

Windows Desktop Service

From computer to user centric IT

Sebastien Dellabella - CERN - IT-CDA-AD

Hepix - Spring 2021

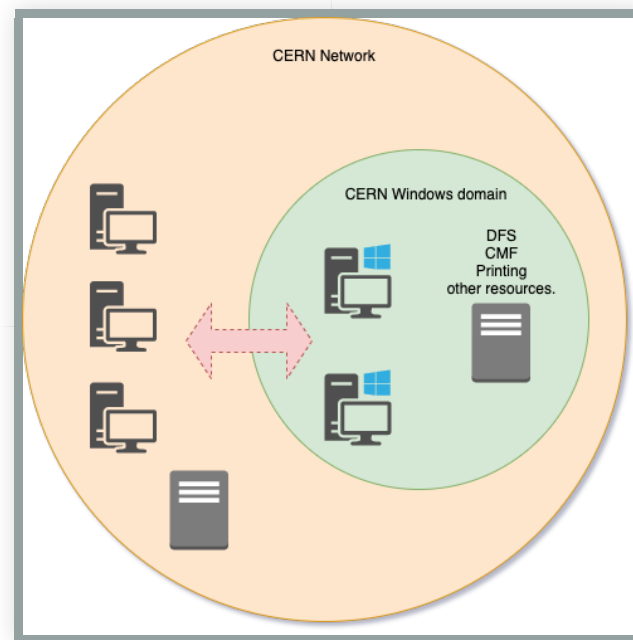
Agenda

- 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>)

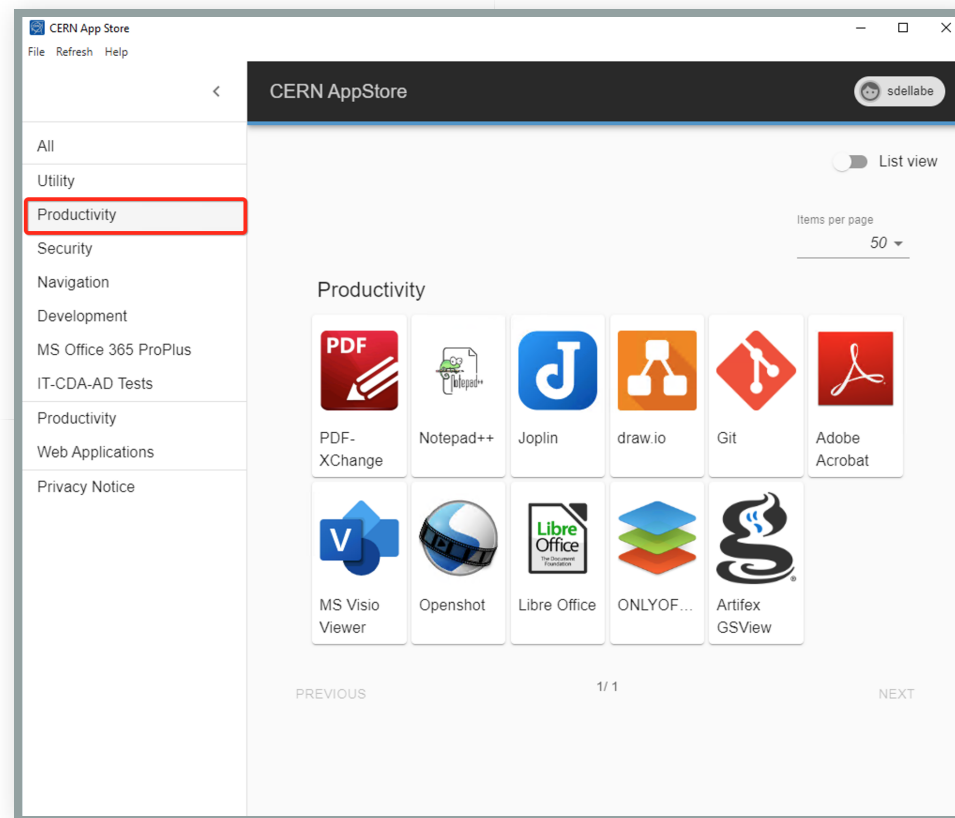
Please choose the desired management model for your device.

