

# COMPUTER SYSTEMS SERVICING NC II

## **COC 1:** Install and Configure Computer Systems

### **Module 14:**

### **Flash update BIOS/UEFI**



**Computer systems Servicing – Grade 11**  
**Quarter 1 – Module 14: Flash Update BIOS/UEFI**  
**First Edition, 2020**

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# Quarter 1

## Self-Learning Module 14

### Flash Update BIOS/UEFI



# Introductory Message

For the Facilitator:

Welcome to the Computer Systems Servicing Grade 11 Self-Learning Module on Flash update BIOS/UEFI!

This Self-Learning Module was collaboratively designed, developed and reviewed by educators from the Schools Division Office of Pasig City headed by its Officer-in-Charge Schools Division Superintendent, Ma. Evalou Concepcion A. Agustin, in partnership with the City Government of Pasig through its mayor, Honorable Victor Ma. Regis N. Sotto. The writers utilized the standards set by the K to 12 Curriculum using the Most Essential Learning Competencies (MELC) in developing this instructional resource.

This learning material hopes to engage the learners in guided and independent learning activities at their own pace and time. Further, this also aims to help learners acquire the needed 21st century skills especially the 5 Cs, namely: Communication, Collaboration, Creativity, Critical Thinking, and Character while taking into consideration their needs and circumstances.

In addition to the material in the main text, you will also see this box in the body of the module:



## ***Notes to the Teacher***

This contains helpful tips or strategies that will help you in guiding the learners.

As a facilitator you are expected to orient the learners on how to use this module. You also need to keep track of the learners' progress while allowing them to manage their own learning. Moreover, you are expected to encourage and assist the learners as they do the tasks included in the module.



For the Learner:

Welcome to the Computer Systems Servicing Grade 11 Self-Learning Module on Flash update BIOS/UEFI!

This module was designed to provide you with fun and meaningful opportunities for guided and independent learning at your own pace and time. You will be enabled to process the contents of the learning material while being an active learner.

This module has the following parts and corresponding icons:



**Expectations** - This points to the set of knowledge and skills that you will learn after completing the module.



**Pretest** - This measures your prior knowledge about the lesson at hand.



**Recap** - This part of the module provides a review of concepts and skills that you already know about a previous lesson.



**Lesson** - This section discusses the topic in the module.



**Activities** - This is a set of activities that you need to perform.



**Wrap-Up** - This section summarizes the concepts and application of the lesson.



**Valuing** - This part integrates a desirable moral value in the lesson.



**Posttest** - This measure how much you have learned from the entire module.







## EXPECTATIONS

After completing this lesson, you should be able to:

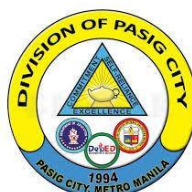
1. understand the purpose of BIOS/UEFI Flash Update;
2. identify the procedures in BIOS Flash Update;
3. appreciate the importance of BIOS Flash Update.

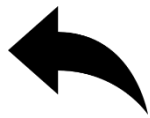


## PRETEST

**Directions:** Read carefully the following questions. Choose the letter of the best answer and write it on your notebook.

1. Serves as a sort mechanism, test and disable your hardware. It also dictates boot devices, CPU-boosting software, overclock settings, and a number of other parameters.  
A. POST  
B. CMOS  
C. BIOS  
D. UEFI
2. The most recent version of the BIOS. shares many similar features with old-school often referred to as legacy BIOS versions.  
A. POST  
B. CMOS  
C. BIOS  
D. UEFI
3. A computer involves deleting the program to load another version of the same app from a disk. The cycle derives its name from the use of flash instead of mechanical memory by the BIOS.  
A. Deleting  
B. Flashing  
C. Booting  
D. Formatting
4. The following Updates to UEFI BIOS consist of two primary files, which are those?  
A. TXT/EXE file  
B. TXT/SXE file  
C. TXT/FXE file  
D. TXT/VAT file
5. The best way to find your BIOS edition is by typing \_\_\_\_\_into the Windows search bar to open the Device Details app.  
A. msmis  
B. msinfo  
C. msflsh  
D. msexex





## RECAP

In the previous module, you have learned about Power on Self-test and Basic-Input-Output-System (BIOS) configuration procedures. You were made aware that when power is turned on, POST (Power-On Self-Test) is the diagnostic check sequence performed by a computer's standard input / output mechanism (or "start program") to decide if the computer keys, random access memory, disk drives, and other hardware are operating properly. And the key role of a computer's BIOS is to control the early stages of the initialization process, ensuring the operating system is loaded into memory correctly. With these, you can perform POST and BIOS configuration. This module is a continuation of the previous topic where you will know how to update or flash your BIOS/UEFI.



