How to empower your business communications

Alcatel-Lucent Enterprise helps unlock the superpowers of your communications platform with winning transformation options

Alcatel·Lucent
Enterprise

Introduction

Organizations today face unprecedented pressure to **modernize their communications solution** to remain competitive, support hybrid work, meet evolving customer expectations, ensure cybersecurity and remain compliant with current regulations. These multiple challenges are driving decision-makers and IT teams to rethink the fundamentals of their communications platform to achieve greater rationality and efficiency.

However, while it's one thing to be aware of the challenges, it's quite another to get to the **"how-to"** stage and assess which transformation path will be the most optimal for your organization. The landscape offers different options, each with distinct advantages depending on your existing assets, specific needs, budget and strategic objectives. The journey isn't a one-size-fits-all road that everyone should take without question.

The purpose of this solution sheet is to help decision-makers and IT teams identify the **"superpowers"** they can unlock in their communications platform as part of a modernization project. To further inform their decision, the document includes feedback from Alcatel-Lucent Enterprise customers — private companies and public administrations of various sizes, across different countries and regions around the world.

Winning transformation options

Over the years, technological developments in communications and networking have enabled considerable progress in delivering more services to businesses, while reducing the complexity of their communications platform. Organizations that have followed this trend have been able to optimize their communications infrastructure, reduce maintenance costs and better integrate with their applications ecosystem — whether on-site or in the cloud.

ALE's decades of experience in assisting our customers with their transformation projects has enabled us to highlight several proven winning options:

1. **Standardization with IP (Internet Protocol) and SIP (Session Initiation Protocol):** IP has established itself as a standard for data networks, optimizing the communications infrastructure by converging different voice and data uses. SIP is becoming increasingly dominant as a standard for VoIP (Voice over IP), as it facilitates system interoperability, particularly with operators' public networks. Some organizations have not yet made the leap to IP and SIP due to technical constraints related to their environment. The ALE solution allows you to mix IP and non-IP equipment on the same communications platform, depending on your constraints.
2. **Centralization of the communications platform:** This applies particularly to organizations with remote sites. Historically, in the absence of sufficiently stable and efficient network links, a communication server has been set up at each site to meet local communications needs. However, maintaining all these satellite systems is complicated and costly. Centralization consists of relying on IP network reliability to bring together the management of all remote sites from a central communications platform installed in a main site.
3. **Virtualization:** Instead of deploying 10 software applications on 10 servers, why not install them all on a single physical server to optimize hardware resources? This is the winning downsizing promise of virtualization, which can be easily implemented for ALE communications platform software applications.
4. **Connect to the cloud:** A communications platform installed on a customer's premises, standardized through IP and SIP, offers full compatibility with external applications and services, including those available in the cloud. However, not all manufacturers provide this option. ALE enables its customers to connect their on-site communication servers with cloud services from ALE, in a SaaS (Software as a Service) approach. This allows customers to extend their system capabilities without having to install any additional application on-site, deploying a new server, or impacting their existing communications system.
5. **Automate with AI (Artificial Intelligence):** Human operations have a cost, and any possible automation in the installation, configuration, operation and maintenance of systems is a benefit for the IT team in charge. This was true before recent developments in AI, and it's even truer today. ALE helps its customers take full advantage of the automation possibilities offered by its communications platform.

In the following sections, we examine how each of these winning options can be put into practice and illustrate them with case studies of customers who have implemented them with real benefits.

1. Standardization with IP and SIP

To standardize its communications platform using IP and SIP for Voice over Internet Protocol (VoIP), a company can follow this structured approach:

a. **Audit of the current communication server(s):** Depending on the size of the organization and the location of different offices and buildings, there can be more than one communication server. First, identify legacy systems, hardware and software that may need upgrades or replacement to support VoIP. Second, determine the specific communication needs of different departments and regions. This includes assessment of call volume, features needed (such as softphone, mobility, video, conferencing, collaboration spaces, contact center) and user preferences.