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

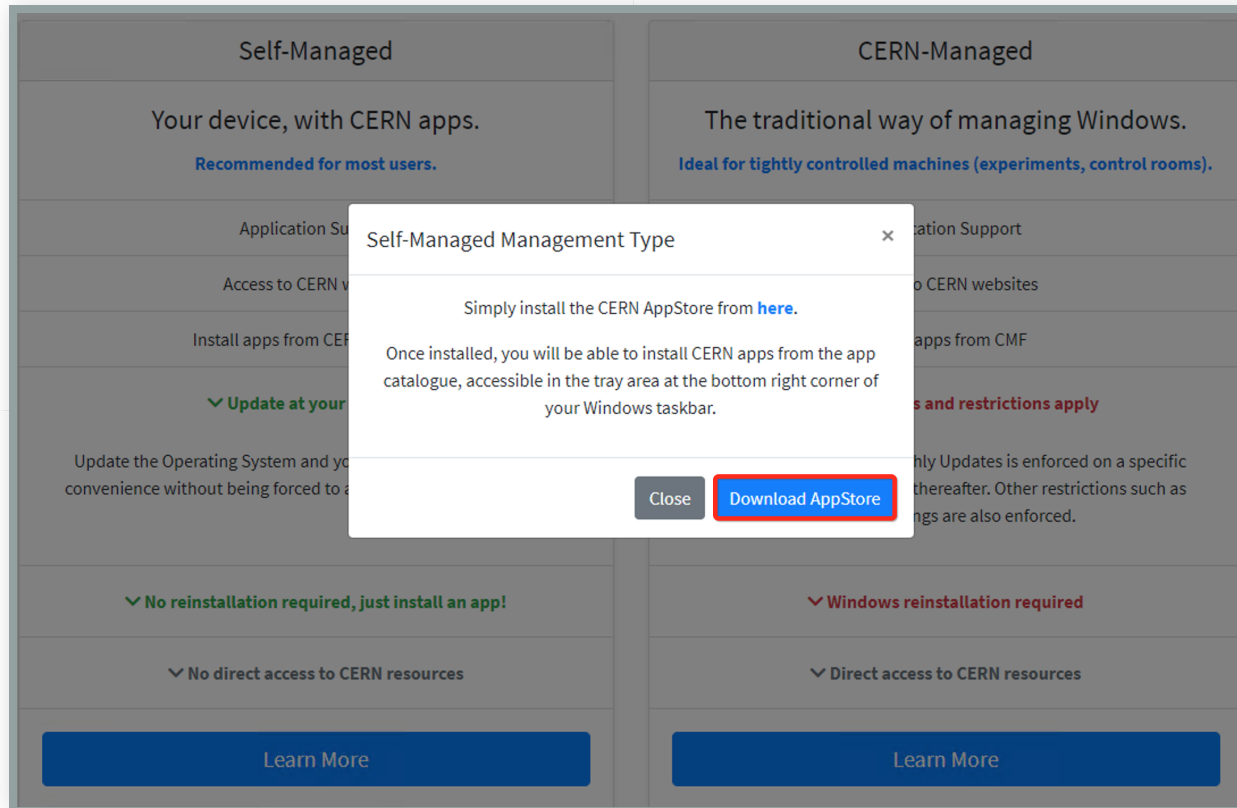
Self-Managed	CERN-Managed
<p>Your device, with CERN apps.</p> <p>Recommended for most users.</p>	<p>The traditional way of managing Windows.</p> <p>Ideal for tightly controlled machines (experiments, control rooms).</p>
Application Support	Application Support
Access to CERN websites	Access to CERN websites
Install apps from CERN AppStore	Install apps from CMF
✓ Update at your own pace	✗ CERN policies and restrictions apply
✓ No reinstallation required, just install an app!	✗ Windows reinstallation required
✗ No direct access to CERN resources	✓ Direct access to CERN resources
Learn More	Learn More

