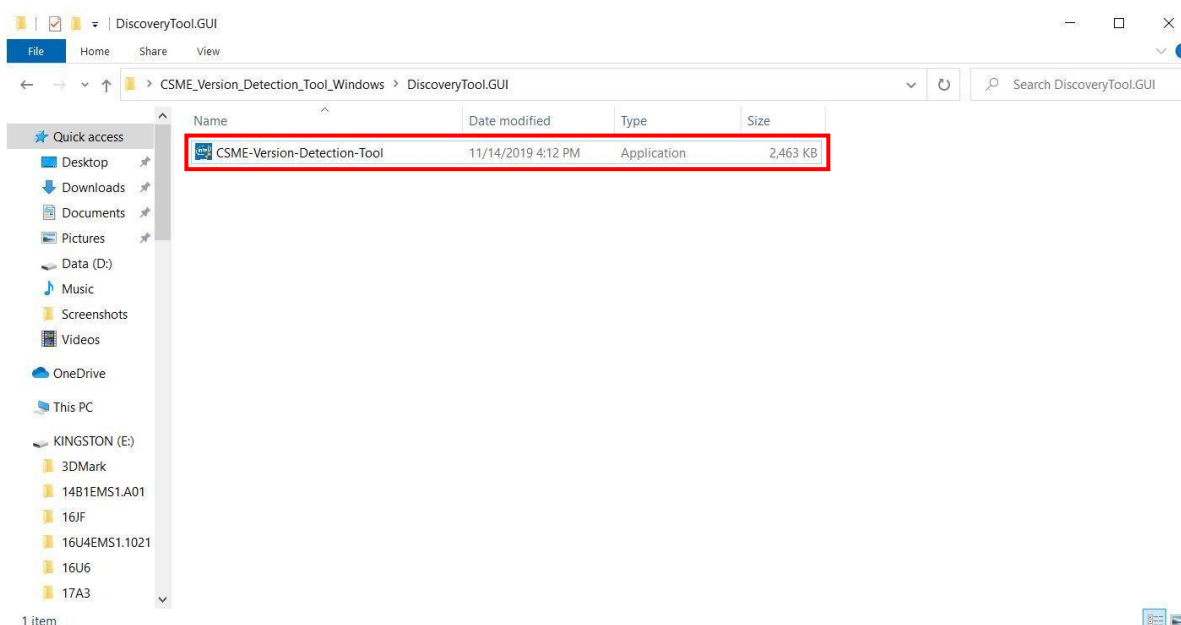


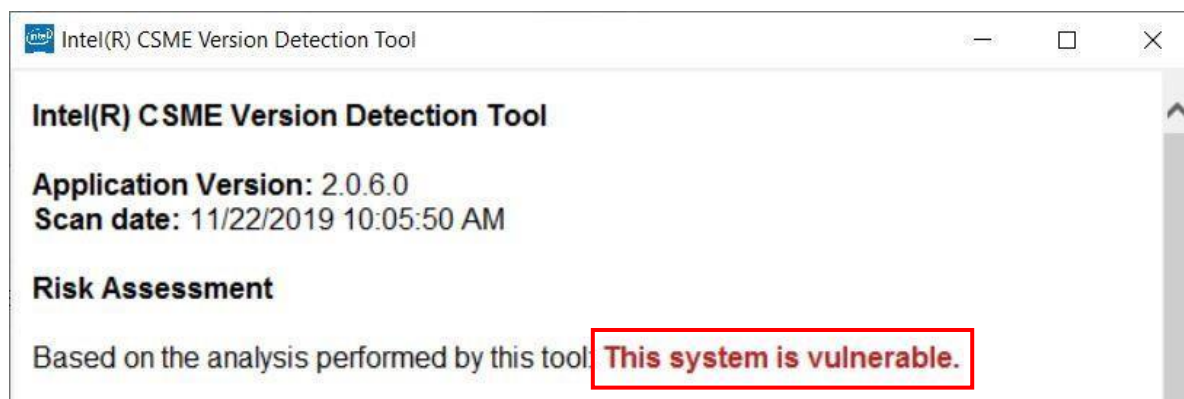
## Intel ME Security Vulnerabilities Firmware Update Guide

### A. Check if the ME firmware update is needed

1. Download the [Intel CSME Detection Tool](#).
2. Extract the file on the desktop and enter the file "DiscoveryTool.GUI".
3. Double click on "CSME-Version-Detection-Tool.exe" run the detection tool.



4. If the result "This system is vulnerable." shows after the risk assessment complete, continue the ME firmware update.



### B. Download and Update BIOS to the latest version released on MSI website.

To keep a stable system environment, make sure to have the latest BIOS updated before the ME firmware update.

5. Download and update the latest BIOS.
6. Reboot the system and press "Delete" button to enter the BIOS menu.
7. Load the optimized default settings and save the configurations by pressing F9 and F10.

