GREEN INFORMATION TECHNOLOGIES: DEVELOPMENT OF RECYCLING AND RESOURCE-EFFICIENT INFORMATION PLATFORMS

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Abstract:
This in the article green information technologies content , their ecological and economic importance, electronic waste again performance, energy efficiency increase and resource economical platforms develop issues illuminated. The work purpose cloudy computing, virtualization and energy saver of equipment importance and to the environment negative the effect to reduce aimed at measures analysis from doing consists of.

Keywords: green technologies, information systems, environmental security, electronic waste, recycling performance, energy efficiency, cloudy computing, virtualization, resource thrift, digital infrastructure.

Annotatsiya:
Ushbu maqolada yashil axborot texnologiyalarining mazmuni, ularning ekologik va iqtisodiy ahamiyati, elektron chiqindilarni qayta ishlash, energiya samaradorligini oshirish va resurs tejamkor platformalarni rivojlantirish masalalari yoritilgan. Ishning maqsadi bulutli hisoblash, virtualizatsiya va energiya tejovchi uskunalarning ahamiyati hamda atrof-muhitga salbiy ta’sirni kamaytirishga qaratilgan chora-tadbirlar tahlil qilishdan iborat.

Kalit so‘zlar: yashil texnologiyalar, axborot tizimlari, ekologik xavfsizlik, elektron chiqindilar, qayta ishlash, energiya samaradorligi, bulutli hisoblash, virtualizatsiya, resurs tejamkorlik, raqamli infratuzilma.

Аннотация:
В данной статье освещаются вопросы, касающиеся зеленых информационных технологий, их экологического и экономического значения, переработки электронных отходов, повышения энергоэффективности и развития ресурсосберегающих платформ. Цель работы – анализ мер, направленных на снижение негативного воздействия на

окружающую среду, включая важность облачных вычислений, виртуализации и энергосбережения оборудования.

Ключевые слова: зеленые технологии, информационные системы, экологическая безопасность, электронные отходы, переработка, энергоэффективность, облачные вычисления, виртуализация, ресурсосбережение, цифровая инфраструктура.

Information technologies (IT) of society every one to the front deep enter is going on. This with together, information technologies ecological traces — that is energy consumption, waste, electronics of devices unsuitable to the point arrival and other negative effects also is increasing. This because of , “green” information technologies ” (Green IT) concept appearance It was Green information Green Information Technology (Green IT) is information technologies to the environment the impact reduce, energy and from resources effective use and IT products life rotation in stages ecological security to provide aimed at The concept of Green IT was first introduced in 2007 by Gartner Research . company by previously pushed today on a global scale per day important from directions to one turned.Green information technologies main directions of the following consists of :

Energy efficiency increase – information centers (data centers), servers and computer of devices electricity energy less spend.

Again work and disposal – outdated IT equipment again work through waste reduce

Virtualization and cloudy technologies – physical from devices according to less energy consumer from technologies use.

Lifecycle management – IT from production to disposal of products - little was in the period ecological security to provide .

Green technologies not only the environment protection does, maybe economic also ensures efficiency. For example, cloudy from technologies use enterprise expenses reduces, work and new product working release expenses reduces. This with together, a green approach of enterprises social responsibility increases and stable to develop service does .

Green IT activities in evaluation different international criteria and standards Applicable: ISO 14001 – ecological management system,Energy Star – energy effective devices certificate, EPEAT (Electronic Product Environmental Assessment Tool) – electronic devices ecological assessment system. Resource economical information platforms — this is the IT infrastructure energy, memory, computing power such as optimally used resources without to work directed are systems . Such platforms virtualization , automated monitoring, load balancing balance control , artificial intellect based on energy management to the functions has Green IT is to the environment damage not to bring the energy that was intended economical, waste reducing

and from resources reasonable using technologies Green information technologies following to principles based on: Energy efficiency – computers, servers, information centers less energy spend; Return working – not working remaining devices or their parts again work; Environment damage failure to deliver – harmful substances (e.g. , lead , mercury) were used from devices use reduce;

Far term use – technological of devices his life extension; Virtualization – servers , operating systems systems and applications on virtual platforms combine through resources saving.Electronics waste (e-waste) — today's of the day the most current from problems one. Every year millions ton computer, printer, mobile telephone and other devices to the trash turns them. wrong no to do and environment and human to your health damage delivers.This Reason: Electronic waste again work centers opening.Devices modularity increase — that is only from work came out part exchange and the rest in use continue to.Repeat to use suitable parts separate to take – for example , hard disks, RAM modules, microcircuits. Latest IT platforms in the years further ecological and economic in terms of effective to be in the direction of is developing. This includes own inside gets Cloudy technologies (Cloud computing) Cloud technologies one how many to users via a single server service shows. This through every one user to maintain a separate server need It won't stay. and servers number , electricity energy spending reduces.

Virtual cars using one physical on the server many program and systems to conduct possible . For example, Docker and Kubernetes such as technologies. Energy saver appliances are Energy Star certified has computers, monitors, printers.SSD disks, low-power ARM processors. Green IT current in the making advantages from that consists of economic saving – energy and equipment expenses reduced, ecological profit – waste and harmful gases decreases, brand image improve – companies for ecological approach positive brings prestige, new work to their places has to be possible – again work and technological modernization in the field.

Green information technologies (Green IT) — this IT infrastructure to the environment negative the impact to reduce aimed at approaches is a complex. Every one big information data center thousands kilowatt-hour energy spends. Green technologies this spending reduces Computers, servers and other IT devices again to work suitable parts working exit ecological in terms of important is considered.Cloudy technologies, virtualization and effective cooling systems resource to thrift service does. State policy and corporate "green" in strategies technologies increasingly more place is taking over.

State and private sectors Green IT principles own strategies input necessary.

Universities and scientific centers green technologies according to separately courses and research directions on the road chicken need.

IT companies again to work suitable devices working to release expansion necessary.
Data centers energy efficiency and ecological security according to international to standards answer giving to systems to pass need.
Information literacy increase through users energy economical software from tools to use to teach necessary.

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