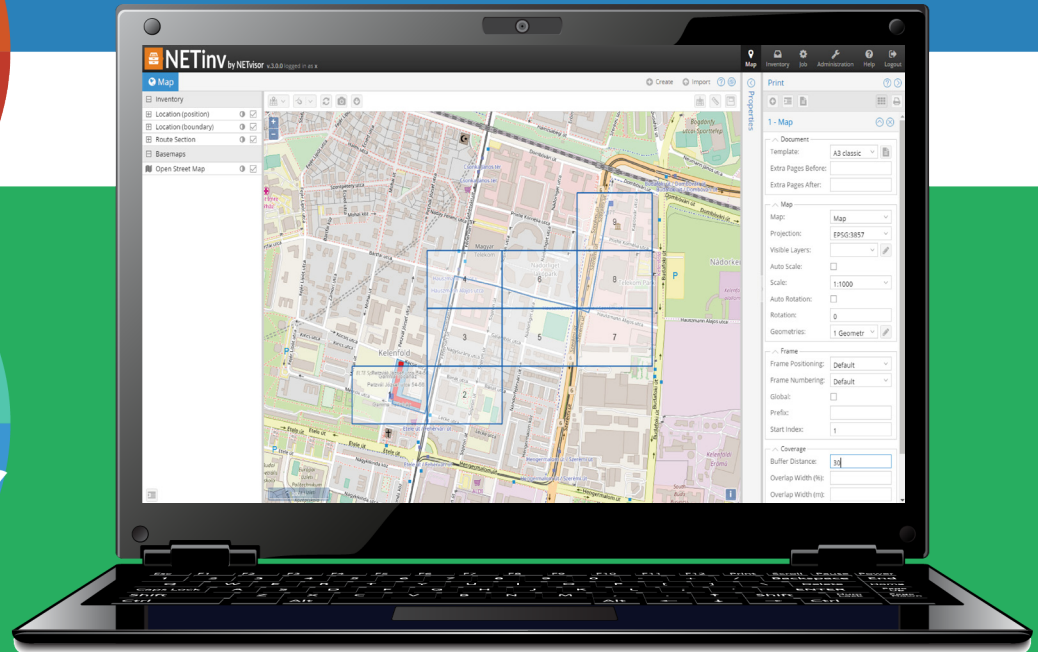


# Multilayer network inventory

# NETinv

**NETvisor**



## MAP BASED MULTILAYER NETWORK INVENTORY



# NETinv

### FOR COMMUNICATION SERVICE PROVIDERS, UTILITIES, GOVERNMENT INSTITUTIONS AND ENTERPRISES

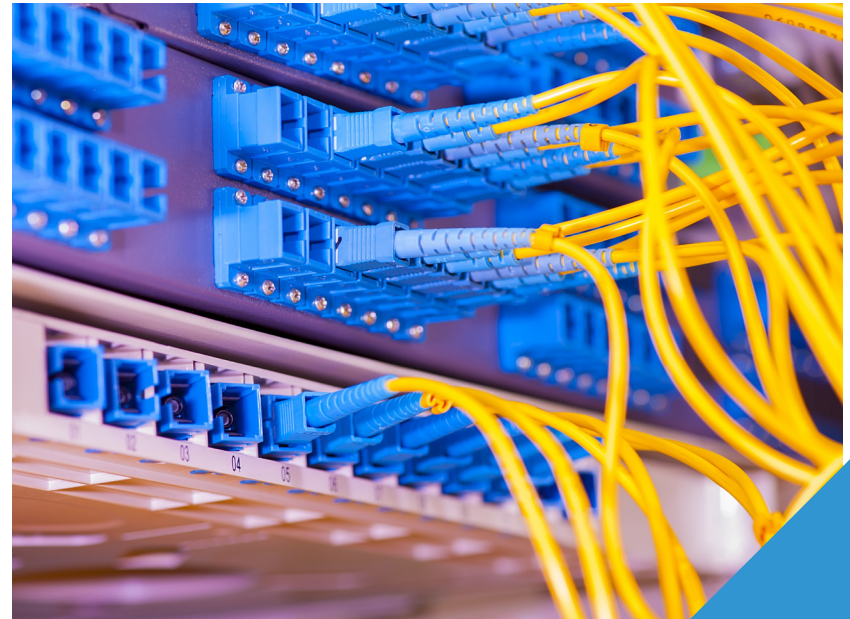
NETvisor's NETinv service and network resource inventory product serves communication service providers and enterprises with creating an integrated inventory of their networks and IT systems. An accurate service and network resource inventory is necessary to perform the daily operational tasks: troubleshooting, provisioning, planning and design, capacity and resource management efficiently.

