

Betriebssysteme

Windows, macOS, Unix, Virtualisierung und Tools

Tom Gries



Dokumenten URL:

<http://docs.tx7.de/TT-BS3>

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Lizenz:

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Version:

7.2.1 vom 16.01.2025





Ein Betriebssystem (BS) verwaltet die Hardware eines Computers und teilt die Ressourcen zu. Bekannte Betriebssysteme für PCs und mobile Endgeräte sind (in chronologischer Reihenfolge):

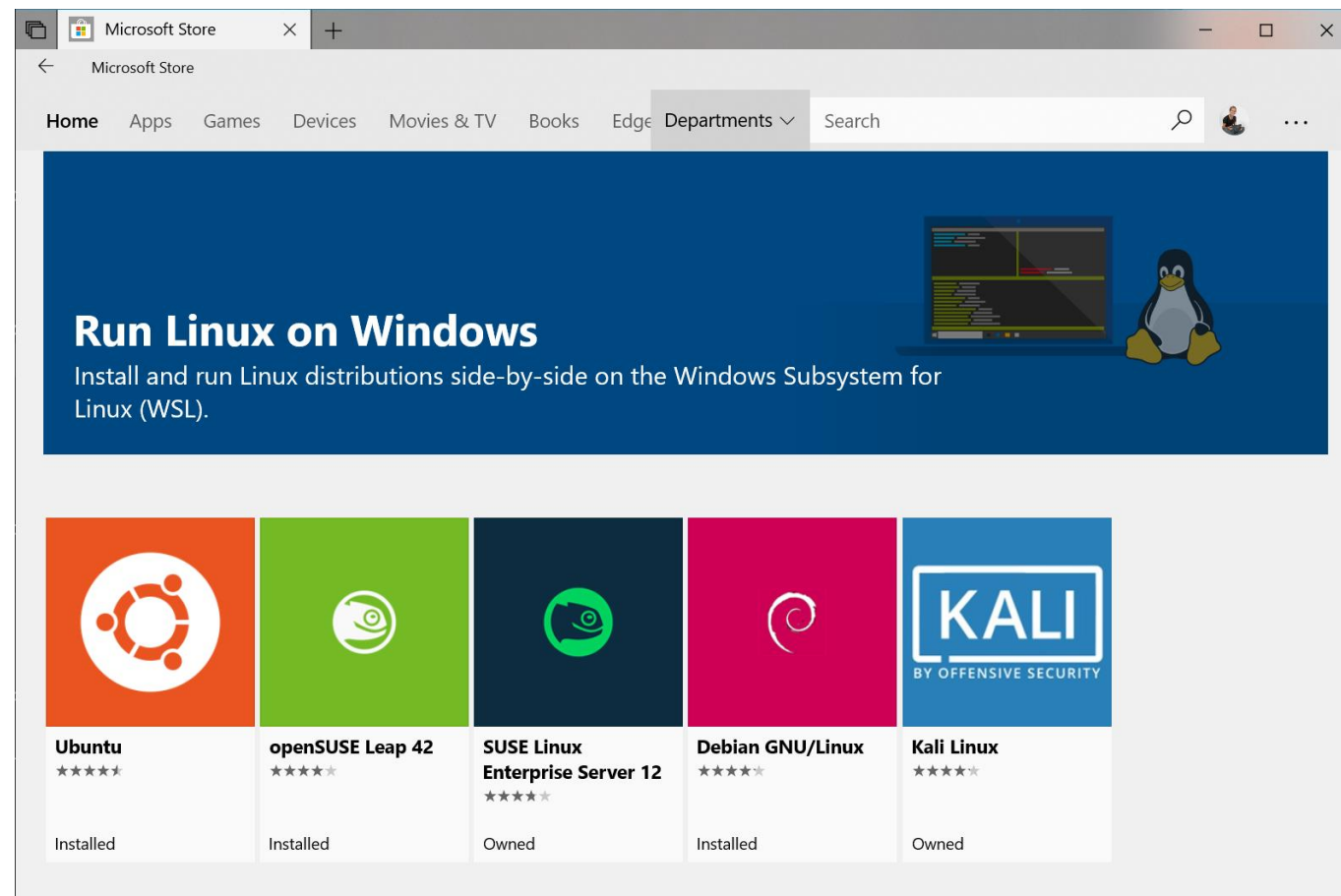
System	Jahr
UNIX	1971
DOS (Nachfolger von CP/M)	1974
Windows	1983
OS/2 Warp	1987
Linux	1991
MacOS	2001
iOS (vorher iPhone OS)	2007
Android	2008

System	2018	2023
Android	38,97 %	41,64 %
Windows	37,07 %	29,25 %
iOS	13,18 %	17,71 %
macOS	5,24 %	6,57 %
Linux	0,76 %	1,54 %
nicht identifizierte BS	2,72 %	1,93 %
andere BS	2,06 %	1,36 %



Das **Windows Subsystem for Linux**, kurz WSL, ist eine Erweiterung von Windows 10, um Linux innerhalb von Windows auszuführen.

WSL nutzt Virtualisierungstechniken der CPU.