Installing/using CERN software remotely

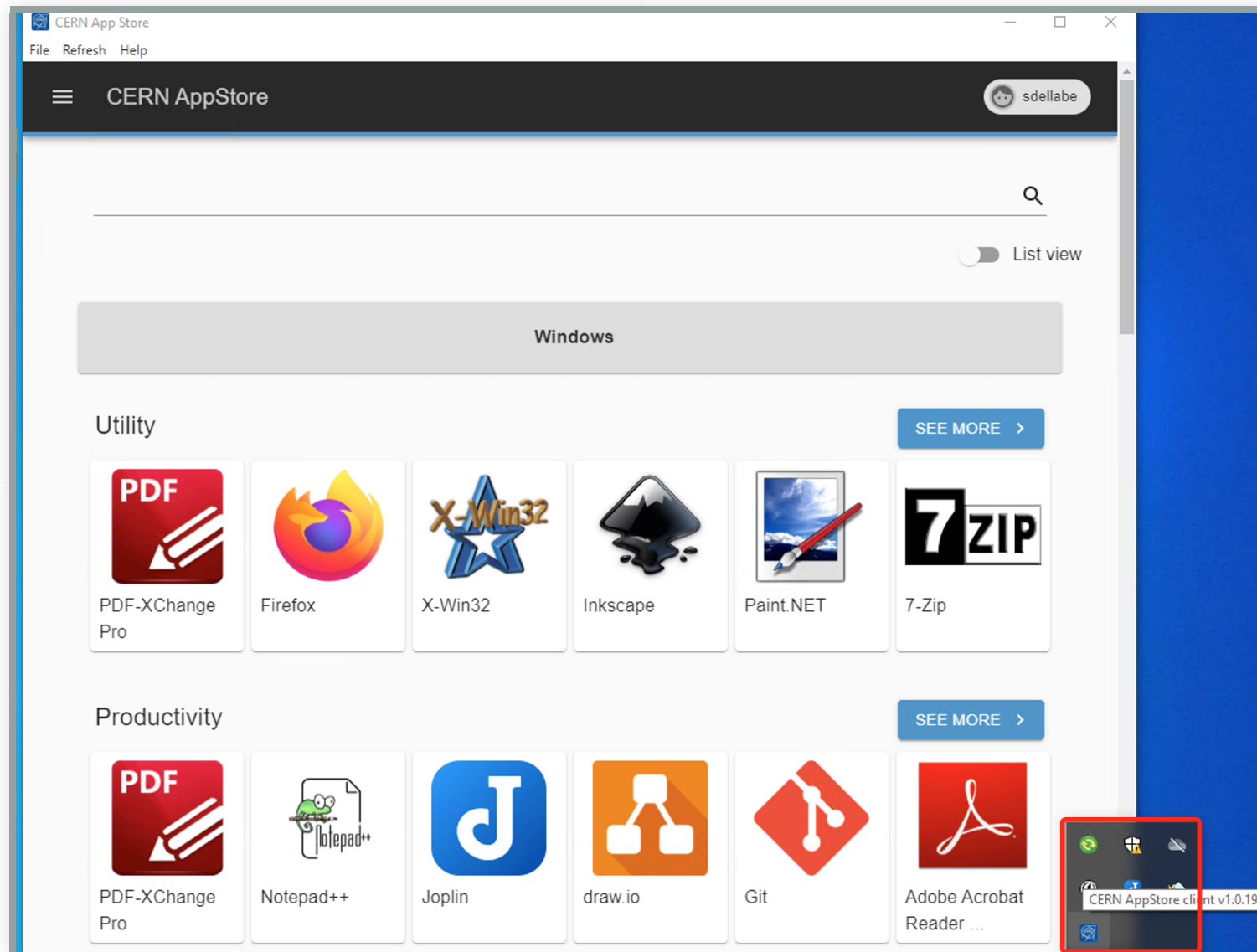
The CERN Appstore