It is essential in all market segments to launch new telecom and IT services flawlessly and to have precise knowledge of required and available resources. An up-to-date inventory of physical and logical resources including their connections is required for optimal capacity expansion. The efficient service assurance is not possible without the knowledge of correlation between services, logical and physical resources.

NETvisor's NETinv multilayer inventory product provides solutions for the above-mentioned business needs.

#### NETinv

- Provides a comprehensive and complete inventory of communications and IT services, physical and logical resources.
- Supports the optimal utilization of network capacity and helps to carry out design, capacity and resource management tasks.
- Effectively supports service assurance, daily operational tasks and fast troubleshooting.



## MAP BASED MULTILAYER NETWORK INVENTORY

# Key benefits

### INCREASES THE RELIABILITY AND EFFICIENCY OF SUPPLYING INFOCOMMUNICATION SERVICES

NETinv ensures unified access to multi-vendor, multi-technology network resource data and correlation between different network layers (service, IP, communication, physical). Through modelling service hierarchy NETinv helps to identify which services are affected by a failure (bottom-up approach) and to trace back any problem with a particular service to that physical device failure (top-down approach). Such in-depth knowledge of technical inventory data can significantly speed up troubleshooting.

NETinv is a vendor and technology independent product. New equipment types, new technologies and custom attributes can quickly be integrated into the inventory without software development; the user can simply add these on the user interface.

NETinv improves utilization of existing resources.

Using NETinv is easy to learn, comes with a detailed HTML help and has a user-friendly web-based user and administration interface.

The NETinv is based on open standards and therefore it can be easily integrated into operations support systems through industry standard interfaces and APIs.

### HELPS TO LAUCH NEW SERVICES FASTER

NETinv supports network design with up- to- date and accurate resource data. This accurate capacity data and planning ensures the optimization of IT procurement and expenditure. NETinv facilitates the ICT design tasks by managing the inventory objects during their entire life cycle.



## OPTIMIZATION OF RESOURCES

## FAULT AND CHANGE MANAGEMENT

## ALARM MANAGEMENT

## NETWORK DESIGN

## INVENTORY MANAGEMENT OF IoT AND IIoT

A hand is shown interacting with a futuristic, blue, digital interface. The interface features a large grid pattern and several small, rectangular windows displaying various images, including a green starburst, a sunset, a cloudy sky, a person on a parachute, a person in a field, and a person in a car. The hand is positioned as if it is about to touch or has just touched one of the windows. The overall aesthetic is high-tech and digital.



## MAP BASED MULTILAYER NETWORK INVENTORY

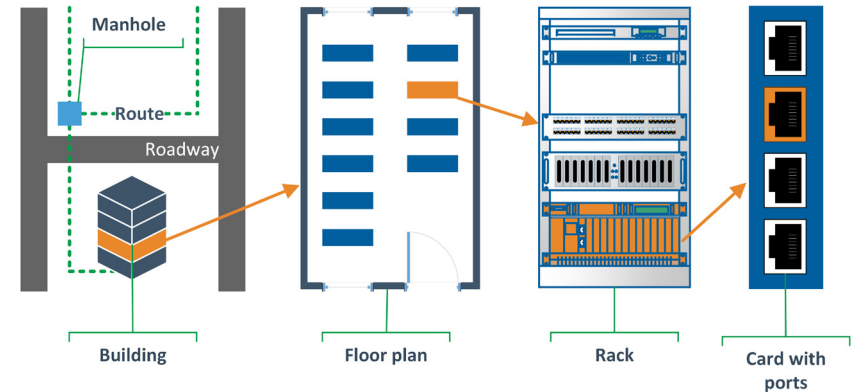
# NETinv components and functions

NETinv consists of three components, each of these providing different services to users.

## PHYSICAL NETWORK INVENTORY

Physical Network Inventory stores physical network data **within and outside the building**. Its data model describes the physical entities in the network and complementary specific functions.

Physical network inventory includes **locations, equipment, routes, cables and physical connections**.



