

Occupational Health and Safety Instruction

Network and System Administration" competencies

Final of the Professionals Professional Skills Championship in 2024.

2024 г.

**Table of Contents**

[1. field of application 3](#_heading=h.30j0zll)

[2. Regulatory References 3](#_heading=h.1fob9te)

[3. general requirements for occupational health and safety 3](#_heading=h.2et92p0)

[4. occupational health and safety requirements before starting work 6](#_heading=h.tyjcwt)

[5. Occupational health and safety requirements during work 7](#_heading=h.3dy6vkm)

[6. Occupational safety requirements in emergency situations 9](#_heading=h.1t3h5sf)

[7. Occupational health and safety requirements at the end of work 10](#_heading=h.4d34og8)

**1. scope of application**

1.1 These rules are developed on the basis of a standard instruction on labor protection taking into account the requirements of legislative and other regulatory legal acts containing state requirements for labor protection, rules for labor protection and are intended for participants of the competence "Network and System Administration" of the regional stage of the Championship on professional skills "Professionals" in 2024 (hereinafter referred to as the Championship).

1.2 Fulfillment of the requirements of these rules is obligatory for all participants of the regional stage of the Professional Skills Championship "Professionals" in 2024 in the competence "Network and System Administration".

# Occupational safety instructions for participants

## 2.General requirements for occupational health and safety

For participants from 14 years old

2.1 Participants aged 14 years and older are allowed to participate in the contest under the direct supervision of the Experts or jointly with the Expert in the Network and System Administration Competence:

- who have undergone occupational safety briefing according to the "Occupational Health and Safety Briefing Program";

- familiarized with the occupational safety instruction;

- who have the necessary skills to operate tools, fixtures and equipment;

- have no contraindications to the performance of competitive tasks for health reasons.

For participants from 16 years old

2.3 Participants from 16 years old are allowed to independently perform competitive tasks in the Competence "Network and System Administration";

- who have undergone occupational safety briefing according to the "Occupational Health and Safety Briefing Program";

- familiarized with the occupational safety instruction;

- who have the necessary skills to operate tools, fixtures and equipment;

- have no contraindications to the performance of competitive tasks for health reasons.

2.4 While performing the competition tasks and being on the territory and premises of the competition venue, the participant is obliged to clearly observe:

- health and safety instructions;

- Do not go beyond the fences and into technical rooms;

- personal hygiene;

- eating in strictly designated areas;

- independently use the tools and equipment authorized to perform the competition task;

2.5 The Participant uses equipment to perform the competition task:

|  |
| --- |
| **Name of equipment** |
| **self-employed** | **performs the competition task together with an expert or a nominated person of 16 years of age or older:** |
| Complete personal computer \ laptop computer | Disassembled personal computer and/or its components |

2.6 The following harmful and (or) hazardous factors may affect the participant while performing the competition task:

Physical:

* cutting and stabbing objects;
* increased levels of electromagnetic radiation;
* increased static electricity;
* increased brightness of the light image;
* increased level of light output pulsation;
* An increased voltage value in an electrical circuit that can be short-circuited through the human body;
* Increased or decreased light levels;

increased direct and reflected glossiness.

Psychological:

* visual and attention strain;
* intellectual and emotional strain;
* prolonged static loads;
* the monotony of labor;
* excessive attention span;
* increased strain on your eyesight.

2.7 Personal protective equipment used during the performance of the competition task:

* earplugs (if there is excessive noise at the site).

2.8 Safety signs used in the workplace to indicate the hazards present:

* No safety signs are provided at workplaces.

2.9 In case of an accident, the injured person or an eyewitness of the accident shall immediately report the incident to the Experts.

In the room for Experts there is a first aid kit, complete with medical products, it should be used for first aid, self-help in cases of injury.

In case of an accident or illness of a competitor, the Chief Expert, the Team Leader and the Expert shall be notified immediately. The Chief Expert decides on the assignment of additional time for participation. If a competitor is disqualified from further participation in the Championship due to illness or accident, he/she will receive points for any completed work.

