

M3 Comp. LLC

/Events Management/Cloud Computing/Services/

# Scorpius

an innovative software for command,  
control and communication to manage  
an always more complex world.



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## Scorpius: a Business Solution

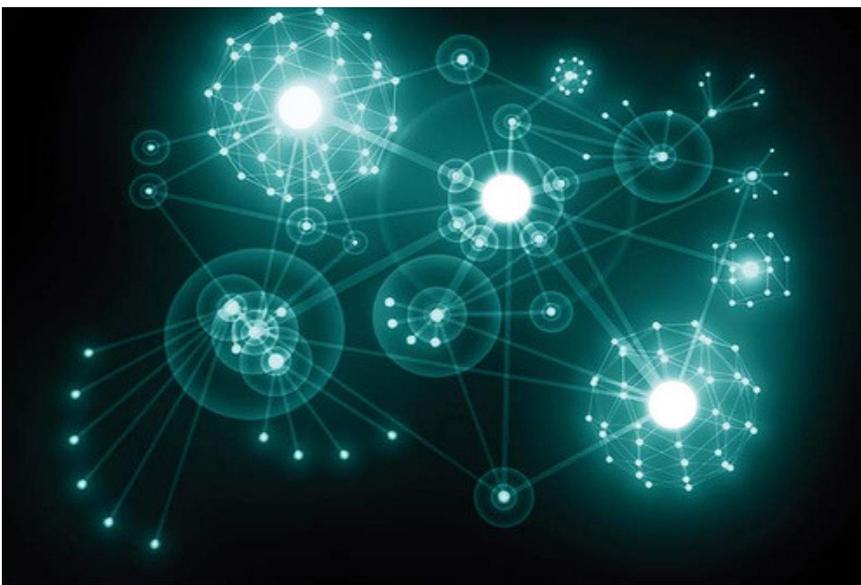
### The events and decisions management

In a world where almost anyone and anything can be connect to the Internet, the exponential increase in the volume of information and connected devices creates a dilemma: IT complexity increases but Customers do demand for simplicity. Private and Public Organizations are facing accelerating changes, global and domestic competitive pressure and social responsibility demands. In these cases technology is an enabling opportunity for innovation in such disparate areas as high-speed wireless connectivity, global positioning systems, radio frequency identification (RFID), "intelligent" appliances, utility meters, building and home control systems. These challenges call for a more dynamic computing model like Cloud computing that enables rapid innovation for applications, services and service delivery.



### Cloud computing

Cloud computing is the next computing platform paradigm shift and refers to Internet-based development and use of computer technology. It is a style of computing in which users access technology-enabled services from the Internet without knowledge of, expertise with, or control over the technology infrastructure that supports them. Cloud computing incorporates software as a service (SaaS), Web 2.0, virtualization, multi-tenancy and other recent technology trends in which the common theme is reliance on the Internet for satisfying the computing needs of the users. Infrastructure utility providers are building out platforms at a phenomenal rate through controlled Web service interfaces to create "Platform-as-a-Service" (PaaS).



## Scorpius: Scope and Functions

Scorpius is an answer to previous challenges as it is a software system for Control, Command and Communication. It is born in the new wave of IT Technologies related to Cloud Computing.

The main scope of this new system is to answers to specific questions like: what events are happening in my Company, Building, City NOW!!!? What the consequences?

As environments are becoming always more complex, the question is that a person in charge of a systems must answer is: How can I react in emergencies, how can understand the meaning of so many events in just few seconds?

These questions means first of all a Smart Sensors Grid management to collect events and software systems able to collect, cluster and support decisions, some time in unmanned way.

The three main functions of the Scorpius system are:

- Grid Management
- Events management
- Events Analysis and Automatic Decision Models

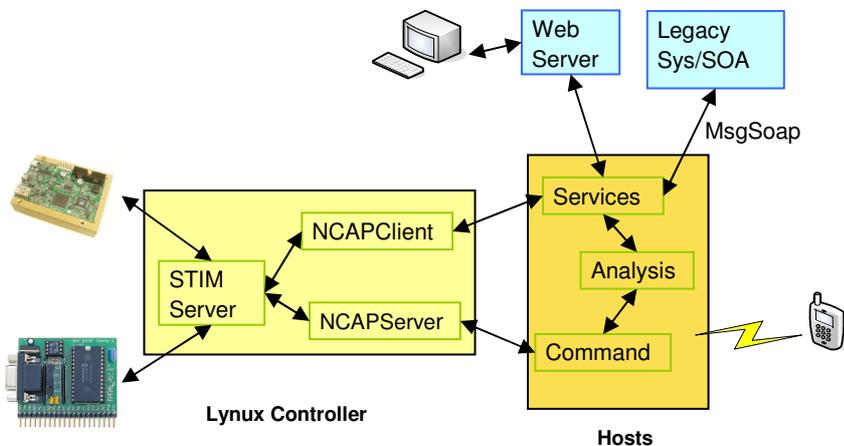
There are also communications function and sensors maintenance planning functions.