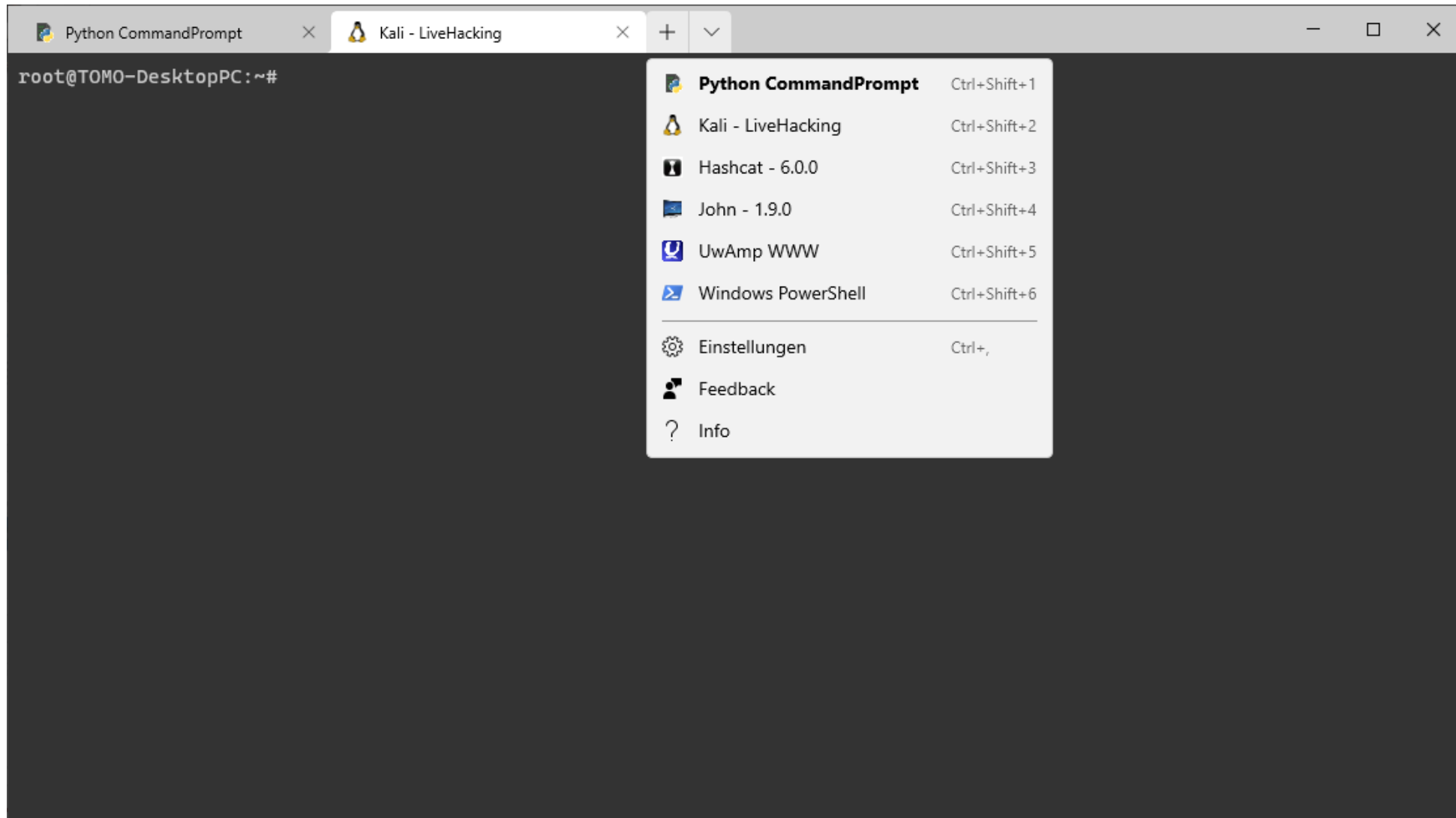




```
tomo@TOMO-DesktopPC: ~  
Installing, this may take a few minutes...  
Please create a default UNIX user account. The username does not need to match your Windows username.  
For more information visit: https://aka.ms/wslusers  
Enter new UNIX username: tomo  
New password:  
Retype new password:  
passwd: password updated successfully  
Installation successful!  
(Message from Kali developers)  
  
This is a minimal installation of Kali Linux, you likely  
want to install supplementary tools. Learn how:  
📖 https://www.kali.org/docs/troubleshooting/common-minimum-setup/  
  
(Run "touch ~/.hushlogin" to hide this message)  
(tomo@TOMO-DesktopPC)-[~]  
$ _
```



Windows Terminal





Putty

Putty war einer der meistverwendeten SSH Clients unter Windows. Putty ist kostenlos.

```
tomo@TOMO-DesktopPC: ~  
login as: tomo  
tomo@172.24.92.77's password:  
Linux TOMO-DesktopPC 4.19.104-microsoft-standard #1 SMP Wed Feb 19 06:37:35 UTC  
2020 x86_64  
  
The programs included with the Kali GNU/Linux system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Kali GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.  
tomo@TOMO-DesktopPC:~$
```

PuTTY Configuration

Category:

- Session
- Logging
- Terminal
 - Keyboard
 - Bell
 - Features
- Window
 - Appearance
 - Behaviour
 - Translation
 - Selection
 - Colours
- Connection
 - Data
 - Proxy
 - Telnet
 - Rlogin
 - SSH
 - Serial

Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address) Port

Connection type:

☐ Raw ☐ Telnet ☐ Rlogin ☒ SSH ☐ Serial

Load, save or delete a stored session

Saved Sessions

Default Settings
Kali Linux in VirtualBox
Raspi Initial (FritzBox)
Raspi Initial (Link Lokal)
TOMO-NAS
TOMO-PI-1-Bplus-01
TOMO-PI-1-Bplus-02