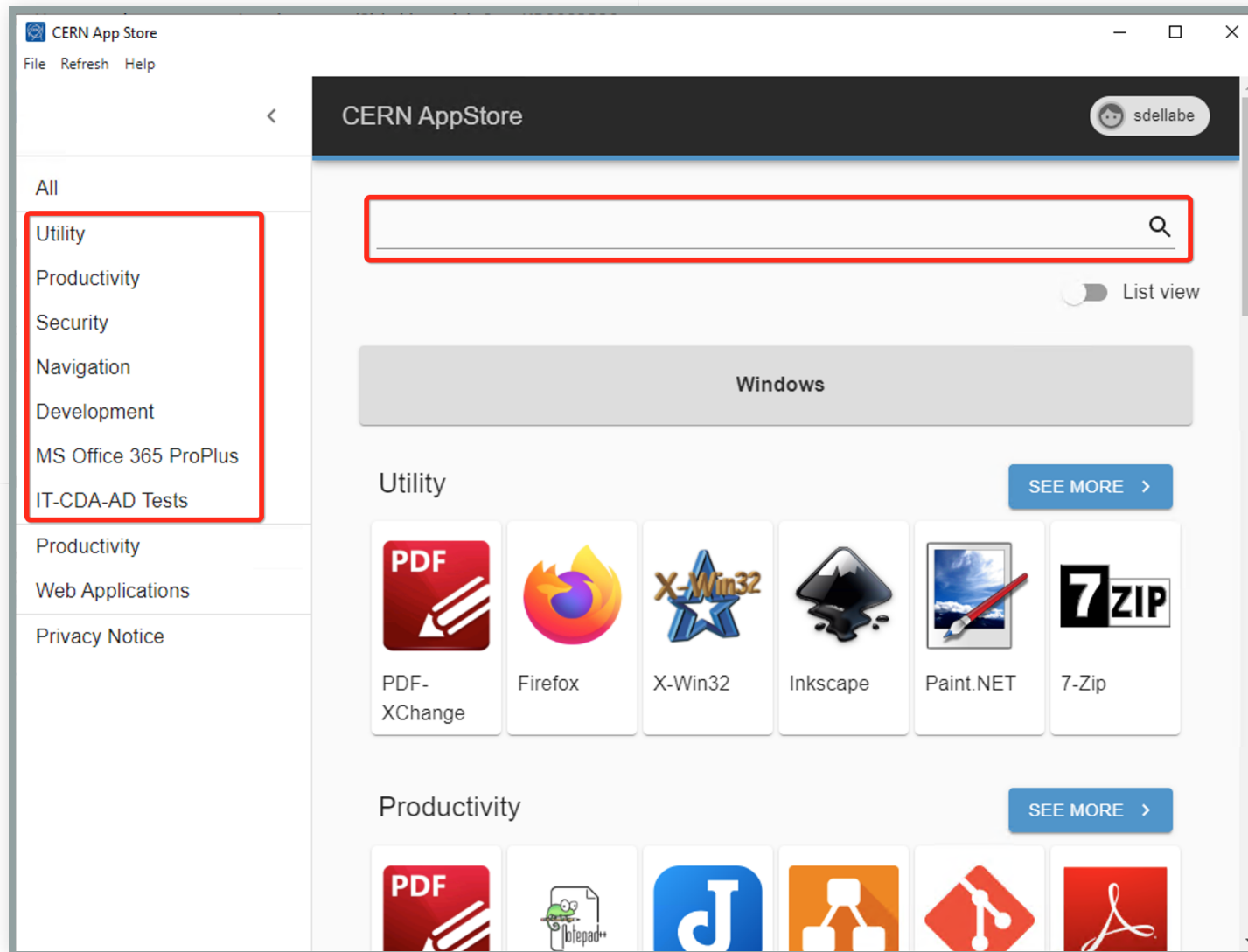
- Only require installation of a client on the machine