The above incidents are subject to mandatory registration in the Accident Registration Form and the Business Interruption Registration Form.

2.10. The participants who have allowed non-fulfillment or violation of the labor safety instructions shall be held liable in accordance with the special rules of competence.

Failure by a participant to comply with HSE rules and regulations will result in loss of points. Permanent violation of safety standards may result in temporary or permanent suspension similar to an appeal.

## 3.Occupational health and safety requirements before starting work

Participants must complete the following before beginning the activity:

3.1 On Day C-1, all participants must familiarize themselves with the safety instructions, fire evacuation plans, locations of sanitary and welfare facilities, medical rooms, drinking water, prepare a workplace in accordance with the Technical Description of the competence.

Check special clothing, footwear and other personal protective equipment. Put on the necessary protective equipment for preparation of workplaces, tools and equipment.

At the end of the familiarization period, the participants confirm their familiarization with all the processes by signing the equipment briefing sheet in the form determined by the Organizing Committee.

3.2 Prepare the workplace:

* inspect the workplace for foreign objects and visible malfunctions;
* Check the correct position of the table, chair, footrest, angle of the monitor screen, keyboard position in order to avoid uncomfortable postures and prolonged body strain. Pay special attention to the fact that the display should be at a distance of at least 50 cm from the eyes (60-70 cm is optimal);
* Check that the equipment is properly positioned;
* Power supply cables, extension cords, surge protectors should be located at the rear of the workplace;
* Make sure there is no light, reflection or glare on the monitor screen;
* Make sure that no containers with liquids, loose materials (tea, coffee, juice, water, etc.) are placed on PC devices (system unit, monitor, keyboard);

3.3 Prepare tools and equipment authorized for independent work:

| **Name of tool or equipment** | **Rules of preparation for the competition task** |
| --- | --- |
| Complete PC / laptop | Powering up and logging in is performed by site maintenance personnel; |
| Router | The power supply is switched on by the site technical staff. |
| Switchboard |
| IP phone |
| Firewall |

The tools and equipment, which are not authorized for independent use, are prepared for the performance of competition tasks by the authorized Expert, the participants can take part in the preparation under the direct supervision and in the presence of the Expert.

3.4 On the day of the competition, study the content and procedure of the modules of the competition task, as well as safe methods of their execution. Check the suitability of tools and equipment by visual inspection.

3.5 Daily, before the start of the competition task, in the process of workplace preparation:

- inspect and tidy up the workplace and personal protective equipment;

- make sure the lighting is sufficient;

- check (visually) that the tool and equipment are correctly connected to the mains;

- check the correctness of the table, chair, position of equipment and tools, if necessary, contact an expert to correct faults in order to avoid uncomfortable positions and prolonged body strain.

3.6 Prepare the necessary materials and tools for work and put them in their places, remove all unnecessary things from the work table.

3.7 The contestant is prohibited to start the competition task if a tool or equipment malfunction is detected. Immediately notify the Expert of any defects or malfunctions and do not proceed to the competition task until the defects are corrected.

## 4.Occupational health and safety requirements during work

4.1 When performing the contest tasks, the participant must observe safety requirements for the use of tools and equipment:

| **Name of tool/equipment** | **Safety requirements** |
| --- | --- |
| A complete PC \ laptop | * keep the workplace clean and tidy;
* make sure that the ventilation openings of the devices are not blocked;
* fulfill the requirements of the operating instructions for the equipment;
* to observe the regulated work breaks established by the schedule and labor regulations, to perform the recommended physical exercises.

