I-LAN
EDGE COMPUTING & MANAGEMENT SYSTEM

ONEBOX

PERFORMING ON THE EDGE

I-LAN'S SECURED EDGE INFRASTRUCTURE MANAGEMENT PLATFORM

How to manage different IT systems in remote sites and provide business continuity at the same time?

How can one provide support and business continuity to manage various locations with the necessary local IT infrastructure? When taking security into account how can you keep the necessary IT budget purchases and monthly costs under control? And at the same time still provide the necessary resilience so that local operations are not impacted or compromised?

OneBox allows you to provide everything you need in these remote branches (offices, stores, automation/SCADA) with the necessary local compute. Security, infrastructure management and applications are fully controlled by one central system, the OneCloud.

I-LAN

EDGE COMPUTE SOLUTION

Edge computing refers to the practice of processing data closer to the source of generation, rather than relying solely on centralized cloud servers. In traditional computing models, data is sent to a distant data center for analysis and processing. Edge computing, however, involves performing computations on devices or local servers situated near the data source. This approach reduces latency, enhances real-time processing capabilities, and alleviates the burden on network bandwidth by handling data locally. It is particularly beneficial in scenarios where low latency, high-speed processing, and real-time decision-making are critical, such as in the Internet of Things (IoT) devices, autonomous vehicles, and industrial applications. Edge computing helps improve efficiency, responsiveness, and scalability in various technological environments.

In a retail industry, the network is usually comprised of a small server room, local network and cash registers with individual backup power systems attached. New in-store edge environments focus on the digital experience of the customer – this requires new edge applications that support local devices such as Point of sales, instore cooling units, ESL, hand scans, tablets and more. By these new demands the need for more data processing capabilities is required ion those sites. To do this, retail IT must provide more compute & data-capacity to the edge to ensure that the digital and physical components are seamlessly integrated. Hosting these applications can improve logistics, inventory, and supply chain management to reduce costs, but this approach requires automation.
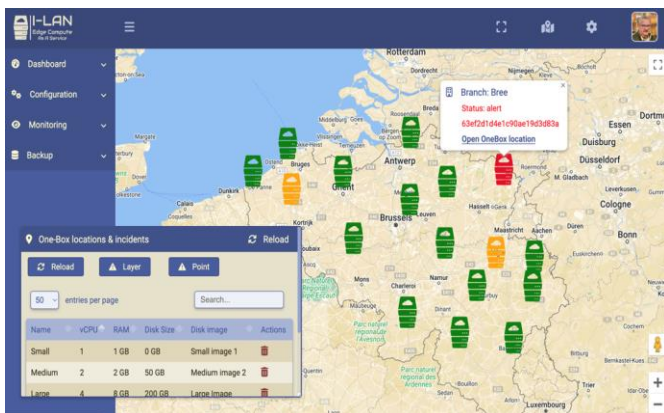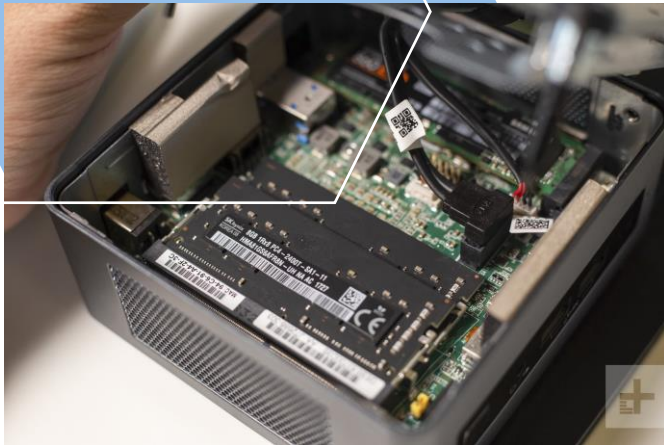
Manage all your remote sites with one central manager OneCloud. Security, access management, hardware and software management, automation, deployments, and new infrastructure are all programmable from the central system. Device management, reporting, real-time monitoring, and predictive failure prevention are some of the module examples.