b. **Network assessment:** Ensure that the network infrastructure (wired and wireless with Wi-Fi) is capable of handling VoIP traffic. This may involve upgrading bandwidth, routers and switches to prioritize voice traffic and reduce latency. Implement Quality of Service (QoS) settings to prioritize VoIP traffic over other types of data. This helps maintain call quality by reducing jitter and packet loss during peak usage times.

c. **Choice of the right technology:** Implement SIP as the standard for initiating, maintaining and terminating real-time sessions that include voice calls. SIP allows interoperability between different devices and systems, ensuring seamless communication across various platforms, including phone calls from and to the public network.

d. **Compliance with security policies:** Implement encryption to protect end-to-end communications over the IP network. In addition, you may consider deploying Virtual Private Networks (VPNs) to further secure communication between remote sites, especially if using Internet.

With our expertise in secure communication networks, ALE can help customers upgrade their infrastructure to IP and use SIP for VoIP as the standard for internal and external communications, supported by service providers around the world. ALE's communications platform can be adapted to any type of network infrastructure, IP or non-IP, wired or wireless. ALE is one of the few manufacturers that can offer customers the choice of technology that suits them best — while ensuring a smooth transformation with no disruption to their existing systems.

Here's an example from Hidalgo State Government in Mexico. The customer had several aging communication servers to cover the needs of the entire territory. The older non-IP technology could not rationalize the use of the existing IP data network, which also had to be modernized to accommodate a new VoIP-based solution. The customer chose Alcatel-Lucent OmniPCX® Enterprise Communication Server Purple (OXE Purple) as the communications platform and a range of IP phones, as well as ALE's wired and wireless network equipment. **Read the full story here**.

2. Centralization of the communications platform

Organizations with geographically remote sites, branches spread across a large national territory, or international offices or factories inevitably face the challenge of centralizing or decentralizing their communications systems.

A **decentralized approach**, in which each site or branch has its own communications system, leaves the choice of technology, installation and maintenance to the local IT team. Sites are then autonomous and independent of each other, with inter-site communications generally through the public network of a national or international carrier. While a decentralized approach may make sense when inter-site network links lack reliability, it's important to consider the constraints and costs involved in ensuring the smooth operation and resilience of each site's communications system.

A **centralized approach**, on the other hand, offers many advantages, provided the inter-site network link is sufficiently reliable. Centralization helps the organization's IT team streamline the network infrastructure for communications. By moving from a dispersed, multi-system, heterogeneous communications solution to a centralized and unique platform, all the needs of the organization can be served uniformly, leveraging the IP network, wired and wireless, depending on the environment of each office, building or warehouse. Each remote site is attached to a central site — typically a data center dedicated to the organization's IT services and operations — which provides access to shared communication resources. In the event of an accidental break in the network link, a locally installed back-up unit takes over for service continuity and emergency calls.

The transformation can be managed at the pace of the organization, in several steps, per site or groups of sites, with respect to the existing network infrastructure and budget allocated to the new project, such as high-speed inter-site links or on-site Wi-Fi deployment.

In terms of **cost reduction**, benefits are immediate:

a. Less communication infrastructure (PBX, servers, chassis, hardware equipment) and systems to manage, eliminating associated costs

b. All applications and devices of the communications platform are connected to a unique network, thus avoiding duplicate investments and charge

c. Reduced communications cost between employees spread across multiple sites using the organization's private network or the Internet (using specific secure links and firewalls dedicated to IP communications)

The Departmental Council of Seine-Saint-Denis, with nearly 7,000 employees, is a major public employer in the Île-de-France region (France).

The challenges

The customer faced an aging and highly heterogeneous telephone infrastructure. The central system managed approximately 3,000 employees, while the remaining 4,000 were distributed across local PBXs (one per site). The scope expanded to include 130 middle schools, bringing the total number of sites to over 400.

This setup led to:

- Significant hardware obsolescence
- Complex management of technical skills
- High maintenance costs
- Limited flexibility to adapt to evolving needs

The solution

An ambitious modernization plan was put in place to streamline the communications platform through the Alcatel-Lucent OmniPCX Enterprise Communications Server Purple. The centralization of all existing satellite PBX systems was achieved at the same pace as the transformation of the customer's global network infrastructure to IP. Change management support was essential to ensure users were technically trained in the new technology.