**Prohibited:*** disconnect and connect the interface cables of peripheral devices;
* Place papers, folders and other foreign objects on the devices of computer and office equipment;
* touch the rear panel of the system unit (processor) when the power is turned on;
* disconnect the power supply during the execution of a program, process;
* Allow moisture, dirt, loose substances to get on the devices of computer and office equipment;
* to open and repair the equipment by yourself;
* open and refill printer or copier cartridges yourself;
* work with removed covers of computer and office equipment devices;
* When working at a distance of less than 50 cm from the monitor screen.
 |
| Router |
| Switchboard |
| IP phone |
| Firewall |

4.2 When performing competition tasks and cleaning workplaces:

- It is necessary to be attentive, not to be distracted by extraneous conversations and activities, not to distract other participants;

- comply with these instructions;

- observe the rules of operation of equipment, mechanisms and tools, do not expose them to mechanical shocks, do not allow them to fall;

- maintain order and cleanliness in the workplace;

- position the working tool in such a way that it cannot roll or fall;

- perform the competition tasks only with a serviceable tool;

4.3 In case of tool and equipment malfunction - stop performing the competition task and inform the Expert, or in his absence, the Deputy Chief Expert.

## 5. Occupational safety requirements in emergency situations

5.1 If a malfunction is detected in the operation of live electrical devices (increased heating, sparking, smell of burning, smoke, etc.), the contestant should immediately report the incident to the Experts. The contest task should be continued only after the malfunction has been eliminated.

5.2 If a competitor feels unwell or is injured, inform the examiner.

5.3 If a competitor is electrocuted, immediately disconnect the power supply, render first aid (self-help) to the injured person, inform the Expert, and if necessary, consult a doctor.

5.4 In case of an accident or sudden illness it is necessary to first of all disconnect the power supply to the electrical equipment, report the incident to the Experts, who shall take measures to provide first aid to the injured, call an ambulance, if necessary send the injured person to the nearest medical institution.

5.5 In the event of a fire, the Chief Expert and the experts must be notified immediately. In the subsequent development of events, the Chief Expert or a substitute expert should be guided by the instructions of the Chief Expert. Efforts should be made to eliminate the state of fear and panic.

If a fire is detected at the competition site, it is necessary to try to nip the flames in the bud in any way possible, with the obligatory observance of personal safety measures.

If clothes catch fire, try to throw them off. If this is not possible, fall to the floor and, rolling over, knock down the flames; it is necessary to cover the burning clothes with a piece of thick cloth, pour water on them, it is forbidden to run - running will only increase the intensity of burning.

Do not wait for the flames to approach in a room that has caught fire. Smoke is the main danger of fire to humans. If signs of suffocation occur, lie on the floor and crawl as quickly as possible towards an escape route.

5.6 If an explosive or suspicious object is detected, do not go near it, warn nearby experts or service personnel of the possible danger.

If an explosion occurs, calmly clarify the situation and act as instructed by experts, if evacuation is necessary, take documents and essentials with you, be careful when moving, do not touch damaged structures, bare electrical wires. Do not use open fire (matches, lighters, etc.) in the destroyed or damaged premises.

## 6.Occupational health and safety requirement upon completion of work

Upon completion of the work, each participant shall:

6.1 Tidy up the workplace.

6.2 Put away personal protective equipment in the place provided for storage.

6.3 Disconnect the tool and equipment from the mains.

6.4 Put the tool away in a place specially designed for storage.

6.5 Notify the expert of any malfunctions and failures of equipment and tools, and other factors affecting the safety of the competition task.

# Occupational safety instruction for experts

# *1.General requirements for occupational health and safety*

1.1 Experts who have undergone special training and have no health contraindications are allowed to work as an Expert of the Competence "Network and System Administration".

1.2 The expert with special powers, who is entrusted with the responsibility for conducting occupational safety training, must have a valid certificate "On checking knowledge of occupational safety requirements".

1.3 In the process of controlling the performance of the tender tasks and being on the territory and premises, the Expert shall be obliged to clearly observe:

- health and safety instructions;

- fire safety rules, know the locations of primary fire extinguishing equipment and evacuation plans.

- schedule and timetable of the competition task, established modes of labor and rest.

1.4 When working on a personal computer and photocopying and multiplying equipment, the Expert may be exposed to the following harmful and (or) hazardous production factors:

- electric current;

- Static electricity generated by the friction of moving paper with working mechanisms, as well as by poor quality grounding of devices;

- noise caused by the design of office equipment;

- chemicals emitted from office equipment;

- visual strain when working with a PC.