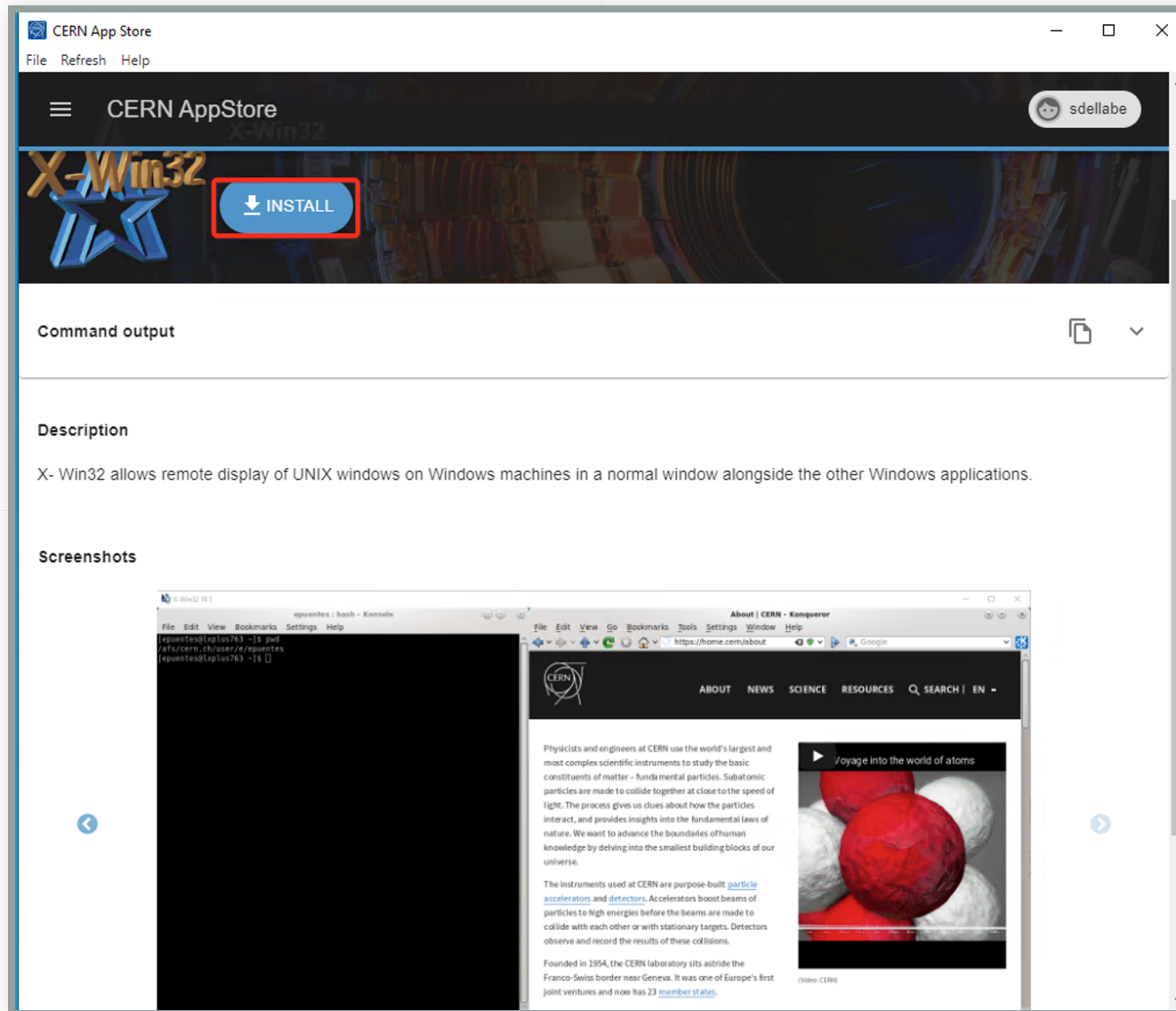
- Update itself automatically



- 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

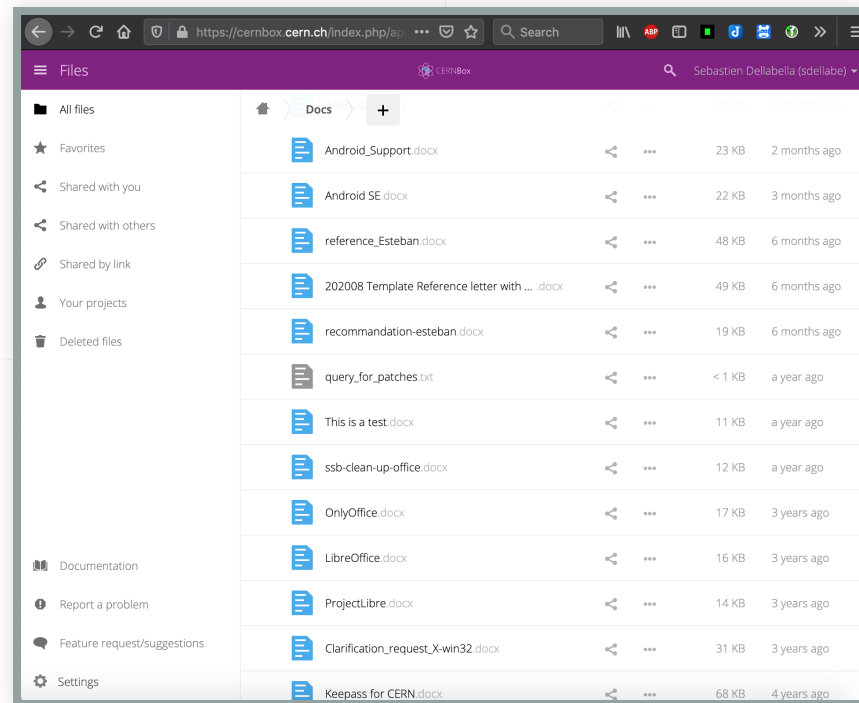
