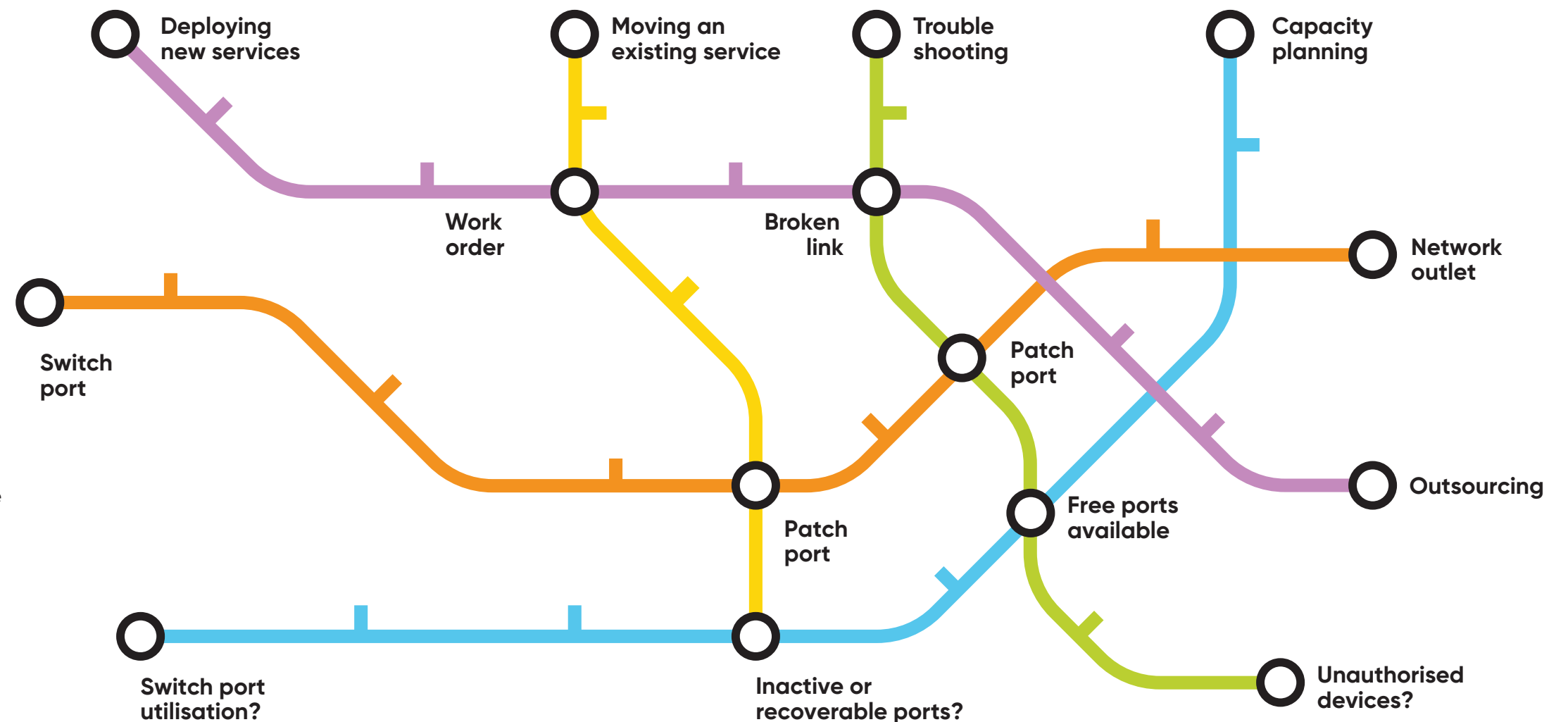# LANsense TGA

AIM Solution

aginode

MORE PORTS, FEWER STAFF

Technology evolution and growing demands are creating increasingly complex, high-performing networks and cabling, as well as a rise in CAPEX for active equipment. At the same time, businesses depend on IT network systems like never before.

For businesses to stay competitive, productive, and enjoy profitable growth, they must focus on IT-supporting infrastructure. Documentation and administration of cabling and cabling infrastructure is critically important, to ensure a minimum of downtime and errors.

Documentation for all the cabling infrastructure and related equipment created during installation will be accurate for a short time – but not over a period of years. There are many possible reasons for this. Some examples: the people responsible for documentation won't stay in their jobs forever, and teams change over time. Or sometimes after an IT incident related to cabling infrastructure has been resolved, the changes aren't documented. And when documentation is managed by a single person or team, it can be difficult to maintain it accurately during critical times.

