

Учебное пособие



**English for  
System administrators**

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**English for system administrators**

«Издательские решения»

**Губарева С. А.**

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Данный самоучитель предназначен для начинающих и практикующих системных администраторов, инженеров облачных сервисов и девопс-инженеров с языковым уровнем А2. С ним вы повторите необходимые грамматические конструкции и устойчивые выражения для ведения делового разговора, написания резюме и прохождения интервью, а также основные технические термины, которые используются каждый день.

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# **English for system administrators**

**Светлана Алексеевна Губарева**

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## Foreword / Предисловие

Данное учебное пособие предназначено для начинающих и практикующих системных администраторов, инженеров облачных сервисов и девопс инженеров с языковым уровнем А2.

Цель – обеспечение технических специалистов лексическим и грамматическим минимумом, необходимым для понимания терминологии, принятой в профессиональной среде на международном уровне, чтения и перевода текстов профессиональной тематики, а также выработки коммуникативных навыков.

Каждый раздел сопровождается списком слов и кратким списком целей. Упражнения предполагают индивидуальную работу.

Памятка для самостоятельной работы:

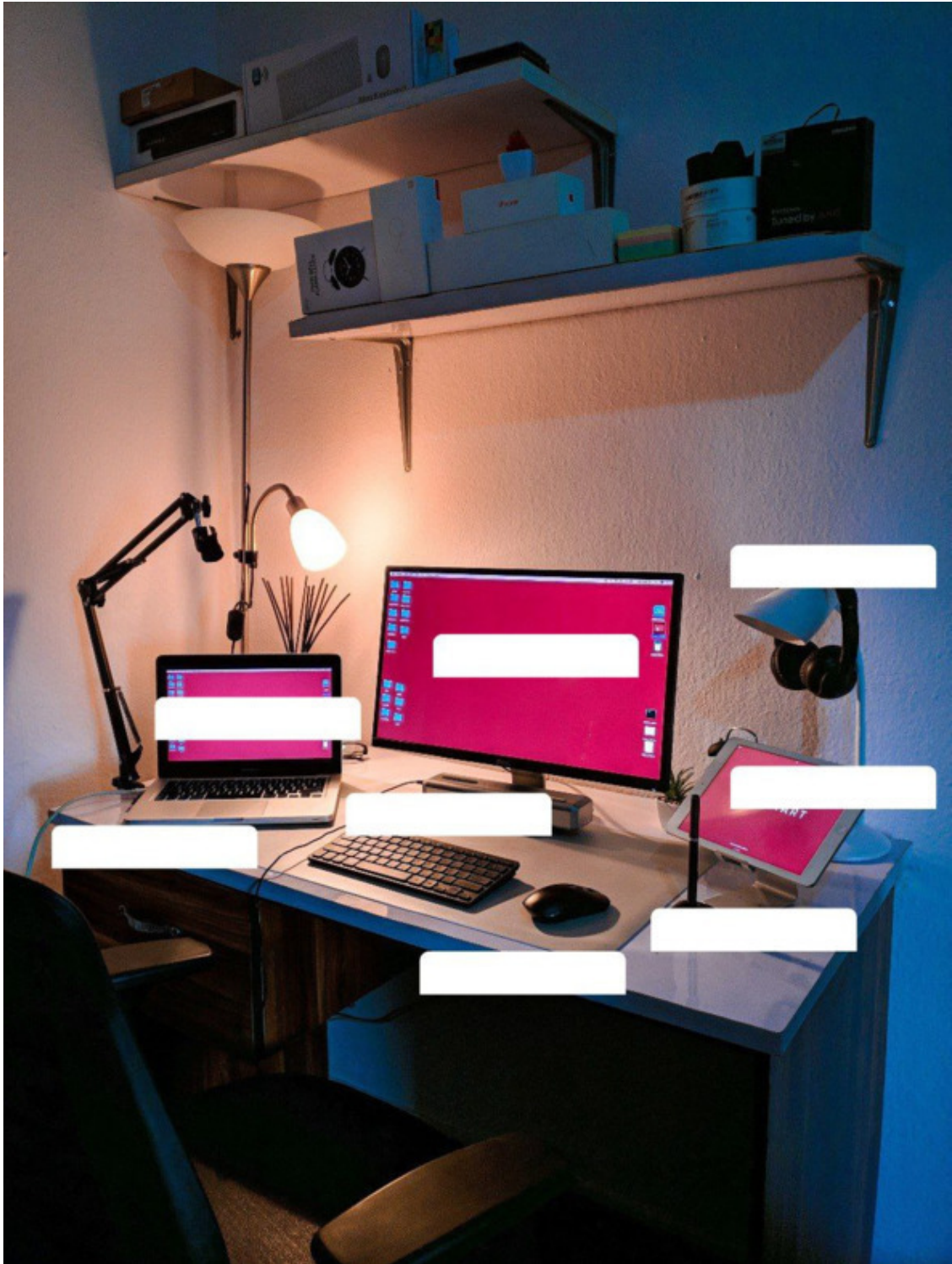
1. Выполняйте задания в юнитах по порядку;
2. Внимательно читайте формулировки заданий;
3. Ответы на тренировочные упражнения стоит смотреть после того, как задание полностью сделано;
4. При возникновении трудностей грамматического характера проанализируйте сначала, почему вы приняли решение дать именно такой ответ, далее посмотрите и попытайтесь понять ответы. Далее перечитайте правила и перепроверьте себя еще раз. Это поможет в дальнейшем не допустить повторения ошибок;
5. Используйте рефлексивный блок *Now you know* после прохождения юнита или при возникновении трудностей с лексикой. Отмечайте пункты, которые вы поняли и изучили, а также выписывайте и тренируйте новые слова дополнительно. Для этого можете использовать метод «карточек» (на одной стороне английское слово – на другой его перевод);
6. После прохождения всех юнитов сделайте итоговый тест. При возникновении сложностей с лексикой или грамматикой вернитесь в соответствующий юнит для повторения.

## Unit 1. Computers

1. Answer the following questions:

- What devices do you use?
- What are the components of a hardware of your device?
- Do you want to change your device to the new one? Why?

2. Look at the picture and name the computer items that you see:



3. Read the text and match the headings with the paragraphs:

- a. Hardware components
- b. The difference between hardware and software
- c. Types of computers

1) Nowadays there are three common computer types which people use widely: desktop personal computer (PC), laptop and tablet. PC is a very popular type for IT specialists who work in an office or at home DUE TO its monitor which is larger than monitors of other devices.

Desktop personal computers usually have the following hardware: monitor, keyboard, mouse, computer case, motherboard, fixed or removable storage drives, and power supply. ADDITIONALLY, they may contain modems or network interfaces. As all elements are separated, the user can create his own «ideal computer» by disassembling and changing inconvenient elements. The only disadvantage of a desktop computer is that it is quite big and heavy for transporting.

IN COMPARISON WITH PCs laptops are portable and have smaller components. Typical laptops have keyboard, display, and processor in one package. The monitor can be closed for screen and keyboard protection and safe transportation. Instead of a mouse, laptops have a touchpad which is located near a keyboard.

One more portable computer is a tablet. Tablets UNLIKE laptops use a touch screen or foldable keyboard and weigh even less than laptops. Some tablets especially graphic ones have a stylus – special pen to write or draw right on the screen.

2) Each electronic device consists of hardware and software which work together for greater performance. Computer hardware represents physical and tangible components of a computer or its analogue which can be seen and touched while software consists of programs and written instructions (code) that give commands to physical components.

3) Hardware is divided into two major groups: internal and external (peripheral) components. Internal components operate inside a computer, for example motherboard and RAM. External components can be categorized into output devices (for getting results) such as monitor and printer, and input devices (to provide instructions) for including information to the computer (mouse, keyboard) and external memory storage devices (CD, hard disk etc.). TO SUM UP WITH, computers need internal hardware components for the proper functioning ALTHOUGH external ones are attached to the computer to add functions.

4. Read the text once again and mark sentences True or False:

1. You can change any elements you want to in a desktop computer.
2. The only difference between PCs, laptops and tablets is their size.
3. Software perform better tasks with hardware.
4. Software consists of internal and peripheral components.
5. Output devices allow users to send data to the computer while input devices take information from the computer and present it on a screen.
6. External hardware components are those components which can be connected and disconnected.

5. Look at the linking words in bold in the text and write them into correct columns:

Additional ideas	Comparison	Reason	Contrast	Conclusion

6. Connect the sentences using the phrases from ex.5 in one text:

Asus Rog Chakram X mouse has 11 buttons.

Rog mouse has a portable joystick which not everyone will use, it suits for people who can't use flat mouses.

Gaming mouse costs a lot.

Asus Rog mouse is good for gaming.

Asus Marshmallow Mouse MD100 has only 3 buttons.

The flat Marshmallow mouse's design isn't for everyone but people can transport it easily.

Asus Marshmallow is suitable for office workers.

7. Match the sentences with their grammar structures:

1.Laptops are portable.	a) he/she/it + Vs
2.PC is one of the most popular types.	b) you/we/they + are
3.Laptops have a touchpad.	c) he/she/it + is
4.Each electronic device consists of hardware and software.	d) you/we/they + V

8. Read the rules:

Present Simple

If there is no verb	+	-	?
I	am	am not	Am I...?
he/she/it	is	isn't	Is he/she/it...?
you/we/they	are	aren't	Are you/we/they...?

If there is a verb	+	-	?
I/you/we/they	V	don't + V	Do I/you/we/they + V...?
he/she/it	Vs	doesn't + V	Does he/she/it + V...?