## LESSON

Most PC users go without upgrading their BIOS. After all, PC output is also not influenced by the BIOS update. And why would you do that? There are two words: continued stability. An outdated BIOS can reduce PC performance, lower PC reliability, weaken overclock settings, and remain incompatible with some devices. When faced with problems, most computer users would try everything in the book without knowing their problems emanating from an outdated BIOS. The general advice is: you're good before you start finding problems with hardware reliability.

### What Is a UEFI BIOS?

The BIOS (Basic Input / Output System) serves as a sort mechanism, test and disable your hardware. It also dictates boot devices, CPU-boosting software, overclock settings, and a number of other parameters.

**BIOS** stands for the basic input and output system, and the BIOS chip must configure the other components on your PC, such as the CPU, GPU, and motherboard chipset. Yet a few years back, motherboard makers, in collaboration with Microsoft and Intel, launched a replacement for standard BIOS chips called UEFI.



Image 1.1 BIOS



The **UEFI** (United Extensible Firmware Interface) is the most recent version of the BIOS. UEFI BIOS shares many similar features with old-school — often referred to as legacy — BIOS versions. The greatest breakthrough of the UEFI BIOS is its clickable and more open user interface (UI).

UEFI BIOS also offers fantastic additional functionality such as device debugging, more easy overclocking usability, overclocking profiles, and faster flashing capability. The emergence of UEFI BIOS versions has made way for large (2.2 TB) storage structures that would not operate on the legacy BIOS. It also allows pre-boot environments that can be used when needed to move files, diagnose issues, and even browse the internet without the need for an operating system (OS).

That version of BIOS depends on the model and the make of the motherboard. Some older motherboards won't make a UEFI BIOS while new motherboards will. Nonetheless, the procedure for updating the BIOS is basically the same. Updates to UEFI BIOS consist of two primary files:

- A TXT file that lists unique changes made to this version of the BIOS.
- The real EXE file for an update to your BIOS. Before downloading, read out the text address.

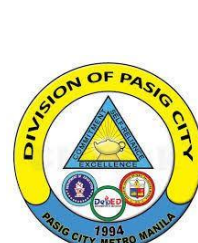
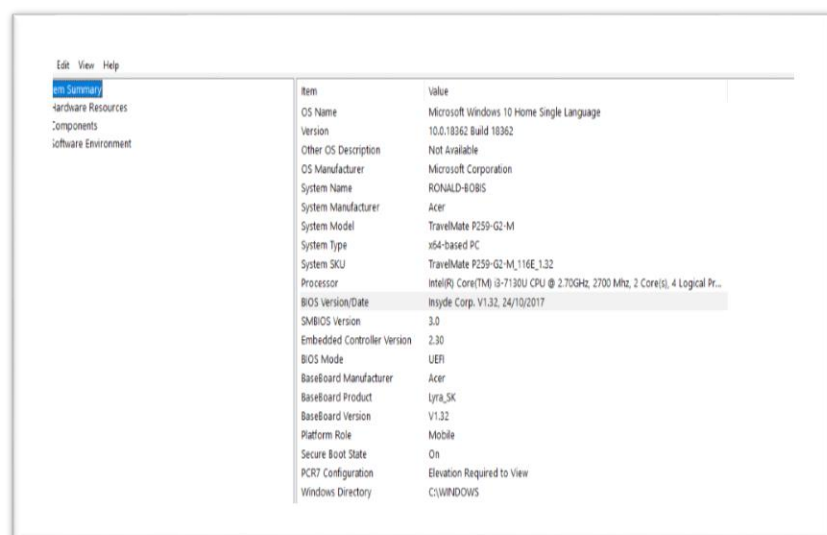
You should find you are unable to access the EXE file like a normal executable program. The file will be flashed, instead of loading it.

**Flashing** a computer involves deleting the program to load another version of the same app from a disk. The cycle derives its name from the use of flash instead of mechanical memory by the BIOS.

## How to update/flash your PC BIOS

**1. Find the latest version of the BIOS:** Make sure that you are actually downloading a new version before updating the BIOS. The best way to find your BIOS edition is by typing **msinfo** into the Windows search bar to open the Device Details app. Your BIOS version will appear in the window that opens to the right, under your processor speed. Type your version number and date, then compare it to the new version available on the support page of the manufacturer's website on your motherboard.

