

We manage
network
capacity

LIMA NETWORK PROTECT

ARCHITECTS
IN SAFETY AND
INTELLIGENCE

Overload Protection. Make your network more resilient against disasters.

Perimeter Control. Manage service availability regionally.

Access Control. Prioritize network availability for first responders and primary services.

INTRODUCTION

Group 2000 has re-defined the definition of resilient networks, resilient in a smart way avoiding unnecessary significant investment and pressure on the environment. This approach is beneficial for numerous use cases and it opens up a range of new possibilities for you as a mobile network operator and as a governmental agency.

The solution is called LIMA Network Protect and it enables mobile network operators to shape their network that the available bandwidth and communication channels can be used by the most important services/applications. LIMA Network Protect is elected as one of the top most important innovations of 2017 by the Internal Security fund of the European Union.

We optimize network resilience and communication availability. We make more effective use of available budgets and create an environment which fits perfectly with your corporate and social responsibility.

Use cases

Emergency services

LIMA Network protect ensures that your network always has the capacity for calling emergency services.

Overcapacity

LIMA network Protect eliminates the need for mobile network operators to invest millions to build extra capacity in order to cope with errors in the current network architecture.

Pro-active overload detection

LIMA Network Protect is designed to pro-actively detect overload and acts accordingly by pre-defined algorithms to resolve any issue.

Tetra networks/private LTE networks/ National Roaming solutions

LIMA Network Protect helps to prioritize the emergency services in case the other solutions need to fallback to the network of a mobile network operator.

Disaster Message Boards

LIMA Network Protect increases the possibility for residents in the disaster area to post messages on the Disaster Message Boards (DMB). Effectively making DMB a better tool for communicating with relatives and colleagues.

Selective communications

LIMA Network Protect can be used by law enforcement agencies to more effectively monitor communication of targets by steering targets communications to certain preferred services, as an example, from 4g to 3g.

Cyber attack/ DDOS

LIMA Network Protect helps operators to defend there network from an excessive number of connection attempts.

Resolve overload

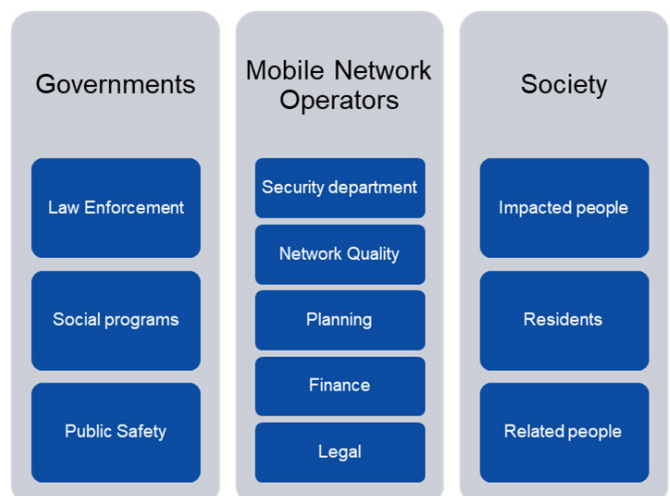
LIMA Network Protect resolves overload situations faster which results in a higher availability of the mobile network.

Event protection

LIMA Network Protect makes use of predefined scenario's ensures maximum protection against overload situation during planned events, like a summit.

Application Area

LIMA Network Protect is designed and perfectly equipped for:



LIMA Network Protect for Governments

Law enforcement – Selective communications

In the past suspects did not have many options if it comes too communications via a mobile phone. With the introduction of smartphone and apps, a new world of possibilities has opened up. This makes it hard for law enforcement agencies to keep up with their equipment.

With the use of LIMA Network Protect, this becomes much easier. With LIMA Network Protect the target can be steered towards a certain form of communications which makes tracing the communication of this target much easier.

Social programs – Emergency service, event, Tetra network, DMB

Governments have social programs that are intended to accommodate public safety. There are only a few tools available to the public during a disaster. The main focus is often on accommodating the first responders, leaving the public with nothing but the [overloaded] commercial mobile networks.

Studies have shown that even the availability of the emergency services is not guaranteed during a disaster or event.

LIMA Network Protect helps the public by improving the availability and resilience of the mobile network. When the mobile network is available to the public then they will have the opportunity to call the emergency number, family or colleagues.

Public safety telecommunicators – Emergency service, event, Tetra network

Firemen, policemen, medical personnel, etc. are the ones that provide assistance in a time of need. Their need to communicate is virtually imminent and in most countries, they have a separate network available to them. However, these separate networks could also be impacted by a disaster and that potentially can cause a degree of network availability.

Generally, these separate networks have a fallback mechanism to the commercial network of a mobile network operator, which would only be beneficial in case this mobile network is not in an overload situation as well.

For this situation, LIMA Network Protect can be used to shape the commercial mobile network so that the communication of the first responders are prioritized and more important: guaranteed.

LIMA Network protect for Mobile Network Operators

Security – DDOS, Emergency services

One of the most valuable assets for an operator is the mobile network. A DDoS attack is targeting that asset and tries to cause congestion or an overload situations, resulting in failed communications for first responders, law enforcement and, residents. LIMA Network Protect is a valuable and friendly investment addition to the currently available solutions and can help the operators to harden the mobile network against a DDOS attack that attacks the signaling capabilities of the mobile network.

Network quality/ QoS – [resolve] overload, event

As stated before, one of the most valuable assets for an operator is the mobile network. From a customers perspective, a high level of QoS is expected. LIMA Network Protect can help to manage the local QoS expectations of their users by managing the availability of each of the services on cell tower level.