Pay attention:

When the verb ends in -ch, -ss, -sh or -x we add -es (watch – watchES)

When the verb ends in a consonant (согласная) + y → we change y into i and add -es (study – studies)

Exception: go – goes.

We use Present Simple:

– to talk about our daily routine and habits (I work remotely.);

– to talk about facts (Tablets use a touch screen.).

9. Rewrite the sentences in Present Simple:

- a. I fix bugs – He \_\_\_\_\_ bugs.
- b. You ask James – He \_\_\_\_\_ James.
- c. They try to deploy it – My colleague \_\_\_\_\_ to deploy it.
- d. All team members write reports – Lewis \_\_\_\_\_ a report.
- e. They fly to Paris – She \_\_\_\_\_ to Paris.
- f. These streamers play games – This streamer \_\_\_\_\_ games.
- g. We watch a detective – Nana \_\_\_\_\_ a detective.
- h. I study Spanish – He \_\_\_\_\_ Spanish.

10. Transform the sentences to the negative ones:

- 1) They travel every year. -> \_\_\_\_\_
- 2) I work all day. -> \_\_\_\_\_
- 3) Mary wears a uniform. -> \_\_\_\_\_
- 4) They are good friends. -> \_\_\_\_\_
- 5) Kevin is from England. -> \_\_\_\_\_
- 6) He agrees with you. -> \_\_\_\_\_
- 7) I'm 32. -> \_\_\_\_\_
- 8) We enjoy working here. -> \_\_\_\_\_

11. Read the text and put the verbs into Present Simple:

<p>Karl _____ an unlucky photographer. He _____ taking photos of beautiful places in his city and he _____ a professional camera for it. Karl _____ only one memory card to store more photos. But every time something _____ wrong with his memory cards: he often _____ them.</p> <p>His friends _____ in an electronics shop. They _____ him to choose new memory cards but they _____ him to buy something expensive because of Karl's distraction.</p> <p>After taking lots of photos, Karl _____ the memory card out of the camera and _____ it into his computer. Then he can delete some photos if he _____ them. Sometimes he also _____ them with his parents. They usually _____ in love with all his photos and _____ him. His mother _____ to say: «These photos _____ perfect! I can't imagine that this place _____ somewhere here! » And his father always _____: «No way, it _____ our park. Trees there _____ so big and green. »</p>	BE	LOVE
	USE	
	NOT HAVE	
	GO	
	LOOSE	
	WORK	HELP
	NOT WANT	
	TAKE	
	PUT	
	NOT LIKE	SHARE
FALL		
MOTIVATE	LIKE	
BE	BE	
SAY		
NOT BE	NOT BE	

12. Correct mistakes:

- 1) Are you have two monitors at work?
- 2) She want to buy stylus.
- 3) They not know where it is.
- 4) Look! The design of this laptop am awesome!
- 5) He don't like writing reports.
- 6) She is productive?
- 7) We all works together as a team.

- 8) There is a printer in your office?
- 9) Relax, you isn't late.
- 10) John use it for making calls.

13. Form the questions in Present Simple and answer them:

Structure: question word (who/where/when...) + auxiliary verb (verb that shows grammar tense e.g. do/does) + subject (who does action) + main verb...?

Example: Where (question word) do (auxiliary verb) you (subject) go (main verb) to have lunch?

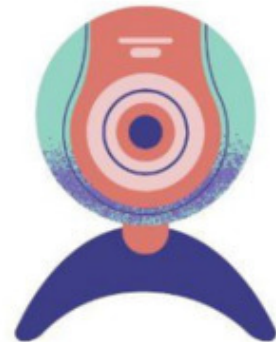
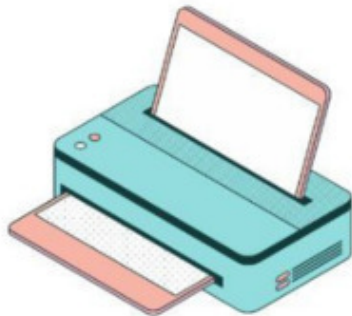
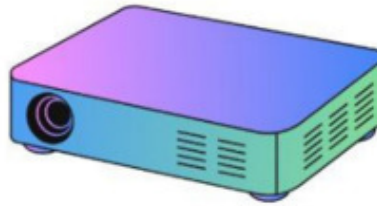
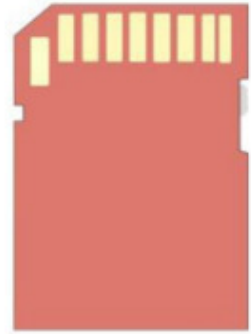
- a. you/laptops or PCs/prefer?
- b. when/start/you/a work day?
- c. like/you/where/working?
- d. your company/what equipment/new employees/provide to?
- e. have/your keyboard/a touchpad?
- f. you/what professional YouTube channels/follow?

14. Put the following components to the correct category according to the definitions of input and output components from the text:

stylus monitor keyboard microphone scanner headphones/earphones USB flash drive  
printer camera mouse projector joystick speaker touchpad memorycard numpad

External input components	External output components	Memory storage devices

15. Look at the pictures. Say what you see and what people use it for:



16. Read the message from your friend and write the reply in Present Simple using useful phrases from ex.5 and input/output components:

For your information: wanna=want to (slang)

Hi, can you please help me? I decided to create an account on a streaming platform, but, you know, my PC is really awful! So, I wanna assemble my own computer to have a nice sound, cool picture (of the game and me, of course) and all other needed devices for streaming games. Please, help me to create a to-buy list of things that I need. Thanks in advance!

Dmitry

---

Now you know:

- computer types and its common input and output components;
- how to use Present Simple;
- useful phrases for adding, comparing, contrasting, concluding your ideas and for giving reasons.

Vocabulary:

<p>laptop — ноутбук          PC (personal computer) — компьютер          monitor — монитор          tablet — планшет          keyboard — клавиатура          mouse — мышка          headphones/earphones — наушники          touchpad — тачпад          stylus — стилус          printer — принтер          UPS (uninterruptible power supply) — источник бесперебойного питания          speaker — звуковая колонка          projector — проектор          microphone — микрофон          web camera — веб камера          scanner — сканнер          memory card — карта памяти</p>	<p>USB flash drive — флэшка          joystick/gamepad — джойстик          numpad — цифровая клавиатура          remote control — пульт управления          power bank — переносное зарядное устройство          internal — внутренний          external — внешний          removable — съемный          foldable — складной          inconvenient — неудобный          to contain — содержать          to disassemble — разбирать          to weigh — весить          to consist of — состоять из          to divide — разделять          to categorize — классифицировать          to attach — прикреплять</p>
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## Unit 2. Computer hardware

1. Answer the questions:

- What computer hardware do you know?
- What are the functions of computer hardware components?

2. Read the text and match the words with their translations:

Internal computer hardware components:

Computers need internal components to process and store data delivered by a program or operating system. The user can find them inside the computer case:

CPU – the processor, which CAN BE CALLED the brain of the computer. It performs the basic operations. Its productivity CAN BE DETERMINED BY the quantity of cores, clock speed, the amount of cache memory and the structure of information processing.

Motherboard – a central hub that serves to interconnect information flows between all hardware components

RAM (random access memory) – temporary memory processing in real time. The larger the memory size is, the faster PC will run. RAM data IS CLEARED after switching off the computer.

Hard drive/hard disk drive – physical storage device for permanent and temporary data.

SSD (solid-state drive) – a modern non-volatile solid-state drive that replaced HDD. Its goal is to store data safely even when the computer IS TURNED OFF.

Optic drive – drive that locates in an on-device drive bay. It enables the computer to interact with compact discs.

Heat sink – used for regulation of the temperature inside the computer to avoid overheating of its components.

Graphics processing unit/video card – chip-based device. It processes graphical data. It usually extends functions of the CPU to let the computer work with more complicated tasks.

NIC (network interface card) /network adapter/local are network adapter – circuit board used to connect to an Ethernet network.

USB port – interface that connects the computer with personal electronic devices.

Power supply – component that supplies power to the computer.

Chip – tiny wafer with an embedded electronic circuit. It contains a lot of microscopic electronic components (transistors) which transmit data signals.

Heat sink	1. сетевая карта
Motherboard	2. пластина
NIC	3. привод оптических дисков
CPU	4. кэш
OS	5. операционная система
Graphic processing unit	6. системный блок
Wafer	7. энергонезависимый
Optic drive	8. хранить
Clock speed	9. блок питания
Core	10. материнская плата
Power supply	11. ядро
Cache memory	12. соединять
Non-volatile	13. содержать
To contain	14. радиатор процессора
To connect	15. тактовая частота
To store	16. обрабатывать
To process	17. графический процессор

3. Discuss the questions:

- How does clock speed affect computer’s performance?
- Why is it important to clean cache memory from time to time?
- What are some popular ways to store data on a PC?
- How do different hardware components work together? Provide some examples.

4. Study the following sentences from the text and choose if the structures in bold are active (объект выполняет действие) or passive (кто-то выполняет действие над объектом):

- 1) The processor **CAN BE CALLED** the brain of the computer. (active/passive)
- 2) The user **CAN FIND** them inside the computer case. (active/passive)
- 3) Computers **NEED** internal components. (active/passive)
- 4) Its productivity **CAN BE DETERMINED BY** the quantity of cores. (active/passive)
- 5) RAM data **IS CLEARED** after switching off the computer. (active/passive)
- 6) It **CONTAINS** a lot of microscopic electronic components. (active/passive)
- 7) Its goal is to store data safely even when the computer **IS TURNED OFF**. (active/passive)

5. Study the rules:

Passive Voice

Active Voice: They turn off the computer.