Cabling systems may remain in place for 10 - 15 years or more, and many changes will occur during this lifespan. Growth of the organisation will lead to additional cabling infrastructure requirements, with more users, changes to user locations, and more devices, for multiple Moves, Adds and Changes (MACs). With all of these challenges, maintaining 100% accuracy on documentation using non-automated methods is difficult – or even impossible.

Deploying new services · **Moving an existing service** · **Trouble shooting** · **Capacity planning** · **Work order** · **Broken link** · **Network outlet** · **Switch port** · **Patch port** · **Outsourcing** · **Patch port** · **Free ports available** · **Switch port utilisation?** · **Inactive or recoverable ports?** · **Unauthorised devices?**

Typically, over a span of 10 years, these changes will occur in a company:

- Servers, routers and switches will have been replaced or been changed at least 2 times
- User PC/devices will have been changed 2-3 times
- The organisation will have grown by 10% in terms of employee count, user devices and revenue growth
- Cabling structure of the organisation will also have grown
- IT teams will have evolved and changed
- Cabling systems would be 10 years old

With so many changes, relying on the basic manual or software documentation would make 100% accuracy practically impossible – creating a very high risk to network uptime.

POOR DOCUMENTATION, POOR MANAGEMENT

Most traditional (software) documentation tools don't have the capability to diagnose and quickly resolve problems. They also increase the risk of error, which could have serious consequences for organisations in terms of higher costs, lost business, reputational damage or poor customer service. Troubleshooting takes significantly longer because ports need to be traced to outlets, and implementing and testing MACs can be extremely challengingespecially as port densities and the number of physical connections increases. As 80% of the time is spent finding the problem, periods of downtime will be extended unnecessarily leading to high Mean Time To Repair (MTTR), and increased risk of disconnecting live devices or applications during an intervention.

Standards like ISO/IEC 14763-2 recommend electronic record keeping in certain types of installations based on their level of complexity, and thanks to the publication of ISO/IEC 18598 there is now a clear definition of Automated Infrastructure Management (AIM) systems. This not only defines the scope of AIM but also addresses the requirements for a management solution to be called an AIM solution. It also defines interfaces that allow AIM systems to communicate with other systems, supporting building management functions such as enhanced intrusion detection. In addition, some modern solutions include practical benefits such as allowing unused ports to be reassigned to improve port utilisation and automated routing.

Various studies show that up to 15 – 25% of network failures can be attributed to human error. AIM can significantly reduce this, as the network manager is fully aware of how the network is physically laid out and can manage and control the network remotely, improving performance in identifying errors and Mean Time To Repair.

ISO/IEC 18598 makes it clear that the benefits of choosing AIM outweigh any reasons for not doing so.

Cabling, connectivity and active IT infrastructure represent an important investment for any size or type of business. Investment in structured cabling, cable systems, and connected equipment could be between 5 – 15% of total CAPEX, and considering the risks and costs introduced by poor management of cabling and connected devices, any saving in this area represents a false economy.

LANsense system allows you to comply with ISO/IEC 14763-2 and ISO/IEC 18598 standards, enabling you to automatically:

- Detect (dis)connects in your network
- Log current network changes
- Map end-to-end circuits to locations
- Share your network documentation
- Optimise your port utilisation

Top reasons for IT network failures

1. Power failure
2. Software & firmware updates
3. Human error
4. Device failure
5. Device error

Downtime Costs

A study by IHS Markit shows that in 2016 businesses in the North American market lost 700 billion USD due to IT downtime costs. On average, a small-medium organisation loses 1 million USD and a large organisation loses 60 million USD in IT costs each year.

An AIM system might not guarantee protection from all conceivable IT downtime costs, but it can help reduce total losses. The ability to integrate an AIM with additional management systems can help to reduce losses further.

LANsense TGA
FOR UP-TO-DATE
ACCURACY

LANsense TGA is the Third Generation Analyser of Aginode LANsense AIM solution. It allows you to monitor, manage and optimise your network capacity.

Detect

LANsense is an intelligent hardware consisting of intelligent panels with mechanical connection detection. New LANsense TGA system supports detection of standard patch cords and do not require 9-pin patch cords anymore. Detection is done in a physical way allowing the (dis) connection to be detected in very short response time with 100% accuracy. With Email Notification, the IT user is always aware of the changes happening in the network on every patch change in the data centre or IT room.

