

**The Amartus Software Services Group has decades of experience designing solutions for the Telecommunications & Networking industry. We provide Network Operators and Equipment Providers with the means to accelerate the development & roll-out of carrier-class software solutions.**

## Company background

Amartus is a privately owned company headquartered in Dublin, Ireland. The company was founded in 2003 and specialises in the development and delivery of mission critical software solutions to the Telecommunications & Networking industry. The senior team at Amartus have worked together for over 15 years designing solutions for global telecommunications clients (Ericsson, Motorola, Tellabs, Siemens, Sprint, AT&T, Cable & Wireless, BT & more...).

By combining our deep understanding of Telecommunications & Networking with strong technical and project delivery capabilities Amartus offers an unparalleled level of service to clients.

Whether you are seeking to build a system from the ground up or looking to integrate third party components into an existing system, our team of seasoned professionals have the full complement of skills, (project management, technical expertise, technical delivery & testing) required to ensure successful project delivery.

## Customer Testimonials

*"We had an ambitious time-line to deliver our next generation network monitoring solution and needed to rapidly expand our development team. Amartus consultants had the right combination of technical and domain expertise enabling us deliver on our program goals. If you are looking for a flexible, dedicated and highly skilled team for your development projects, I would highly recommend that you speak with Amartus"*

**James Henry – VP Engineering, Corvil**

## Our experience at a glance

Our expertise ranges from development of Operational & Business Support Systems for Network Operators / Service Providers to Control, Test and Management systems for Network Solution Providers. Our core experience includes:

### OSS & BSS systems

We have extensive experience working with large scale Enterprise Technologies that underly OSS / BSS systems and have successfully completed a number of integrations and custom software projects in these areas.

### Network Test & Measurement solutions

We have undertaken a number of key client projects involving the development of integrated software solutions to control test and measurement in next generation carrier and enterprise networks.

### Network, Element & Device Management solutions

We have developed carrier class Network, Element and Device level Management (FCAPS) solutions to manage both packet and connection oriented mobile & fixed networks and have a deep understanding of all areas of management and control software solutions.

*"Our clients were seeking expertise for key software development and integration projects. Amartus consultants had the right skills set to get the job done. I would have no hesitation recommending them to others"*

**John Fleming – CEO, Orbism**



**ORACLE** PARTNER

## What we offer

Our services combine in-depth knowledge and expertise of Telecommunications software systems with a proven ability to deliver high quality solutions on time and within budget.

### Application Development

Amartus delivers **best-of-breed** *bespoke software solutions* that fully address client requirements. Our highly experienced *application development teams* take **full ownership** of a client project from day one, ensuring a smooth transition across all phases of the development cycle.

### Systems Integration

Amartus assists clients with the complex tasks of integrating software systems, processes and technologies. We have extensive integration expertise including:

- **Process and data integration**
- **Service Oriented Architectures (SOA)**
- **Legacy system integration**

### Software Consultancy

Our expert team provides a range of consultancy services from on-site workshops to technical evaluation and recommendation.

## Case Studies

### Network Performance Testing System

A team of experienced engineers from Amartus developed an innovative Network Test solution for a leading client in the Network Test Solution space. This solution is designed to ensure customer SLA conformance in a provider network. It integrates directly with the provider's OSS systems. Building and designing this solution required detailed knowledge of network layers, protocols and network traffic as well as in-depth knowledge of the core technologies required to establish, run, report and manage tests.

### IP Traffic Monitoring System

A team of senior Amartus engineers are working with a key client developing components for the next-generation traffic management solutions to be used in IP Networks. The solution provides deep insight into traffic patterns and bandwidth usage across the Enterprise. The solution consists of distributed Network Appliances for live statistical analysis of traffic and a management server for correlation and analysis of network wide statistics. Developing this solution requires a deep understanding of IP networks and traffic management concepts (QoS) as well as in-depth knowledge of end-to-end technologies required to manage and report on traffic.

### Large Scale Multi-Service Network Management System

This work involved the design & implementation of full FCAPS Network Management System to manage multi-service networks supporting IP, Ethernet, MPLS, ATM, FrameRelay, and CEM. The end result was a scalable & robust JAVA/WEB based solution designed to run on Solaris HP-UX and Windows servers. The system was built from the ground up and involved the development of generic frameworks to cope with the interoperability of multiple disparate Network Element types.

## Technical Expertise

We have a broad range of technical skills in networking and software tools:

### Networking Knowledge

**Network Protocols:** Ethernet, IPV4, IPV6, MPLS, ATM, Frame-Relay, Circuit Emulation, IMA

**Management Protocols:** SNMP V1-V3, CMIP, CORBA, TMF 814, JMX, TL1, GDMO, XML

**Traffic Types:** IP, ATM, HTTP(S), TCP, UDP, DHCP, POP3, SMTP, IGMP, ICMP

**Traffic Management:** QoS, QoE, ATM-PNNI, ATM-DTL, LSP, RSVP, DiffServ, ToS, OSPF, IS-IS, BGP

### Technical Expertise

We have extensive architecture, design, programming and integration skills including:

**Application Development:** JAVA /J2EE / ORACLE, .NET MS SQL Server & C++

**Embedded Development:** C/C++

**Systems Integration:** XML, SOA, RMI & CORBA

In addition we have hands-on experience with a wide range of third-party technologies including protocol stacks, relational databases & application servers. Amartus has established partnership with leading Software Solution providers including Oracle® and Microsoft®