Они выключают компьютер.

Passive Voice: The computer is turned off by them.

Компьютер выключается ими.

Structure: \_\_\_+to be (in the correct form) +Ved/3 + by someone

Remember: we need to change subject and object. Plus, we need to change only the verb TO BE in grammar tenses. The main verb will always be in 3 form or with -ed ending.

to be	Present Simple	Past Simple (facts happened in the past)
I	am+Ved/3	was+Ved/3
he/she/it	is+Ved/3	was+Ved/3
you/we/they	are+Ved/3	were+Ved/3

We use Passive Voice:

- If a subject is a recipient of a verb’s action;
- If we don’t know who does an action or it doesn’t matter for us.

Passive Voice with modal verbs:

	Can (может)	Must (должен)	Need (нуждается)	Should (следует)
To be	can be +Ved/3	must be +Ved/3	need to be +Ved/3	should be+Ved/3

Active Voice: People can call the processor the brain of the computer.

Passive Voice: The processor can be called the brain of the computer by people.

6. Match the phrases in Active and Passive Voice:

People make mouses of plastic and aluminium	a. I was invited to a meeting
HR department invited me to a meeting	b. Our office was decorated for Christmas
He does such tasks really fast	c. Only one monitor is used
We decorated our office for Christmas	d. Such tasks are done really fast by him
I use only one monitor	e. Mouses are made of plastic and aluminium
A 3D printer can build houses	f. Houses can be built by a 3D printer

7. Complete the description of the laptop with Passive Voice:

The model of the laptop is Titan GT77 – 12U. This laptop \_\_\_\_\_ (build) for gamers and creators. The main processing chip called Intel Core i9—12900HX processor that \_\_\_\_\_ (manufacture) by the Intel Corporation. It operates at a clock speed of 5.00 GHz and has 8 Performance-cores and 8 Efficient-cores. Electronics for driving the graphics output has a memory capacity of 8 GB. The laptop \_\_\_\_\_ (equip) with several sets of expansion memory slots for DDR5 memory. RAM \_\_\_\_\_ (can reach) up to 128 GB. A massive storage space \_\_\_\_\_ (can create)

with the help of SSD slot – 8 TB. Lightning modes of keyboard and laptop \_\_\_\_\_ (switch) into various styles. A 17.3 inch, flat display screen \_\_\_\_\_ (make) with a resolution of 3840 by 2160. The operating system that \_\_\_\_\_ (use) to control the system – Windows 11.

8. Rewrite the sentences into Passive Voice:

- 1) John wrote this manual. (Past Simple)
- 2) I must check the installation process.
- 3) Do people make computers of steel?
- 4) They don't open all programmes at once.
- 5) Our company doesn't use this browser.
- 6) We turn on cameras for video conferences.
- 7) He didn't change the battery. (Past Simple)
- 8) Do you upgrade it every week?
- 9) She shouldn't mute him during meetings.
- 10) I buy a new phone once in two years.

9. Choose the correct grammar form (active or passive):

- a. Simon chooses/is chosen a new motherboard.
- b. The CPU cools/is cooled by a fan.
- c. People usually use/are used the RAM to store data.
- d. Special cases can protect/can be protected the internal components.
- e. He invited/was invited to the teambuilding event by us.
- f. Do you need to print/need to be printed images?
- g. The power supply provides/is provided power to all of the computer components.
- h. No, the hard drive doesn't use/isn't used to remove data. It stores/is stored it!
- i. Cache should delete/should be deleted from time to time.

10. Match the following abbreviations with their meanings:

SSD	a. terabyte
RAM	b. gigabyte
GB	c. random-access memory
TB	d. solid-state drive
GHz	e. gigahertz

11. Suggest the appropriate types of computers for these people. Explain your choice and try to use Passive Voice constructions:

Example: I think that this laptop is suitable for a film lover because the laptop is connected with the TV, so it's more comfortable to watch movies with the use of the bigger screen. Also, this laptop can be taken to any public places and transport due to its compact size. For watching films there is everything that is needed: display, keyboard, touchpad and a cable to connect the laptop to the TV.



- Systems administrator
- Designer
- Student
- Professional gamer/streamer



12. Study the information about the computer and describe it using the following questions:



Имя устройства

Lenovo-Z50-70 >

Память

5,7 GiB

Процессор

Intel® Core™ i5-4210U CPU @ 1.70GHz × 4

Графика

NVIDIA Corporation GM108M [GeForce 840M] / NVIDIA GeForce 840...

Ёмкость диска

120,0 GB

Название ОС

Ubuntu 20.04.5 LTS

Тип ОС

64-бит

Версия GNOME

3.36.8

Оконный интерфейс

X11

- What is the memory size of the computer?
- How fast is the CPU?
- What is the capacity of the hard drive and SSD?
- Which operation system does it use?
- What multimedia features does it have?
- What can this computer be used for? Why?

Now you know:

- components of computer hardware;
- how to use Passive Voice.

Vocabulary:

<p>heat sink — радиатор процессора  motherboard — материнская плата  NIC — сетевая карта  CPU — системный блок  OS — операционная система  graphic processing unit — графический процессор  to store — хранить  to process — обрабатывать  RAM (random-access memory) — память компьютера  SSD (solid-state drive) — твердотельный накопитель  wafer — пластина  optic drive — привод оптических дисков  clock speed — тактовая частота  core — ядро  power supply — блок питания  cache memory — кэш</p>	<p>non-volatile — энергонезависимый  embedded — встроенный  temporary — временный  permanent — постоянный  to contain — содержать  to connect — соединять  gigahertz — гигагерц  terabyte — терабайт  gigabyte — гигабайт  quantity — количество  hub — центр  information flow — поток информации  to replace — заменить  to enable — включить  overheating — перегрев  to extend — расширить  to supply — обеспечить  to transmit — передавать  to determine — определять</p>
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## Unit 3. Network hardware

1. Divide the following advantages and disadvantages of network hardware and express your opinion about each point:

1. Requires electricity to function, which can be unreliable in some places.
2. Helps you connect to the Internet and share data
3. Provides access to a lot of information and resources
4. May require technical expertise to troubleshoot problems
5. Makes it possible for multiple devices to work together
6. Allows you to work from home or other remote locations
7. Can slow down if there are too many users
8. Can make your work faster and more efficient
9. Can be expensive to set up and maintain
10. Needs to be protected from hackers and viruses

Advantages: \_\_\_\_\_

Disadvantages: \_\_\_\_\_

Phrases to express your opinion:

In my opinion...

As I see it...

Personally I think that...

My point of view is that...

2. Read the text and put the missing words:

Firewall   Network cables   Network hardware   Access point mode   Router/modem   Network interface cards   Wireless access point   Switch   Repeater mode   Network cables   Bridge mode

In this article we are going to have a look at the main 1. \_\_\_\_\_. They are crucial to know for systems administrators:

2. \_\_\_\_\_. It is designed to organize a WI-Fi network and connect to the Internet (from LAN to WAN). Having one Internet connection point (one cable) you can connect a large number of devices. Try to differentiate this device and a WI-FI adapter. A Wi-Fi adapter is small and it connects a computer to a WI-FI network. A \_\_\_\_\_, in this case, is a more complex device that not only receives and transmits data, but also manages the network.

3. \_\_\_\_\_. It is designed to connect several elements of computer equipment into one network. A device of this type has a simpler structure than a router. When devices are connected to the same network, the \_\_\_\_\_ compiles a switching table into which it writes the port number and MAC address of each network element. This ensures that data is transmitted strictly from one user to another. They differ only in the number of input ports and bandwidth. Some of them can be equipped with wireless communication modules.

4. \_\_\_\_\_. This device usually has one port for connecting an external cable (for incoming traffic). The point works in several modes:

a.5. \_\_\_\_\_ – the point accepts external connections to combine them into one wireless network through a Wi-Fi adapter.

b.6. \_\_\_\_\_ – the point works to unite physically remote LAN networks into one network to avoid unnecessary data transfers if the receiving device is not there.