Log

LANsense TGA offers intelligent software: the LANsense Analyser connected to the patch panels via standard RJ45 patch cords track all connects and disconnects, and communicates the changes to the software database via TCP/IP, presenting them in an easy-to-use way. Data on each (dis)connection is enriched by using Active Discovery which uses SNMP to communicate with switches. All information is represented in reports that can be used to monitor your physical layer connectivity.

Map

LANsense TGA automatically translates all information on ports in switches and patch panels in a graphical presentation with visual guidance. End points are mapped on room plans showing distribution zones and telecom outlets for your complete building or data centre. Each end-to-end circuit is fully documented: physical location, network and device identification and status.

Mapping all network information on graphical presentations improves service time in the case of MACs, or resolving incidents e.g. in remote locations or when working with outsourced services.
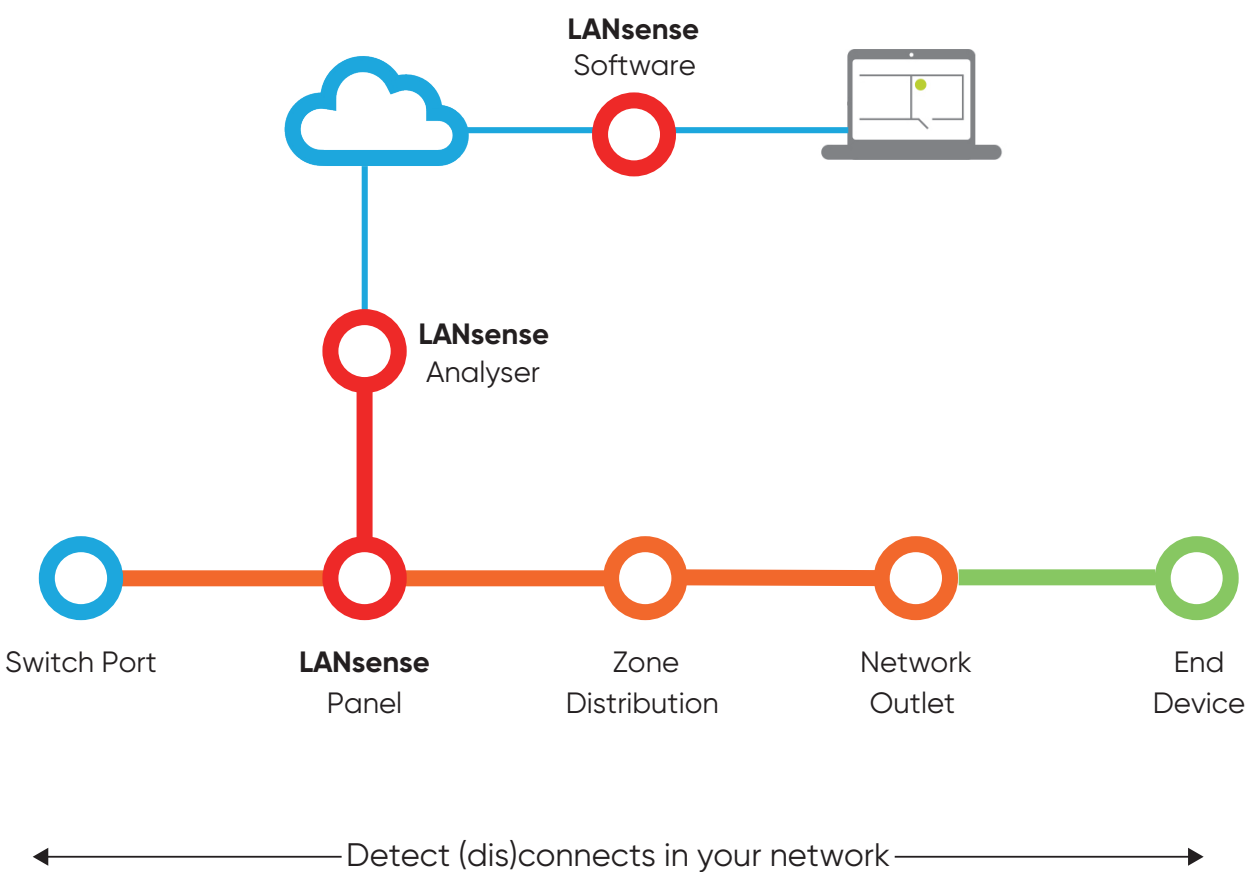
Share

