



# ViPNet 4.0

meets Industry

Smart systems need  
smart VPN solutions



## From vision to reality

Today, many companies in the manufacturing industry have self-regulating processes and access companies' and machine data remotely. But there are many unresolved issues, both technical and strategic. The concept of Industry 4.0 is still at an early stage of its development and its use in the industrial production is just one example of the many applications of Smart Factories. Rigid manufacturers turn into smart systems with efficient, resource-saving structures, where communication plays a crucial role contributing to the merge of industrial and IT worlds.

## A reliable VPN...

Data security is an essential prerequisite for the complete reorganization of communication in industries. All aspects of security and the protection of valuable corporate information must also be guaranteed. The vision cannot be realized without comprehensively securing communication. But can traditional VPN solutions also be viable online with the connection and encryption methods they are based on?

## ...and the new challenges

The industrial topology of the new generation is very diverse and varied. Smart systems need customized secure infrastructures for communication purposes.

In the future, Industry 4.0 will find it difficult...

- to define a specific LAN area in order to build perimeter protection for it,
- to set an interface between the LAN and external network in order to deploy an access control point there, and
- to differentiate between external and internal clients and objects.



The traditional VPN technology quickly reaches its limits when it comes to topology and connectivity. In addition, basic algorithms of the Public Key Infrastructure (PKI) cryptographic system, on which all current VPN solutions are based, are questionable. With these solutions, you can trust a connection only if the authenticity of the root certificate is guaranteed. But is this the case for the current events centering around Prism, Tempora and Co.?

# How visions are realized

Two decades ago, Infotecs developed a VPN technology that is not subject to any fixed server/client dependency and that allows you to change your network topology any time. The ViPNet VPN software allows connection between any network objects, regardless of their location and IP addresses. Based on symmetric keys, the ViPNet technology flexibly adapts to the existing topology and is infinitely scalable.

Unlike the PKI, the ViPNet technology requires no security association to establish a connection between two objects. Direct encrypted data exchange and immediate connection recovery are unique selling points of the ViPNet technology. These features are required for application in the industry field. When you are protecting communications channels, it must be 100% guaranteed that technological processes are not altered or disturbed:

- no loss of packets at the network level
- no delays
- no loss of connection to the remote site when relocating objects

The ViPNet technology is based on symmetric key management and demonstrates basically no vulnerability as opposed to the PKI. The resistance capacity of the encryption is therefore independent of the computational complexity of mathematical functions or trustworthiness of certificates. Because of these features, the ViPNet technology is clearly distinguished from traditional VPN solutions and meets the requirements of Industry 4.0.

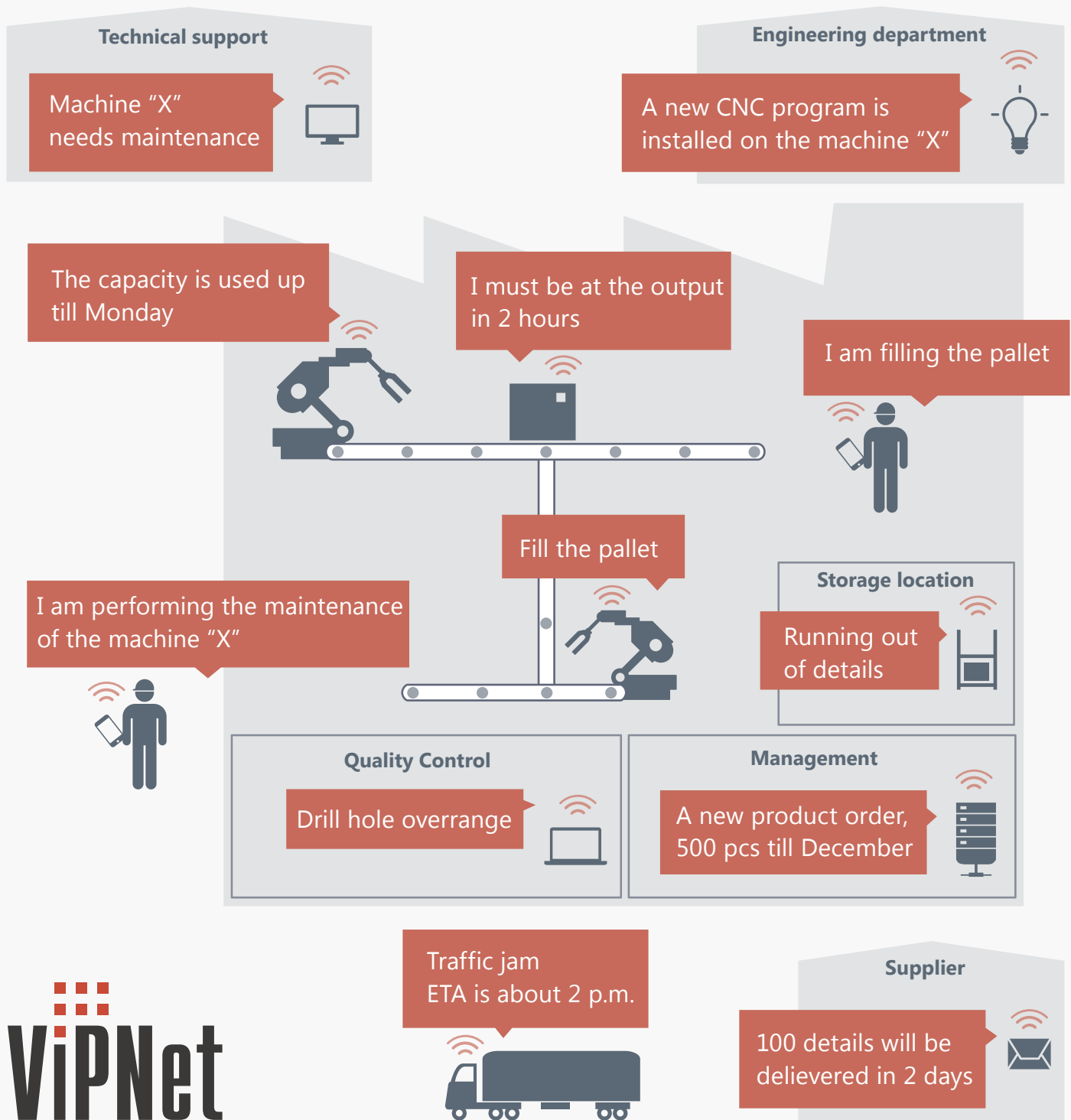


## ViPNet at a glance

- Easy and quick adaptation to an existing network topology
- Direct secure client-to-client connection
- Unlimited scalability
- Transparent for all applications and services
- Software and hardware solutions
- Innovative key management system based on symmetric keys
- No certificate infrastructure required



# Industry 4.0: Various Ways of Communication



**VIPNet**

With the ViPNet technology, you can simultaneously encrypt any areas of a communications channel between different endpoints. The virtual network structure, created by highly secure connections, makes the implementation fast and unobtrusive.

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