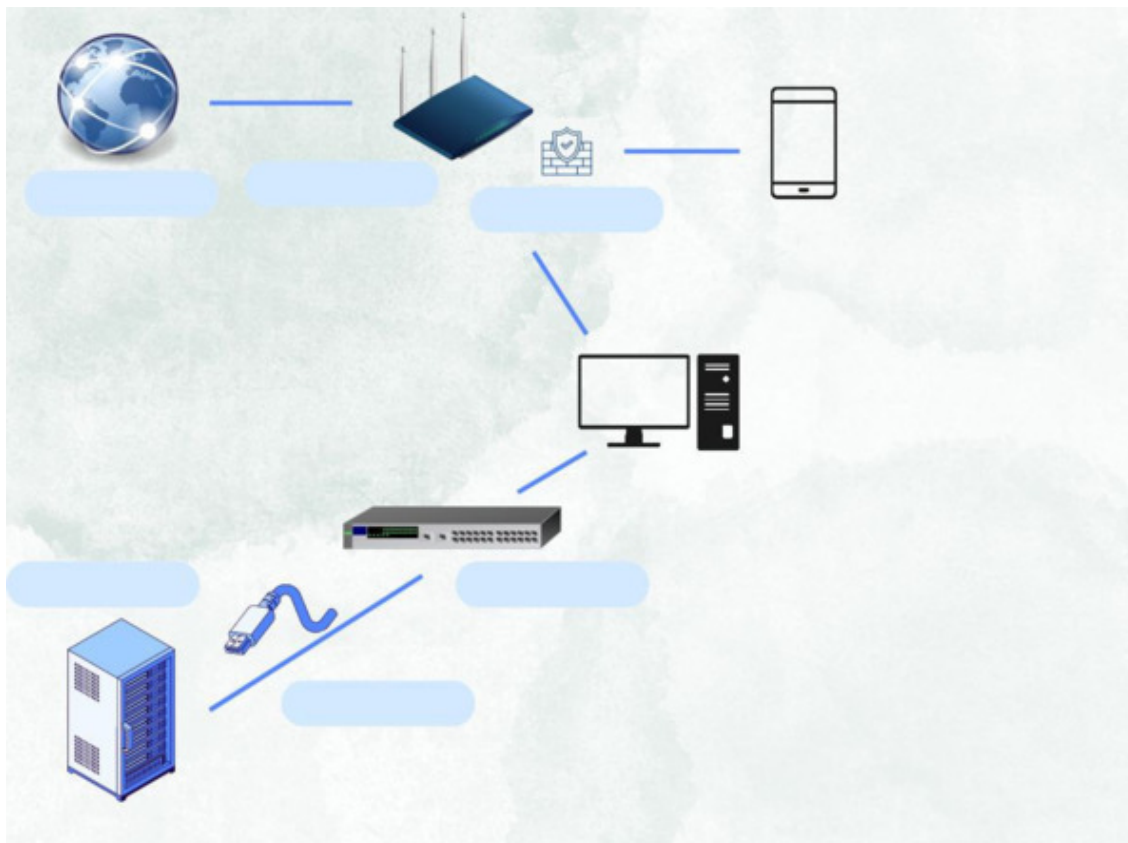
c.7. \_\_\_\_\_ – the point acts as a transceiver or repeater. A weak signal that comes from another similar point is received, amplified and transmitted further to the addressee.

8. \_\_\_\_\_. Cables provide signal transmission to connect different devices on a network.

9. \_\_\_\_\_. NIC are usually built into a motherboard (or can be added externally) to provide information transfer between network computers.

10. \_\_\_\_\_. This hardware or software device prevent attacks of hackers by blocking unauthorized connections made to a computer or LAN.

3. Look at the scheme and write the names of network hardware in the gaps:



4. Match the words from the text with their definitions:

1.Network	a. physical address assigned to each device connected to the network
2.Data	b. to increase, to make a signal stronger
3.MAC address	c. to make something do something
4.Mains power	d. to change data into another format
5.Bandwidth	e. the connection of two or more computer systems
6.secure	f. to send signals or messages
7.reliable	g.to stop something in advance
8.wireless	h. with the use of cables
9.wired	i. information in binary digital form
10.to transmit	j. energetic capacity required to do a task
11.to amplify	k. to start something
12.to convert	l. to put a program onto a computer
13.to reduce	m. electric power source
14.to install	n. can be trusted
15.to set up	p. safe
16.to enable	q. to make something smaller
17.to prevent	r. without cables

5. Complete the sentences with the words from ex.4:

enable mains power wired install reliable network wireless transmitted prevent  
data secure

- 1.You can \_\_\_\_\_ network-manager package on Ubuntu easily with several commands.
- 2.On Windows OS you need a network adapter to connect to the Internet through a \_\_\_\_\_ or wireless \_\_\_\_\_.
- 3.HTTP is the protocol used to indicate how \_\_\_\_\_ are not only defined, but also \_\_\_\_\_.
- 4.Remember to switch the \_\_\_\_\_ on when you go on vacations.
- 5.Use these options to \_\_\_\_\_ and disable optional codecs.
- 6.The ability to guarantee the functional correctness of digital integrated circuits is the main task in the production of \_\_\_\_\_ and \_\_\_\_\_ systems.

7. Antivirus can \_\_\_\_\_ the installation of some applications.

8. \_\_\_\_\_ headphones are connected via Bluetooth.

6. Put the phrases from the dialogue into correct order and answer the questions:

Beginning of the dialogue:

– Hello, I have a problem with my WI-FI router.

– Good afternoon, could you please describe your problem in details?

1) -Yes, I switched it off, unplugged all cables and then plugged in and turned on. It didn't help.

– Ok. Let's check your cables first and if it still doesn't work, we will check all necessary settings: one cable, which should be connected to your computer, must be in LAN connector, the other one from our provider in WAN.

2) -Yes, please, today I tried to connect my router to the Internet but it is written «without Internet access».

– Have you already rebooted it?

3) -No, I appreciate your help, bye!

– Have a nice day, goodbye.

4) -It works! Thank you so much!

– Not at all, is there anything else I can help you with?

5) -Let me check it... Oh, does this WAN connector has a white colour?

– No, it's a grey one, on the right side.

6) -How can I check the speed of the Internet?

– Open your browser, type «speed test» and click on the first website. Then press «start» and you will see your speed.

7) -One moment please... Yes, now everything is correct.

– Ok. Turn on your router once again and tell me if the connection appears or not.

8) -Ok, I'll do it. Thanks!

– May I assist you with anything further?

– What was the problem?

– How was it solved?

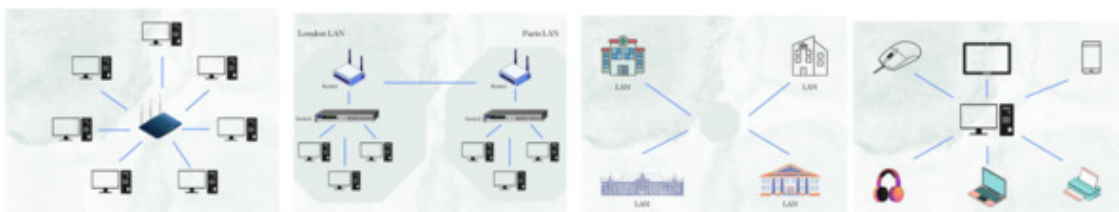
– Have you ever had any problems with the Internet access in your company? What did you do?

7. Look at the pictures and match them with the types of network:

WAN

LAN PAN

MAN



8. Answer the questions:

– What do LAN/WAN/MAN/PAN mean?

- What are the differences between LAN and WAN?
- What are the advantages and disadvantages of using WAN?
- Can you characterize PAN?

9. Look at the statements from the dialogue and complete the rules:

- a) Turn on your router once again and tell me if the connection appears or not.
- b) Open your browser, type «speed test» and click on the first website.
- c) Then press «start» and you will see your speed.

Imperative (повелительное наклонение):

We use the imperative to 1. \_\_\_\_\_.

In positive sentence we write 2. \_\_\_\_\_ form of the verb.

In negative sentence we write 3. \_\_\_\_\_ before the verb.

- 1.a. make an offer
- b. talk about abilities
- c. give instructions and orders

- 2.a. base
- b. -ing
- c. second

- 3.a. doesn't
- b. don't
- c. didn't

10. Complete the instruction opening the brackets:

How to upgrade Ubuntu to 23.04

\_\_\_\_\_ (to open) the «Terminal» application.

\_\_\_\_\_ (to fetch) update software list by running the `sudo apt-get update` command

\_\_\_\_\_ (to type) in the command «`sudo apt dist-upgrade`» and \_\_\_\_\_ (to press) enter

\_\_\_\_\_ (to install) update-manager-core package.

Then \_\_\_\_\_ (to upgrade) distro and \_\_\_\_\_ (to run) the command «`sudo do-release-upgrade`» until you get Ubuntu 23.04 version

\_\_\_\_\_ (not to switch off) your computer while updating.

\_\_\_\_\_ (not to click) on anything while updating.

Once the update is complete, \_\_\_\_\_ (to reboot) your computer to finish the process.

11. Write an instruction on how to upgrade Microsoft OS using the words below:

---

Useful words:

to switch on/switch off = to turn on/turn off – включить/выключить

to back up – сделать резервное копирование

to type in – напечатать в...

to press – нажать (кнопку)

to click on – кликнуть на...

to reboot – перезагрузить

to head into – проследовать в...

to install – установить

Now you know:

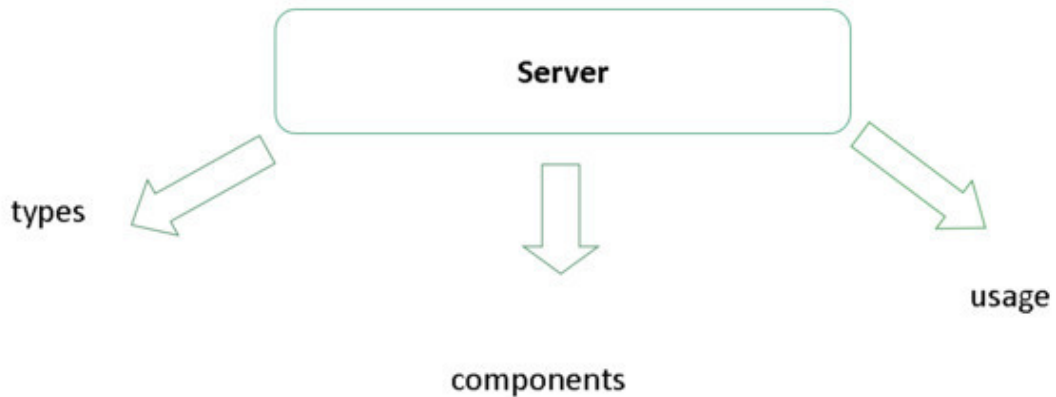
- different types of network;
- how to express your opinion;
- how to give instructions.