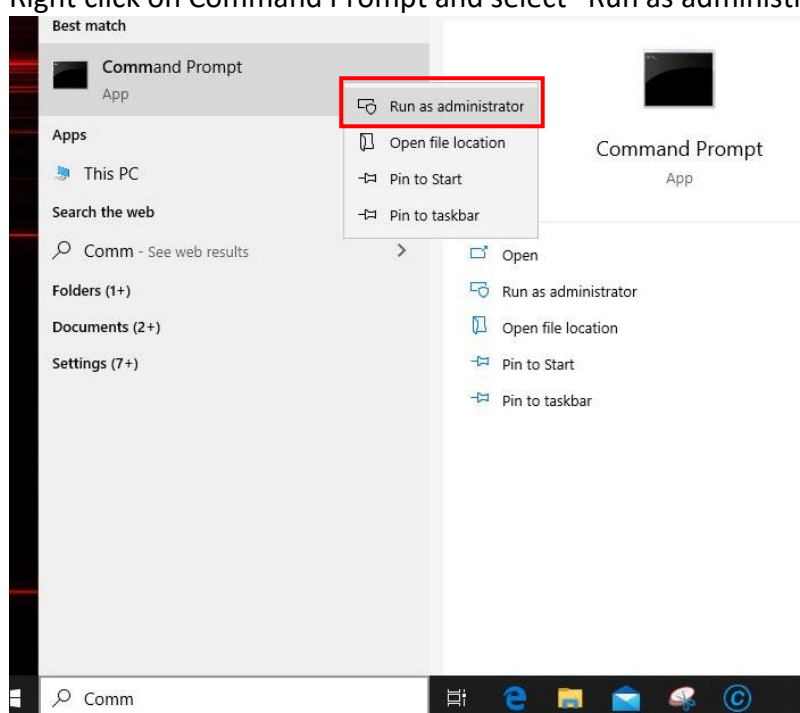
## C. Update Intel ME Firmware

The update has two parts, first updating the ME driver and then continue with the ME firmware update.

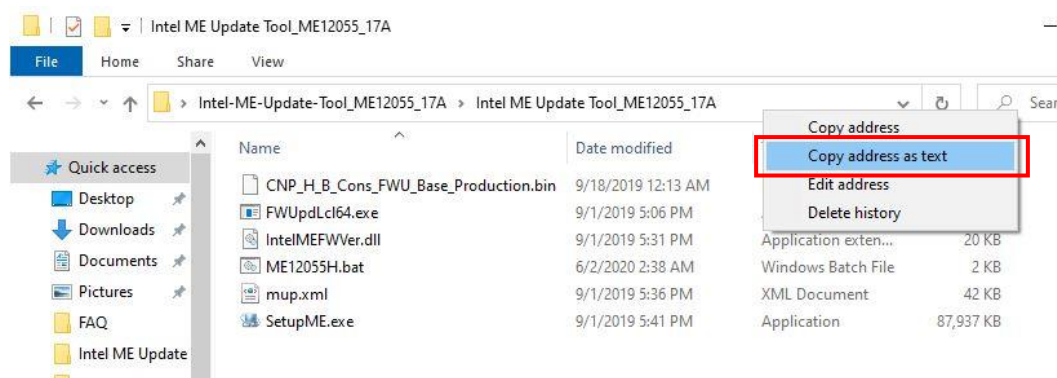
### CAUTION

Make sure the laptop connects to the Internet during the whole update process.

8. Download the ME Update Tool from the BIOS download page.
9. Extract the ME Update Tool “ME12055” onto the desktop.
10. In Windows Search, type “Command Prompt”.
11. Right click on Command Prompt and select “Run as administrator”.



12. In Command Prompt, type “cd \” and press the “Enter” key.
13. Open the folder extracted in Step 9 and go to the location of “ME12055H.bat”.
14. Right click on the address bar and select “Copy Address as text”.



15. In Command Prompt, type “cd”, press the space key once, paste the address copied in Step 14 and press “Enter”.

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.18363.836]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>cd \

C:\>cd C:\Users\MSINB\Desktop\Intel-ME-Update-Tool_ME12055_17A\Intel ME Update Tool_ME12055_17A
```

16. Type “ME12055H.bat” and press “Enter”.

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.18363.836]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>cd \

C:\>cd C:\Users\MSINB\Desktop\Intel-ME-Update-Tool_ME12055_17A\Intel ME Update Tool_ME12055_17A

C:\Users\MSINB\Desktop\Intel-ME-Update-Tool_ME12055_17A\Intel ME Update Tool_ME12055_17A>ME12055H.bat
```

17. The update process will begin.

```
Administrator: Command Prompt - ME12055H.bat

C:\WINDOWS\system32>cd \

C:\>cd C:\Users\MSINB\Desktop\Intel-ME-Update-Tool_ME12055_17A\Intel ME Update Tool_ME12055_17A

C:\Users\MSINB\Desktop\Intel-ME-Update-Tool_ME12055_17A\Intel ME Update Tool_ME12055_17A>ME12055H.bat
*****

Check internet access first, please wait.
*****

Updating Intel ME driver part...
Done.

Updating Intel ME firmware part ...
Intel (R) Firmware Update Utility Version: 12.0.55.1522
Copyright (C) 2005 - 2019, Intel Corporation. All rights reserved.

Checking firmware parameters...

Warning: Do not exit the process or power off the machine before the firmware update process ends.
Sending the update image to FW for verification: [ COMPLETE ]

FW Update: [ 2% (/)] Do not Interrupt
```

18. Once the update process is done, the laptop will restart automatically.

## D. Confirm the Security Vulnerabilities has been patched

19. Run CSME Version Detection Tool again.
20. The assessment result should now shows “This system is not vulnerable. It has already been patched.” or “The system is not vulnerable”.