EDR

- 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

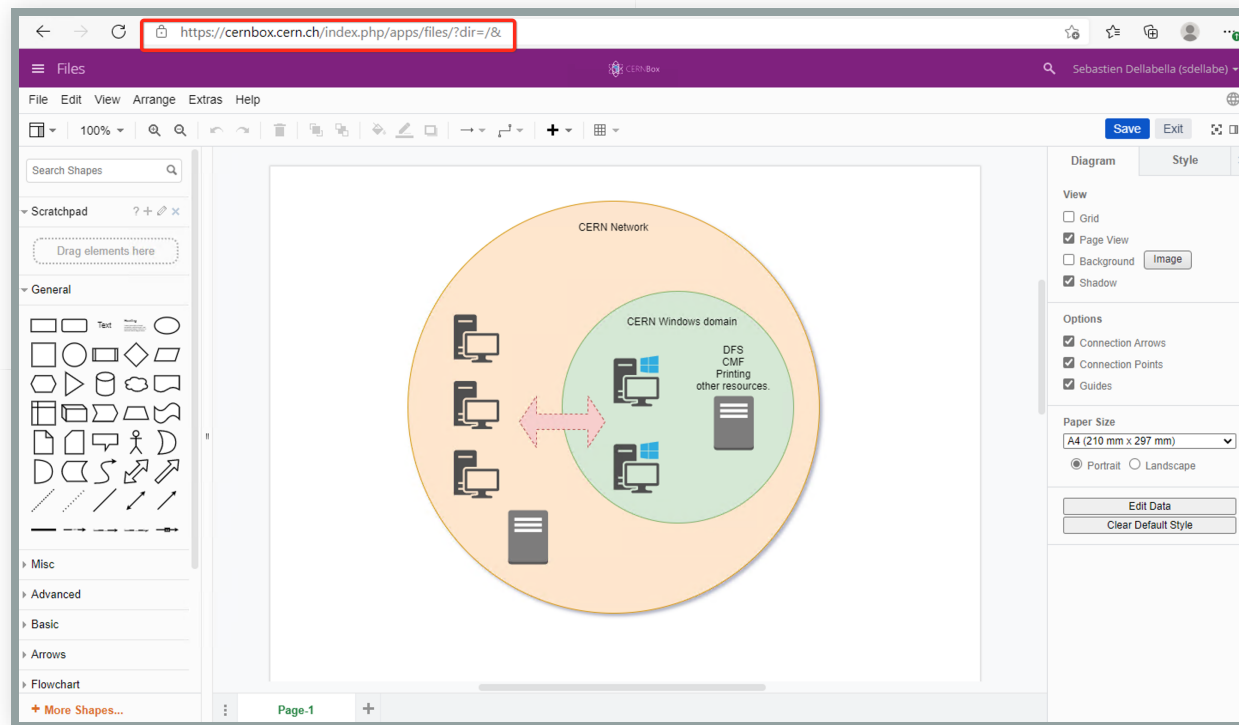
Accessing personal/shared files remotely

