

NIIC 2017
nordic infrastructure conference

The premium event for IT-professionals

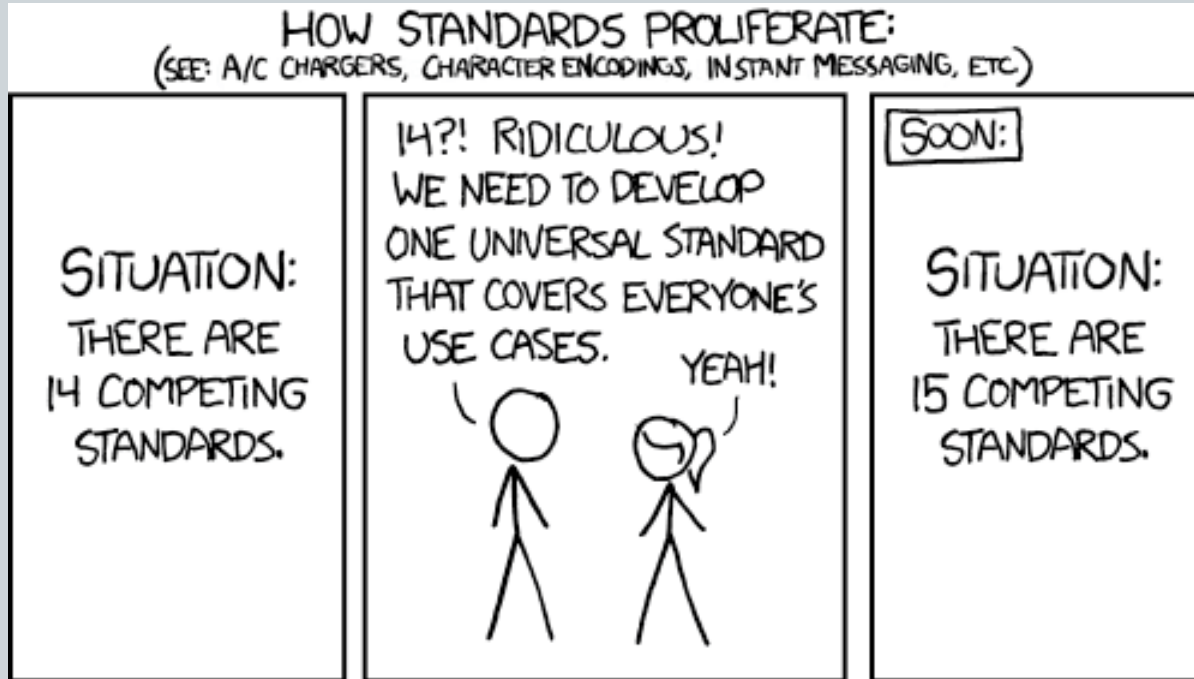
Feb. 1-3rd in Oslo Spektrum



Black belt modern devices troubleshooting
Ask ~~Me~~ Us (almost) Anything

#AMANICconf

Why are we here?



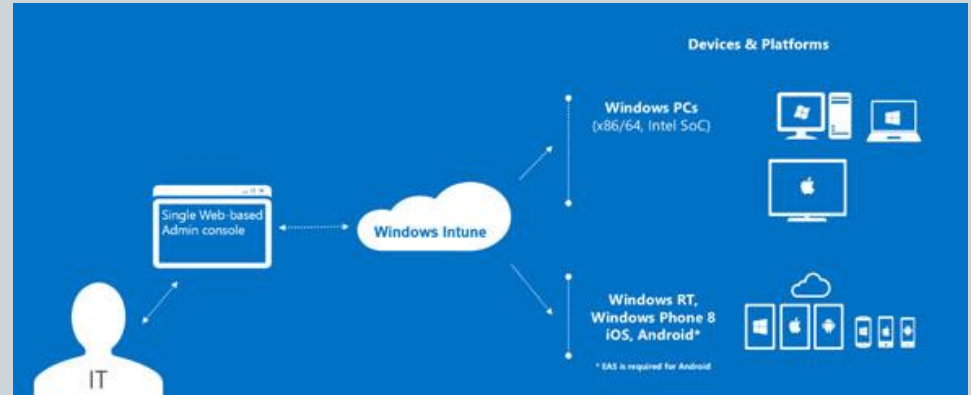
Common OSD issues

- Operating system deployment and OS management
- Power profiles and Connected standby
- Driver enrollment and updates

```
gwmi Win32_PnPSignedDriver | ?{$_.DeviceName -like "*surface*"} | Select DeviceName, DriverVersion, IsSigned
```

Modern Device Management

- AAD & Intune
- Low overhead
- High ROI



DEMO-time!

Device drivers & OOBE AAD Join & SCCM NIC & WSUS driver mgmt

Component related issues

- Drivers
- Firmware

```
$ScriptPath = Split-Path -parent $MyInvocation.MyCommand.Definition
$files = get-childitem -path $Scriptpath -recurse -filter *.inf
foreach ($file in $files)
{
    Write-host "Injecting driver $file"
    pnputil -i -a $file.FullName
}
```

```
gwmi Win32_PnPSignedDriver | ?{$_DeviceName -like "*surface*"} | Select DeviceName, DriverVersion, IsSigned
```

Windows Key + Shift + Ctrl + B = ?

- **That combination tells windows to reset input cards, and graphic cards.** Basically it empties the video buffer and restart the driver, and does the same for the keyboard, the mouse and the soundcard.

