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TOSIBOX – SIMPLIFYING IOT

As the IoT trend continues to grow, there isn't a single area of our life that won't be touched by IoT devices in the next decade. Connectivity is the foundation for IoT, and it needs to be simple and secure for companies to be able to reap the benefits.

The need for reliable internet connections is greater than ever, with estimates of billions of devices being connected already today. The Internet of Things (IoT) is expected to explode the number of connected objects to 40–80 billion by the year 2020 *(Gartner)*. The global IoT market is said to expand to $457 billion by 2020 *(IDC)*. Thus, also the demand for ubiquitous connectivity is bound to continue to grow at an unforeseen pace in the coming years.

By 2020 there will be at least four internet-connected devices for every person comprising IoT (Futurism.com), and more than half of new business processes and systems will incorporate some element of IoT. By 2020 more than 65% of enterprises will adopt IoT products. *(Gartner)*

The Internet of Things consists of intelligent, connected machines and devices that gather and use vast amounts of data to accomplish things that we could not even dream of a few years back. Expectations are high regarding the market opportunities and new business models made possible by these new connected technologies, especially regarding the so-called Industrial Internet of Things (IIoT).

Benefits drive IoT adoption: use cases

What makes IoT interesting for companies are the various use cases and their significant potential. Devices such as elevators, factory equipment and workspaces are all being connected to the internet to transmit data from their background processes. Real-time data collection and data logging help companies extract the data for analysis, in the hopes of boosting efficiency.

By analyzing the collected data, companies can better optimize processes. To do this efficiently, a feedback to devices is needed. The IoT data collection by organizations is said to grow by 200% in the coming few years *(TDWI)*. Industrial firms and manufacturers, for example, can use data generated from sensor-connected machines to track inventory changes in real time or monitor the health of equipment in the field.

Based on the results of the analyzed data, companies can use remote access to connect back to the devices and improve their processes and boost efficiency. Continuous monitoring of energy consumption, for instance, enables finetuning of building automation systems and easily generate cost savings. Also, when machines can be remotely serviced, it makes everyday work easier by decreasing traveling time and downtime as well as related costs.

By harnessing data companies can use remote maintenance to improve their operating efficiency and uptime as well as productivity. A better service performance can also improve customer satisfaction. One popular use case for IoT is predictive maintenance, which means analyzing historical data to predict when maintenance is needed or to determine when physical assets need repairs.

In addition to the remarkable saving potential in remote services, IoT brings along business opportunities. The new generation of IoT business applications will include creating smarter products to beat competition, utilizing smarter data collection and management, and implementing new business models and creating new value streams *(IP Watch, Infocus.dellemc.com)*. By mastering the IoT, the company can generate new business opportunities from new services or operations that it previously did not provide, and generate new lines of revenue.

Solving the challenges of connectivity

To be able to collect data and access the devices, companies need IoT connectivity. There are challenges, however, that must be solved for the IoT to really live up to the promises. The main challenges in IIoT adoption have to do with cyber security, lack of standardization and skilled workers, legacy-

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"If a tourist can fly across oceans without knowing anything about airplanes, why can't people enjoy the benefits of technology without having an IT degree?"

Veikko Ylimartimo, Tosibox founder

installed base, significant upfront investments, and data integrity *(Morganstanley.com)*. Questions about reliability, security and costs of the connection technologies used are holding back companies from taking the leap into IoT.

So far, the connectivity challenges have been tackled by solving single network connection problems using tailored solutions. The problem with such a case-by-case approach is that it is time-consuming and expensive. Also, compatibility issues can make adding items to the system at a later stage problematic.

As objects connect to the internet for the first time, they're challenging the traditional IT architectures and raising new questions about security and integration. IoT applications and projects typically require exchanging OT (operational technology) data with IT systems to gain increased business intelligence. Therefore, collaboration between OT and IT stakeholders is already in process. However, the impasse often occurs around the topic of security. Enterprise IT departments understand the need for cyber security, but often discount operation's need for ease of use and efficiency. Conversely, operational teams (who also understand the reasons for security) underestimate the complexity of securing data transfer, access control, in these multi-tiered network environments.

Simplicity is security

With a growing amount of sensitive data being gathered by connected sensors and devices, and a growing dependency on the utilization of this data, the challenges of data security and privacy have become a critical issue regarding the development of the IoT. Basically, any "thing" or device connected to and controlled by Internet-connected networks is vulnerable to being hacked.

Secure connectivity is essential for remote access, remote maintenance, continuous monitoring, real-time data collection and data logging. A world without security risks would mean endless business opportunities. By eliminating human errors and other security threats in IoT connections – by simplifying IoT security – users will be able to feel confident and enjoy the benefits of IoT.

Simplicity is also good for security. In addition to making its products secure, Tosibox has put a lot of effort into making them easy to use. With fewer things for users to remember and worry about, TOSIBOX® products are practically impossible to misconfigure. The technology is in all ways agnostic, and the set-up is standardized and configuration-free. This simplicity minimizes manual work, thereby also reducing the likelihood of human errors.

Fast-track to IoT

The basic problem with remote connections has been the lack of standards and, as a result, the countless different ways of establishing the internet connection and ensuring data security. This is where Tosibox has entered the arena with a totally new, disruptive technology: a device-based end-to-end VPN solution.

Tosibox has taken connectivity and made it simple. TOSIBOX® technology replaces the currently available cloud-based connection methods and the site and supplier-specific tailored remote connections with a Plug & Go™, easy-to-use, secure and cost-effective solution that can be deployed by anyone in a few minutes, also without extensive IT skills.

The solution turns an internet connection between two devices into an encrypted and automatic point-to-point connection. Firewalls do not need to be opened. The owner of the TOSIBOX® Lock and Key pair can be sure that the data and the connections are completely secured, and never stored on any third-party server.

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The easy-to-use and secure TOSIBOX® technology enables two-way communication, which allows both data collection and device control. Companies can finally attain the benefits of IoT as well as remote maintenance with this one, unique technology.

Moreover, TOSIBOX® enables easy, centralized and device-specific access management. Creating and managing access groups, limiting access and adding new users and objects is a matter of clicks whereas with previous generation technologies the same tasks took days or weeks to perform. Enterprises can manage their networks in a brand-new way with more efficiency and security than before.

While TOSIBOX® secures the connections, this full package lets companies and integrators create new services on top of the technology. Secure IoT connectivity, remote maintenance and network management are solved by this award-winning technology that is already in use worldwide.

Want to know more?

Please contact us: www.tosibox.com

Advantages of TOSIBOX®

Simple
Build and manage secure IoT infrastructure in minutes

Secure
Tested & audited security

Modular
Unlimited expandability and flexibility

Timeless
Deals with legacy and future systems

Unique
Globally patented point-to-point connection