The benefits

Centralization on a single OXE Purple system serving all sites and users has drastically simplified maintenance and operations. The result is fewer breakdowns and greater stability, scalability and upgradability.

The main benefit has been financial: the annual costs have been reduced by more than five times.

"At the time, the annual allocation for middle schools was around 800,000 euros. We brought it down to 150,000 euros. That represents a very, very significant economic gain."

THIERRY CAUCHETEUR, HEAD OF THE INFRASTRUCTURE ENGINEERING DEPARTMENT, AT DEPARTMENTAL COUNCIL OF SEINE-SAINT-DENIS (FRANCE)

Read the full story here.

3. Virtualization

Today, increasingly more deployments are taking place in virtualized environments. Here are some reasons why:

- **Optimized use of the hardware platform.** It reduces costs typically associated with power consumption, cooling and space required for physical servers.
- **Lowered hardware maintenance contracts and better management of risks related to supply disruptions and obsolescence.** It reduces operational costs.
- **Independent deployment of hardware.** It allows the use of any standard server platform on the market, allowing the customer to choose the most cost-effective product.
- **Simplified outsourcing to a service provider for the hosting of virtual machines.** It reduces the need for costly expertise and resources inside the organization.

Here are the four common steps of any successful virtualization project:

1 Assess your environment

Assets of the organization (hardware, software, IP network) | Centralization and mutualization options | Transformation to full software | Deployment choice: on premises / hosted / private cloud

2 Select the hypervisor platform

Compatibility with the ALE communications platform (communication server, media processing, applications, VDI for desktop user):

KVM | XPROXMOX | aws | vmware | NUTANIX | Microsoft Hyper-V

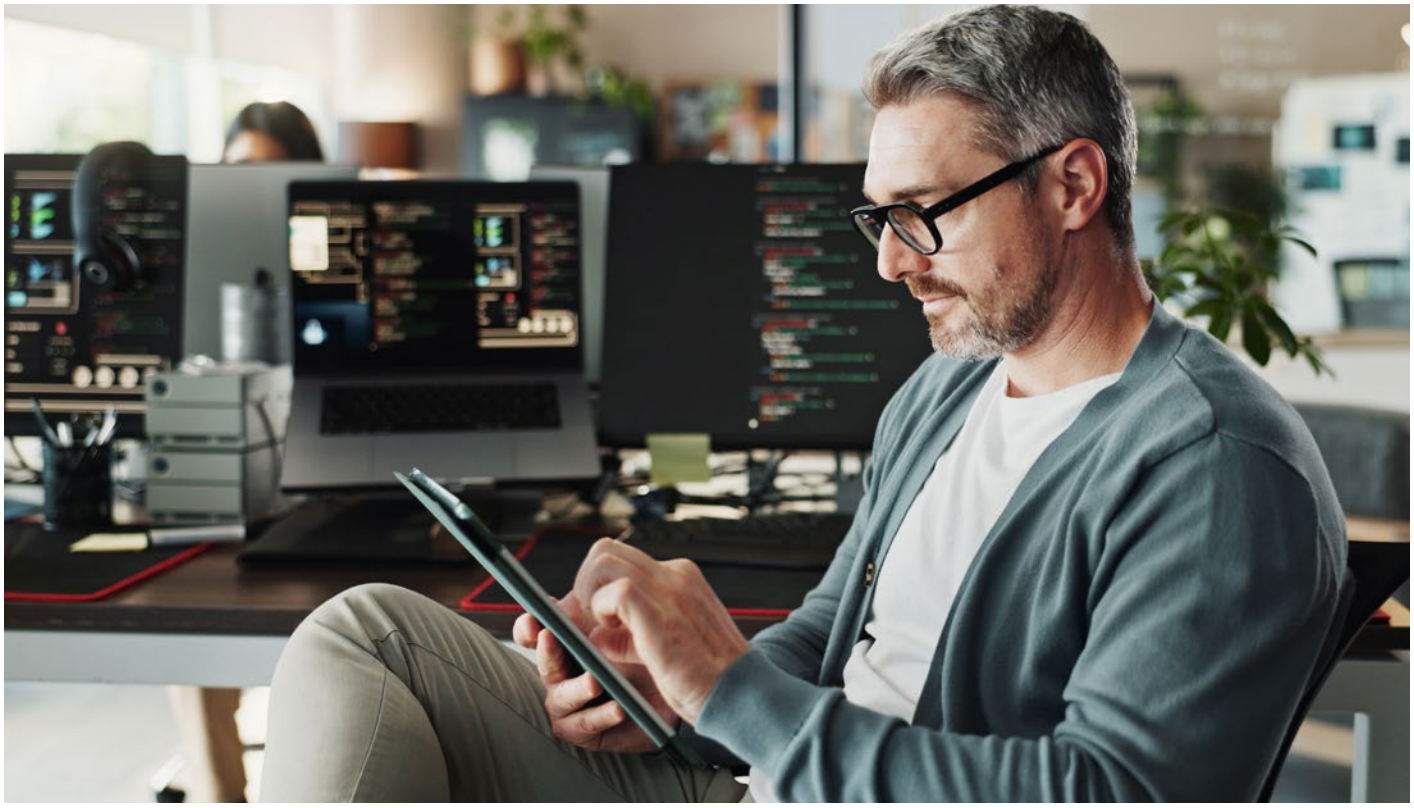
3 Migrate to the virtualized environment