Vocabulary:

network – сеть	to prevent – предотвратить
data – данные	to switch on/to turn on – включить
MAC (Media Access Control) address – MAC-адрес	switch off/to turn on/turn off – выключить
mains power – питание от сети	to back up – сделать резервное копирование
bandwidth – пропускная способность	to type in – напечатать в
secure – безопасный	to press – нажать (кнопку)
reliable – надежный	to click on – кликнуть на
wireless – беспроводной	to reboot – перезагрузить
wired – проводной	to head into – проследовать в
LAN (Local Area Network) – локальная вычислительная сеть	to install – установить
WAN (Wide Area Network) – глобальная компьютерная сеть	to set up – настроить
MAN (Metropolitan Area Network) – городская вычислительная сеть	to delete – удалить
PAN (Personal Area Network) – персональная сеть	to reduce – уменьшать
	to transmit – передавать (данные)
	to amplify – усиливать
	to convert – конвертировать
	to require – требовать

## Unit 4. Servers

1. Look at the word below and complete the scheme with the information that you know:



2. Discuss the questions:

- 1) How important are servers to companies?
- 2) What kind of data do servers store?
- 3) Can you name any characteristics that a server might have?
- 4) What security measures do you think a company needs to take when dealing with servers?
- 5) What problems may occur if a server doesn't work correctly?

3. Read the dialogue and put the words in brackets into correct order:

Kathrine – office worker

Jack – system administrator

K.: Hi, Jack. 1. \_\_\_\_\_ (you/sorry/bother/to), but Leon said that only you could help me. 2. \_\_\_\_\_ (5 minutes/I/may/of your time/you/ask/for)?

J.: Ok.

K.: Thanks! 3. \_\_\_\_\_ (you/I/ ask/wanted to/about) servers we're using at work.

J.: Well, we have one physical server on-premise and also we use OpenStack VMs for some applications.

K.: 4. \_\_\_\_\_ (I/wondering/was/if you/me/could/to/help) explain the difference between a physical server and an OpenStack VM.

J.: Sure. A physical server is a sort of hardware that can be touched and seen, you know. It processes data, RAM and disk space. Moreover, this server hosts virtual machines. In our company all VMs were created by OpenStack software. Such virtual machines we call instances.

K.: That's interesting. 5. \_\_\_\_\_ (understand/If/correctly/I), we can create a lot of instances with the use of OpenStack to run various applications?

J.: Exactly. Furthermore, each instance can be allocated its own resources like CPU, memory, and storage. We can even assign them to specific VLANs.

K.: Pardon? 6. \_\_\_\_\_ (I/catch/didn't) what VLANs are.

J.: A VLAN is a Virtual Local Area Network. It's used to separate networks or network segments logically without needing two physical networks. This helps in efficient utilization

of resources within an organization's network infrastructure. So, it's like having different groups of logical switches so we can control LAN traffic depending upon users or applications you wish to provide connectivity to.

K.: I see. You also mentioned RAM. How can it affect server's performance?

J.: The amount of RAM will determine how many programs you can run simultaneously and how fast it could be. If there isn't enough RAM, the system will slow down or crash because it doesn't have enough available memory to handle all the requests.

K.: 7. \_\_\_\_\_ (got/I/it). And what about security?

J.: Don't worry. We use firewalls, encryption methods, antivirus software, and regular maintenance updates to keep our servers secure.

K.: 8. \_\_\_\_\_ (now,/That's/you/clear/thanks). I have one more question: how do we ensure that our server is always operating efficiently?

J.: It's easy. We monitor its performance regularly, analyse usage patterns, and make adjustments which are needed to optimise its speed and reliability.

K. All right. 9. \_\_\_\_\_ (Thanks/all this/ for explaining).

J.: No problem. See you!

4. Read the text once again and answer the questions:

- What information does Kate want to know?
- What is the difference between a physical server and an OpenStack VM?
- How does RAM affect server performance?
- What other security measures can be used to protect servers?

5. Write the missing letters to complete the words:

server \_n-pr\_m\_se – a physical server which is located in company's building or data center.

appl\_ca\_ion – a program which performs exact functions for users.

to \_o\_t – to be somewhere e.g., in cloud

vir\_ual ma\_h\_ne – a resource that uses software instead of a physical computer to run programs and deploy apps.

In\_t\_n\_e – another name for VM used for clouds

to \_ll\_cate – to divide

\_L\_N – a network that groups together devices that share a physical LAN, isolating the traffic for each group.

ut\_l\_za\_ion – using something

network infrastructure – a set of hardware and software to maintain a network.

to \_ff\_ct – to influence on something

p\_rfo\_m\_nce – how well something works

to slo\_do\_n – to move slower

to \_rash – to fall, to break

to h\_n\_le – to deal with something

r\_q\_est – a message with the task

\_ncr\_pt\_on – a changing of data into a secret code to protect an information from stealing

m\_inten\_nc\_upd\_te – a new release of software without new functions for fixing bugs

to mon\_tor – to check

to anal\_se – to study in detail

adjus\_me\_t – a small change

to opt\_mise – to make something better

6. Complete the situations with the words from the ex.5:

affect monitor VM slow down network infrastructure allocate application server on-premise  
host optimise

1. Stanley: «Can you please create a new \_\_\_\_\_ for testing?»  
Dave: «Ok, but firstly I need to know if we \_\_\_\_\_ enough resources to do it.»
2. Jenny: «Do we need to install the \_\_\_\_\_?»  
David: «Why not? It's more secure that way.»
3. Ann: «Does the new software \_\_\_\_\_ the current system?»  
Oliver: «Yes, it does. We need to test it before implementing.»
4. Elena: «What \_\_\_\_\_ did you install yesterday?»  
Martha: «Spotify. I finally decided to try it.»
5. Nora: «Can a network infrastructure \_\_\_\_\_ over time?»  
Nikita: «Yes, if it's not maintained properly.»
6. Noah: «How can we \_\_\_\_\_ the network speed?»  
Ivan: «We can try allocating more bandwidth to the critical applications.»
7. Rob: «We need to find a place to \_\_\_\_\_ our website.»  
Brian: «I heard Bluehost is a good option.»
8. Lucas: «We need to \_\_\_\_\_ the \_\_\_\_\_ closely.»  
Dan: «Yes, any issues can affect all the connected devices.»

7. Read the text from the ex.3 once again and complete the table with the phrases from the text and the additional section:

Apology	Ask for help	Clarification	Understanding	Misunderstanding	Appreciation for explanations

Additional phrases:

- a. That's clear, thank you.
- b. I appreciate your explanation.
- c. I need some assistance, please.
- d. Could you please clarify...?
- e. I think we are not on the same page.
- f. Could you do me a favor?
- g. I'm terribly sorry but...

8. Fill in the gaps with the missing phrases from ex.7:

Alex – systems engineer  
Sergei – service team manager

Sergei: Good morning, \_\_\_\_\_? (apology)

Alex: Hello, yes.

Sergei: I \_\_\_\_\_ (ask for help) invite you to an unplanned meeting in 10 minutes time, because you will be engaged in one more project.

Alex: \_\_\_\_\_ (apology). I don't have any time for it today.

Sergei: Why? We're going to discuss an important issue about working at the weekend.

Alex: But today is Monday. You can reschedule the meeting for Thursday or Friday, for instance.

Sergei: \_\_\_\_\_ (clarification)

Alex: \_\_\_\_\_ (apology) I need to finish the configuration of 10 servers in few hours time. So I can't participate in a meeting.

Sergei: \_\_\_\_\_ (misunderstanding). You can do it right after our call.

Alex: No, it's my high priority task for now. If I do something wrong, that can lead to crash, or don't meet a deadline, there will be problems with the client. Are you ready to take these risks?

Sergei: No, I suppose. \_\_\_\_\_ (appreciation for explanations), so take your time. Maybe I'll transfer our meeting for tomorrow because this new project is connected with our new customer and we need to start it as soon as possible.

Alex: Ok, \_\_\_\_\_ (understanding).

Sergei: In this case I'm looking forward to seeing you tomorrow.

Alex: Deal with it.

9. Read the sentences and choose the functions of grammar tenses in them:

1.Maybe I'll transfer our meeting for tomorrow	a.prediction based on our opinion
2.We're going to discuss an important issue about working at the weekend.	b.instant decision
3.There will be problems with the client.	c.plan or prediction based on our opinion

10. Study the rules:

Future Simple and be going to

	Structure		
	+	-	?
Future Simple	will + V	won't + V	Will __ V?
Be going to	I + am going to + V	I + am not going to + V	Am I + going to + V?
	He/she/it + is going to + V	He/she/it + isn't going to + V	Is he/she/it + going to + V?
	You/we/they + are going to + V	You/we/they + aren't going to+V	Are you/we/they + going to + V?

We use Future Simple:

– to talk about predictions based on our opinion (I think it will be better to upgrade it as soon as possible.);

– to make spontaneous decisions (Ok, we will try to call them.);

– to make promises (I will do everything to prevent a server crash.).

We use be going to:

- to talk about our plans (I am going to do 3 tasks today);
- to talk about predictions based on facts (We noticed some problems with VM's resources, so we are going to optimize it.).