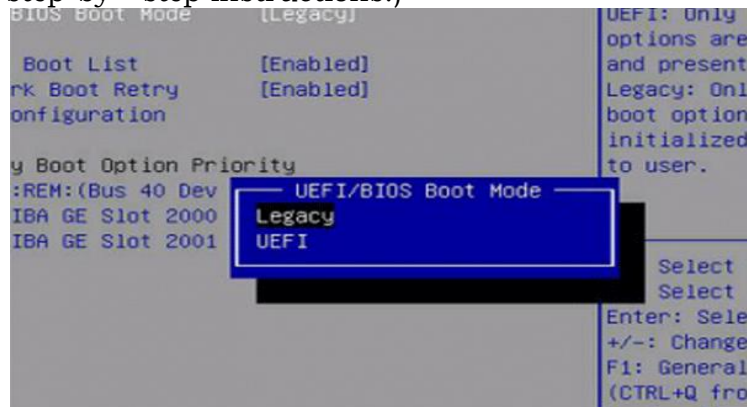
**Image 1.2**  
msinfo





**2. Enter the UEFI BIOS:** After booting your PC, you will see text that tells you which button to press to access the UEFI BIOS. (The exact button needed, and the actual UEFI control panel configuration of each motherboard varies, so these instructions would be more guideposts than step-by - step instructions.)

**Image 1.3**  
UEFI/BIOS  
mode

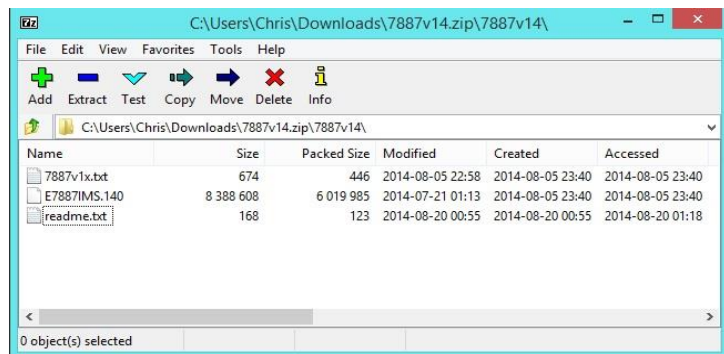


**3. Boot into the UEFI control panel (where possible):** While not all motherboards provide this feature, you can boot into the UEFI control panel on some models and use an integrated update tool to connect to the internet and flash the new firmware from the server of the manufacture. This incredibly pleasant function makes the upgrading as painless as possible to newer firmware revisions.

**4. Find the latest BIOS update from the support page of your motherboard:** go to the support page on the website of the manufacturer for your motherboard. In the support and downloads area, the new BIOS update should be available.

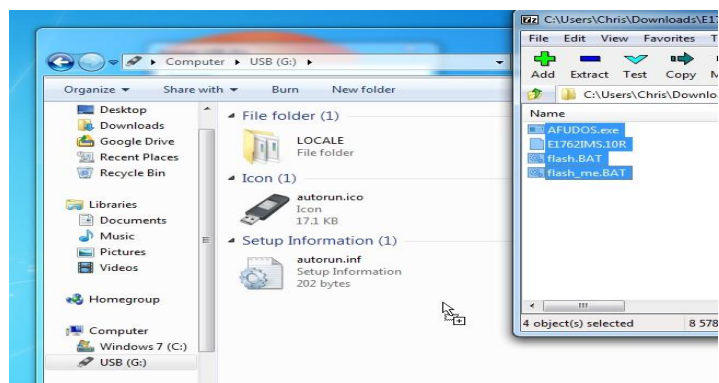
**5. Download and unzip the update file for BIOS.**

**Image 1.4**  
unzipping EXE  
file



**6. Transfer update file onto a USB flash drive.**

**Image 1.5** EXE  
file copying



**7. Reboot your PC to the UEFI control panel.**

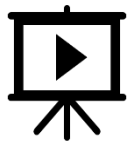
**8. Start the firmware upgrade tool or flashing tool of UEFI and back up to your flash drive the current firmware of your PC:** this will protect you if something goes wrong.

**9. Using the same UEFI tool to pick the new firmware file you saved on the flash drive:** running the firmware update tool should take just a few minutes, just make sure you don't shut down your PC during this phase. This is crucial.

**10. Restart your system until the flashing cycle is finished:** Your modified computer BIOS is ready to rock.

Your BIOS upgrade can require several restarts to the BIOS, so wait until the entire process is complete. Then enter your BIOS again, or use the command prompt form to search your BIOS update. Your recently revised BIOS edition will be available at the top of the screen.

That's it! There's a fair amount of stigma around updating the BIOS unless it's absolutely necessary, but the procedure is really easy, painless, and in the future, it can eliminate some PC issues.



## ACTIVITIES

**A. Direction:** Rearrange the following procedures in their proper order. Use numbers to indicate their order of precedence. The first number is done for you.

