МИНИСТЕРСТВО НА ОТБРАНАТА
ИНСТИТУТ ПО ОТБРАНА „ПРОФЕСОР ЦВЕТАН ЛАЗАРОВ”
София 1592, бул. „Проф. Цветан Лазаров” № 2, факс: 02/92 21 808, http://di.mod.bg

OPINION

by Dr. Maya Georgieva Bozhilova,
Associate Professor at the Defence Institute "Prof. Tsvetan Lazarov ",

for the dissertation thesis for awarding the educational and scientific degree "Doctor"
on the topic "Models of cloud architectures for building a communication and information environment for collaboration work and control",
author Kristina Lyudmilova Ignatova,
scientific supervisor Prof. Dr. Rosen Stankov Iliev,

in the area of higher education 5 "Technical Sciences", professional field 5.2. "Electrical Engineering, Electronics and Automation", scientific specialty "Automated systems for information processing and control"

1. Relevance, purpose and tasks

The study of the possibilities for building an environment for collaboration based on cloud architecture is undoubtedly a relevant scientific and applied task, arising from the need to optimise the use of hardware, software and human resources. Cloud technologies allow the effective allocation of the necessary resources at the right time.

The aim of the dissertation thesis is to propose relevant models for building a communication and information environment for collaborative work on the basis of cloud technologies, to support the management process for the needs of defence. To achieve this goal, the following research tasks are formulated:

1. To analyse the capabilities of modern cloud technologies and software products that are suitable for building communication and information environments for collaboration work for access to IT services and resources.

2. To propose models of cloud architecture for building a communication and information environment for collaboration work of defence professionals.

3. To make a proposal for building a cloud communication and information environment for the collaboration work of defence professionals.

I believe that the aim and the defined objectives reflect the relevance and significance of the presented thesis, as well as the possibility to apply the results obtained for the needs of defence.

2. Characteristics of the dissertation thesis and contributions

The dissertation thesis is 160 pages long. It is structured in an introduction, three chapters, a conclusion containing the results obtained, a list of publications on the topic of the thesis, a bibliography with 131 cited sources, lists of figures, tables and abbreviations.

The first chapter discusses cloud technologies, cloud platforms and opportunities for building an environment for collaboration work and cooperation. The definition and properties of generalized networks are presented. At the end of the chapter the aim and the main objectives of the dissertation thesis are defined.

The second chapter defines three generalized network models - the process of building a communication and information environment for collaboration in cloud infrastructure, the process of video communication in such an environment and the process of building cloud infrastructure.

Chapter Three contains a description of the results of the simulation of the generalized network models of Chapter Two and presents the possibility of their

application in the field of defence.

The conclusion describes the contributions of the dissertation thesis and guidelines for future work.

I accept the formulated contributions, as well as their classification as scientific-applied and applied contributions.

The presented abstract correctly reflects the content of the dissertation thesis and complies with the requirements of the Academic Staff Development Act in the Republic of Bulgaria and the Regulations for its implementation.

3. Publications on the dissertation thesis

There are seven publications on the topic of the dissertation thesis, one of which is independent. Four of the publications are in Bulgarian, three - in English. Three of the publications have been presented at conferences in Bulgaria, three are in Bulgarian journals and one is published by Springer.

According to the minimum national requirements for awarding the educational and scientific degree "Doctor" in professional field 5.2 "Electrical Engineering, Electronics and Automation", defined in the Regulations for implementation of the Academic Staff Development Act in the Republic of Bulgaria requires 30 points in Group of indicators „Г". Presented publications on the dissertation thesis form a sum of 90 points on indicators from Group „Г", which is three times more than the required minimum of 30 points.

4. Critical notes

I have insignificant remarks on the dissertation thesis submitted to me for opinion, mainly related to the precision of the expressions used in the content of the thesis and grammatical errors.

5. Conclusion

I believe that the presented dissertation thesis meets the requirements of the Academic Staff Development Act in the Republic of Bulgaria, the Regulations for its implementation and the Regulations on the terms and conditions for awarding scientific degrees at the Defence Institute of "Professor Tsvetan Lazarov". The achieved results give me a reason to give a positive assessment and recommend the respected members of the Scientific Jury to vote for the award of educational and scientific degree "Doctor" of Kristina Lyudmilova Ignatova in the area of higher education 5. "Technical Sciences", professional field 5.2. "Electrical Engineering, Electronics and Automation", scientific specialty "Automated systems for information processing and control"

12 May 2022 Member of Jury:

Sofia (Assoc. Prof. Dr. Maya Bozhilova)