Complex Environment Management						
	Human-Systems Interface	Sensing	Monitoring & Diagnosis	Decisions	Networking	Sensors Web Maintenance
Comand, Control & Communication	Cockpit Aide	Events Collection	Contingency Management	Commands Management & Alarms	Network Status Management	Maintainers messaging
Mission Management	Operator Decision Aide	Threshold Management	Model Based Contingency Management	Proactive Modeling Decision	Model Based Contingency Management	Maintenance Planning

## Scorpius Architecture

Scorpius has an architecture with one or more servers and controllers. Servers should be located in a data center of the service provider, while controller can be installed on Customer's site.

Controllers have the function to manage sensors and to send control feedbacks to the environment. They communicate with Servers sending events data and receive Servers orders that they execute. Events data are collected in a database before clustering and analysis. An interface with SOAP messages permits integration in a SOA cloud based. Parameterization of the sensors net and communication with Scorpius is possible using a support web server. The architecture is shared, highly scalable, networked.



Scorpius has a broadly applicable architecture for middleware in a variety of instrument settings. It aggregates large numbers of sensors with a fusion of heterogeneous information from many sources. Many instrument resources have a continuous technological evolution and this characteristic causes continual re-invention of driver software. Scorpius middleware has as primary design goal to facilitate integration of instruments into current computing to leverage Cloud-based services.

Service-oriented architecture (SOA) provides methods for systems development and integration. SOA separates functions into distinct units, or services, which developers make accessible over a network in order that users can combine and reuse them in the production of applications. These services communicate with each other by passing data from one service to another, or by coordinating an activity between two or more services.

SOAP, originally defined as Simple Object Access Protocol, is a protocol specification for exchanging structured information in the implementation of Web Services in computer networks.

## Potential benefits

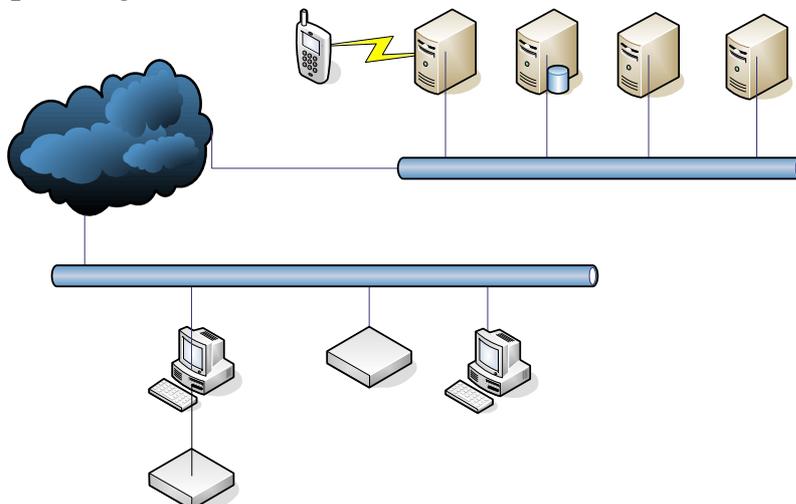
Scorpius on cloud computing can be a potentially cost-efficient model for provisioning sensors management services while making IT management simpler and increasing business responsiveness. It can enable rapid business innovation by delivering easy-to-use computing services to users regardless of their location or the type of device they are using.

Scorpius can reduce total cost of ownership, guarantee quality-of-service and achieve business agility.

Scorpius has three distinct **Business Model**:

- **Service Provider** - Provides services (servers, storage, applications complete) generally according to a "pay-per-use" model.
- **Client Administrator** - Customer chooses, configure and control the services. He chooses and sets up services offered by the Provider. Provider generally offers an added value such as hardware and software applications.
- **End User**- Use the services properly configured by the Customer administrator in a private Cloud.

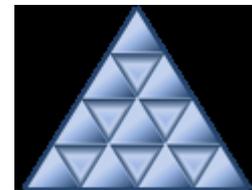
Even the sensors maintenance can be organized in site depending on End User choice: outsourced or not.



## About M3 Comp LLC

*M3 Comp. Llc is a start-up with strong skills in software.*

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