

The Alcatel 5650 MultiNetwork Service Controller (MNSC), formerly the 48020 MNSC\*, is a key component of the Alcatel network and service management product family. This family consists of a comprehensive set of software products that enable service providers and large network managers to maximize the efficiency and revenue-generating potential of their networks.

The Alcatel 5650 MNSC can be used to address a multitude of network management challenges. For example, individual service providers may want to consolidate the management of multiple networks into a common administration. The need to do this could arise as a result of network acquisitions and mergers.

The Alcatel 5650 MNSC can also be used by multiple service providers who want to work together to improve the level of service to their customers, including the provision of one-stop shopping and virtual private networks across geographical and/or technical boundaries.



Multidomain network  
management of telecom  
services that incorporate  
multiple technology,  
network and service  
provider domains



The Alcatel 5650 allows each service provider to manage its own resources, while sharing these resources among multiple service providers as part of a consortium.

The Alcatel 5650 works with the Alcatel 5620 Network Manager (NM), formerly the 46020 Network Manager\*, to provide a comprehensive management solution. Both systems employ the same easy to use, point-and-click graphical user interface (GUI), so training and related overhead costs are minimized.

The Alcatel 5650 system increases revenue potential through expanded network service offerings. At the same time, the Alcatel 5650 creates tremendous opportunities for cost-savings through increased network efficiencies and the streamlining of operations. By facilitating the sharing of network resources, the Alcatel 5650 makes it possible to maximize the return on investments in costly infrastructures.

The Alcatel 5650 MNSC is standards-based and supports multiple technologies and multiple services on a single platform. It is specifically designed to accommodate the type of growth a successful service provider can plan on in the coming years.

## The Multinetwork Management Solution

The Alcatel 5650 provides consistent and cost-effective delivery of high level network management. The Alcatel 5650 emphasizes an end-to-end service or executive perspective of the network, rather than a device or technology view.

The Alcatel 5650 consolidates the management of network resources exported to it from two or more networks managed by the Alcatel 5620 NM. The Alcatel 5650 system grows as the multinetwork environment grows, ensuring investments in infrastructure and system training are not lost. The size and nature of resources managed by the Alcatel 5650 can be adjusted on demand.

### Increased revenue through expanded network service offerings

The Alcatel 5650 allows service providers to provide international and national services in addition to regional services. Services can be differentiated by improving SLA performance with automatic rerouting across internetwork links. The Alcatel 5650 also provides end-to-end views of customer services via the Internet or X-terminal sessions.

#### ▼ Service providers in multi-administration partnerships



## Lower costs through consolidation

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The Alcatel 5650 MNSC can be used to consolidate the management of multiple networks, enabling service providers to reduce operating costs and ensure that network resources are used efficiently.

Using the Alcatel 5650 to provide a common network management structure simplifies the management task, reducing time spent managing, as well as time spent training and supporting operational staff and system users.

Since the Alcatel 5650 uses the same terminology and GUI as the Alcatel 5620 NM, experienced operators and network users will require minimal orientation to the Alcatel 5650.

## Network efficiency through resource sharing

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Service providers can gain network efficiencies by deploying the Alcatel 5650 system to integrate the management of independent networks based on differing technologies. This allows sharing of network resources among multiple service networks.

## End-to-end service control

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The Alcatel 5650 system can provide multi-administration management for a consortium of service providers. Consortium members manage their own customers' services, and their operators have an end-to-end view and control of their customers' services. This one-stop shopping capability gives consortia a significant advantage over less integrated competitors.

## Simplified service provisioning

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By making network topology transparent to service provisioners, the Alcatel 5650 focuses their work on choosing appropriate service access endpoints. This simplifies the service provisioning task and results in reduced training and operating costs for the service provider.

## Security

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The Alcatel 5650 operates in a controlled environment with all software located at the service provider's site. Customers access the Alcatel 5650 database via an X-terminal session running on a Macintosh, PC-compatible or UNIX workstation.

The Alcatel 5650 can implement customizable access levels to ensure that no one gets greater access to a resource than is appropriate.