Adjust the network infrastructure (Core, Access, Border) | Rip & replace or smooth transformation (interconnect with the existing) | Secure high availability solution | Monitoring and fine tuning (network management system for voice)

4 Scale as you grow or downsize

Flexible business model (subscription instead of perpetual licensing) | Easily test new applications before engaging | Take seasonal peaks into account | Extend to new geographies as you grow

The communications platform proposed by ALE is a key asset for your organization. By offering full compatibility with multiple hypervisors (such as Microsoft Hyper-V, Nutanix, KVM, Proxmox, VMware, AWS) available on the market, ALE should be part of your IT transformation plan to a fully virtualized environment. It's ideal for organizations that need to adapt quickly to change — whether growing, downsizing or expanding into new geographies — simply by moving or replicating virtualized assets.



4. Connect to the cloud

ALE provides the ability to connect on premises communications platform to cloud-based services, extending overall capacity with innovative services. ALE develops, operates and delivers its own SaaS for unified communications, collaboration and conferencing (UCaaS - Unified Communications as a Service), contact center and customer service (CCaaS - Contact Center as a Service) and unified management of the communications platform.

These cloud-based services benefit ALE customers by integrating privately deployed communications system with cloud-based services in a hybrid cloud model.

Here are three examples of how cloud-based SaaS services can be implemented as part of a hybrid cloud architecture:

1) Full mobility for users enables them to take calls from anywhere and remain reachable on any device. It's one of the factors driving ALE customers to adopt a UCaaS solution, which connects their robust high-performance on-site communications system OXE Purple with Rainbow by Alcatel-Lucent Enterprise in the cloud. This is the case for Strasbourg-Eurometropolis in Eastern France, which capitalized on its existing communications system and extended its capabilities through Rainbow's cloud-based mobility and softphone services. Read the full story here.
2) Increased customer satisfaction by offering them the opportunity to contact your organization in any way they like, including by phone, email, chat or through a social network. It should be done strategically — ideally by leveraging the existing call center infrastructure to avoid any technology disruption that would take front-office agents away from their day-to-day tasks. Additionally, you need to provide them with new services, such as AI, to assist them in customer interactions, integration with CRM applications to access data for real-time conversations, and team collaboration to streamline communication between front and back offices. These are the same advantages that prompted French company Eberhardt specializing in the distribution of household appliances for professionals to adopt the ALE Connect CCaaS solution for their customer service. Read the full story here.
3) The management of the communications platform is often overlooked when choosing a technology, since it doesn't directly offer value-added services to end users — except for system administrators, who are often external service providers managing it under contract. But when you think about it, easy configuration and administration, maximizing automation of operations, and giving end users the ability to manage certain day-to-day settings on their own — all have a definite value for your organization. If management is simplified and can be delegated, then management costs will be lower or even negligeable. With this in mind, ALE has designed Unified Management Center (UMC), the cloud service for managing OXE Server Purple and its application suite.