### Update/Flash your PC BIOS

- 10 1. Restart your system until the flashing cycle is finished.
- \_\_\_ 2. Download and unzip the update file for BIOS.
- \_\_\_ 3. Transfer update file onto a USB flash drive.
- \_\_\_ 4. Boot into the UEFI control panel (where possible).
- \_\_\_ 5. Find the latest version of the BIOS.
- \_\_\_ 6. Enter the UEFI BIOS.
- \_\_\_ 7. Start the firmware upgrade tool or flashing tool of UEFI and back up to your flash drive the current firmware of your PC.
- \_\_\_ 8. Reboot your PC to the UEFI control panel.
- \_\_\_ 9. Find the latest BIOS update from the support page of your motherboard.
- \_\_\_ 10. Using the same UEFI tool to pick the new firmware file you saved on the flash drive.

**B. Directions:** Create an infographic showing the steps you have on the first activity.





## WRAP-UP

This module talked about updating/flashing BIOS/UEFI. Specifically, it discussed how to flash update BIOS/UEFI, and the proper way to do it. Also, how to find the version of BIOS/UEFI.

In addition, most of those considerations for BIOS upgrades include: Hardware upgrades newer changes to the BIOS would allow the motherboard to accurately recognize new hardware such as processors, RAM, etc. If you have updated your CPU, and the BIOS does not remember it, the solution could be a BIOS light. Security upgrades the new BIOS upgrades arrive with security improvements that help the BIOS survive modification and improve detection of viruses in the boot sector if the motherboard allows boot sector scanning. And increased stability as motherboards contain bugs and other problems, the manufacturer must release BIOS patches to correct and repair those bugs. It will effect directly on data transmission and retrieval speeds.

Now, as learners, aside from the several points mentioned above. You can use the blank spaces provided in the next page to answer and react to the following cases or scenarios:

- Would you be able to make use of this knowledge obtained in this module? In what particular scenario would it be?

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- What are the challenges you encountered in learning this module?

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# VALUING

**DIRECTION:** Read and answer the following questions carefully in two to three sentences each number.

1. What is the essence of following the correct procedures in updating/flashing your BIOS/UEFI?

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2. How will you use the knowledge you acquired about updating/flashing your BIOS/UEFI?

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3. Cite a situation in which you can apply the knowledge of understanding updating/flashing your BIOS/UEFI?

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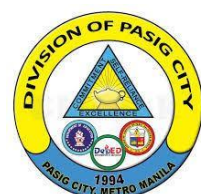
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## POSTTEST

**Direction:** Write *T* on the line if the statement is correct and *F* if the statement is wrong.

\_\_\_1. The emergence of UEFI BIOS versions has made way for large (1.2 TB) storage structures that would not operate on the legacy BIOS.

\_\_\_2. That version of BIOS depends on the model and the make of the motherboard. Some older motherboards won't make a UEFI BIOS while new motherboards will.

\_\_\_3. The greatest breakthrough of the UEFI BIOS is its clickable and more open user interface (UI).

\_\_\_4. You should find you are unable to access the EXE file like a normal executable program. The file will be gone, instead of loading it.

\_\_\_5. Make sure that you are actually downloading a new version before updating the BIOS.

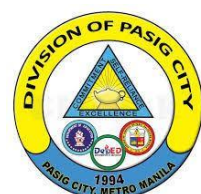
\_\_\_6. The best way to find your BIOS edition is by typing **msvbn** into the Windows search bar to open the Device Details app.

\_\_\_7. An outdated BIOS can reduce PC performance, lower PC reliability, weaken overclock settings, and remain incompatible with some devices.

\_\_\_8. a few years back, motherboard makers, in collaboration with Microsoft and Intel, launched a replacement for standard BIOS chips called UEFI.

\_\_\_9. The UEFI (United Extensible Firmware Interface) is the most recent version of the BIOS.

\_\_\_10. Flashing a computer involves deleting the program to load another version of the same app from a disk.







# KEY TO CORRECTION

1. C	1. F	1. 10
2. D	2. T	2. 8
3. B	3. T	3. 7
4. A	4. F	4. 4
5. B	5. T	5. 9
<b>Posttest Key to correction</b>		
1. C	1. F	1. 10
2. D	2. T	2. 8
3. B	3. T	3. 7
4. A	4. F	4. 4
5. B	5. T	5. 9
<b>Activity Key to correction</b>		
1. 10	1. 10	1. 10
2. 5	2. 5	2. 5
3. 6	3. 6	3. 6
4. 3	4. 3	4. 3
5. 1	5. 1	5. 1
6. 2	6. 2	6. 2
7. 8	7. 8	7. 8
8. 7	8. 7	8. 7
9. 4	9. 4	9. 4
10. 9	10. 9	10. 9

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