As LANsense is an automated management tool, there is no need to have guidelines to manage changes in the network. Even if the teams change or IT is being outsourced, the new members who have access to LANsense can see the historic data and continue working with minimum training. This makes the outsourcing of deploying new services and MACs more efficient: you can easily and securely share work orders with floor plans, graphical aids and logs & follow up. Instant route planning with no personal network knowledge allows semi-skilled personnel to perform helpdesk roles.
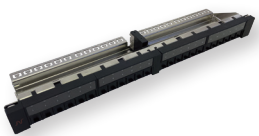
Optimise

LANsense Active Discovery links the network layer and physical layer of IT infrastructure. Switch management software and network management software can provide some information on switch port usage, but the addition of LANsense also provides the complete circuit path of downlinks and allows you to check whether a patched switch port is actually connected to an end device, physically where that device is located, and when it was last used. This way, patched yet unused switch ports can be identified and reused without the risk of disconnecting a live service. LANsense not only helps in asset management of active ports but also in optimum resource utilisation of passive infrastructure with information and reports on the available U space in cabinets/racks, patch panel ports available for utilisation, available end user sockets per room, etc.

AIM

LANsense Software

LANsense Analyser

Switch Port

LANsense Panel

Zone Distribution

Network Outlet

End Device

Detect (dis)connects in your network

Analyser

Copper panel

Fibre panel

Automated Infrastructure Management (AIM)

BENEFITS FOR USERS IN ENTERPRISE AND DATA CENTRES

LANsense TGA automates the documentation of your physical network and allows you to manage your network more efficiently.

IT manager

Accurate, up-to-date and reliable view on the foundation of your IT infrastructure:

- Accurate, up-to-date and real time documentation of the cabling physical infrastructure. Your network is documented automatically regardless of any challenges such as staff turn-over, limited time for documenting changes or unplanned interventions.
- Recover unused switch ports.
- Improved asset management: assess port utilisation and detect unmanaged switches.
- Enable efficient outsourcing of deploying new services and MACs: easy and securely share work orders with room plans, graphical aids and logs & follow up.
- Faster service to end user requests: resolving issues (reduced Mean Time To Resolve) deploying new services and moving existing services.
- Dashboards and reports to monitor the performance of the foundation of your IT infrastructure.
- End-to-end circuit trace, from port to socket.
- Improved security: identify unauthorised devices.

Data Centre Manager

Confidence in circuit availability:

- Monitor end to end circuit trace.
- Ensure redundant and load balancing circuits are connected.
- Flag critical circuit disconnects.
- Identify available rack space.

Service operator / team

Hassle-free directions to perform Moves, Adds and Changes more efficiently:

- User-friendly, web-based application that can be operated from a smartphone.
- Work orders with email notifications and logs.
- Room plans allow you to easily locate the port or outlet.
- Visual guidance on software and LED guidance on panels to perform patch changes, even by untrained staff.
- Automatically maintains the history of work orders performed and flags incomplete scheduled activities.
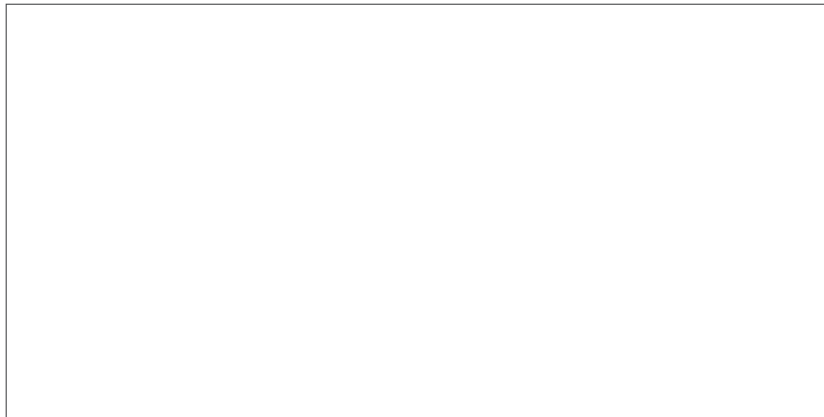- Faster trouble-shooting.