When observing the performance of the competition task by the participants, the Expert may be exposed to the following harmful and (or) hazardous production factors:

Physical:

* cutting and stabbing objects;
* increased levels of electromagnetic radiation;
* increased static electricity;
* increased brightness of the light image;
* increased level of light output pulsation;
* An increased voltage value in an electrical circuit that can be short-circuited through the human body;
* Increased or decreased light levels;

increased direct and reflected glossiness.

Psychological:

* visual and attention strain;
* intellectual and emotional strain;
* prolonged static loads;
* the monotony of labor;
* excessive attention span;
* increased strain on your eyesight.

1.5 Personal protective equipment used during the performance of the competition task:

* earplugs (if there is excessive noise at the site).

1.6 Safety signs used at participants' workplaces to indicate the hazards present:

* No safety signs are provided at workplaces

1.7 In case of an accident, the victim or witness of the accident must immediately report the incident to the Chief Expert.

In the room of the Experts of the Competence "Network and System Administration" there is a first aid kit equipped with medical products, it should be used for first aid and self-help in cases of injury.

In the event of an accident or illness of an Expert, the Chief Expert shall be notified immediately.

1.8 The experts who have allowed non-fulfillment or violation of the labor protection instructions are held liable in accordance with the special rules of competence and, if necessary, in accordance with the applicable legislation.

# *2.Occupational health and safety requirements before starting work*

The following must be accomplished by the Examiners before beginning work:

2.1 On Day C-1, the Expert with special powers, responsible for occupational safety and health, shall conduct a detailed briefing on the "Program of occupational safety and health briefing", familiarize experts and participants with the safety instructions, with evacuation plans in case of fire, with the location of sanitary rooms, medical rooms, drinking water, control the preparation of workplaces of participants in accordance with the Technical Description of the competence.

Check special clothing, footwear and other personal protective equipment. Put on the necessary protective equipment to perform preparation and control of preparation of workplaces, tools and equipment by the participants.

2.2 On a daily basis, before the contestants start performing the competition task, the Expert with special powers conducts a briefing on labor protection, the Experts supervise the process of workplace preparation by the contestants, and take part in the preparation of workplaces of the contestants under the age of 18.

2.3 Every day, before starting work at the tender site and in the experts' room, it is necessary to:

- to inspect the workplaces of experts and participants;

-tidy up the expert's workplace;

-check that the equipment is correctly connected to the mains;

- wear the necessary personal protective equipment;

- inspect the tools and equipment of participants under 18 years of age, participants over 18 years of age inspect their own tools and equipment.

2.5 Prepare the necessary materials and tools for work and put them in their places, remove all unnecessary things from the work table.

2.6 The Expert is prohibited to start work if any equipment malfunction is detected. Immediately notify the Technical Expert of any defects or malfunctions and do not start work until the defects are corrected.

# *3.Occupational health and safety requirements during work*

3.1 When performing work on the evaluation of competitive tasks on a personal computer and other office equipment, the values of visual parameters should be within the optimal range.

3.2 The image on the screens of video monitors shall be stable, clear and extremely sharp, free of flickering symbols and background, the screens shall be free of glare and reflections of lamps, windows and surrounding objects.

3.3 The total time of direct work with a personal computer and other office equipment during the competition day should be no more than 6 hours.

The duration of continuous work with a personal computer and other office equipment without a regulated break should not exceed 2 hours. Every hour of work should be followed by a regulated break of 15 minutes.

3.4 To avoid electric shock it is forbidden:

- touch the back panel of the personal computer and other office equipment, monitor when the power is on;

- allow moisture to get on the surface of the monitor, working surface of the keyboard, disk drives, printers and other devices;

- to open and repair the equipment by yourself;

- switch peripheral device interface cable connectors when the power is turned on;

- clutter the top panels of the devices with papers and foreign objects;

- allow moisture to get on the surface of the system unit (processor), monitor, working surface of the keyboard, disk drives, printers and other devices;

3.5 While performing the modules of the competition task by the participants, the Expert must be attentive, not to be distracted by extraneous conversations and activities unnecessarily, not to distract other Experts and participants.