## 1. Locations

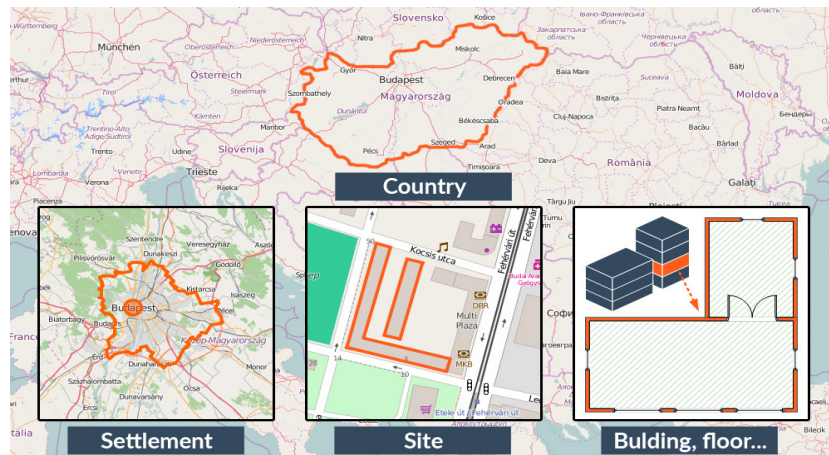
In a technical inventory the first step is to specify the **physical locations where equipment can actually be found**. Locations organized hierarchically support network operators to identify and locate relevant sites in terms of operations. Any number of location levels can be handled in NETinv.

Real entities appear as locations in the inventory equivalent to the real hierarchy as shown on the left figure.

NETinv supports handling poles, outdoor cabinets and underground utility boxes as locations.

Schematic representation of manholes in the network will increase the effectiveness of field work. NETinv supports the recording of routes, conduits, cables and their connections.

The locations may have map information, making easier to find sites, manholes, poles and other locations.

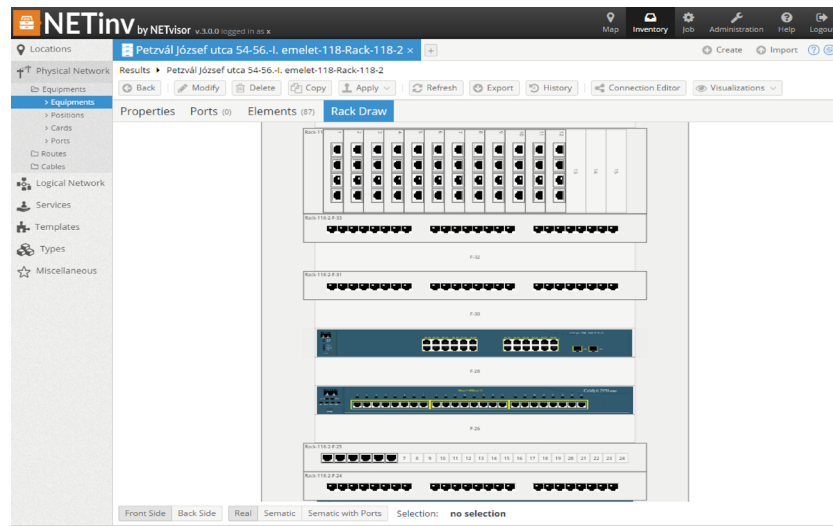


## MAP BASED MULTILAYER NETWORK INVENTORY

# NETinv components and functions

## 2. Equipment

Management of the physical location, cards and modules corresponding to real structure creates the inventory of physical equipment in the network (cabinets, cable distribution frames, and active equipment).



## 3. Routes

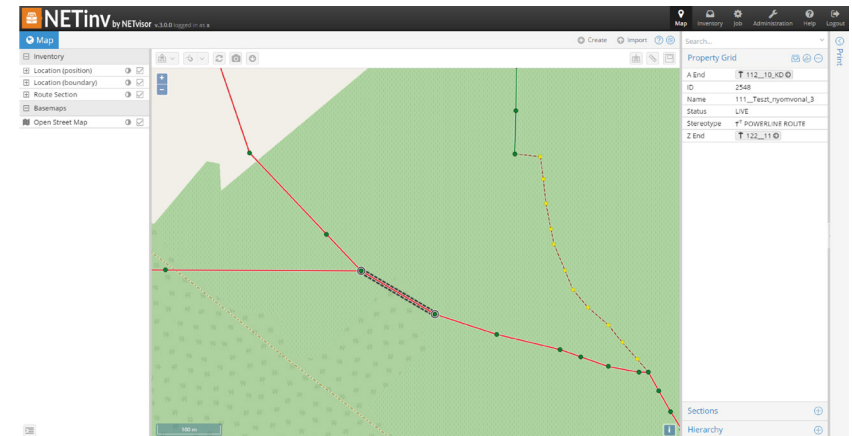
The routes determine the physical topology of the network. This includes storing and representing underground, aerial and in-building networks.

## 4. Cables

Cables are important and non-discoverable elements of any inventory. Their accurate inventory is indispensable for effective operational tasks. NETinv manages the inner structure of cables and enables recording their route.

## 5. Physical connections

Inventory of connections in the cable network enables traceability of physical connections among active equipment by handling the splices and patch cables.