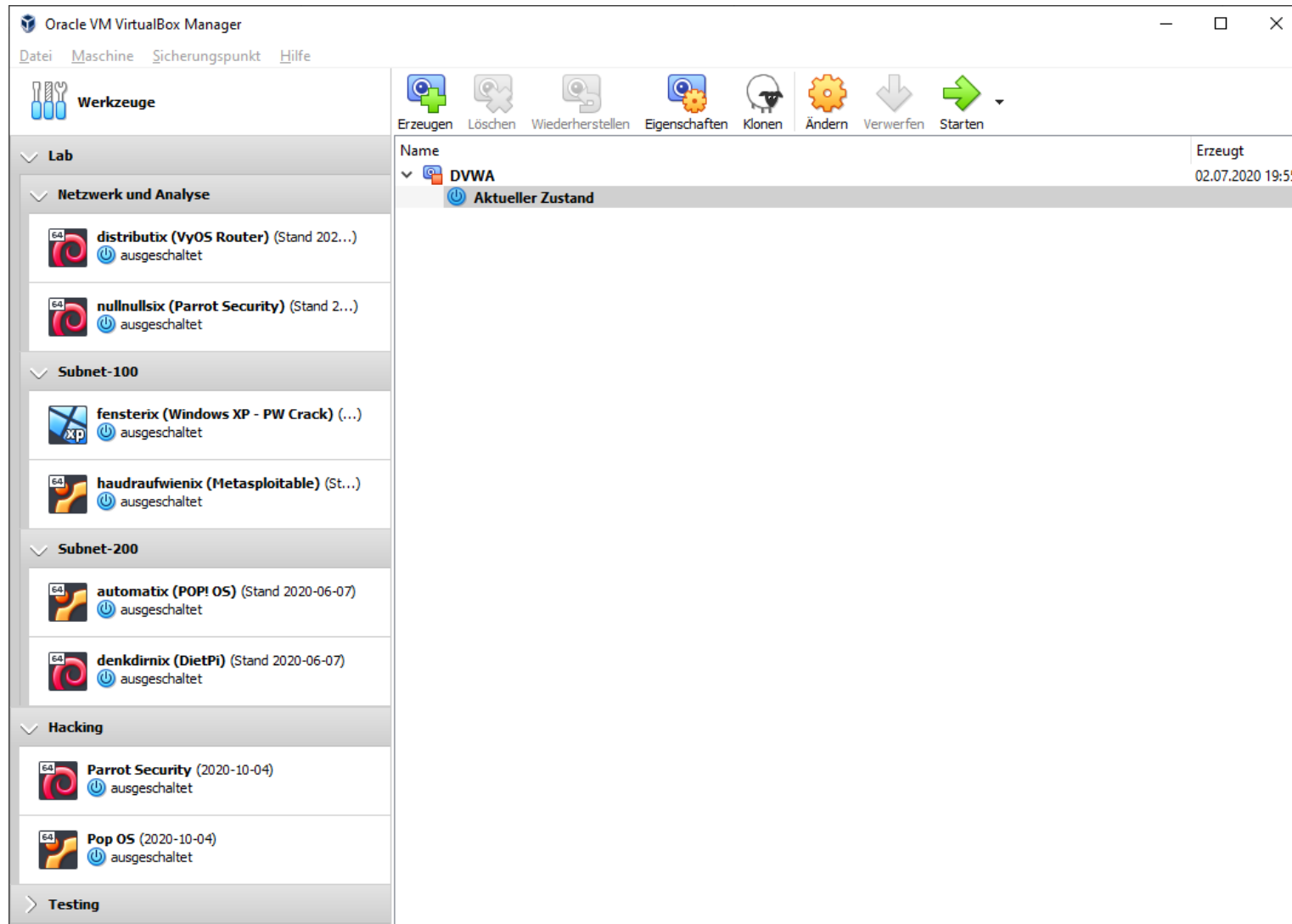
Close window on exit:

☐ Always ☐ Never ☒ Only on clean exit

About Help Open Cancel



VirtualBox





PROXMOX Virtual Environment 6.0-4

Search

Documentation

Create VM

Create CT

root@pam

Server View

Datacenter (democluster)

pve6-demo1

ceph (pve6-demo1)

cephfs (pve6-demo1)

local (pve6-demo1)

local-lvm (pve6-demo1)

pve6-demo2

100 (Buster)

ceph (pve6-demo2)

cephfs (pve6-demo2)

local (pve6-demo2)

local-lvm (pve6-demo2)

pve6-demo3

101 (debianct)

ceph (pve6-demo3)

cephfs (pve6-demo3)

local (pve6-demo3)

local-lvm (pve6-demo3)

production

testlab

Datacenter

Search

Summary

Cluster

Ceph

Options

Storage

Backup

Replication

Permissions

Users

Groups

Pools

Roles

Authentication

HA

Firewall

Support

Health

Status

Nodes

Ceph

Cluster: democluster, Quorate: Yes

HEALTH_OK

Resources

CPU

Memory

Storage

1%

21%

11%

of 18 CPU(s)

4.92 GiB of 23.36 GiB

17.66 GiB of 153.91 GiB

Subscriptions

Community

Your subscription status is valid.

Guests

Virtual Machines

LXC Container

Running

Stopped

1

0

Running

Stopped

1

0

Nodes

Name	ID	Online	Support	Server Address	CPU usage	Memory usage	Uptime
pve6-demo1	1	✓	Community	192.168.6.80	1%	18%	00:06:36
pve6-demo2	2	✓	Community	192.168.6.81	1%	26%	00:06:35
pve6-demo3	3	✓	Community	192.168.6.82	1%	19%	00:06:30