ONEBOX

A MICRO DATA CENTER CONTAINING ALL IN ONE

Go Small and get Big. The smallest of the family is the OneBox NUC. At its core, the OneBox system embodies simplicity, security and sophistication, offering a compact yet powerful hardware setup designed to bring the capabilities of edge computing closer to users and devices. This all-in-one system combines processing, storage, and networking functionalities, creating a centralized hub for data processing at the edge of the network.

A high-available system that starts from minimum 3 nodes in a standard cluster unit up to 25 nodes. The OneBox NUC appliance is a small, all-flash, NVMe storage-based compute appliance that delivers all the simplicity, efficiency, and enterprise-ready virtualization associated with OneBox edge Computing Operating system. Built specifically for sites that need full security and a highly available infrastructure, the OneBox can be deployed almost anywhere, without requiring a full deployment team.

Taking up only very little space, it also includes Identity Access management (IAM), full cyber security, WAF, disaster recovery, business continuity, rolling upgrades and integrated data protection.

The extremely small form factor consumes a small amount of power, offers ease of installation and an ability to rapidly add devices that scale up rapidly, along with the reliability needed for edge computing and IoT applications:

High Performance: Powered by cutting-edge processors and advanced hardware, the OneBox delivers exceptional computational performance, enabling rapid data processing and analysis at the edge in real time.

Scalability: The system is designed to scale seamlessly, accommodating evolving workloads and requirements. Its modular architecture allows for easy expansion and customization to suit specific business needs.

Versatility: The OneBox system supports a wide array of applications and use cases, ranging from IoT deployments to AI-driven analytics, empowering businesses across various industries to leverage edge computing efficiently.

Networking and Security: With a robust built-in security and networking layer the OneBox ensures data integrity, confidentiality, and resilience against potential threats, safeguarding critical information.

Backup and DRP: Build into our core system, backup and restore functionalities are standard out of the box. Due to our design, we can offer DRP and general protection against crypto malware capabilities no one else can offer.

Ease of Management: Its user-friendly interface and intuitive management tools simplify system monitoring, configuration, and maintenance, reducing operational complexities for administrators.
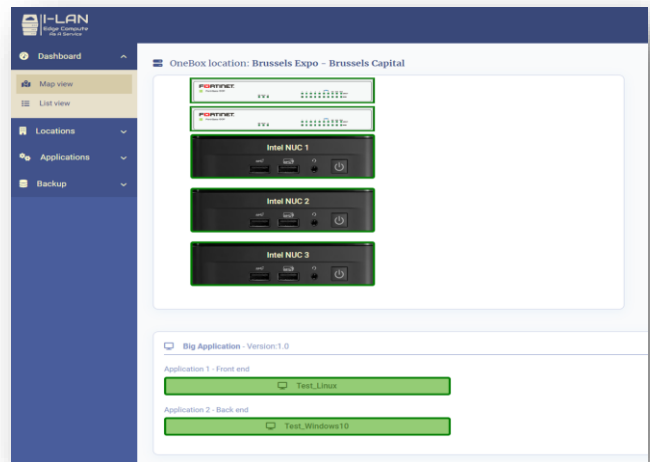
Edge computing is a networking philosophy focused on bringing computing as close to the source of data as possible to reduce latency and bandwidth use. In simpler terms, edge computing means running fewer processes in the cloud and moving those processes to local places, such as on a user's computer, an IoT device, or an edge server. Bringing computation to the network's edge minimizes the amount of long-distance communication that must happen between a client and server.

ONECLOUD

CENTRALLY MANAGE EVERY HEARTBEAT

The OneCloud is a platform that provides a flexible setup between Remote Branches and the central management system.

This OneCloud central management platform is the command center that orchestrates and oversees the functionality, configuration, and maintenance of the OneBox edge compute system. This centralized platform offers a unified interface and robust tools to efficiently manage and optimize multiple OneBox micro-datacenters across diverse locations from a single, user-friendly dashboard.

The power of OneCloud central management is the ease of set up. Automated processes will provide a flexible and automated deployment of the Remote Branch and Offices.

The use of enterprise technology will protect and serve all business processes and data. Our patented technology will ensure industries best standards to protect all the remote environments. The efficiency in deploying and maintaining servers, networks, applications, data and finally your business processes is guaranteed by the service of our OneCloud management system.

The retail sector is adopting a hybrid, multicloud RoBo (Remote offices & Branch Offices) approach to enable greater flexibility and application modernization. The OneCloud provides a flexible setup between Remote Branches and the customers Core applications in the cloud or private data centers.