11. Put the verbs into the correct future grammar forms:

1. (our company optimise) the website as we planned?
2. The overall operation of services reduces the Internet speed, so we \_ (expand) the Internet channels.
3. I think we \_ (monitor) the progress of the project closely.
4. Tomorrow, I \_ (have a meeting) with my boss to discuss my KPI.
5. The CEO \_ (not allocate) additional money for IT department.
6. Ok, so I \_ (analyse) the data and present my findings at the meeting.
7. What \_ (you do) if the server crashes?
8. I (not have) any days-off, because I need to finish my project.

12. Complete the sentences with Future Simple and be going to:

- a. Maybe I \_\_\_\_\_ (do) this task tomorrow.
- b. \_\_\_\_\_ (you conduct) regular checks this week?
- c. I think that she \_\_\_\_\_ (not help) you with it.
- d. I \_\_\_\_\_ (collaborate) with the support team on Friday.
- e. Ok, I \_\_\_\_\_ (try) to fix this issue.
- f. They \_\_\_\_\_ (implement) security measures, but I'm not sure.
- j. \_\_\_\_\_ (Mike set up) firewall tomorrow morning?

13. Look at the diary and complete the text about Chang:

07/07/2023

08:00 – wake up (maybe)

08:50 – check emails

09:30 – upgrade servers

12:45 – be praised by the team lead (I think)

13:00 – have lunch in an office or in a cafe?

14:00 – work with the development team

17:00 – take part in a daily meeting

17:55 – don't take an umbrella (according to a weather podcast)

18:00 – go home or go to the gym?

Chang \_\_\_\_\_ wake up at 8 o'clock. Chang \_\_\_\_\_ check emails at 8:50. Chang \_\_\_\_\_ upgrade servers at 9:30. Chang \_\_\_\_\_ be praised by the team lead after it. Chang \_\_\_\_\_ have lunch in an office or in a cafe. At 2 p.m. Chang and the development team \_\_\_\_\_ work together. Then he \_\_\_\_\_ take part in a daily meeting. At 5:55 p.m. he \_\_\_\_\_ take an umbrella. After work he \_\_\_\_\_ go home or to the gym.

14. Look at the situation below and make up your own dialogue. Don't forget to use words and phrases from ex.7:

Today is 15.05. Max, chief technology officer (CTO), wants to give you a task to migrate services from on-premise server (on-prem.) into the cloud server with saving all data. Deadline – 17.05. You understand that you will not have enough time for it. You need to make a plan on what you are going to do and talk to CTO to prove that you need to have more time.

Now you know:

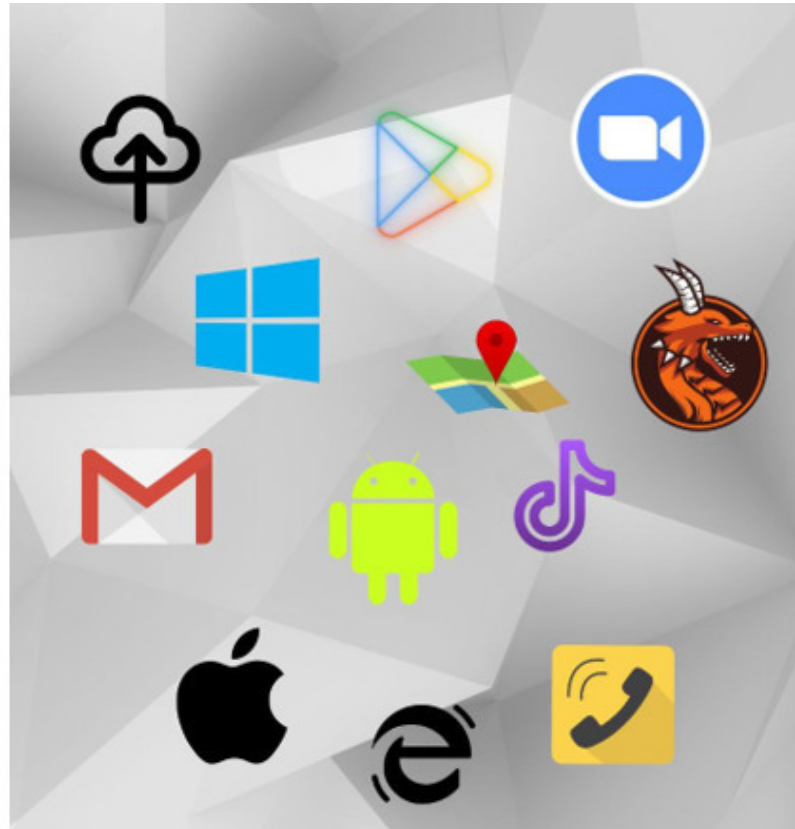
- how to talk about future plans and predictions;
- words connected with servers;
- how to apologize, ask for help and clarification, express your understanding and misunderstanding, appreciate for explanations.

#### Vocabulary:

server on-premise — локальный сервер	network infrastructure — сетевая инфраструктура
application — приложение	to host — размещать
encryption — шифрование	to affect — влиять
maintenance update — техническое обновление	performance — производительность
VM (virtual machine) — виртуальная машина	to slow down — замедлять
instance — случай	to allocate — выделять
VLAN (Virtual Local Area Network) — виртуальная локальная компьютерная сеть	to handle request — обрабатывать запрос
utilization — использование	to monitor — мониторить
adjustment — корректировка, установка	to analyse — анализировать
crash — сбой	to optimise — оптимизировать
	to deploy — развернуть

## Unit 5. Software

1. Look at the picture and answer the questions:



- 1) Which software do you see in the picture?
- 2) What types of software do you know?
- 3) Name software that you use every day.
- 4) Make up a «Top-10 list» of software that is essential at your work. Explain why.

2. Read the statements and say if you agree or disagree with them:

Branko: «Software makes my life easier because a lot of things are done automatically.»

Eden: «Software can be risky! I've heard stories of hackers stealing personal information through applications.»

Sofya: «I hate everything that is connected with software. Due to it, people became lazier and they rely only on software.»

Agreement	Disagreement	Doubts
I agree with... That's so true. I believe that... is true. ... is a good point.	I don't think so. I'm afraid I disagree with... ... is not always true. ... is not always the case. I'm not so sure about ...	I'm not sure about... I have some doubt about...

3. Read the post and tick the ideas which are mentioned:

Greg

Every system administrator needs to have special software to close tasks faster. Today there's an enormous quantity of such software and each company uses its own programs. I decided to write my personal list of must-have tools for better understanding of what you need to do at work.

To begin with, I'd like to start with Helpdesk – service for organising support activities for their customers. To have access to this software you (or your company) must be their client. In this case, if you have some basic questions but you're short of time, you can write them in HelpDesk to receive an answer to help you with resolving an issue.

Secondly, one of the most popular open-sources is Ansible. It is used for configuration and is based on Python language. It's very simple in using. Moreover, if you have a lack of knowledge of program languages, it'll be easier for you to write a code in it than using some other software e.g. in Saltstack. Also, you can use it for a configuration of different types of systems and an integration with such tools as Kubernetes, Terraform, and Jenkins.

Next one in my list is Zabbix. It's a nice tool for monitoring systems. Zabbix is quite complicated but at the same time flexible enough. For example, you can customize your own sensors for monitoring with the help of this software. But I strongly recommend you to read manuals before utilising it.

Fourthly, if you need a simple tool to manage all corporate devices, you can download cloud-based solution called Microsoft Intune. Especially Microsoft Intune comes in handy if you have a subscription in Microsoft Azure. It provides easy control and installation of updates.

Then, one of the tasks of sysadmins is an organisation of a secure «space» for keeping passwords. For this purpose, I like using KeePass. It generates passwords and temporary links for having an access to the passwords. Thus, it keeps passwords in safety.

Another important tool is Acronis. This software is vital to have secure operation systems backups. This one is more expensive than some of its analogues but it's quite easy to configure and use it. Also, you can integrate it in different systems.

Finally, one of the best tools for remote connectivity in my opinion – Teamviewer. You can assist and control any kind of working process remotely from your device with this program.

I hope this information will be useful for creating your necessary toolkit for leveraging automation and optimizing your workload.

Greg mentioned software for:

- 
- Writing notes
  - Monitoring systems
  - Serving clients
  - Communicating with team members
  - Analysing network protocols
  - Backuping systems and files
  - Managing devices
  - Providing remote works

4. Read the text once again and complete the summary:

There are \_\_\_\_ important software tools for a system administrator in Greg's list: \_\_\_\_\_.  
System administrators need them to \_\_\_\_\_close tasks faster. But each company uses  
\_\_\_\_\_because\_\_\_\_\_.

5. Match the explanations with the words:

to have access to	1. freely available software
to resolve an issue	2. to create something
open-source	3. to change something according to someone's needs
a lack of	4. to be useful
tool	5. to deal with something
to customize	6. instructions
monitoring	7. to help with something
manual	8. to order or arrange a system in a particular form
to come in handy	9. to be able to see or use something
to generate	10. to use to maximum
backup	11. systematic reviewing
to configure	12. to combine something
to integrate	13. not having enough of something
to assist	14. a copy of something made in case of losing data
to leverage	15. a device or something that helps to do something

6. Choose the suitable words to complete the sentences:

1. How can we \_\_\_\_\_ this issue as soon as possible?

- a. integrate b. monitor c. resolve
2. We don't \_\_\_\_\_ to the Internet because of repair works.  
a. have an access b. give an access c. take an access
3. I'll \_\_\_\_\_ you in finding a good software for international calls.  
a. assist b. leverage c. configure
4. Our department use some \_\_\_\_\_ software to create the website.  
a. pay-source b. open-source c. close-source
5. You can \_\_\_\_\_ your phone by changing the theme and the size of shrifts.  
a. resolve b. assist c. customize
6. We can \_\_\_\_\_ our resources to meet the deadline.  
a. have an access b. leverage c. come in handy
7. I always \_\_\_\_\_ all important files.  
a. backup b. configure c. customize
8. This is a useful \_\_\_\_\_ for managing tasks.  
a. lacks b. open-source c. tool
9. I prefer reading \_\_\_\_\_ before using new programs.  
a. issues b. manuals c. backups

7. Answer the questions:

- Which software do you know for generating passwords?
- How do you usually backup important data?
- How can software assist users?
- What challenges have you faced due to lack of resources when working with software?

