



Information About Boot Integrity Visibility

Boot Integrity Visibility allows Cisco's platform identity and software integrity information to be visible and actionable. Platform identity provides the platform's manufacturing installed identity. Software integrity exposes boot integrity measurements that can be used to assess whether the platform has booted trusted code.

During the boot process, the software creates a checksum record of each stage of the bootloader activities.

You can retrieve this record and compare it with a Cisco-certified record to verify if your software image is genuine. If the checksum values do not match, you may be running a software image that is either not certified by Cisco or has been altered by an unauthorized party.



Note Boot Integrity Visibility is supported only on the active supervisor. It does not support high availability scenarios.

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Verifying the Software Image and Hardware

This task describes how to retrieve the checksum record that was created during a router bootstrap. Enter the following commands in privileged EXEC mode.



Note On executing the following commands, you might see the message % Please Try After Few Seconds displayed on the CLI. This does not indicate a CLI failure, but indicates setting up of underlying infrastructure required to get the required output. We recommend waiting for a few minutes and then try the command again.

The messages % Error retrieving SUDI certificate and % Error retrieving integrity data signify a real CLI failure.

1. `show platform sudi certificate [sign [nonce nonce]]`
2. `show platform integrity [sign [nonce nonce]]`

Verifying Platform Identity and Software Integrity

Verifying Platform Identity

```

Store-4451# show platform integrity
Platform: ISR4451-X/K9
Boot 0 Version: F01001R06.03c1d3d202013-01-18
Boot 0 Hash: 82597CE130610B8016A6A0FF2851919279857C86966540170E1132C6872A6274
Boot Loader Version: 16.7(4r)
Boot Loader Hash:
5F44054A51B69312283CE03255929D38D938351FDEE7F26A45DCEFCB7F39C3078C65CB966D71DCF984865D30880AB86D5DD70DB31910B94B0AE290E8DA675E3
OS Version: BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127
OS Hashes:
isr4400-universalk9.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.bin:
8448067652482B991F562E7CB99FC1B1C1437BA7FC968A22C717AD1B5D36D1EE1331B6CCFC5427FF9D88847D3B849DF482D92DF631D00BD9A853C065DABEAF1
isr4400-firmware_sm_dsp_sp2700.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
A667AFCD2B9819CE88725B90399131EDA06A0B9EFC0DC4835F02E6EFC23347C717DD6A4659A8C33692344191931D32407EEAA1604F0C152222DF243D5E21D29
isr4400-firmware_nim_shdsl.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
AGE5D11706801FEF7B87B67B71A591176B05955CBA031FAABA23CC41AC715970819F06BD9A85AF945A338E99400211A5061D919C85FA3EC428457F0E498C06C0
isr4400-firmware_nim_ssd.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
F6F6418037171A6C941830EE8481A768C7CFE205F6A807B0196A54BA2A607C78E6CA26F34BFEAB0C04D0CCA05A1AA5E8AECB6C8CF7659E826A2F2DC39888DE
isr4400-firmware_nim_ge.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
97752E79EB8AE4925B74A94603CE5FEE5BF89994531074C55935BF1C79065C474D21F3CF35A9F755110A6875ED425C0A14CA3400D3FB76C47CEEEA1E2A7E3216
isr4400-firmware_sm_async.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
0044338FE6A3E8A8AE61DA5599EB9A2A1B1ED78FBCB2880459F0CF9E750FD685239677755CC6ACE4EFD1CED40A0F63DA0DF5EAB4DF34DE11D4A42D8FCCFBCC
isr4400-firmware_sm_lt3e3.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
54DA6469D00FF20596FDAD7A2687ED6424180E73DA95A87848CE61143BAB51011866759B7CD21F4C77BFCE2219CBE6918A5F60F245E68BA2E22DFB3831CB1E2B
isr4400-firmware_dsp_analogbri.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
9B7B92DEF5B9E2574FC3668A6E2E4F1AOC20D4C895EF99016F51055E56D6195EA41DE31596E8F2D31B5C4B409207F3C04104304E9A9EBC4461606B3614CD57F8C
isr4400-firmware_nim_xdsl.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
A2957CD3005499316638B0AE943F77B02882F1B490899EB43E0D052ED57E299AD3FD82D58589AEC97275DB9AB6D12382C99DF41FD3722D40E01AB7E0201B739D
isr4400-firmware_dsp_sp2700.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
4A6422975EDED6367F40A0FB6C20888414BCD2D9C78A615F8C853584CE360079533B63E2AE9D10C1C4B0BE2F46F409525927A416E7275A34E2D513635486F54
isr4400-firmware_ngwic_tle1.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
001B48A89716B10B6506AAF562495DFD67E8DBF5BF4385A870E8A8B08B8B7A4F7D67230084A344AA9E40B03797E425A8CE289CDB47D06DFD759F56B5D30DE6
isr4400-firmware_sm_10g.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
1B9D88DC2E708015D65A913B42CEF7D42981D2E09EF9B9CEBDC94714F23C6D19D66B9CD5C72F51434A719EDDC640D9F88972BE9CAC742C894A699EE55694FF67
isr4400-firmware_prince.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
E82220CCB45DD66C2A7A99DEA10758FE5AB8C217624BA623A83D1ADAF87FD08E4FC533C028DC8B093184479EB064B36DB6255AA15A91381AE287070C1226EA
isr4400-firmware_dreamliner.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
50AE70E6C115E5339A1299E4ED8C123DE8BBO04CA9A45CA11B716C3013FFDCACD73D53FF043D6EFA36655A56F6872472AF2D57176E2142E0ACC506E64BD2A7DD
isr4400-firmware_nim_bri_st_fw.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
338EDCB41132394919D045E6B957D485F3ACBD160C7561EEF0A8155036DC695F6300291E1444E240975D9D02B45F4DFD36F36C5973D4DD90911DF6F71D9EB4157
isr4400-firmware_nim_cwan.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
AF6FD9A79D92382994FFA292E3129C47024E907E1AC05E13BA44F519D1B95863E7BC2E0BF9A2DD62D153A0D0159131CE034253ADC8EAC8E4662787834BC8DA5E
isr4400-firmware_nim_async.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
DE69E388865BC5E0144FBC96996F35143CA1E3920D84EDA1D97A08281289575B1FA0664CC7B81FC834B4FFA8C91DC1F77CD5CA8323ED078B85374374F63DFD16
isr4400-mono-universalk9.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
6E9CCCA9AD205E2713C0097A0B90B95B61FF27E3BC231916E8E1DE1650131F8168188E7F1CEE4F17A412B83C73D890A9ED0409AB6EBB6F5AA687E043FE154
isr4400-firmware_dsp_tilegx.BLD_V1612_THROTTLE_LATEST_20190517_003908_V16_12_0_127.SSA.pkg:
BA452BC6B6279A97519397D6B90C8CF9C4CDF3BF74F41900EEDF0000D711EF03CE62C3B9878C314B5A339C16B0C963FD41C4DE86C3A36EDED2481C49467B485

```