The OneCloud is a hybrid, multi-cloud management framework that will provide greater operational agility and power to identify, analyze and respond quickly to changes in these mixed environments.
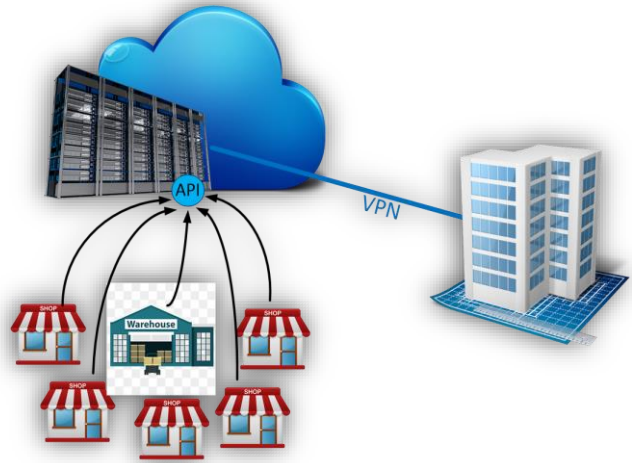
The power of OneCloud central management is the ease of set up. Automated processes will provide a flexible and automated deployment of the RoBo environment. Example give: A new deployment of a branch. Plug in the OneBox and the Core OS will automatically call Home (OneCloud) for request to be provisioned with its personalized configuration.

The use of enterprise technology will protect and serve all business processes and will ensure industries best standards to protect the full environment. The efficiency in deploying and maintaining servers, applications and finally your business processes is guaranteed by the service of the centralized OneCloud solution.

Integrated in our OneCloud solution is the DashBoard portal for centralized OneBox management, like creation of environments, sending new servers (DTAP) deployment and go to production, develop new applications and infrastructure, automation of all functions and easy to program new infrastructures or solutions in the remote locations (All virtual and remotely manageable)
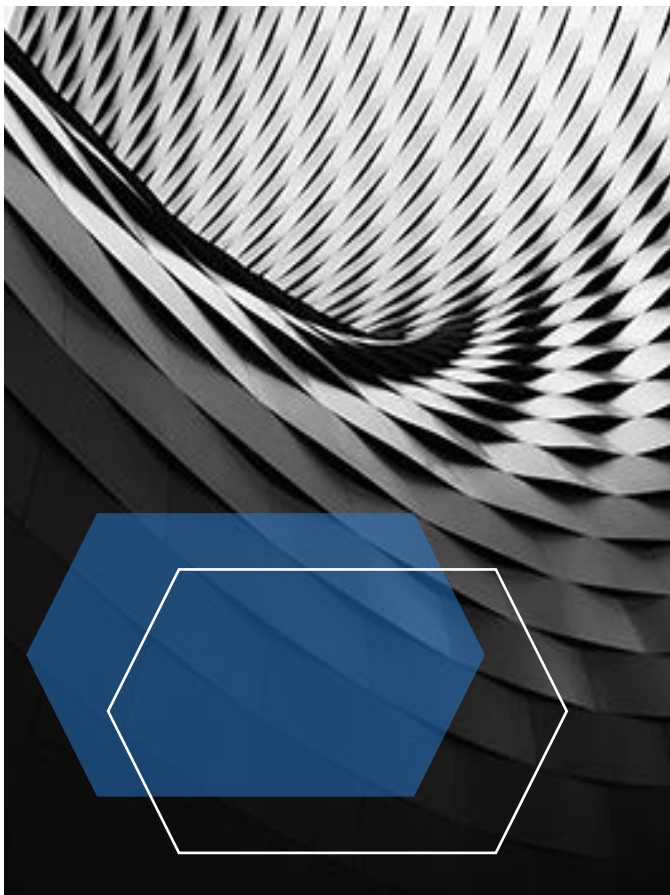
ONECLOUD standard

The OneCloud standard, central management platform is the command center that orchestrates and oversees the functionality, configuration, and maintenance of the OneBox edge compute-system. This centralized platform offers a unified interface and robust tools to efficiently manage and optimize multiple OneBox deployments across diverse locations from a single, user-friendly dashboard.

