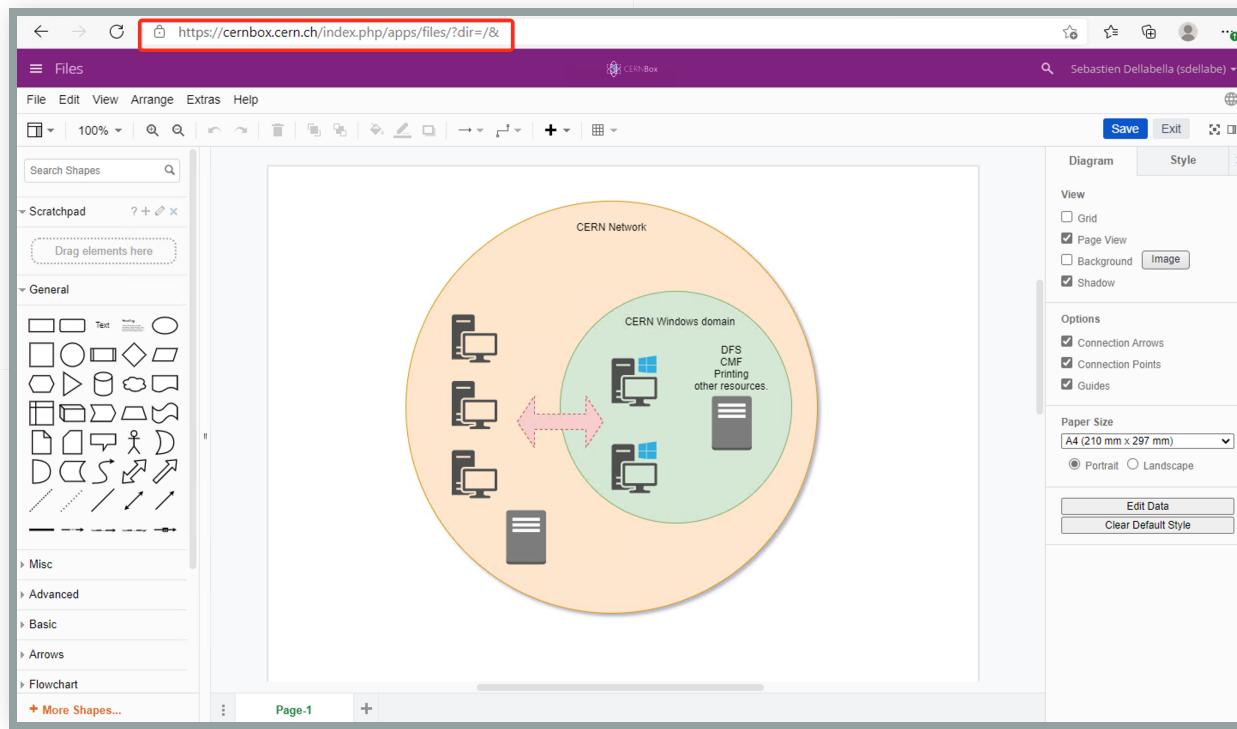
# Accessing personal/shared files remotely

## CERNBox

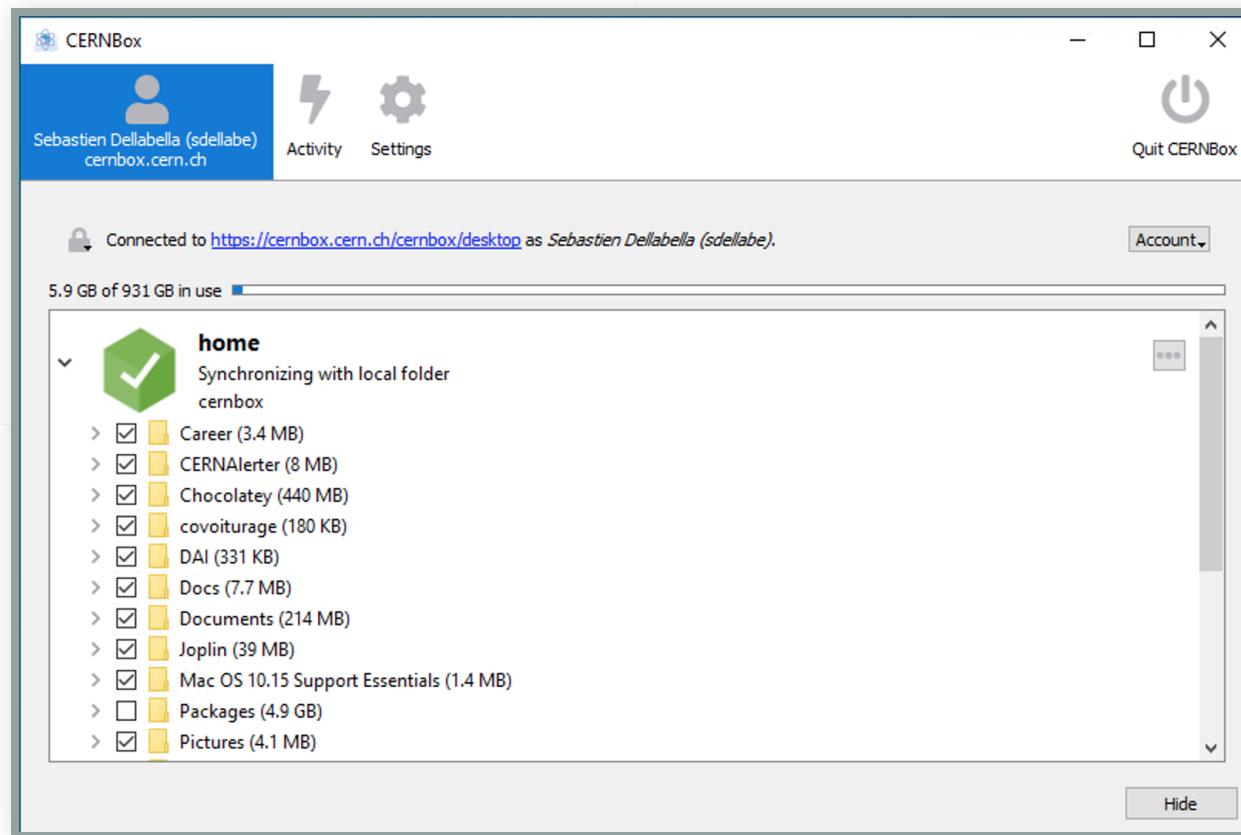
- Access personal files from any platform (Web, Windows, Mac OS, Linux, Android, IOS) and from anywhere