CERNBox

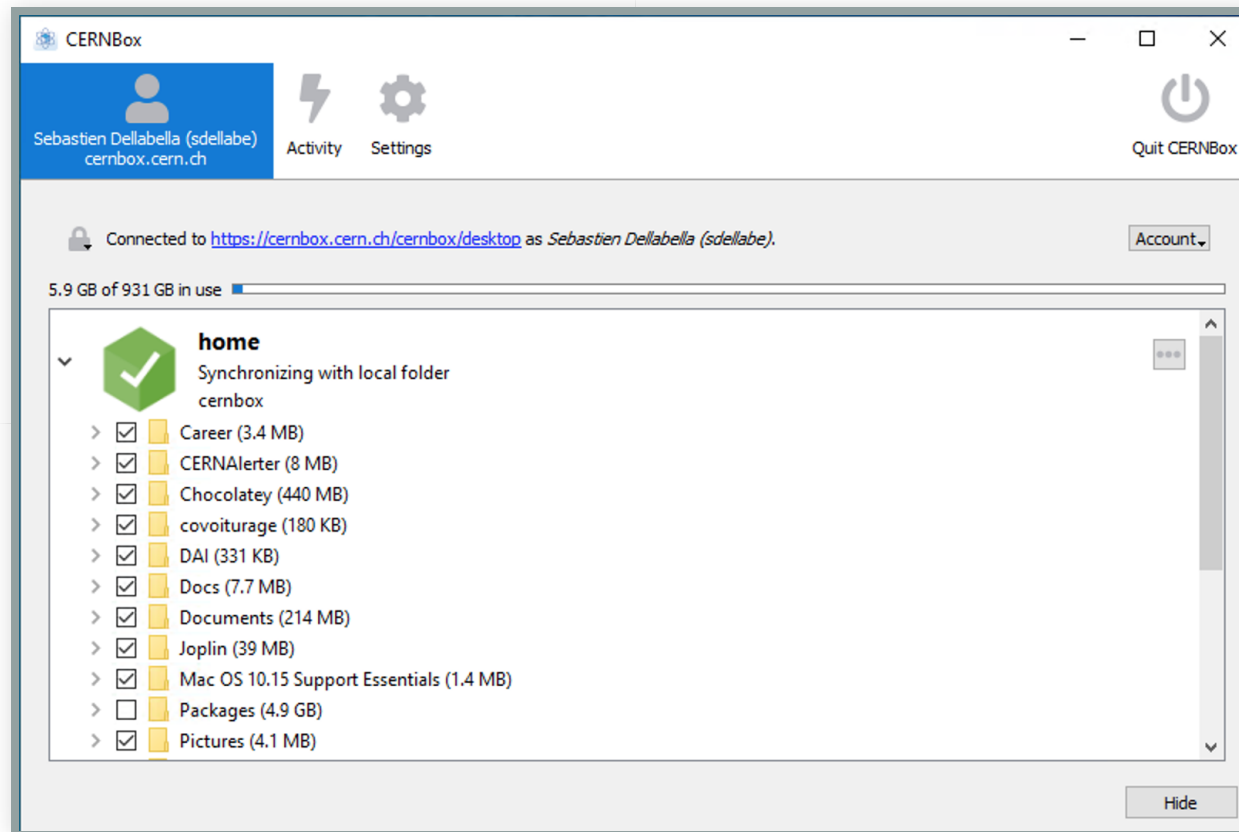
- Access personal files from any platform (Web, Windows, Mac OS, Linux, Android, IOS) and from anywhere