8. Read the sentences from the text and complete the table:

- Every system administrator needs to have special software to close tasks faster.
- It'll be easier for you
- This one is more expensive than some of its analogues.
- One of the most popular open-sources is Ansible.
- I decided to write my personal list of must-have tools for better understanding
- Finally, one of the best tools for remote connectivity in my opinion – Teamviewer.

Adjective	Comparative form	Superlative form
	faster (быстрее)	the fastest (самый быстрый)
easy	easier	
	more expensive	
popular		the most popular
good	better	

9. Study the rules:

Degrees of comparison

	Comparative	Superlative
Short adjectives	+er	the +...est
	smaller	the smallest
Long adjectives (2+ слова) and adjectives ending in -ed/-ing	more + adj.	the most +adj.
	more interesting	the most interesting

Pay attention:

- If a short adjective ends with -y → we change y into i: happy – happier – the happiest
- If a short adjective has consonant-vowel-consonant (согласный-гласный-согласный), we need to double one consonant: big – bigger – the biggest

Irregular adjectives:

- good – better – the best
- bad – worse – the worst
- far – farther (usually about distance) /further (usually about abstract things) – the farthest/furthest

Note:

- old – elder – the eldest (if we are talking about age: the eldest brother – самый старший брат)
- old – older – the oldest (in the meaning of «старый»: the oldest bag – самая старая сумка)

10. Write the correct comparative and superlative forms:

- late -> \_\_\_\_\_ -> \_\_\_\_\_
- complicating -> \_\_\_\_\_ -> \_\_\_\_\_
- good -> \_\_\_\_\_ -> \_\_\_\_\_
- near -> \_\_\_\_\_ -> \_\_\_\_\_
- old -> \_\_\_\_\_ -> \_\_\_\_\_
- exciting -> \_\_\_\_\_ -> \_\_\_\_\_
- bad -> \_\_\_\_\_ -> \_\_\_\_\_
- comfortable -> \_\_\_\_\_ -> \_\_\_\_\_
- hot -> \_\_\_\_\_ -> \_\_\_\_\_
- far -> \_\_\_\_\_ -> \_\_\_\_\_
- dirty -> \_\_\_\_\_ -> \_\_\_\_\_
- patient -> \_\_\_\_\_ -> \_\_\_\_\_

11. Open the brackets with the correct form of adjective:

SaltStack and Ansible are nice tools for automating IT infrastructure. Before making a choice between them, it's important to consider your specific needs and choose the tool that will be the \_\_\_\_\_ (good) for meeting these needs.

SaltStack is \_\_\_\_\_ (powerful) tool than Ansible, because it allows you to manage complex infrastructure. One of the \_\_\_\_\_ (big) advantages of SaltStack is its speed. SaltStack uses a master-slave architecture, which means that changes can be made quickly. Thus, with this software your infrastructure will remain secure. Another advantage of SaltStack is its scalability. SaltStack can easily manage thousands of servers, making it ideal for large-scale deployments.

In comparison with Saltstack, Ansible is \_\_\_\_ (simple) and \_\_\_\_ (easy) to use for small or medium-sized deployments. Ansible uses a push-based architecture, which means that changes are made on the client-side. This makes Ansible \_\_\_\_\_ (lightweight) than SaltStack. Another advantage of Ansible is its simplicity, so beginners and non-coders don't have any problems while using it.

So, which one is \_\_\_\_\_ (good)? If you need to manage a large-scale deployment with complex infrastructure, then Ansible is a \_\_\_\_ (bad) choice than Saltstack. For that purpose, you should use Saltstack. If you have a \_\_\_\_ (small) deployment and want a tool that is easy to use and set up, then Ansible is \_\_\_\_\_ (suitable) for you.

12. Look at the information, compare the tools and choose the best one in your opinion:

Wireshark:

Price – free

Complexity – complex

Flexibility – very flexible

Monitoring – designed for packet capture and analysis, not for real-time

Features – packet analysis, real-time monitoring, historical data analysis, troubleshooting tools

SolarWinds Network Performance Monitor:

Price – commercial

Complexity – easy to use for basic monitoring

Flexibility – flexible

Monitoring – real-time and historical network performance

Features – real-time monitoring, historical data analysis, troubleshooting tools, traffic shaping, QoS monitoring, and more

13. Read the situation and do the task:

Your colleague Helen is an HR manager. She needs to choose a new program for making notes during job interviews instead of Notepad. Helen decided to ask you for help. You need to recommend her the other tool with the same function. Don't forget to use comparative forms of adjectives.

If you don't have any ideas, you can use the following information about OneNote: OneNote is compatible with Windows OS, IOS, and Android. There are some drawing tools, voice notes, and image embedding. Also, you can share your notes with others.

Helen: Hi, how are you?

Your line: \_\_\_\_\_

Helen: Well, I'm trying to decide which software I want to use for note-taking.

Your line: \_\_\_\_\_

Helen: I've been using Notepad recently, but sometimes it's so irritating for me. Can you please recommend any other options?

Your line: \_\_\_\_\_

Helen: Do you think this one is harder to use?

Your line: \_\_\_\_\_

Helen: Can I also edit in it my text? For example, use different shrifts and colours?

Your line: \_\_\_\_\_

Helen: What about voice notes or drawing?

Your line: \_\_\_\_\_

Helen: And is it compatible with other OS? Or is it only for Windows?

Your line: \_\_\_\_\_

Helen: Thanks a lot! I think I'll try that one and see how it goes.

Your line: \_\_\_\_\_

Now you know:

- how to talk about software in English;
- how to compare things with the use of adjectives;
- how to agree, disagree and express your doubts.

Vocabulary:

to have access to — иметь доступ к	to generate — сгенерировать
to resolve an issue — решить проблему	backup — резервное копирование
open-source — открытый ресурс	to configure — настроить, конфигурировать
a lack of — нехватка	to integrate — интегрировать
tool — инструмент	to assist — помогать
to customize — настроить	to leverage — использовать на максимум
monitoring — мониторинг	to come in handy — пригодиться
manual — руководство, инструкция	

## Unit 6. Operating systems

1. Look at the picture and discuss the questions:



- What is an operating system?
- Can you name any types of OS?
- How can you install OS?
- Why do you need to update OS?

2. Read the letter and answer the questions:

To: Sam Barewell

Subject: Installation of new version of Windows

Dear Sam,

I am writing to ask for your support with my computer's operating system. I encountered some issues with my current OS yesterday. Can you please guide me and give instructions on how to download and install the latest version of Windows? Additionally, I would appreciate if you could advise me on how to fix any bugs that may arise during the installation process.

Thank you for your time and assistance in advance.

Sincerely,  
Jakob Leen

- What is the purpose of Jakob's letter?
- Why does he want to upgrade OS?

3. Divide the phrases for official emails:

Start an email	Purpose	Close an email	Offer your help	Finish an email

- a. I am writing to you to...
- b. Best regards,
- c. Thank you in advance.
- d. Dear...
- e. Let me know if...
- f. I would appreciate if you could...
- g. Sincerely,

4. Read the reply from Jakob and complete the structure of the email:

- a. greeting
- b. sender
- c. email body
- d. email ending
- e. recipient
- f. email sign-off
- g. subject

- 1) To: Jakob Leen
- 2) Re: Installation of new version of Windows

3) Dear Jakob,

4) I am writing in reply to your email. If you want to install the latest version, you need to make sure that you have enough space on your hard drive. Please, pay attention that you must backup all your important files and documents before you begin. Other unimportant data you don't have to back up.

Once you've done it, you can start the installation process. Firstly, insert the installation disk or USB drive into your computer and restart it. Your computer should boot from the installation media automatically. If it doesn't boot, you will need to change the boot order in your BIOS settings.

Follow the on-screen instructions to complete the installation process. You'll be prompted to enter your product key, select your language and time zone, and choose which version of Windows you want to install.

If there are any bugs with your applications after installing a new version, you can try running the built-in troubleshooter tool or updating your drivers. You may also check for updates to Windows itself by going to «Settings», then click on «Update & Security» and choose «Windows Update».

5) Let me know if you're still experiencing problems.

- 6) Best regards,
- 7) Sam

5. Read the reply once again and complete the notes:

The email is about how to \_\_\_\_\_. Before Jakob starts the installation process, he needs to \_\_\_\_\_. To start an installation process Jakob can \_\_\_\_\_. If there are any problems, Jakob can try \_\_\_\_\_.

6. Choose the meaning of the words in bold:

1) The command **PROMPT** allows users to execute different commands in Windows.

- a. a symbol to perform the next command
- b. a symbol to download software

2) I always **TROUBLESHOOT** new software before putting it in production.

- a. to find and solve problems with a system or device
- b. to cause problems

3) There's a **BUG** in the code. You need to fix it immediately.

- a. a programming tool
- b. an error in a program

4) She notices a strange sound while **BOOTING** her laptop.