- OpenXML (.docx,etc.), Open Document Format (.odt,etc.), [Draw.io](#) files, all of them can be opened and edited directly in CERNBox



- Sync personal files locally with the CERNBox client



# CERNBox

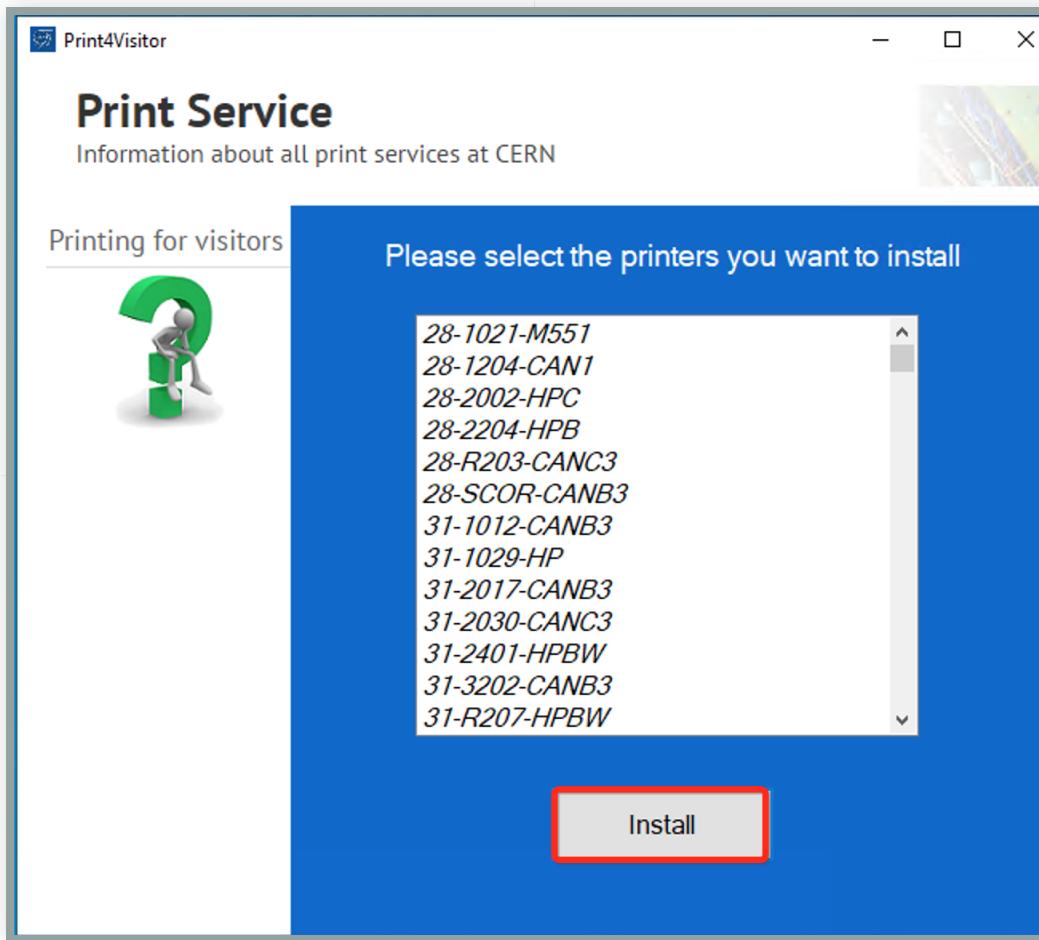
- CERNBox includes also other functionalities:
  - Online editors and viewers
    - Collabora Online
    - ONLYOFFICE
    - [Draw.IO](#) (now called [Diagrams.net](#))
    - Gantt Chart Viewer
    - Image files viewer
    - CodiMD (markdown editor)
  - File sharing
  - File versioning

# CERNBox for homefolders

- CERNBox is now the default solution for user home folders on "**CERN-managed devices**"
- On "**self-managed devices**", CERNBox is the way to keep your CERN files secure and share your work

# Printing

## Print4visitor



# **Print4visitor**

- Automatically propose the nearest printers for a one-touch installation
- **It's open-source**
  - The gitlab will become public in the first half of the year
- Yes, we'll rename it soon

# **Soon to come**

- Enabling the possibility for existing machines to switch from one management model to another
- EDR to be distributed both on “self-managed” and “CERN-managed” devices
- Make available the Gitlab for both the CERN AppStore and the Print4visitors software
- More applications in the CERN AppStore to be completely in line with CMF

# **Questions ?**