Key features of the OneCloud central management platform include:

Unified Control: It provides a single-pane-of-glass view, allowing administrators to monitor and manage all OneBox local networks, compute, backup, security, applications, and data. Simplifying management tasks and ensuring consistency. OneCloud standard offers console access to all infrastructure components.

Configuration Management: Administrators can easily configure and update settings, software, and applications on individual or groups of OneBox systems remotely, streamlining deployment processes and ensuring uniformity.

Monitoring and Analytics: Real-time monitoring tools enable continuous performance monitoring, resource utilization tracking, and the ability to gather actionable insights into the health and status of each OneBox unit.
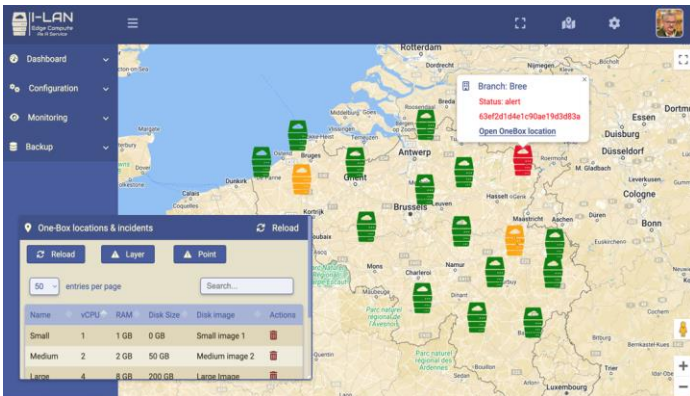
Automated Updates and Maintenance: OneCloud facilitates seamless updates, patches, and maintenance tasks across distributed OneBox deployments, minimizing downtime and ensuring systems remain up-to-date and secure. From network to server operating system, from application to data.

Security and Access Control: Robust security features enable administrators to enforce access controls, implement security policies, and monitor compliance across all OneBox devices, ensuring data integrity and protection.

Scalability and Flexibility: The platform is designed to scale alongside growing deployments, allowing for easy integration of new OneBox units and adapting to changing business needs without compromising efficiency.

User-Friendly Interface: Its intuitive interface and user-friendly tools empower administrators with the ability to efficiently navigate and manage complex edge computing infrastructures without extensive training.

ONECLOUD advanced

OneCloud solution uses data analysis technology that represents a powerful convergence of cloud-based infrastructure and artificial intelligence capabilities aimed at revolutionizing how organizations derive insights and value from their data.
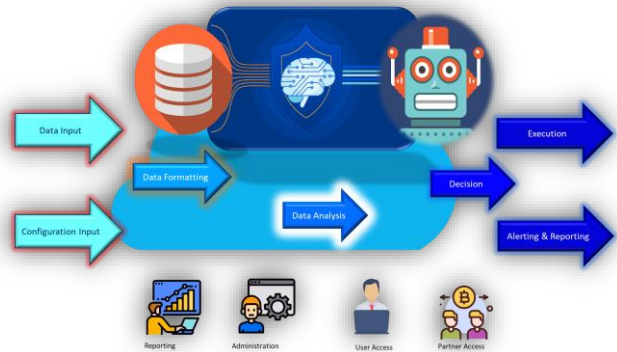
Here's an overview of how OneCloud integrates AI into its data analysis capabilities:

AI-Powered Data Processing: OneCloud leverages AI algorithms to process vast amounts of data efficiently. AI-enhanced data processing enables quick extraction, transformation, and loading of data from multiple sources, accelerating the analysis pipeline.

Advanced Analytics and Machine Learning: The platform offers a suite of advanced analytics tools powered by machine learning algorithms. These tools enable predictive modeling, anomaly detection, clustering, classification, and regression analysis, among others, uncovering valuable insights from complex datasets.

Recommendation Engines: Utilizing AI-driven recommendation engines, OneCloud can suggest relevant analyses, data models, or actions based on user behavior and historical data patterns, enhancing the efficiency of decision-making processes.

Deep Learning Capabilities: For complex pattern recognition and image analysis tasks, OneCloud supports deep learning frameworks, enabling businesses to leverage neural networks for image classification, object detection, and more.