- a. to turn on a computer by loading OS
- b. to turn off a computer by loading OS

5) He had an access to the **BIOS** settings by pressing F2.

- a. basic input operating system
- b. basic input-output system

6) Please, **INSERT** your USB drive here.

- a. to give something
- b. to put something into

7. Answer the questions:

- Why do you need to troubleshooting new software?
- What bugs can occur while installing software?

8. Read the sentences from the email and complete the rules:

- a. You **NEED TO** make sure that you have enough space on your hard drive.
- b. You **MUST** backup all your important files and documents
- c. You **CAN** start the installation process.
- d. Your computer **SHOULD** boot from the installation media automatically.
- e. You **MAY** also check for updates to Windows itself.
- f. Other unimportant data you **DON'T HAVE TO** back up.

We use \_\_\_\_ to express advice.

There is one more verb for strong recommendations, rules or something that you decided to do – \_\_\_\_.

The verb \_\_\_\_ expresses necessity. After this verb we use to.

\_\_\_\_ is used to talk about our abilities.

If we're not sure in something, we use \_\_\_\_ or might. These verbs have almost the same meaning, but \_\_\_\_ is used for asking permissions and also it usually means «likely to happen». Might means «unlikely to happen».

If there is the lack of necessity, use \_\_\_\_\_. Pay attention that \_\_\_\_\_ in positive statements means that someone told you to do something.

## 9. Study the rules:

### Modal verbs

	+	-	?
should (следует)	should +V	shouldn't +V	Should ___ +V...?
must (должен)	must +V	mustn't +V	Must ___ +V...?
have to (обязан)	I,you,we,they+have to+V	I,you,we,they+don't have to+V	Do (I,you,we,they) have to+V...?
	He,she,it+has to+V	He,she,it+doesn't have to+V	Does (he,she,it) have to+V...?
can (уметь)	can +V	can't +V	Can ___ +V...?
need to (нуждаться)	I,you,we,they+need to +V	I,you,we,they+don't need to +V	Do (I,you,we,they)+need to +V...?
	He,she,it+ needs to +V	He,she,it+doesn't need to +V	Does (he,she,it)+need to+V...?
may/might (возможно)	may/might +V	may/might not +V	May/might ___ +V...?

Pay attention: in negative sentences and questions before «need to» and «have to» we use do or does.

## 10. Choose the correct functions of the verbs in bold:

- Can you please help me? (ask for a permission/obligation)
- I can speak Japanese. (possibility/ability)
- He needs to talk to her right now. (advice/necessity)
- They might be at the meeting. (possibility/obligation)
- You shouldn't be worried. (lack of necessity/advice)
- I have to go to the office. My manager told me to come. (obligation/lack of necessity)

## 11. Cross out the incorrect modal verb:

- When there is a problem, you must/shouldn't troubleshoot it.
- The computer must/may boot slowly if there are too many programs running.

3. You can't/shouldn't insert the USB drive until the computer has finished shutting down.
4. Do I need to/can do this task today?
5. This software can't/mustn't integrate with that operating system.
6. Before printing, you don't need to/should generate a PDF file.
7. You mustn't/may not maintain the equipment without proper training.
8. You may/need to configure the settings to your liking.
9. I need to/can backup my files before upgrades.
10. Must/May I ask a question?
11. She has to/must do her homework. Her teacher told her to do it.

12. Rewrite the sentences with modal verbs:

- a. I know how to upgrade Ubuntu. (can)
- b. Mary isn't sure if he is at work or not. (might)
- c. We are obliged to wear a uniform. (have to)
- d. Max advises me to quit the job. (should)
- e. It's dangerous to block an emergency exit. (mustn't)
- f. It's necessary for her to take some pills. (need to)
- g. This ticket is a gift for you. It's not necessary to pay for it. (not have to)
- h. It's possible that Markus is still there. (may)

13. Complete the sentences with your own ideas:

- a. Today I must\_\_\_\_\_.
- b. I need to\_\_\_\_\_this week.
- c. At my work we mustn't\_\_\_\_\_.
- d. I don't have to\_\_\_\_\_ at work.
- e. I can\_\_\_\_\_ but I can't\_\_\_\_\_.
- f. If a worker has a problem, he should\_\_\_\_\_.
- g. I may\_\_\_\_\_next month.

14. Read one more email from Jakob and write the reply using modal verbs. Mind the structure of official emails:

To: Sam Barewell  
Subject: System configuration

Dear Sam,

I am contacting you for your professional assistance. During the last meeting with the IT department managers agreed to improve system performance of one of the servers. For that purpose, could you please identify which services are not used there and disable them? I would also appreciate if you could provide me some information about the date when it'll be done and which steps you need to do.

Thank you in advance.

Yours sincerely,  
Jakob Leen

Now you know:

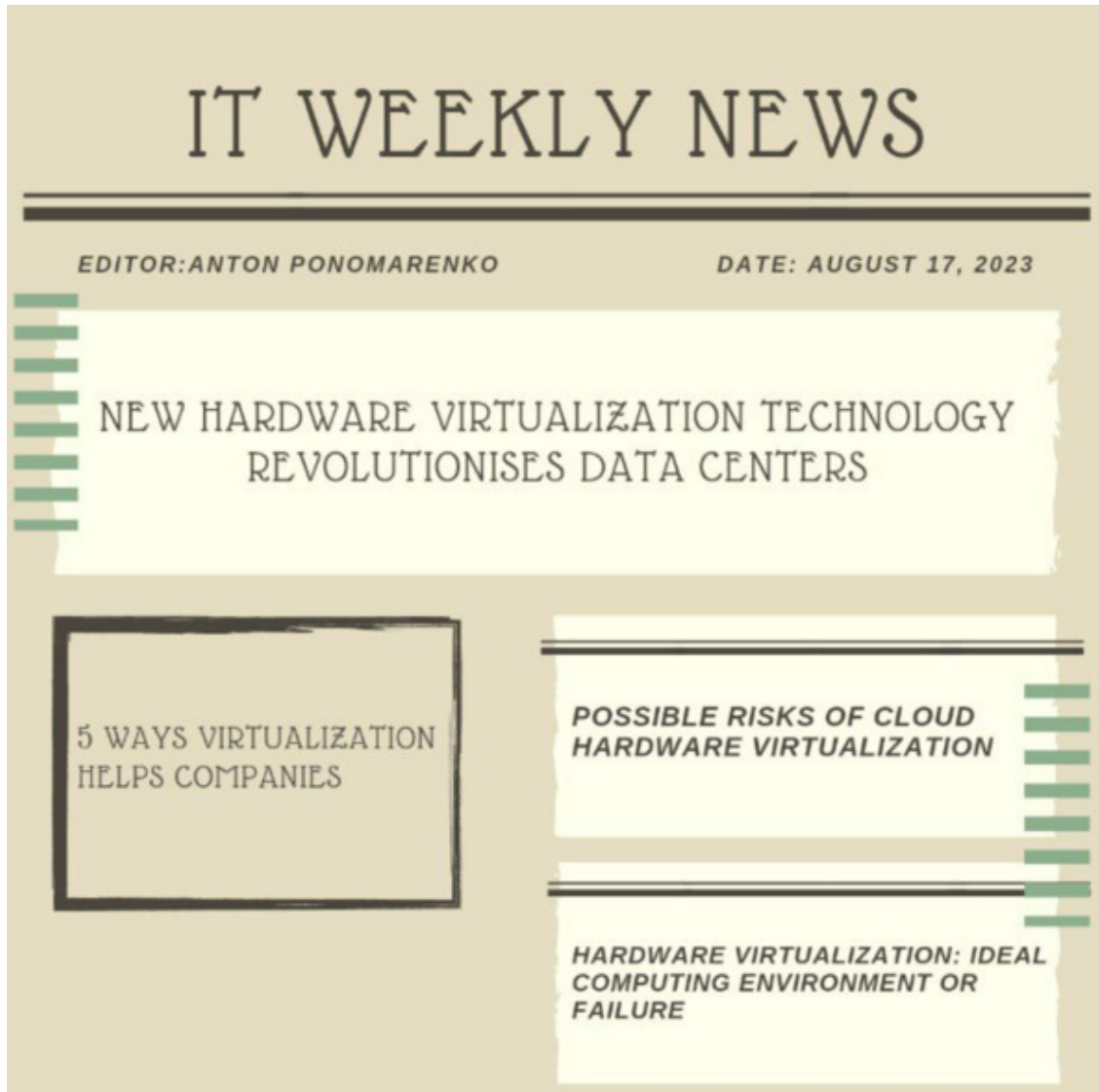
- useful words to talk about software;
- how to use modal verbs;
- how to write official emails.

Vocabulary:

command prompt — командная строка to troubleshoot — устранять неполадки bug — ошибка, баг fault tolerance — отказоустойчивость BIOS (basic input/output system) — базовая система ввода-вывода	to boot — включить to insert — вставить obligation — обязанность necessity — необходимость ability — способность
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## Unit 7. Hardware virtualization

1. Look at the news and answer the questions:



- What is hardware virtualization?
- How can it help companies?
- What are the possible risks of cloud hardware virtualization?
- Do you think that hardware virtualization is an ideal computing environment of the future? Why?

2. Read the text and tick the topics which were mentioned:

Hardware virtualization is a technology that allows the hardware elements to be divided into multiple virtual machines. Sometimes hardware virtualization is executed on a particular hardware platform by host software. It requires a hypervisor which is used in order to maintain the virtual environment by creating virtual versions of hardware. Most common examples of desktop virtualization products are the following: VMware, VirtualBox, and Parallels.

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