Overcapacity

The network planning department has the responsibility to plan maintenance and hardware upgrades activities and plan for potential growth. LIMA Network Protect ensures that there is less disruption caused by maintenance and that there is less need to expand network capacity to cover against a possible overload situation. Resulting in less investment, less recurring costs for maintenance and a more resilient network appealing to your corporate and social responsibility.

Finance – costs

Expanding a network or not upholding an SLA can result in high costs and moreover damage your reputation and carefully built brand significantly. LIMA Network Protect decreases the cost to expand the mobile network and it can be used to meet the SLA agreements made by the mobile network operator.

Legal – compliance, legal costs

The legal department has also an important role in acquiring permits for installing hardware at a location in order to expand and improve the mobile network and stay compliant with all regulatory obligations and contractual SLA's.

With LIMA Network Protect there is less need for expansion and that saves valuable resources from the legal department. LIMA Network Protect can also be used by the mobile network operator to ensure that the SLA with third parties is met. Like for instance an SLA for a large amount M2M connections for large corporate and governmental accounts.

A congested or overloaded network reduces the effectiveness of those information services dramatically.

LIMA Network Protect increases the availability and the resilience of the mobile network. Ensuring that communication is there for those who need it the most. With LIMA Network Protect it is possible to temporarily prioritize SMS service for the disaster area. This in combination with a network that has a higher availability will increase the effectiveness of these SMS information services.

LIMA network protect for us as a society

Impacted people

The society in this example is a group of people that are affected by the disaster. A congested or overloaded mobile network means that victims of a disaster cannot be reached via the mobile network nor that they can use the mobile network themselves.

Related people

A result of a congested or overloaded mobile network is that people who have a (work) relation with one of the victims are unable to reach the victim and that have to wait until the victim reaches out or until the network is restored, which can take many hours causing unnecessary concerns. This can be a particularly worrying situation when the victim is not in his country of origin. LIMA Network Protect increases the availability and the resilience of the mobile network which enables this group of people to reach out to their friends, family or colleagues.

Residents

People who live in or near the disaster area want to be informed. SMS services serve this function.

LIMA Network Protect in action

LIMA Network Protect

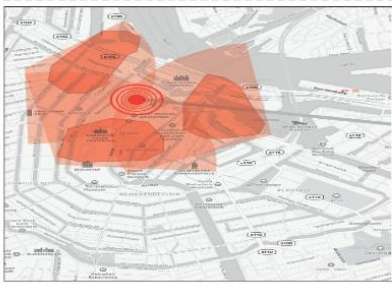
By Class

Cells 20

0 % 100 %

Normal (0-9)

Special (11-15)



By Service

Cells 33

0 % 100 %

Voice

Data

SMS

Video

M2M

By Category

Cells 24

Disaster Message Board	High
Voice	
Data	<input type="range"/>
WhatsApp, Facebook	
Youtube, Facebook live	
Torrents	
None	Low

Cancel
Apply

YOUR BENEFITS

LIMA Network Protect is installed on standard servers or in a virtual environment.

LIMA Network Protect does not require any change in the core network.

LIMA Network Protect can be used for a full and user-friendly automatic management of cell tower capacity and services.

LIMA Network Protect provides a graphical view of the mobile network status.

LIMA Network Protect eliminates the need for in-depth network topology knowledge.

LIMA Network Protect implements various 3GPP releases to support a wide range of options.

LIMA Network Protect is a scalable and flexible solution.

LIMA Network Protect support proactive detection through integration with existing customer deployed solutions or through information obtained from the customer's mobile network.

LIMA Network Protect can analyze, identify issues and determine appropriate countermeasure in under a minute.

VARIOUS CONTROL LEVELS

Cell (Lock/unlock)

Barring of Access Class (Normal 0-9, Special 11-15)

Technology (2G / 3G/ 4G/ 5G)

Service: Voice /Data /SMS /Video /CSFB /M2M

Application: VoIP/ Web/ Video/ WhatsApp/ Facebook/ etc.

Power level: (E)DRX, PSM

OUR COMPLIANCE SOLUTIONS



LIMA COMPLIANCE PORTFOLIO

Comprehensive solutions for service providers, enterprises, law enforcement, and intelligence agencies.

- LIMA Lawful Intercept
 - Warrant Management
 - Provisioning and Mediation
 - Location enrichment
 - Passive and active IP interception
 - E-mail monitors
 - VoIP monitors
 - Mobile data monitors
 - Workflow support
- LIMA Data Retention
 - LIMA Disclosure Management
 - LIMA Data Retention store
 - Workflow support
- LIMA Élite
 - Lawful Interception End 2 End validation
 - Test LEMF functionality

LIMA NETWORK MANAGEMENT AND SENSING PORTFOLIO

For more information about Group 2000's Network Management and Sensing solutions, please visit www.group2000.com.

ARCHITECTS IN SAFETY AND INTELLIGENCE

WHY GROUP 2000?

- Group 2000 is an independent global solutions provider of interception, intelligence, network management, resilience and sensing solutions
- Group 2000 delivers and preserves essential and reliable interception knowledge
- Group 2000 has global experience in the public and telecommunication domain
- Group 2000 minimizes complexity, delivering end to end solutions
- Group 2000 has technology partnerships with leading suppliers
- Group 2000 is an active member of ETSI
- Group 2000 LIMA solutions are modular and scalable to support the largest networks