5. Automate with AI

Cybersecurity best practices and strengthened regulatory frameworks across industries have established a robust foundation for automated systems. At the same time, the rapid advancement of AI is proving invaluable to IT teams —automating repetitive day-to-day management and maintenance tasks, as well as providing increasingly better support for more complex operations such as system installation and configuration. Self-provisioning and simplification of role-based rights management also enable end users to be autonomous, making them more agile and empowered. Automation capabilities in customer service applications, with the booming use of AI-enabled chatbots and voicebots, reduces the total cost of service and improves customer experience, satisfaction and loyalty.

The communications platform is often used to manage automatic distribution of alerts to stakeholders when an issue is detected at the level of an IoT, so device slowdowns and failures are caught sooner. It can also automatically create collaboration spaces where relevant personnel can connect with each other (using instant messaging, audio or video) and receive real-time notifications and alarms from connected devices. This ensures the right people have the information they need to make swift, informed decisions in any situation. As part of the ALE communications platform, the Alcatel-Lucent Visual Notification Assistant is particularly efficient in situations where many people need to be notified automatically and simultaneously, wherever they are in a building, either at their desks or on the move.

The combination of AI-powered automation, flexible deployment models (on premises, cloud or hybrid), and comprehensive process integration creates an environment where employees and customers can engage with organizational resources autonomously and efficiently. This transformation not only reduces operational costs and improves service quality but also enables organizations to focus on strategic initiatives and innovation while automated systems handle routine communication and support tasks.

Automation can go beyond human relationship and consider communications with connected objects (IoT). As an example, the ALE customer Jeju Shinhwa World in Korea required an effective communications platform to build its innovative hospitality environment across 2.5 million square miles of hotels and theme parks. The resort wanted to deliver a “Smart Connecting Room” experience, with the automation of air-conditioning control, lighting and Do Not Disturb notices, as well as access phone services via touch screen. In this specific case, human-machine interactions are managed through phones and smartphones controlled by the guest while valuable usage data are gathered to enhance service quality and maintain smooth operations. Read the full story here.

The economical aspect of modernization

While many manufacturers offer only subscription-based financing models for their communications solution, ALE offers flexibility, allowing customers to choose from various purchasing options and deployment models. With ALE, organizations can deploy their communications platform on premises, in the cloud (private or public) or hybrid. Then, they can select the payment model that best suits their needs — whether it's CAPEX (for hardware and software), OPEX (for software), or pay-per-use.

A modernization project often involves the cost of transforming old systems and equipment and replacing them with more modern, state-of-the-art versions. The advantage for ALE customers is that they can capitalize on past investments:

- Upward compatibility of the software with hardware equipment (telephones, mobile handsets, radio base stations, etc.) is ensured as far as possible, depending on component obsolescence. Customers already equipped with hardware from ALE may be able to reuse some of their equipment, or benefit from advantageous conditions for upgrading.
- Existing software licenses on an aged ALE communications system may enable the customer to benefit from promotions on subscriptions for the upgrade to the latest version. The subscription-based business model known as Purple on Demand includes access to all services of ALE's state-of-the-art communications platform, as well as support and automatic updates with the latest features and security patches. It can provide a smart solution for a company wishing to modernize without having to spend money on permanent software licenses (the classic CAPEX model).

Ready to unlock the superpowers of your communications platform?

Modernizing the communications platform is not a single-lane highway. It's a strategic journey that must respect each organization's unique starting point, constraints and objectives. The winning options outlined in this document are like superpowers embedded within your communications platform.

And the best part about superpowers?
They make the impossible, possible!

Contact an ALE expert to assess your current landscape and co-design a phased plan — whether you start with IP/SIP standardization, centralization, virtualization or management automation — while considering the economical aspect of your project.

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