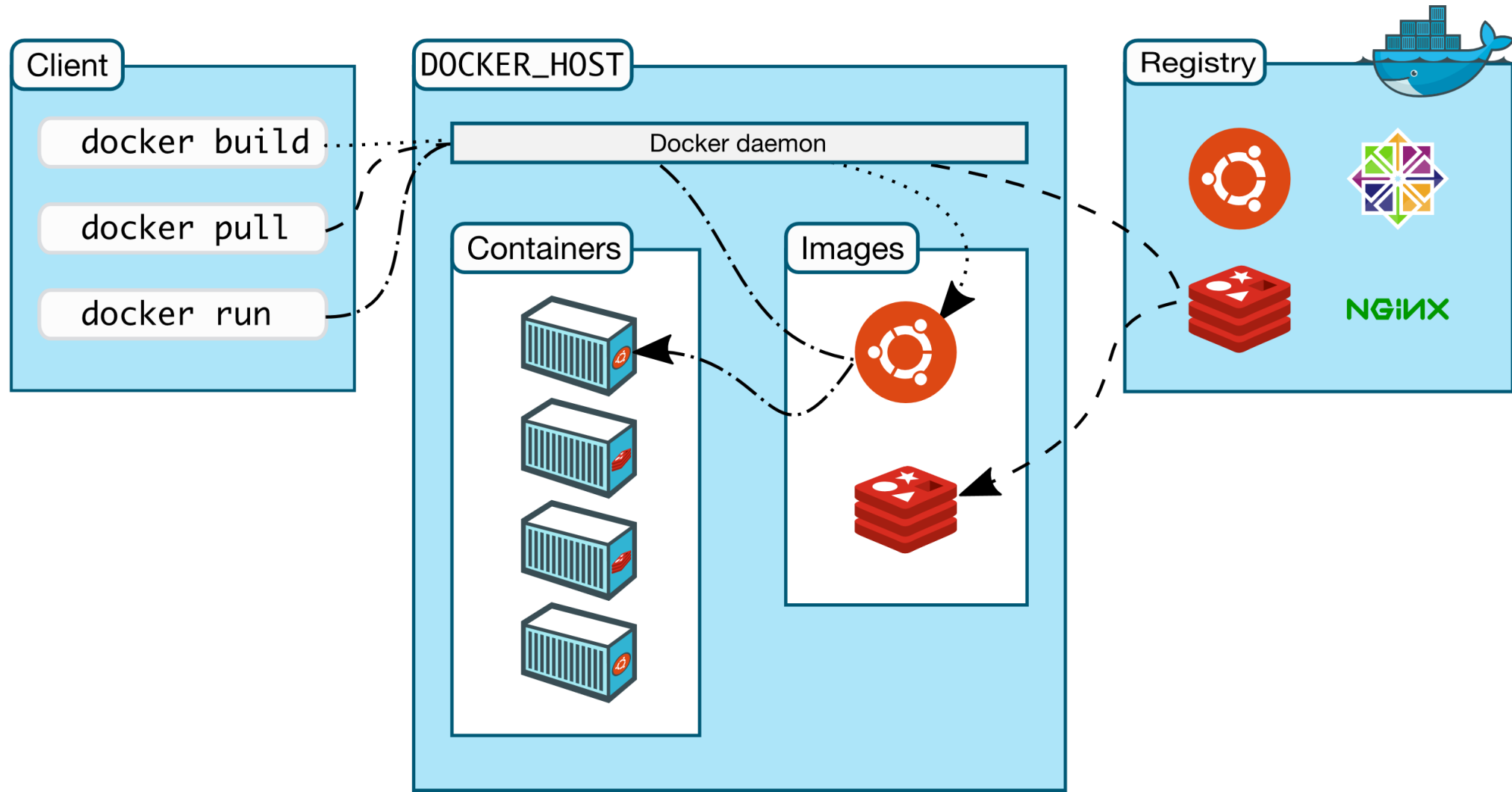
Tasks

Cluster log

Start Time ↓	End Time	Node	User name	Description	Status
Jul 16 11:31:59	Jul 16 11:32:02	pve6-demo1	root@pam	Shell	OK
Jul 16 11:31:18	Jul 16 11:31:19	pve6-demo2	root@pam	VM 100 - Start	OK
Jul 16 11:29:15	Jul 16 11:30:00	pve6-demo3	root@pam	CT 101 - Start	OK
Jul 16 11:27:21	Jul 16 11:27:23	pve6-demo3	root@pam	Start all VMs and Containers	OK
Jul 16 11:27:15	Jul 16 11:27:17	pve6-demo2	root@pam	Start all VMs and Containers	OK
Jul 16 11:27:12	Jul 16 11:27:16	pve6-demo1	root@pam	Start all VMs and Containers	OK



Docker





portainer.io

Home

KASM

Dashboard

App Templates

Stacks

Containers

Images

Networks

Volumes

Events

Host

SETTINGS

Users

Environments

Registries

Authentication logs

Settings

A new version is available

portainer.io 2.11.0

Container list Containers

tomo
[my account](#) [log out](#)

Containers Columns Settings

Start Stop Kill Restart Pause Resume Remove Add container

Search...

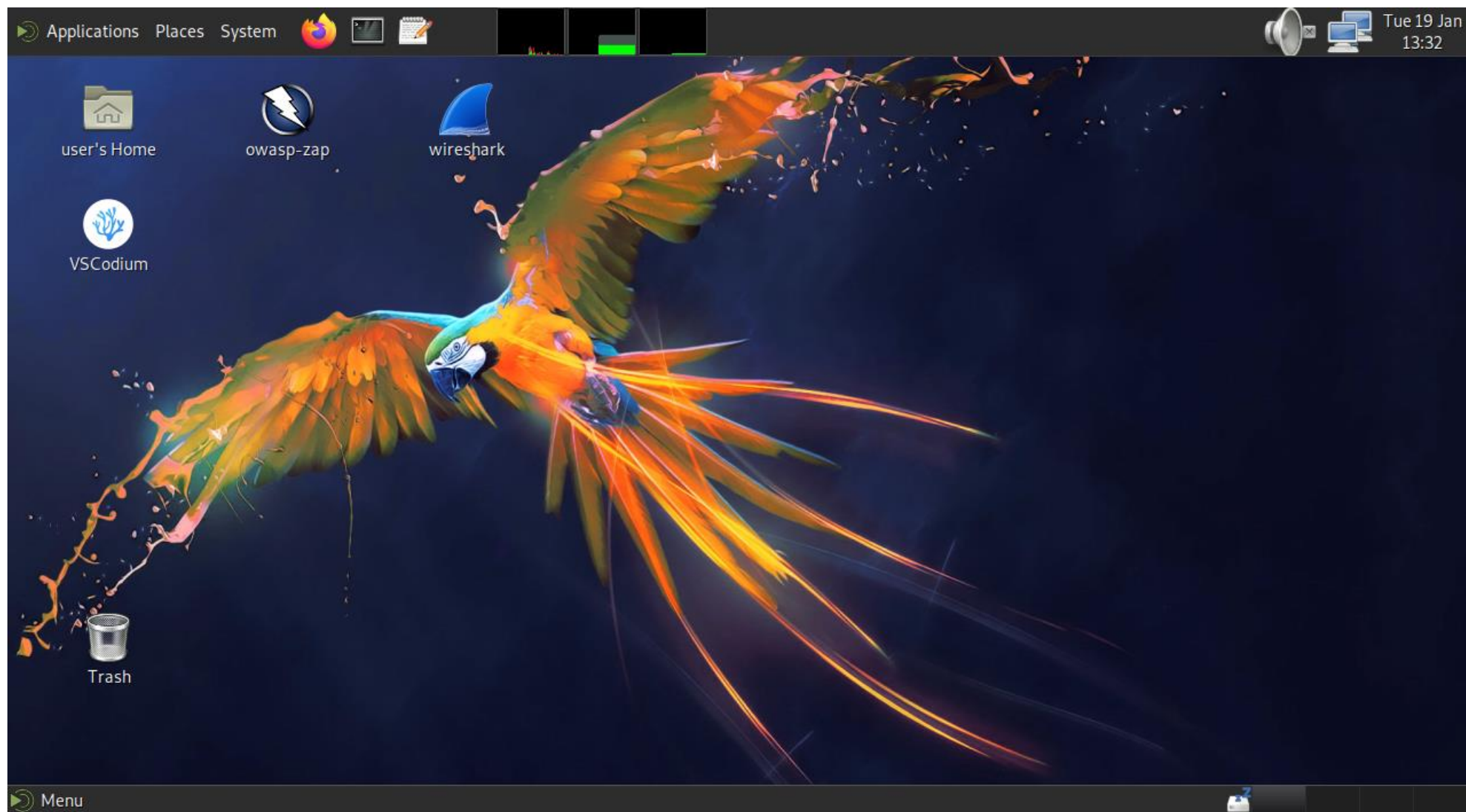
<input type="checkbox"/>	Name	State Filter	Quick actions	Stack	Image	Created	IP Address	Published Ports	Ownership
<input type="checkbox"/>	portainer	running		-	portainer/portainer-ce:2.11.0	2021-12-10 21:31:45	172.17.0.3	8000:8000 9000:9000 9443:9443	administrators
<input type="checkbox"/>	portainer_agent	running		-	portainer/agent	2021-12-08 10:15:12	172.17.0.2	9001:9001	administrators