AutoML and Model Building: Automated Machine Learning (AutoML) features within OneCloud streamline the model-building process, assisting users in selecting the best algorithms, tuning hyperparameters, and deploying models without extensive manual intervention.

Continuous Learning and Improvement: OneCloud's AI capabilities facilitate continuous learning by analyzing new data and improving models over time, ensuring that insights remain relevant and accurate as the data landscape evolves.

Interoperability and Integration: The platform's AI tools and models seamlessly integrate with existing data analysis workflows and third-party applications through APIs (like Salesforces, governmental or banking services), fostering interoperability and expanding the scope of AI-driven insights. Our OneCloud offers the possibility to integrate with 3rd party online services.

OUR PRODUCT RANGE

The OneBox solution is a turnkey integrated system that includes all the hardware, software, and security to simplify deployment across a range of choices from private, public and edge cloud infrastructure. It combines High availability, easy server and application management & deployment and a full solution to the security and access control. This powerful combination delivers enterprise-ready services for RoBo or Edge compute, networking, virtualization, security, and access management along with simple, one-click management capabilities.

Small

medium

large

With 3 different types of edge compute units, the OneBox solution can handle all different types of environments from retail stores, industrial automation plants, warehouses, construction sites, remote area's like stone quarries, building management.

Technical Specifications	Silver	Gold	Platinum
Nodes	3	3	3
Processors	i3-10110U 2C/4T 2.1GHz/4.1GHz, i5-10210U 4C/8T 1.6GHz/4.2GHz, i7-10710U 6C/12T 1.1GHz/4.7GHz	Intel® Celeron®, Intel® Core™ i3, Intel Core i5, Intel Core i7, Intel® Pentium®	Dual processor, cores, Intel Xeon Silver 4110, 2.1GHz
Storage	HDD, SSD, SATA, SAS (3 node X 64GBmax)	HDD, SSD, SATA, SAS (3 node X 64GBmax)	SSD (up to 8 x 2TB HD per node)
RAM	32GBmax, SO-DIMM, DDR4-SDRAM	32GBmax, SO-DIMM, DDR4-SDRAM	128GB, DDR4 ECC
Network	2 Eth LAN	2 Eth LAN	4 x Gigabit Ethernet
Dimensions	38mm x 117mm x 112mm	242mm x 200mm x 72,5mm	483mm x 43mm x 450mm
Switching	1 x Included 4 ports	1 x Included 8 ports	2 x 8 - 24 - 48 (Eth, PoE)
Routing	Included 4 ports	Included 8 ports	(Virtual applience)
UPS	Optional	Optional	Optional

CUSTOMERS INTEGRATION

SECURELY CONNECT TO YOUR BACKEND ENVIRONMENT

The integration of our Edge-Solution into the core applications has never been easier with the data integration assistance and consultancy, i-LAN can offer. Integration into the SAP systems, or Azure developments will have access to all the digital information present in our OneCloud database for the core applications to pick up or deposit the new data or configurations. A wide variety of monitoring and reporting tools are available depending on the customer's type of environment. I-LAN will integrate all the necessary tools that allow service automation:

1. Security management
2. Remote Infrastructure management and automation
3. Auto provisioning of Servers and applications across the RoBo sites
4. IAM Identity access management to provide partners, users, admins access to their environment.
5. Backup and archive included (depending on the prerequisites)

Customer or External systems integration is a key feature of the i-LAN Onecloud solution. The Onecloud offers an integration platform, capable of connecting and exchanging data or commands. with built-in adapters and interfaces that provide common integration into the customers' back-end applications. Additionally, the Onecloud integration solution leverages integration standards by using various ICT interfacing solutions.

The i-Lan OneBox/OneCloud can integrate with:

- Azure, AWS, Google,
- SalesForce, Odoo, Github, BitBucket or other API driven platforms
- Back-end systems or core applications
- Partners and suppliers

If it has an API, we can integrate.

The OneCloud system provides the ability to communicate with its external environment in a complete & secure manner. This communication includes sending and receiving system information, application data and infrastructure reports from remote sites to the OneCloud to the customers back-end systems or external systems, as well as administrating all systems around the world.

