How to prepare clean Windows ISO

Access latest image (February 2024): \\ww.hl.lan\GDN\Groups\RGDNT034 - AIS_TL\Endpoint\AiS\hyper-v -windows iso
There is Windows 10 22H2 HLDEV.iso Image & Windows 11 22H2 HLDEV.iso

Obtain copy of Windows

1. How to get Windows 10 Enterprise ISO

Option 1: via official site

Using the links

- https://www.microsoft.com/en-us/evalcenter/download-windows-10-enterprise
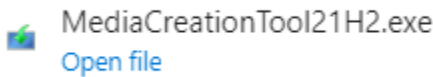
Option 2: via "Media Creation Tool"

You need a Windows Installation *.ISO, if you don't have one - go to Download Windows 10 (microsoft.com)
Find "Create Windows 10 installation media tool" and download it

Lunch freshly downloaded MediaCreationTool22H2.exe:

MediaCreationTool21H2.exe
Open file

use option: Prepare Windows 10 ISO for different machine

Don't save it in "Documents"/"Desktop" or any other network location, as above please use path "c:\hlag\apps\Hyper-v\iso\win10.iso".

In Hapag-Lloyd we use Windows 10 Enterprise, so we should use the same for testing environment.

Using Media Creation Tool (https://www.microsoft.com/en-us/software-download/windows10) on virtual machine with admin rights (choose an option for creating ISO file)

CMD

```
MediaCreationTool22H2.exe /Eula Accept /Retail /MediaArch x64 /MediaLangCode en-US /MediaEdition Enterprise
```

Also you can install with admin rights Windows ADK (https://docs.microsoft.com/en-us/windows-hardware/get-started/adk-install) onto virtual machine - it can help with preparing answer file for unattended installation.

2. How to get Windows 11 Enterprise ISO

Option 1: via official site but Microsoft provides only 23H2 release!

- using the link: Download Windows 11 (microsoft.com)

Option 2: Finding fork of official 22H2 ISO

There is solution on GitHub called MediaCreationTool.bat that downloads from Microsoft servers specific requested version of Windows 10 & 11 in our case we needed 22H2 to match Hapag-Lloyd Standards.

Download from GitHub: AveYo/MediaCreationTool.bat: Universal MCT wrapper script for all Windows 10/11 versions from 1507 to 21H2! (github.com)

Download whole .zip of the code.

Run MediaCreationTool.bat

Select 11_22H2 and then Auto ISO

Wait for ISO to be downloaded

Modification of ISO File

In order to prepare ISO Image I were using PowerShell Module called: Overview - OSDBuilder (osdeploy.com)

Prerequisites needed are:

ISO File of Windows taken directly from Microsoft

Installed Windows ADK on Computer (needed only Image part) Download and install the Windows ADK | Microsoft Learn

Download of attached .xml file to perform automatic OS Installation

Start PowerShell IDE as Administrator

OSDBuilder

```
#Prereq
##Install Windows ADK to create ISO in last step.
##Mount Windows 10 ISO Image from Microsoft

#Install & Import Module
Install-Module -Name OSDBuilder -Force
Import-Module -Name OSDBuilder -Force
#Initialization
Get-OSDBuilder
## Default Path is C:\OSDBuilder
## If you want to use custom path perform
## Get-OSDBuilder -SetPath C:Temp\OSDBuilder\Win10

#Import of needed to do update OS Version if performed manually
#Import-OSMedia
#Automatic import including pushing Updates
Import-OSMedia -Edition Enterprise -Update -BuildNetFX -SkipGrid

#Update source image again to ensure everything is updated
Update-OSMedia -Download -Execute

#Copy autounattend.xml into C:\OSDBuilder\ContentPacks\_Global\Media\ALL
#Push to add
New-OSBuildTask -TaskName HLDEV -CustomName HLDEV

#Perform last updates to source image
Update-OSMedia -Download -Execute

#Perform custom build
New-OSBuild -ByTaskName HLDEV -CreateISO -Download -Execute
```

Possible modifications that can be implemented during the process

Drivers

Drivers can be added to an OS using OSDrivers and WinPE using PEDrivers.

Directories within OSDrivers and PEDrivers are created by default and follows this logical assignment

- OSDrivers\ALL
  Universal Drivers for both x64 and x86
- OSDrivers\$Architecture
  Drivers for a specific Architecture

PowerShell Scripts

PowerShell Scripts can be executed using OSScripts or PEScripts

Directories within OSSCripts and PEScripts are organized using the following structure

- OSScripts\ALL
  Universal PS1 files for both x64 and x86

- OSScripts\$Architecture
  PS1 files for a specific Architecture