# NETinv components and functions

## LOGICAL NETWORK INVENTORY

The Logical Network Inventory module ensures the management of circuits and the services based on the physical equipment in the network. Its model can store all the currently used technologies. Logical Network Inventory items are devices, trails and services.

### 1. Devices

Logical devices in the network are mostly managed remotely by network engineers, and are the basic elements of the logical networks. Interfaces on these ensure the termination of the logic circuits. The separation of logical devices and physical equipment allows a correct management of virtual appliances, or even stacked devices, when one physical equipment implements more logical devices, or more physical equipment implements one logical device.

### 2. Trails

The modelling of trails (or circuits) allows recording any communications technology in NETinv. It is possible to manage both main and backup paths.

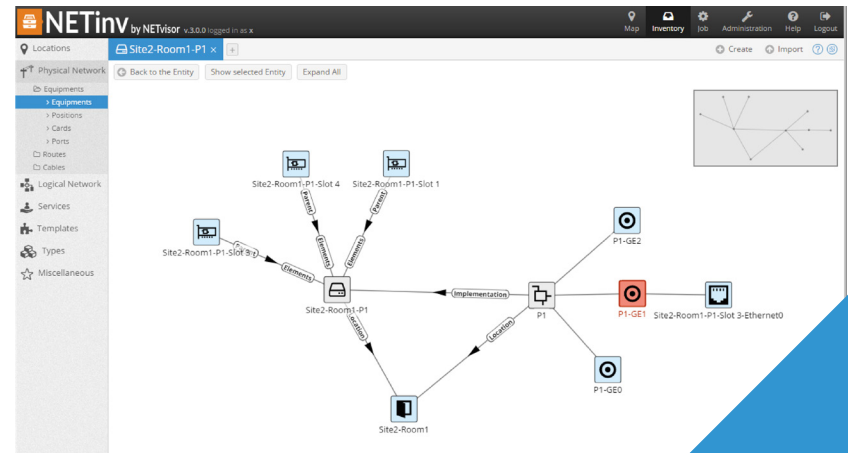
In addition NETinv has capacity management functions in respect of trails that provides complete control over the available capacities.

### 3. Services

NETinv supports modelling and creating inventory of services, and offers opportunities for managing connections among the services and the resources they use, as well as services related to their service quality parameters. The latter provides an appropriate basis for ITIL-based service management processes.

## INTEGRATION SERVER

The Integration Server module provides an open northbound interface for the system through SOAP and http (RESTful) protocols. It supports all object types and actions. Thus, NETinv easily fits into any modern operation support system and can supply data to other systems built on standard service-oriented architecture (SOA) principles.



# Main features

## MAP VIEW

NETinv visualizes the physical inventory data on map, which facilitates faster troubleshooting. Data completed from external sources - such as geodetic data, inventory data of other utilities or base maps – makes the design work extremely effective. NETinv is a map based product. It assigns inventory elements to physical locations of arbitrary maps or floor plans. This fully customizable product can integrate many public and private map sources into layers, and users can add unlimited number of inventory object types and attributes easily.

## HOW TO KEEP YOUR INVENTORY UP-TO-DATE?

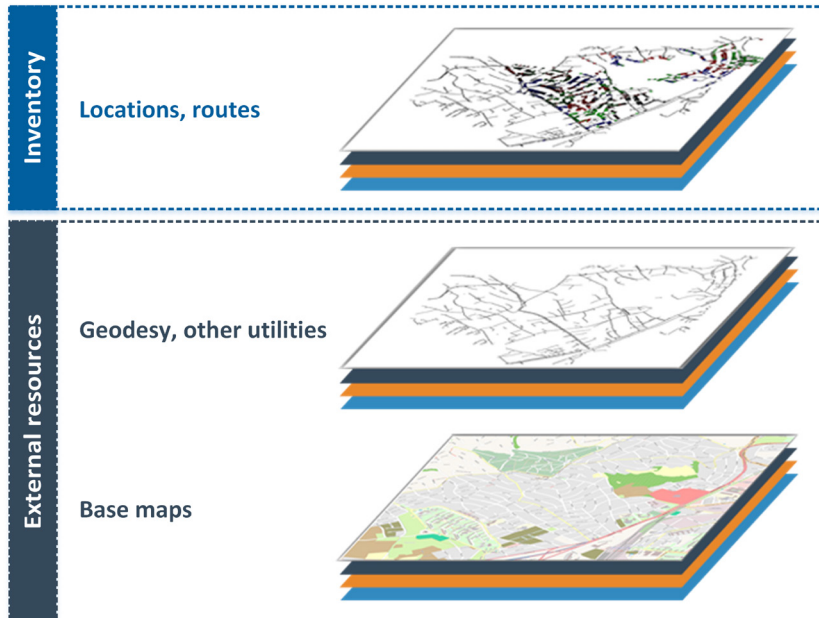
One critical aspect of any inventory is how to upload and update the data. NETinv's well-defined import / export functionality supports massive creation and update of data, allowing to efficiently track changes in resources. For example, the result of a construction work can be loaded back into the inventory from a file or from other systems in a single step.

