

NAME

w11arm_esd2iso - utility to build Windows 11 ARM ISOs from Microsoft ESD files

SYNOPSIS

w11arm_esd2iso [-v]
w11arm_esd2iso [-v] -r *work-dir*
w11arm_esd2iso [-Vh]

DESCRIPTION

In the first form, a Windows 11 ARM 22H2 ESD (Electronic Software Distribution) file is downloaded from Microsoft, and converted to ISO. This ISO can be used to install Windows 11 ARM on physical or virtual machines.

The utility will prompt for the type of ISO to produce (either Home/Pro or Pro/Enterprise) and the language for the created ISO. A list of available languages will be provided to assist in making the ISO language selection.

The generated ISO file is placed in the current working directory. The utility will display the name of the generated ISO file.

In the second form, an interrupted network transfer of the ESD from Microsoft is resumed from the point of interruption and the ISO build process will continue. The *work-dir* argument is required, and is expected to be a work directory created from a prior failed run of the utility.

In the third form, the utility will either print out it's version or a synopsis of command line options, and immediately exit without performing any ISO build.

OPTIONS

- h** Print a synopsis of usage and exit
- r** *work-dir*
Resume an interrupted ESD download using the information from the work directory *work-dir*.
- v** Enable verbose output. Use only when providing debugging output.
- V** Print the version of the utility and exit.

FILES

./esd2iso_work.*
Work directory for ESD download and image creation, located in the current working directory.

DEPENDENCIES

w11arm_esd2iso requires an Apple Silicon (M1/M2) Macs running macOS 13 (Ventura) or later.

Starting with version 3.0, w11arm_esd2iso no longer requires the installation of open-source utilities from Homebrew or MacPorts. All required utilities are provided in the distribution zip file.

EXIT VALUES

0 Successful creation of the ISO file

Non-zero

Unsuccessful creation of the ISO file

NOTES

There are no intentions to make this script run on Windows or Intel Macs.

w11arm_esd2iso only builds ISO media for Windows 11 ARM 22H2. It does not build media for any other versions of Windows or Windows Server.

The current working directory must be changed to the directory where the distribution zip file of w11arm_esd2iso was extracted. The utility must be executed from that directory otherwise the required bundled components will not be found.

Have at least 12 GB of free disk space to run w11arm_esd2iso. Checks are performed for sufficient disk space and the utility will refuse to run if space isn't available.

The w11arm_esd2iso utility contains bundled versions of the open-source wimlib-imagex(1) and aria2c(1) utilities. These will be used if the utilities are not found to be installed with Homebrew/MacPorts. This is done for ease of use - the user does not have to go through the complexity of installing Xcode command line tools, Homebrew/MacPorts, and the packages containing these utilities. In the unlikely event that existing user-installed versions of aria2c and wimlib-imagex present a problem, an uninstall of Homebrew/MacPorts is not necessary. The default behavior of using the bundled utilities can be restored by removing the Homebrew/MacPorts binary directory from the \$PATH variable of the shell being used to run w11arm_esd2iso.

The work directory will be deleted upon successful ISO creation and when most errors are encountered. It will not be deleted if a transfer of the ESD can be restarted using the -r option, or if the final phase of the ESD creation fails.

The command line syntax has changed starting with V4.0 and is not 100% compatible with V3.0.1 and earlier. The functions provided by command line options and arguments are now provided by

interactively prompting the user during the build process.

The -a option has been removed as aria2c(1) is now used for all downloads.

w11arm_esd2iso automatically enables retry and restart features that handle the interruption of ESD downloads from Microsoft due to network connectivity issues. The utility will automatically retry an interrupted download up to 20 times. After 20 retries, the utility will exit, and will display a command (containing the -r option) that can be copy/pasted to resume the ESD download.

The -r option can be used as many times as necessary as directed by the utility to complete the download. In all honesty, it shouldn't need to be used more than once unless you have a really, really bad network connection. Each restart attempt using the -r option will resume a download from the point of interruption of the last execution of the utility.

w11arm_esd2iso will verify the SHA1 hash of the downloaded ESD file against the hash value provided by Microsoft. If the verification fails (indicating a corrupt download), the utility will exit with an error message.

More extensive guidance on the use of w11arm_esd2iso to create Windows 11 ARM virtual machines with VMware Fusion 13 on Apple Silicon can be found in the Unofficial Fusion 13 for Apple Silicon Companion Guide which can be found at <https://communities.vmware.com/t5/VMware-Fusion-Documents/The-Unofficial-Fusion-13-for-Apple-Silicon-Companion-Guide/ta-p/2939907>

EXAMPLES

./w11arm_esd2iso

Download and build a Windows 11 ARM ISO. The user will be prompted for both the type of ISO to create, and the language of the ISO.

./w11arm_esd2iso -r ./esd2iso_work.abcdef

Restart a interrupted download from the point of interruption using the work directory ./esd2iso_work.abcdef left behind from a previous run of the utility.

SEE ALSO

wimlib-image(1), aria2c(1), hdiutil(1)

CREDITS

Information for obtaining Microsoft ESD distributions and Microsoft Product catalog from b0gdanw "ESD to ISO on macOS.txt" <https://gist.github.com/b0gdanw/e36ea84828dbd19e03eff6158f1fc77c>

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SUPPORT

No production level support is available for this script. The author provides best effort response to any issues with no service level targets.

Any questions about this utility should be posted to the VMware Fusion Discussions forum:
<https://communities.vmware.com/t5/VMware-Fusion/ct-p/3005-home>

If you find an error please run the utility with the -v option, then attach the entire output of the utility in a zip file to your post.

AUTHORS

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