- 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

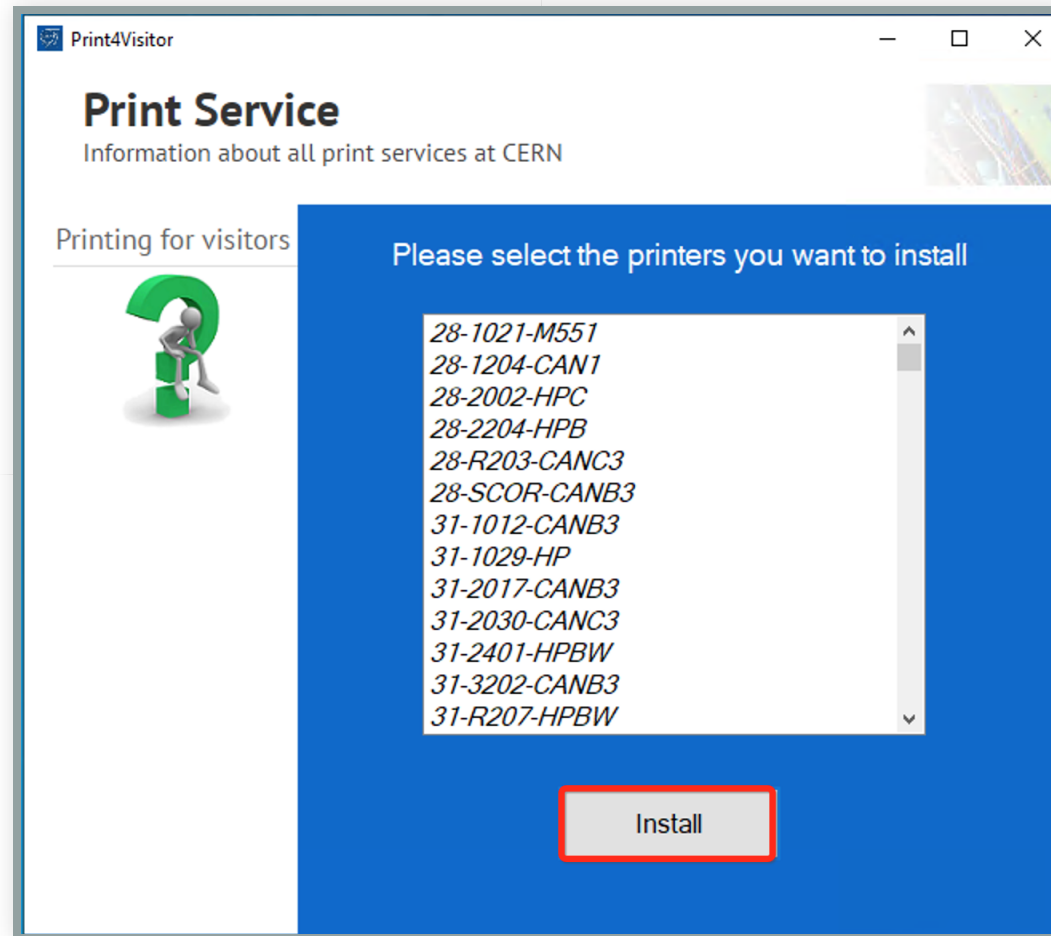
- CERNBox includes also other functionalities:
 - Online editors and viewers
 - Collabora Online
 - ONLYOFFICE
 - [Draw.IO](#) (now called [Diagrams.net](#))
 - Gantt Chart Viewer
 - Image files viewer
 - CodiMD (markdown editor)
 - File sharing
 - File versioning

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 ?