## SUPPORT FOR FIELD WORK

Data from NETinv, as the central database, can be printed in various ways, according to specific needs and these floor plans, section maps support the field work if the site does not enable online access. The user can customize the print format by choosing from several parameters, resulting in well-known and familiar-looking documents to work with.

## SCHEMATIC DRAWINGS

The network designers produce many drawings during their work, for example cable layout drawing, splice diagram, butterfly diagram for manholes, rack drawing. NETinv relieves network designers to perform these time-consuming tasks because these drawings are easily available on the user interface of NETinv, always showing the latest status.





1

**CREATE**

AN INTEGRATED INVENTORY OF YOUR  
TELECOMMUNICATION NETWORKS AND  
IT SYSTEMS.

2

**VISUALIZE**

THE CONNECTION BETWEEN THE  
DIFFERENT NETWORK LAYERS (SERVICE /  
IP / TRANSPORT / PHYSICAL)

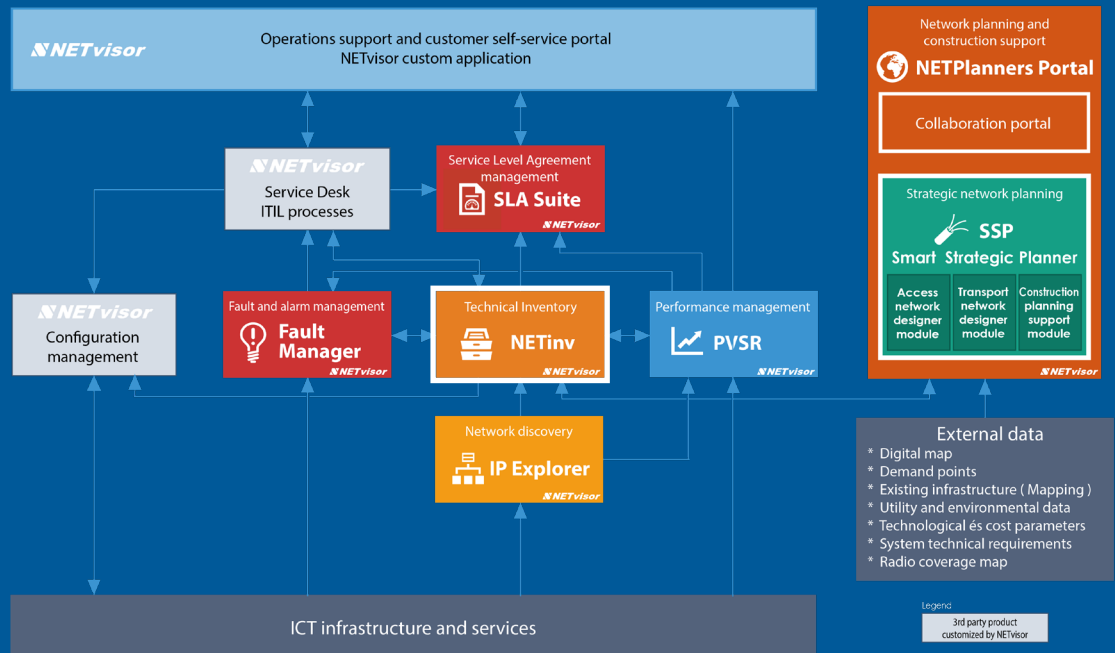
3

**SUPPORT**

EFFICIENTLY PERFORMING  
DAILY OPERATIONAL TASKS:  
TROUBLESHOOTING, PROVISIONING,  
PLANNING AND DESIGN, CAPACITY AND  
RESOURCE MANAGEMENT.

**NETINV**

IS THE CENTRAL ELEMENT OF AN OPERATIONS SUPPORT SOLUTION





improving the quality & efficiency of ICT services

## NETvisor Ltd.



Petzval Jozsef utca 56. 1119 Budapest, Hungary



Telephone: (+36-1) 371 2700 Fax: (+36-1) 204 1664



E-mail: [netvisor@netvisor.hu](mailto:netvisor@netvisor.hu)



[www.netvisor.eu](http://www.netvisor.eu)