Items per page 10 1 2



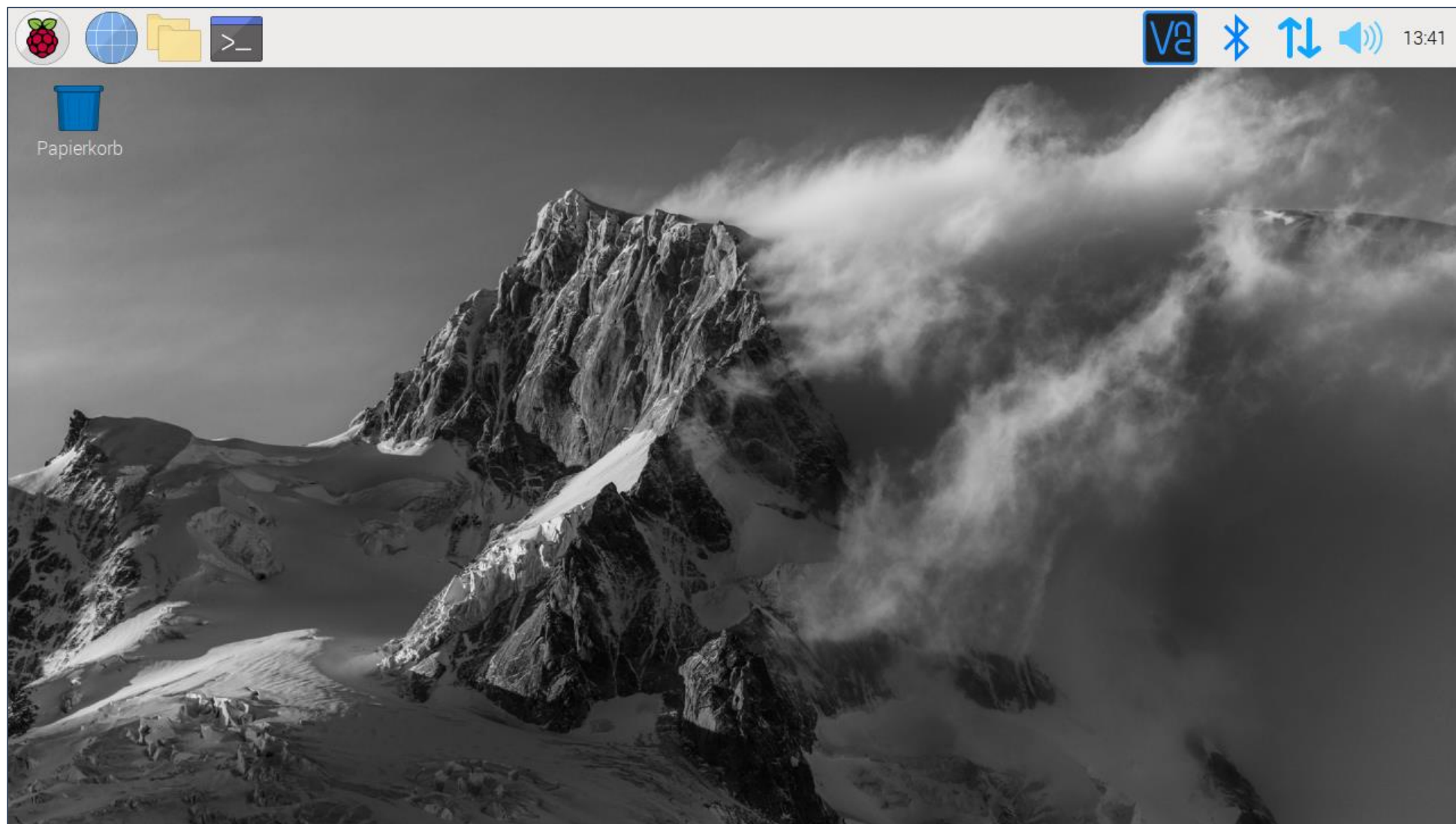


Parrot Security



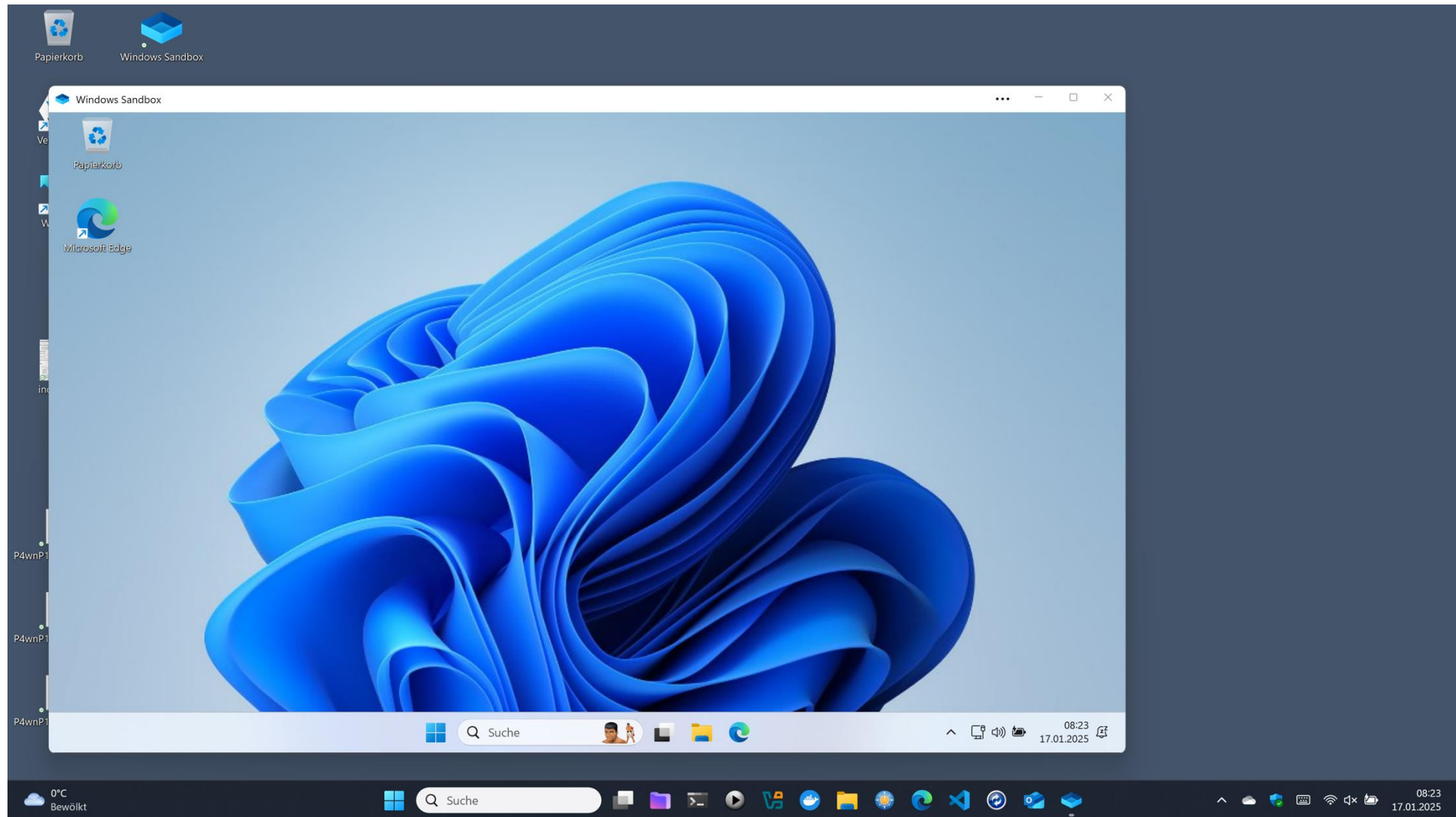


Raspberry Pi OS



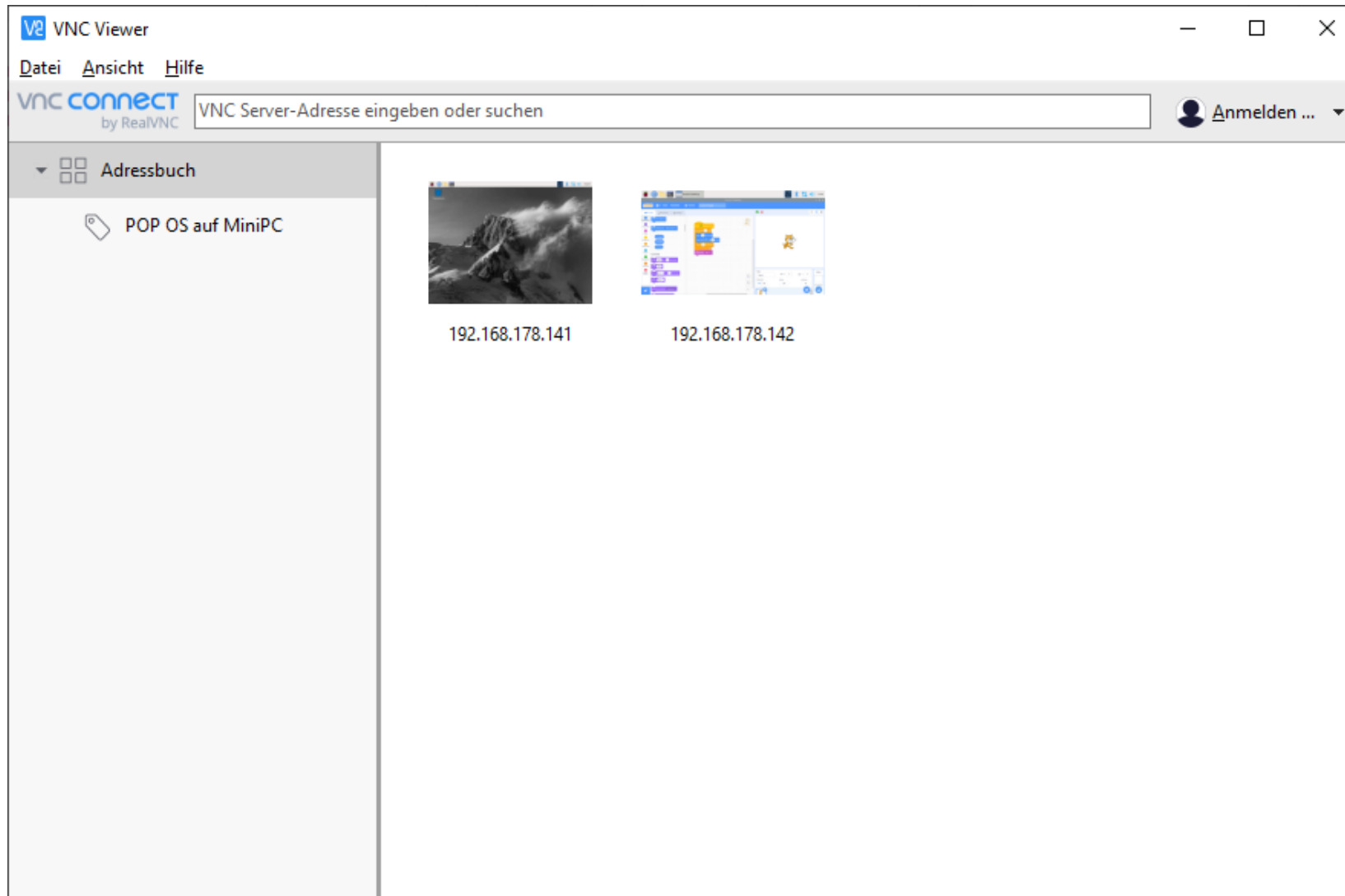


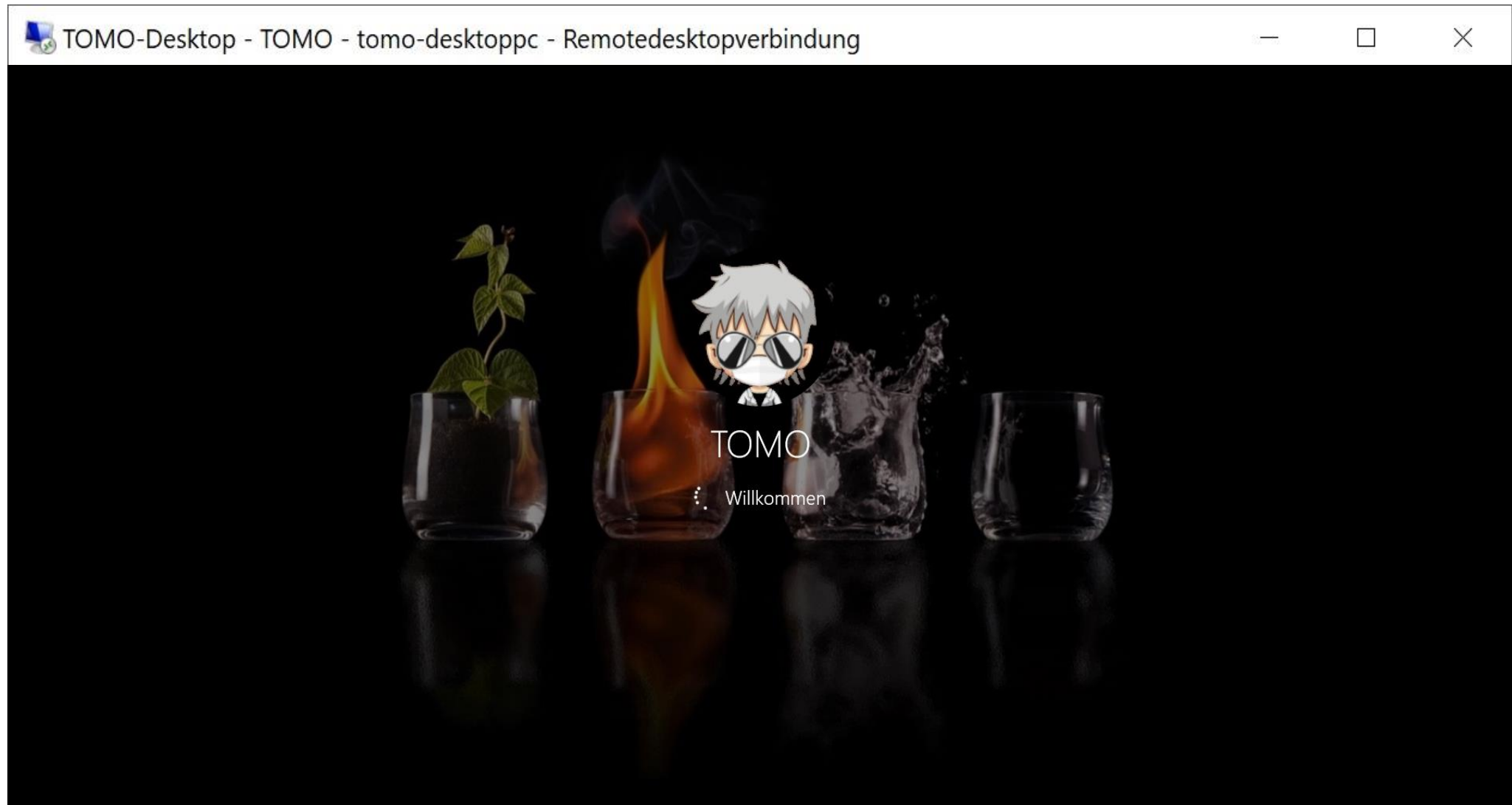
Windows Sandbox





VNC Viewer







NirSoft und SysInternals

NirLauncher - NirSoft Utilities

File Edit View Options Launcher Packages Help

Password Recovery Utilities	Network Monitoring Tools	Web Browser Tools	Video/Audio Related Utilities	Internet Related Utilities	Command-Line Utilities
Desktop Utilities	Outlook/Office Utilities	Programmer Tools	Disk Utilities	System Utilities	Other Utilities
All Utilities					

