

Validate the Integrity of a Downloaded Software File

Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Components Used](#)

[Validation](#)

[Related Information](#)

Introduction

This document describes how to verify the checksum of a software file downloaded from Cisco to a computer and onto any MDS or NX-OS switch.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Validation

From the [Cisco Software Download](#) page, place the cursor over the file you want to download. This gives additional file details, which includes the MD5 and SHA512 checksum, as shown in the image:

Downloads Home > Products > Storage Networking > MDS 9000 Multilayer Directors and Fabric Switches > MDS 9100 Series Multilayer Fabric Switches > MDS 9148S 16G Multilayer Fabric Switch > NX-OS Kick Start-8.1(1)

MDS 9148S 16G Multilayer Fabric Switch

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Release 8.1(1) ☆☆☆☆☆ Release Notes for 8.1(1) My Devices Notifications

File Information	Release Date	Size
Cisco MDS 9148S Multilayer Fabric Switch - Kick Start Image for NXOS 8.1(1) m9100-s5ek9-kickstart-mz.8.1.1.bin	03-MAY-2017	23.85 MB

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Details

Description: Cisco MDS 9148S Multilayer Fabric Switch - Kick Start Image for NXOS 8.1(1)

Release: 8.1(1)

Release Date: 03/May/2017

File Name: m9100-s5ek9-kickstart-mz.8.1.1.bin

Size: 23.85 MB (25008128 bytes)

MD5 Checksum: 2dc155945b35f96e129ca8e143780255

SHA512 Checksum: 8ed2c70b879ed76be2f149f70a1d35c9...

[MDS-Release Notes](#) | [Release Notes for 8.1\(1\)](#) | [Field Notices](#)

On a Windows PC, there is an inbuilt tool, certutil, which you can use with the MD5 or SHA512 hash algorithms (amongst others) to establish the unique checksum of any file.

```
certutil -hashfile <filename> MD5|SHA512
```

Use the previous m9100-s5ek9-kickstart-mz.8.1.1.bin file as an example:

```
<#root>
```

```
c:\Temp>
```

```
certutil -hashfile m9100-s5ek9-kickstart-mz.8.1.1.bin MD5
```

```
MD5 hash of file m9100-s5ek9-kickstart-mz.8.1.1.bin:
```

```
2d c1 55 94 5b 35 f9 6e 12 9c a8 e1 43 78 02 55
```

```
CertUtil: -hashfile command completed successfully.
```

```
c:\Temp>
```

```
certutil -hashfile m9100-s5ek9-kickstart-mz.8.1.1.bin SHA512
```

```
SHA512 hash of file m9100-s5ek9-kickstart-mz.8.1.1.bin:
```

```
8e d2 c7 0b 87 9e d7 6b e2 f1 49 f7 0a 1d 35 c9 2e 75 75 bc 2f 88 1b 49 73 b6 a4 a8 db 44 98 78 2d 14 5c
```

```
CertUtil: -hashfile command completed successfully.
```

```
c:\Temp>
```

On a Mac, you can use **md5** or **shasum -a 512 <filename>** to achieve this:

```
<#root>
```

```
$
```

```
md5 m9100-s5ek9-kickstart-mz.8.1.1.bin
```

```
MD5 (m9100-s5ek9-kickstart-mz.8.1.1.bin) =
```

```
2dc155945b35f96e129ca8e143780255
```

```
$
```

```
shasum -a 512 m9100-s5ek9-kickstart-mz.8.1.1.bin
```

```
8ed2c70b879ed76be2f149f70a1d35c92e7575bc2f881b4973b6a4a8db4498782d145d6da6f4e50871ce9821862a76a726722be3
```

```
m9100-s5ek9-kickstart-mz.8.1.1.bin
```

On a Linux or Unix machine, use **md5sum** or **sha512sum** typically located in /usr/bin, that is:

```
<#root>
```

```
$
```

```
md5sum m9100-s5ek9-kickstart-mz.8.1.1.bin
```

```
2dc155945b35f96e129ca8e143780255
```

```
m9100-s5ek9-kickstart-mz.8.1.1.bin
```

```
$
```

```
sha512sum m9100-s5ek9-kickstart-mz.8.1.1.bin
```

```
8ed2c70b879ed76be2f149f70a1d35c92e7575bc2f881b4973b6a4a8db4498782d145d6da6f4e50871ce9821862a76a726722be3
```

```
m9100-s5ek9-kickstart-mz.8.1.1.bin
```

Once the file is transferred to the MDS or Nexus bootflash, you can check the md5sum or sha512sum with:

```
<#root>
```

```
MDSswitch#
```

```
show file bootflash:m9100-s5ek9-kickstart-mz.8.1.1.bin ?
```

```
<CR>
```

```
> Redirect it to a file
```

```
>> Redirect it to a file in append mode
```

```
cksum Displays CRC checksum for a file
```

```
md5sum
```

Displays MD5 checksum for a file
sha256sum Displays SHA256 checksum for a file

sha512sum

Displays SHA512 checksum for a file
| Pipe command output to filter

MDSswitch#

```
show file bootflash:m9100-s5ek9-kickstart-mz.8.1.1.bin md5sum
```

```
2dc155945b35f96e129ca8e143780255
```

MDSswitch#

```
show file bootflash:m9100-s5ek9-kickstart-mz.8.1.1.bin sha512sum
```

```
8ed2c70b879ed76be2f149f70a1d35c92e7575bc2f881b4973b6a4a8db4498782d145d6da6f4e50871ce9821862a76a726722be3
```

From the previous example, you can see that the m9100-s5ek9-kickstart-mz.8.1.1.bin file off the Cisco Download Software site, the Windows, Mac or Linux PC, and the MDS switch has the same md5sum and sha512sum characters.

This confirms the validity of the file transferred to the switch.

 **Note:** Some earlier NX-OS versions do not have the sha512sum option but md5sum must be present on all versions.

Related Information

- [Cisco Technical Support & Downloads](#)