## Applications

### Managing multiple Alcatel 5620 Network Manager systems within a single service provider's domain

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A service provider may operate two or more Alcatel 5620-managed networks for a variety of reasons, including multiple administrative regimes based on geography and/or technology. However, for maximum efficiency, the service provider may want to be able to manage certain aspects of the different networks as a single entity. The service provider may also want to share resources across the different networks.

For example, the service provider's networks might be separated into geographical regions, which could be based on such factors as local access and transport areas (LATAs), state, provincial or canton boundaries. The regions manage their own network configuration through their separate Alcatel 5620 systems.

The Alcatel 5650 MNSC enables higher level network management and sharing of resources among the regions. The Alcatel 5650 system provides the capability to view and manage services that thread through the regional networks as if they were one large virtual network. This results in significant operational efficiencies, improved grade-of-service and access to end-to-end service provisioning and customer service management.

### Service provisioning

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The Alcatel 5650 MNSC system, implemented with Delegate Stations and network partitioning, can be used where service providers need a number of service operator positions to handle customer-oriented activities, such as provisioning and help desk services, without the need for detailed physical network views.

### Service providers in resource-sharing partnerships

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Multiple service providers can create partnerships to provide end-to-end managed VPN services on a national, international or global basis, to organizations that need uniform services.

As shown below, service providers can use the Alcatel 5650 to offer their customers seamless networking services that span organizational, geographical and technical borders.

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In this example, Service Providers A and B have divided their networks into different geographically-based regions, portions of which are shared through the Alcatel 5650 system. Service Provider C brings its advanced ATM and frame relay network resources to the partnership. As a result, Service Providers A and B can offer their customers access to frame relay and ATM network resources without owning these infrastructures.

Once the customer base for either Service Provider A or B becomes large enough to warrant investing in a frame relay or ATM network, the service provider can transfer an established user base to the new resources.

### **Service providers use the Alcatel 5650 MNSC to manage legacy network systems**

Another trend within the service provider world is the acquisition, through mergers and buyouts, of legacy networks. These networks already have management systems and support infrastructures in place. There may be no need to replace these systems, but there is a need to add a "senior management" layer to the overall structure. The Alcatel 5650 MNSC provides that management overview.

Using the Alcatel 5650, the parent company can monitor and control the activities of the smaller networks. They can ensure resources are shared across the smaller networks and eliminate under-utilization of expensive infrastructures. At the same time, the smaller networks benefit because they get access to services they would not otherwise have.

\* This product belonged to the Newbridge family. Newbridge was acquired by Alcatel in May 2000.

## **Technical Summary**

### **Features**

- ▼ Enables service providers to offer differentiated, value-added services
- ▼ Enables service providers to increase their offerings to clients without substantially increasing their infrastructures
- ▼ Allows partnering with other service providers, making it possible to offer global management services
- ▼ Allows service providers to access technological platforms that would otherwise be prohibitively expensive
- ▼ Consolidates management of networks in a multiservice, multi-technology environment
- ▼ Enables faster provisioning of services across multiple networks
- ▼ GUI can incorporate customizable access group logos for easier identification of group ownership

### **System Requirements (minimum)**

#### **For database server and delegate station server**

- ▼ Sun Workstation or server
- ▼ Solaris 2.6 operating system
- ▼ OpenWindows 3.4

#### **For X-terminal access**

- ▼ Desktop personal computer or workstation that can be used as an X-terminal
- ▼ LAN or WAN Ethernet connection to the Delegate Station server
- ▼ X11Release 5 compliant X-server software
- ▼ TCP/IP communications software
- ▼ Microsoft Windows v.3 or higher (required only for PC-based X-terminals)

#### **For Alcatel 5620 systems**

- ▼ 5620 Network Manager Release 3.2, 3.3 and 4.0

### **Capacity**

- ▼ Single Alcatel 5650 system installations (including multiple auxiliary stations acting as servers) support up to 128 Delegate Station sessions
- ▼ A single Alcatel 5650 can work with up to 50 Alcatel 5620 Network Managers
- ▼ The Alcatel 5650 can manage up to 100,000 paths (services)



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