Name	Description	Version	Updated On	Web Page URL	EXE Filename	EXE Modifie...	EXE Created Time	GUI/C...	Help F...	In Favorites
DevManView	Alternative to the stand...	1.80	06.09.2023 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	06.09.2023 1...	06.09.2023 11:31:38	GUI A...	C:\Use...	No
DriverView	Displays the list of all d...	1.51	05.08.2024 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	05.08.2024 1...	05.08.2024 10:03:42	GUI A...	C:\Use...	No
EventLogChannelsView	View,Disable,Enable Eve...	1.38	28.09.2023 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	28.09.2023 1...	28.09.2023 12:38:48	GUI A...	C:\Use...	No
EventLogSourcesView	Displays the list of all e...	1.00	09.08.2013 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	09.08.2013 1...	09.08.2013 10:19:04	GUI A...	C:\Use...	No
ExecutedProgramsList	Displays programs and ...	1.11	18.03.2016 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	18.03.2016 1...	18.03.2016 11:11:04	GUI A...	C:\Use...	No
FirmwareTablesView	Displays a list of firmwa...	1.02	06.08.2022 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	06.08.2022 0...	06.08.2022 09:44:20	GUI A...	C:\Use...	No
FolderChangesView	Monitor folder/drive ch...	2.37	28.08.2024 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	28.08.2024 1...	28.08.2024 16:04:20	GUI A...	C:\Use...	No
FolderTimeUpdate	Updates the 'Modified ...	1.72	22.08.2023 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	22.08.2023 1...	22.08.2023 19:30:12	GUI A...	C:\Use...	No
FullEventLogView	Event log viewer for Wi...	1.80	22.09.2023 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	22.09.2023 1...	22.09.2023 12:43:22	GUI A...	C:\Use...	No
HandleCountersView	Shows handle counter f...	1.19	15.08.2024 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	15.08.2024 1...	15.08.2024 15:05:12	GUI A...	C:\Use...	No
InstalledAppView	View installed Windows...	1.09	04.09.2024 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	04.09.2024 1...	04.09.2024 11:21:58	GUI A...	C:\Use...	No
InstalledDriversList	Lists all device drivers t...	1.06	21.09.2024 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	21.09.2024 1...	21.09.2024 16:20:34	GUI A...	C:\Use...	No
InstalledPackagesView	Displays installed MSI p...	1.10	16.04.2024 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	16.04.2024 1...	16.04.2024 15:59:46	GUI A...	C:\Use...	No
JumpListsView	Displays the informatio...	1.16	25.03.2018 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	25.03.2018 2...	25.03.2018 22:45:50	GUI A...	C:\Use...	No
KeyboardStateView	Shows the current stat...	1.00	23.03.2018 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	23.03.2018 2...	23.03.2018 21:25:28	GUI A...	C:\Use...	No
LastActivityView	View the latest comput...	1.37	28.03.2023 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	28.03.2023 1...	28.03.2023 11:20:00	GUI A...	C:\Use...	No
LoadedDLLsView	Displays all DLL files loa...	1.06	24.09.2022 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	24.09.2022 1...	24.09.2022 14:28:12	GUI A...	C:\Use...	No
ManageWirelessNetworks	Alternative tool to the s...	1.14	17.06.2024 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	17.06.2024 1...	17.06.2024 10:17:20	GUI A...	C:\Use...	No
MMCSnapInsView	Displays the details of a...	1.00	25.11.2015 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	25.11.2015 0...	25.11.2015 08:06:32	GUI A...	C:\Use...	No
MonitorInfoView	displays essential infor...	1.25	23.10.2024 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	23.10.2024 1...	23.10.2024 18:01:40	GUI A...	C:\Use...	No
MUICacheView	Edit/delete MUICache it...	1.01	05.01.2010 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	05.01.2010 1...	05.01.2010 14:49:12	GUI A...	C:\Use...	No
MultiMonitorTool	Enable,disable,and set t...	2.15	16.10.2024 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	16.10.2024 1...	16.10.2024 10:36:14	GUI A...	C:\Use...	No
MyEventViewer	MyEventViewer is a sim...	2.25	15.01.2017 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	15.01.2017 1...	15.01.2017 19:49:20	GUI A...	C:\Use...	No
NetworkInterfacesView	Displays the list of all n...	1.35	29.10.2023 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	29.10.2023 1...	29.10.2023 15:03:52	GUI A...	C:\Use...	No
OfflineRegistryFinder	Find data in external Re...	1.10	20.04.2020 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	20.04.2020 0...	20.04.2020 09:32:12	GUI A...	C:\Use...	No
OfflineRegistryView	View offline Registry files	1.03	26.04.2019 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	26.04.2019 1...	26.04.2019 13:27:40	GUI A...	C:\Use...	No
OpenedFilesView	Displays the list of all o...	1.91	31.08.2023 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	31.08.2023 1...	31.08.2023 18:30:50	GUI A...	C:\Use...	No
OpenSaveFilesView	Displays list of files that...	1.16	14.11.2022 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	14.11.2022 1...	14.11.2022 14:09:36	GUI A...	C:\Use...	No
Password Security Scanner	Displays security inform...	1.61	08.07.2020 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	08.07.2020 1...	08.07.2020 11:16:50	GUI A...	C:\Use...	No

Run Advanced Run Web Page Help File Web Search Package Package

85 Utilities, 1 Selected NirSoft Freeware. https://www.nirsoft.net



NirSoft und SysInternals

NirLauncher - NirSoft Utilities

File Edit View Options Launcher Packages Help

Password Recovery Utilities	Network Monitoring Tools	Web Browser Tools	Video/Audio Related Utilities	Internet Related Utilities	Command-Line Utilities
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KeyboardStateView	Shows the current stat...	1.00	23.03.2018 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	23.03.2018 2...	23.03.2018 21:25:28	GUI A...	C:\Use...	No
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MonitorInfoView	displays essential infor...	1.25	23.10.2024 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	23.10.2024 1...	23.10.2024 18:01:40	GUI A...	C:\Use...	No
MUICacheView	Edit/delete MUICache it...	1.01	05.01.2010 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	05.01.2010 1...	05.01.2010 14:49:12	GUI A...	C:\Use...	No
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OfflineRegistryView	View offline Registry files	1.03	26.04.2019 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	26.04.2019 1...	26.04.2019 13:27:40	GUI A...	C:\Use...	No
OpenedFilesView	Displays the list of all o...	1.91	31.08.2023 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	31.08.2023 1...	31.08.2023 18:30:50	GUI A...	C:\Use...	No
OpenSaveFilesView	Displays list of files that...	1.16	14.11.2022 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	14.11.2022 1...	14.11.2022 14:09:36	GUI A...	C:\Use...	No
Password Security Scanner	Displays security inform...	1.61	08.07.2020 ...	https://www.nirsoft.net/...	C:\Users\LiveHacking\One...	08.07.2020 1...	08.07.2020 11:16:50	GUI A...	C:\Use...	No

Run Advanced Run Web Page Help File Web Search Package Package

85 Utilities, 1 Selected NirSoft Freeware. https://www.nirsoft.net

Anmerkungen oder Fragen?