Comarch Network Inventory Management stores complete information about physical, logical and virtual network resources. It is one common and central inventory to capture all details of very complex IT/Telecom environment with a state of art microservices technology underneath.

Telecom Network Inventory facilitates network resource management for multi-vendor, multi-domain networks. It manages RAN, transmission, core, and fixed network domains, IT infrastructure and data center inventory tasks for SDN/NFV and hybrid networks, and allows easy onboarding of new technologies.
MAIN COMPONENTS

- **Resource Catalog**

- **Physical Infrastructure Inventory**
  A common source of knowledge about sites and infrastructure in the telecommunications network. Includes integration with internal and external address databases, and documentation of hierarchy locations and space. Provides sophisticated, graphical tools for documenting any type of site from a telecommunications tower to a data center, including a visual representation of floor plans. Contains tools for inside plant telecom and outside plant telecom physical network documentation, including cabinets, manholes, ducts, cables and other elements of the physical infrastructure.

- **Transport Inventory**
  Out of the box Ethernet, IP, xWDM, microwave, SDH and PDH support – along with several other technologies. Easy onboarding of niche and emerging technologies due to Resource Catalog integration. When used with Virtualization Inventory, it is fully capable of documenting virtual and hybrid networks.

- **Devices and Virtualization Inventory**
  A vendor and domain-agnostic source of knowledge about network elements (physical, logical or virtual). This set of supported technologies is easily extendable due to integration with Resource Catalog. Resources managed here are a convergence point for the technologies utilizing them, and the source provides a coherent view of a multi-domain, multi-layer network.

- **Fixed Access Inventory**
  Fixed access inventory covers multiple access technologies (GPON, xDSL, GFast, RFoG, etc.). Pre-integrated with Comarch Next Generation Fulfillment and other inventory components, it forms a great solution for converged network OSS.

- **Radio Access Inventory**
  Radio Network Inventory provides a comprehensive solution for managing RAN network resources, and helps operators to maintain a logical and physical radio network. The 3GPP-based vendor-agnostic data model provides a unified, easy to manage Inventory for all radio hardware vendors and technologies (GSM, UMTS, LTE, etc.). Layered modeling of devices in the network (physical/logical) allows easy and effective modeling of multi radio and SDN/cloud-RAN scenarios. A shared model with Radio Network Planning, as well as integration with Configuration Management and Comarch SON, gives operators a powerful tool that helps with the maintain a network of the highest quality.

- **Mobile and Fixed Core Inventory**
  An inventory of mobile and fixed core network physical and logical devices. Providing PS and CS core network virtualization support.

- **Resource Management Processes**
  Part of the telecom Network Inventory Management solution. Resource Management Processes provide the opportunity to exploit all inventory data in a manner that is both efficient and tailored to the operator’s environment, while helping to ensure that this data is always up to date.

- **Reporting**
  The Reporting module allows the self-creation of many kinds and formats of reports. The future-proof architecture of Network Inventory Management allows easy integration with innovative NFV/SDN environments, and plays the role of Topology Manager.

Integrated Network Auto-discovery and Reconciliation can provide a network-driven inventory solution that minimizes the overall effort of maintaining an up to date inventory – the real enabler for advanced and effective assurance.
BENEFITS

- **End to End View of Multi-vendor, Multi-technology Networks**
  The idea is to represent the same equipment and connections in several layers, with technology-specific information included in the dedicated-generic layer providing a consistent view of the network for the operator, without an information overflow.

- **Reduced Network Operating Cost**
  Having one consistent view of the network for all technologies and layers allows to the operator to increase business efficiency and decrease operational costs. Inventory is the foundation of a lot of business processes across a telecom company, including the network operation center, engineering and planning departments, procurement, and business partners.

- **Improved Utilization of Existing Resources**
  An up to date, cross-domain Network Inventory Management is the basis of network investments in telecoms. It allows the efficient utilization of existing resources, and planning of new ones which are profitable from the business perspective.

- **Efficient Resources Assurance**
  Network inventory provides network assurance system support in topological correlations and allows recognition and troubleshooting of the root cause of failures in the most efficient manner.

- **Integrated in Umbrella OSS**
  Resource & Network Inventory is the “heart” of the Comarch OSS Suite. It provides the data and information for all other modules, such as Planning & Design, Configuration Management, Fault Management, Service Quality Management, Customer Experience Management, and Business Process Management. All dedicated modules utilize the same inventory database, which leads to efficient data processing and, thanks to the elimination of lots of dedicated interfaces, reduced operational costs.

- **Innovations**
  Thanks to its future-proof architecture, Comarch OSS is already integrated with the NFV/SDN framework in the inventory, planning, configuration and assurance areas. This means that the Comarch OSS is an Umbrella OSS over new virtualized and legacy worlds.

![Figure 1. COMARCH NETWORK INVENTORY MANAGEMENT](image)
Comarch is a provider of complete IT solutions for telecoms. Since 1993 the company has helped CSPs on 4 continents optimize costs, increase business efficiency and transform BSS/OSS operations. Comarch solutions combine rich out-of-the-box functionalities with high configurability and are complemented with a wide range of services. The company’s flexible approach to projects and a variety of deployment models help telecoms make networks smarter, improve customer experience and quickly launch digital services, such as cloud and M2M. This strategy has earned Comarch the trust and loyalty of its clients, including the world’s leading CSPs: Vodafone, T-Mobile, Telefonica, E-Plus, KPN and MTS.

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