Power analysis

- Powercfg
 - powercfg /batteryreport
 - powercfg /sleepstudy
 - powercfg /energy
 - powercfg /a
 - powercfg /qh>power_settings.txt

Recent usage
Power states over the last 3 days

START TIME	STATE	SOURCE	CAPACITY REMAINING
2016-12-01 18:24:39	Active	Battery	100 % 41,428 mWh
18:29:04	Connected standby	Battery	100 % 41,428 mWh
18:50:31	Active	Battery	100 % 41,428 mWh
18:55:30	Connected standby	Battery	100 % 41,428 mWh
19:29:59	Active	Battery	100 % 41,428 mWh
19:30:00	Connected standby	Battery	100 % 41,428 mWh
19:39:23	Active	Battery	100 % 41,428 mWh
19:39:49	Connected standby	Battery	100 % 41,428 mWh
19:39:50	Active	Battery	100 % 41,428 mWh
19:39:51	Connected standby	Battery	100 % 41,428 mWh
20:30:39	Active	Battery	100 % 41,428 mWh
21:01:19	Connected standby	Battery	91 % 37,810 mWh
21:01:49	Active	Battery	91 % 37,795 mWh
21:58:17	Connected standby	Battery	85 % 35,256 mWh
22:04:58	Active	Battery	85 % 35,226 mWh
22:35:00	Suspended		82 % 33,995 mWh
2016-12-02 22:18:54	Active	AC	82 % 33,888 mWh
23:30:00	Suspended		99 % 40,911 mWh
2016-12-03 20:59:33	Active	AC	99 % 41,207 mWh
23:20:00	Report generated	AC	101 % 41,640 mWh

DEMO

Sleepstudy and (connected) standby

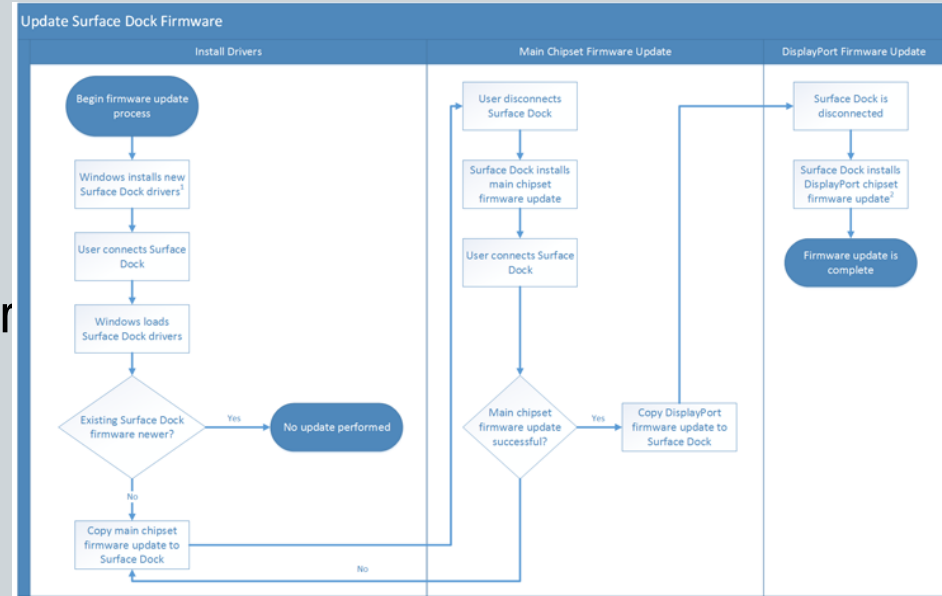
Hardware

- DisplayPort
- USB-C?
- Modern storage

*"If you're not careful, **you can neuter or even damage your devices by using the wrong cable.** Seriously: Using the wrong cable can damage your machine! This should not be possible, but there it is."*

Tools

- Surface Eraser Tool
- Surface Dock Updater
- Surface Troubleshoot Tool
- Surface Deployment Accelerator



Surface Dock update

- Confirming that my Surface Dock is updated

```
Windows PowerShell
Windows PowerShell
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PS C:\Users\chsaetre> Get-WmiObject -Class Win32_PnPSignedDriver | Where-Object {($_.Description -match "Generic SuperSpeed USB Hub")} | Select-Object HardwareID

HardwareID
-----
USB\VID_045E&PID_090B&REV_4705
USB\VID_045E&PID_0902&REV_4695
USB\VID_045E&PID_0900&REV_4694
```

- Surface dock that is not updated have the following PNPID's:
 - Hub1: USB\VID_045E&PID_0900&REV_4694
 - Hub2: USB\VID_045E&PID_0902&REV_4695

The 4694 and 4695 are the firmware revisions

- When you run the Surface Dock Updater tool it updates those PNPID's to this new firmware revisions
 - Hub1: USB\VID_045E&PID_0900&REV_4753
 - Hub2: USB\VID_045E&PID_0902&REV_4754

- Surface Tools for IT: <https://www.microsoft.com/en-us/download/details.aspx?id=46703>

DEMO

Firmware, driver and peripheral update

Recovery

- Download a recovery image
- Refresh Windows Tool

Step 1: Select your product

Option 1: Choose a registered Surface device

[Sign in](#) [Can't sign in?](#)

Option 2: Enter a Surface product serial number

Product	Serial Number
<input type="text" value="Choose a product"/>	<input type="text" value="123ABC0987"/>

Step 2: Download the Surface recovery image

Step 3: Create the recovery drive

Thank you!

aka.ms/nicconf

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