

Introduction:

In the last decade, we have seen tremendous growth in the field of information technology. It has evolved to impact millions of users in varied ways, thereby also increasing the demand for powerful hardware devices. In today's world a computing device has almost become inevitable in our daily lives. An increasing demand for devices also brings in hazardous materials to the environment from factory waste in producing these machines, exposure to hazardous materials contained in computer products, defunct products after use etc. In order to minimize these risks, Green IT comes into picture which is the practice and study of environmentally sustainable computing. This includes designing, manufacturing, using of computers, disposing servers, computers and associated components in an efficient and effective manner with minimal or no impact on environment.

Green IT systems deliver information technology with greater sustainability and maximum energy efficiency. The main goal of Green IT is to reduce the use of hazardous materials along with maximizing energy efficiency during the product's lifetime and promote the recyclability of defunct products and factory waste.

Problem Analysis & challenges:

Due to computer digitization and high resource consumption, use of these environmentally harmful substances in hardware production is increasing by the day. High energy consumption and emission of CO₂ through inefficient use of hardware is an additional threat. Also, after the use of product or after product's life, it's low recycling quota and irresponsible methods of disposal are a major concern for our environment.

Some Facts

- Global carbon emissions through IT infrastructure has been estimated at 2 to 2.5 percent of world's total – which is same as of the airline industry
- Between 30% and 60% of the electricity consumed in server rooms is wasted
- 35% of large European enterprises are already relying on and pushing IT to drive a green agenda

IT functions in many organizations have adopted green computing initiatives to reduce the environmental impact of their IT operations. Showing an important social responsibility, organizations are highly publicizing these initiatives to entice employees, stakeholders and customers to build and implement a green image.

Efficient ways to implement the GREEN IT concept:

Energy saving (Energy Star Rating): 4 star complaint PCs have 90% power efficiency whereas 4 star servers may have an efficiency of upto 92%

Disposal of electronic waste: Electronic waste should be dumped properly - electronic devices should be recycled as that would keep harmful materials such as mercury, lead and hexavalent chromium out of landfills. Computers should be repurposed or donated after they have outlived their particular function

Virtualization of servers/storage: Servers with high density steadily consume high energy despite being idle 78% of the average time. Virtualization helps organizations lower the power and cooling consumption by reducing the physical hardware that businesses need

Regulatory compliance: Meeting compliances HR233, the US National Computer Recycling Act and ISO14001, promotes international specifications for an environmental management system

Telecommunicating: Growing importance and use of Teleconference and Telepresence technologies, enables remote working and can help bring down carbon emission through controlled business travels

End user satisfaction: Use of Laptops and LCD monitors enhance the end user experience and also significantly reduce the electricity consumption and overall cost. Usage practices such as turning of PCs at night and weekends, using power saving settings during the day will lead to reduced energy consumption

CONCLUSION:

In today's digitized world, computing devices have become an integral part of end users. Green IT is not directly related to testing or development of software but an initiative that we all should take together to keep our environment healthy. Virtualization is playing a major role here and we should encourage more use of virtualized machines wherever we can leverage them. Recycling of computing equipments' not just keeps harmful materials out of landfills but also helps save energy and emission of harmful chemicals, if they were to be manufactured again. Donating hardware or computers to various charities and non-profit organizations also helps in saving energy and emission. Green IT is not a goal that we can achieve in a measured time but an initiative that we all must take to keep our surroundings healthy and to keep our environment safe. And this is not a long shot goal. With some simple steps outlined above, this is fairly in everyone's reach to achieve.

About QA InfoTech:

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At QA InfoTech (an ISO 9001:2008, 20000-1:2005, 27001:2005 and CMMI Level III certified company), we specialize in providing independent offshore software testing and, unbiased software quality assurance services to product companies, ranging from the Fortune 500s to start-up companies.

Established in 2003, with less than five testing experts, QA InfoTech has grown leaps and bounds with its QA Centers of Excellence globally; three of which are located in the hub of IT activity in India, Noida, India and the other, our affiliate [QA InfoTech Inc.](#) Michigan USA. In 2010 and 2011, QA InfoTech has been ranked in the top 100 places to work for in India. For more details, please refer to our [blog on this event](#).

"We assure the highest degree of Excellence and Accuracy in our engagements. Once you have placed your trust with us, rest assured we guarantee an elated peace of mind"

- Mukesh Sharma, Founder & Chief Executive Officer

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