3.6. to the Expert during work with office equipment:

- Pay attention to the symbols displayed on the equipment panel and do not ignore them;

- Do not remove covers or panels that are hardwired to the device. Some device components use high voltage or laser light, which can cause electric shock or blindness;

- Do not switch on/off the apparatus with wet hands;

- Do not place water containers or metal objects on the device;

- Do not operate the machine if it overheats, smokes, smells or sounds unusual;

- do not operate the device if it has been dropped or the case has been damaged;

- Do not remove jammed sheets until the device has been disconnected from the mains;

-Do not move the apparatus while it is plugged in;

- All work on cartridges and paper replacement can be performed only after disconnecting the machine from the mains;

- It is forbidden to lean on the glass of the original holder or to put anything other than the original on it;

- Do not operate the machine with cracked glass;

- Always wash your hands with warm water and soap after each cleaning of cartridges, assemblies, etc;

- spilled toner, media, immediately collect with a vacuum cleaner or damp cloth.

3.7 Switching on and off the personal computer and office equipment shall be carried out in accordance with the requirements of the operating instructions.

3.8. Prohibited:

- install unknown password systems and reformat the disk yourself;

- carry any means of communication;

- to use any documentation other than that provided for in the tender task.

3.9 In case of equipment malfunction - stop work and report it to the Technical Expert, and in his absence to the Deputy Chief Expert.

# *4. occupational health and safety requirements in emergency situations*

4.1 If a malfunction is detected in the operation of energized electrical devices (increased heating, sparking, odor of burning, smoke, etc.), the Expert should immediately disconnect the power supply and take measures to eliminate the malfunction, as well as report the incident to the Technical Expert. Work should be continued only after the fault has been rectified.

4.2 In case of visual discomfort and other unfavorable subjective sensations it is necessary to limit the time of work with personal computer and other office equipment, to correct the duration of rest breaks or to change the activity to another one not related to the use of personal computer and other office equipment.

4.3 In case of electric shock, immediately disconnect the power supply, render first aid (self-help) to the injured person, inform the Chief Expert, if necessary, consult a doctor.

4.4 In the event of an accident or sudden illness, the first thing to do is to turn off the power to the electrical equipment and report the incident to the Chief Examiner.

4.5 In the event of a fire, the Technical Expert shall be notified immediately. In the subsequent development of events, the instructions of the Chief Expert or a substitute official should be followed. Efforts should be made to eliminate the state of fear and panic.

If a fire is detected at the competition site, it is necessary to try to nip the flames in the bud in any way possible, with the obligatory observance of personal safety measures.

If clothes catch fire, try to throw them off. If this is not possible, fall to the floor and, rolling over, knock down the flames; it is necessary to cover the burning clothes with a piece of thick cloth, pour water on them, it is forbidden to run - running will only increase the intensity of burning.

Do not wait for the flames to approach in a room that has caught fire. Smoke is the main danger of fire to humans. In case of signs of suffocation, lie on the floor and crawl as quickly as possible towards an escape exit.

4.6 If an explosive or suspicious object is detected, do not go near it, warn the responsible persons nearby about the possible danger.

In the event of an explosion it is necessary to calmly clarify the situation and act on the instructions of officials, if necessary to evacuate, evacuate the participants and other experts and the competition site, take the documents and essentials with you, be careful when moving, do not touch damaged structures, bare electrical wires. Do not use open fire (matches, lighters, etc.) in the destroyed or damaged room.

# 5*.*Occupational health and safety requirement upon completion of work

After the end of the bid day, the Examiner shall:

5.1 Disconnect electrical appliances, equipment, tools and devices from the power source.

5.2 Tidy up the workplace of the Expert and check the workplaces of the participants.

5.3 Notify the Technical Expert of any equipment malfunctions and failures and other factors affecting labor safety identified during the performance of the competition tasks.