

Core³ Networks

A network is the backbone of the IT infrastructure that enables internet access, email, voice calls over the Internet, music and movie access, remote touch panel controls, telemetry data transmission, CCTV, video conferencing, access to weather and newspapers, remote support or just to watch that key football match on the other side of the world.

Today computer networks are complex. To do all this they connect all the components of an IT infrastructure, supporting any number of applications, protocols, and services.

Because networks have so many multidimensional tasks to perform, it is no longer practical or economically feasible to construct them by connecting together a large number of standalone components that are managed separately and have little or no awareness of one another.

Why is a Core³ Network different?

Core³ Networks are the most efficient, cost effective and reliable infrastructure to fulfill the integration needs of your network.

Historically, data transfer, voice signaling, call processing and audio-video streaming have been developed and deployed on separate products and on separate networks. Today converged Core³ solutions are available, greatly reducing capital expenditures, cabling costs, and the operational expenses associated with managing separate network infrastructures.

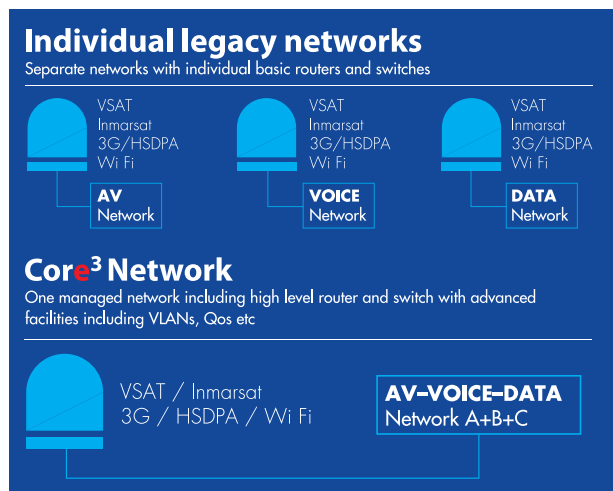
Core³ Network technologies can be divided into two primary categories:

- Core³ Wired Network
- Core³ Wireless Network

By using **Cisco** routers and switches your network will be capable of high performance fast switching, intelligent routing, Quality of Service (QoS) control, security and all with rock solid reliability.

Cisco is a high level product that has all the advanced facilities needed by Core³ Networks.

Moreover if you need wireless device mobility around the yacht as part of your network, **Cisco** offers a broad range of products delivering high performance and easy management, using the **Cisco Wireless Control System**.



Core³ Networks



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Core³ Wired Network for switching and routing

The switch and the router control the basic transfer of data traffic around the network.

In addition to these basic functions the Core³ Wired Network will provide the following attributes:

Multilevel network security

- Firewall and access control capabilities.
- Automatically permit or deny individual user access to network resources according to the yacht policies.
- Intrusion prevention functions that detect malware, such as viruses, worms, Trojans, and other infectious code.
- Data encryption.
- Network Access Control (NAC) for guest device "health checks".

Traffic management

- Quality of Service (QoS) capabilities to control the various voice, data, and video application traffic flows, all of which have different bandwidth requirements and delay sensitivities to make sure the owner always has a guaranteed connection.
- QoS policy actions, such as data packet prioritization and per-flow bandwidth guarantees and rate limiting, can be assigned and applied to each class of traffic.

Reliability management for serious dependability

- Redundant network circuits and automatic failover protocols such as Cisco Hot Standby Router Protocol (HSRP) and the industry-standard Virtual Router Redundancy Protocol (VRRP).
- Redundant power supply options.

Core³ Wireless Network to provide mobility around the yacht

This Core³ technology adds the wireless device mobility layer to the Security, Traffic and Reliability management capabilities featured in the Wired Network. Some of the main characteristics of this additional layer are:

Security

The strategy of defence-in-depth is deployed to manage network devices on all layers of the network providing a total end-to-end security solution providing a balance between access and protection.

- Access control, including identity services, authentication, authorization, accounting (AAA), access control servers, and certificate authorities.
- Extended perimeter services, such as firewalls, purpose-built appliances, and router access control lists (ACLs.)
- Network and host-based intrusion detection and protection.
- Secure connectivity through encryption and VPNs.

QoS and Management

- Fast Secure Roaming (FSR): For time-sensitive applications, it enables a wireless client to securely roam between access points in the same subnet or between subnets, it enhances channel scanning, and provides fast IEEE 802.1X rekeying. Access point handoff times are within 50 ms, which is crucial for effective VoIP applications while users are roaming about the yacht.
- Self-Healing Functions: If an access point fails, an optional controller can automatically increase the power and corresponding coverage of surrounding access points to compensate for the coverage hole. This quickly fixes coverage hole problems while the administrator replaces the failed access point.

Core³ Support - we will never leave you on your own

When the Core³ Network components operate under a common technology and management system, the support engineer does not have to be trained to use several different systems. Moreover this uniformity allows him to troubleshoot network issues faster and keep operations available for a larger percentage of the time.

As a **Cisco Registered Partner** we offer **Cisco SMARTnet Service** where we resolve network problems rapidly with direct, anytime access to Cisco experts and hardware replacement matched to your needs. The service is full-time global from the **Cisco Technical Assistance Centre** with next day hardware replacement – except at sea.

Conclusion

Today's communication technology requires an integrated approach to survive and thrive. Legacy networks are cumbersome, slow, unmanageable and unreliable.

Wireless mobility, traffic management, high level security, complete redundancy and centralised management are no longer optional features for a network infrastructure they should all be considered as absolutely essential.

To provide this ultimate yacht network solution e³ has partnered with **Cisco Systems** to provide the most flexible network configuration using the best available network technologies that will suit any yacht: large or small, new or in refit and to suit any budget.

The Core³ Network is the best solution to support your present and future network requirements for either a new build or if upgrading an existing network.

How do we start?

A simple procedure to enable a full evaluation of the requirements and an assessment of any existing systems, if they exist, is as follows:

1. Define the requirement. Arrange a "wish list" meeting to discuss the clients requirement
2. Undertake a current network assessment/survey resulting in a report – this is chargeable but refundable against a future order

What do we need?

3. We will then design the Core³ Network for the defined requirement
4. We will provide a full system quotation

Certifications for Networks | Cisco Registered Partner | Microsoft Registered Partner

Other Core³ Technologies | Communications – VSAT, Fleet Broadband, GSM/GPRS/HSDPA, Wi Fi, SeaCell | Marine-IT - Servers Integrated Navigation Systems | Music and Movies | Security and Monitoring

e³ Connect

2007 Award Winners for Inmarsat and GSM services to yachts

Provide itinerary tailored connections for communications, sat TV and premium services. GSM, GPRS, 3G, HSDPA, INMARSAT, VSAT, IRIDIUM, EMAIL, HOSTING, GSM SEACELL, SKY, NOVA, DIRECTV, RUSSIAN, NEWSPAPERS, WEATHER, IPTV, CHART UPDATES

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