CUSTOMERS BENEFITS
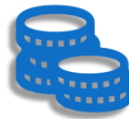

Business continuity | Security + data protection | Easy and remote management | Small form factor | Cost reduction

1. Lower Overall Costs TCO

1. Support and operational costs:
    - Less to Zero technical interventions → Reduction of partner support contracts
    - Central deployment of servers, applications, network configurations, security and access control
    - redundant configuration enabling maximum SLA → Less partner intervention costs.
    - Local intervention is reduced to standard warranty replacement → next Business Day on site
    - automated & centralized patching → Reduce operational cost to 90%
    - automation of new application and configuration of local infrastructure → Reduction of Opp cost 90%
    - Less local install base (Software defined)
    - consolidated management reducing on-site interventions → Reduction of partner support contracts.
2. Future-proof platform
3. Internet based Web Service (Eg: ability to phase-out MPLS in favor of regular internet connections)
4. Hardware: off-the-shelf servers; 1-click deployment covered by warranty contract. Next business day on site

2. Smaller, more efficient IT staff

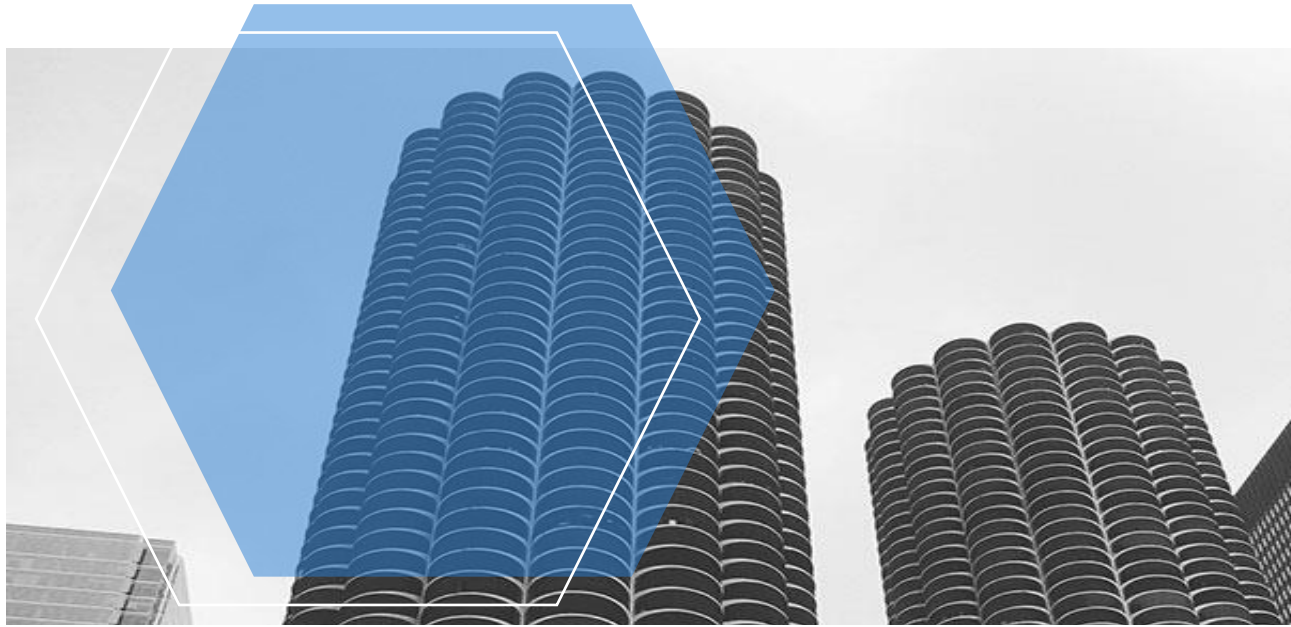3. Optimal security hybrid cloud technology

1. Increase security & data protection standards by standardization and centralization
2. Provide a solution for One Baseline security standard for all sites
3. Partner access: provide access only to their responsibility. Granular access rights can be provided for all needs
4. User access: Employees access anywhere in the world, any device or application they need to operate
5. Admin access: provide all types of access to any system in the OneBox solution to admin accordingly
6. Automated access: Partner Systems can access all resources based on customer specific rules
7.   Centralized and automated monitoring and reporting.
8. Automated security deployments of all sites

4. Improve business continuity

5. Increased data protection

6. Improved performance

7. Greater Gains Through Automation in a hybrid cloud