Network user

Increased security and continuity:

- Faster service response and reduced MTTR lowers the cost.
- Higher availability of the network.
- Improved security and GDPR compliance.
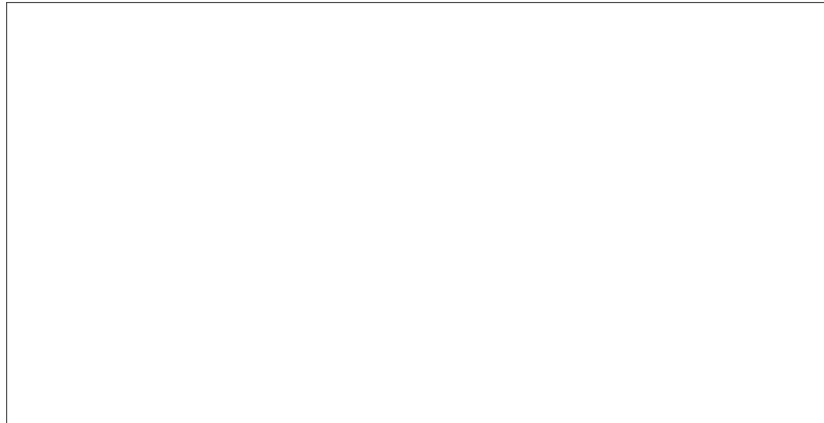
What LANsense TGA tells you: end-to-end circuit with all data.

Real time 2-dimensional graphical view of equipment room, cabinets/racks, networking equipment, cabling, patch panels and LANsense TGA active equipment.


Real time graphical representation of the switch, showing recoverable parts, VLANs, port status and PoE powered switches. If skilled IT staff aren't available for remote offices, visual guidance can help an unskilled person perform patching changes.

SPECIFICATIONS
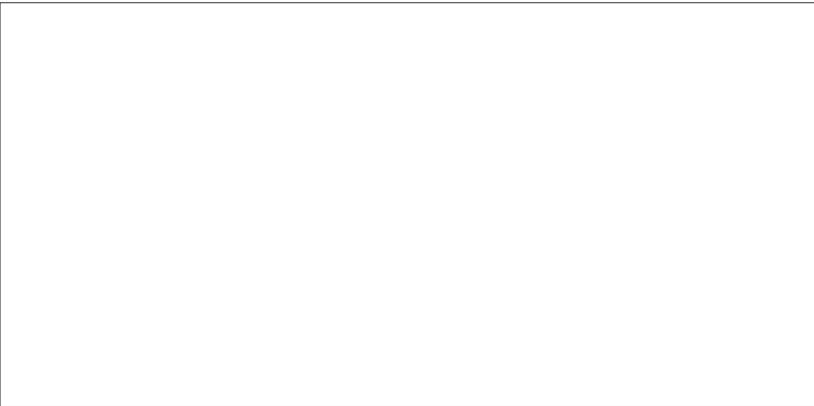
Alerts on dashboard show the number of new and unauthorised devices, illegal patches, unused patched ports and multiple devices on ports.
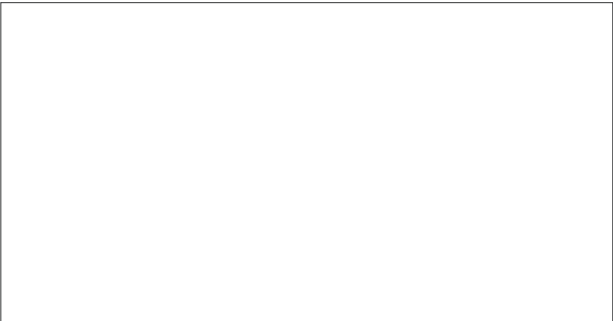
The LANsense Room Planner tool is an interactive tool for documenting the various elements and items related to cabling infrastructure like racks/floor boxes, data sockets, wall boxes, etc. Circuit tracing can also be done from the socket to find the switch port that the socket is connected to. Room plans also display available U space. The room plans of data centres, equipment rooms, can be uploaded using .svg files.

- 64-bit application (makes better use of a modern O/S)
- Professional SQL database (including use of enterprise class platforms)
- VM ready
- Current technology & interfaces
- Optional discovery module
- Web-based application – no client software required, only HTML 5 browser (database accessible from any machine in your organisation)
- AIM standard compliant
- Licensed by ports
- Cabinet view, circuit trace, room plans, and numerous reports included
- Multi-language per user
- Training and support available
- Supports and inter-connect configurations

#smartconnection

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info@aginode.net

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