



ALPHAREN CORE-Integrator (ARINT) System

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System Landscape

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ARCLST the elementary component

The elementary, indivisible element, "heart" of the *ARINT* system is **ARCLST**. This is an *cluster node* which is exactly as the says, a cluster, having independence and ability to solve all problems that ARINT implementation is designed to address.

An *ARCLST* can be linked with other ARCLST nodes and can work in any mode, ie as *active-active* or *active-passive* at the administrator option to configure system.

ARCLST physical locations

An *ARCLST* must have all machines (servers) **located in the same LAN**. All machines inside should be able to communicate between them at IP level. Many implementations (and is a practice) isolate the *ARCLST* from the installation phase in a dedicated operating system container (ie, not application container) - `Ubuntu LXC` being a very good example of this kind of container.

ARCLST essential components

- [1 to n] **ARINT Framework** servers¹ (these will work ONLY in *active-active* mode)
- [0 to 1] **ARINT RDatabase** relational database server(s)
- [1] **ARINT KVDatabase** NoSQL database server(s)
- [1] **ARINT CORE** administration and management service and its user interface (once installed and activated becomes physically part of *ARINT Framework*)
- [0 to n] **ARINT products** various other products, applications, etc (once installed and activated becomes physically part of *ARINT Framework*)



Notes regarding used terms

- notation [n . . .] specify a quantity range of allowed resources, instances and follow the usual practices in range specifications
- if not otherwise specified by *server* term is understood a *logical server*, meaning that can be a physical or any form of virtual one, but a dedicated machine perceived as having its own operating system isolation level (for example its own dedicated `root` for *Xenix* kind of machines, an application container, etc)

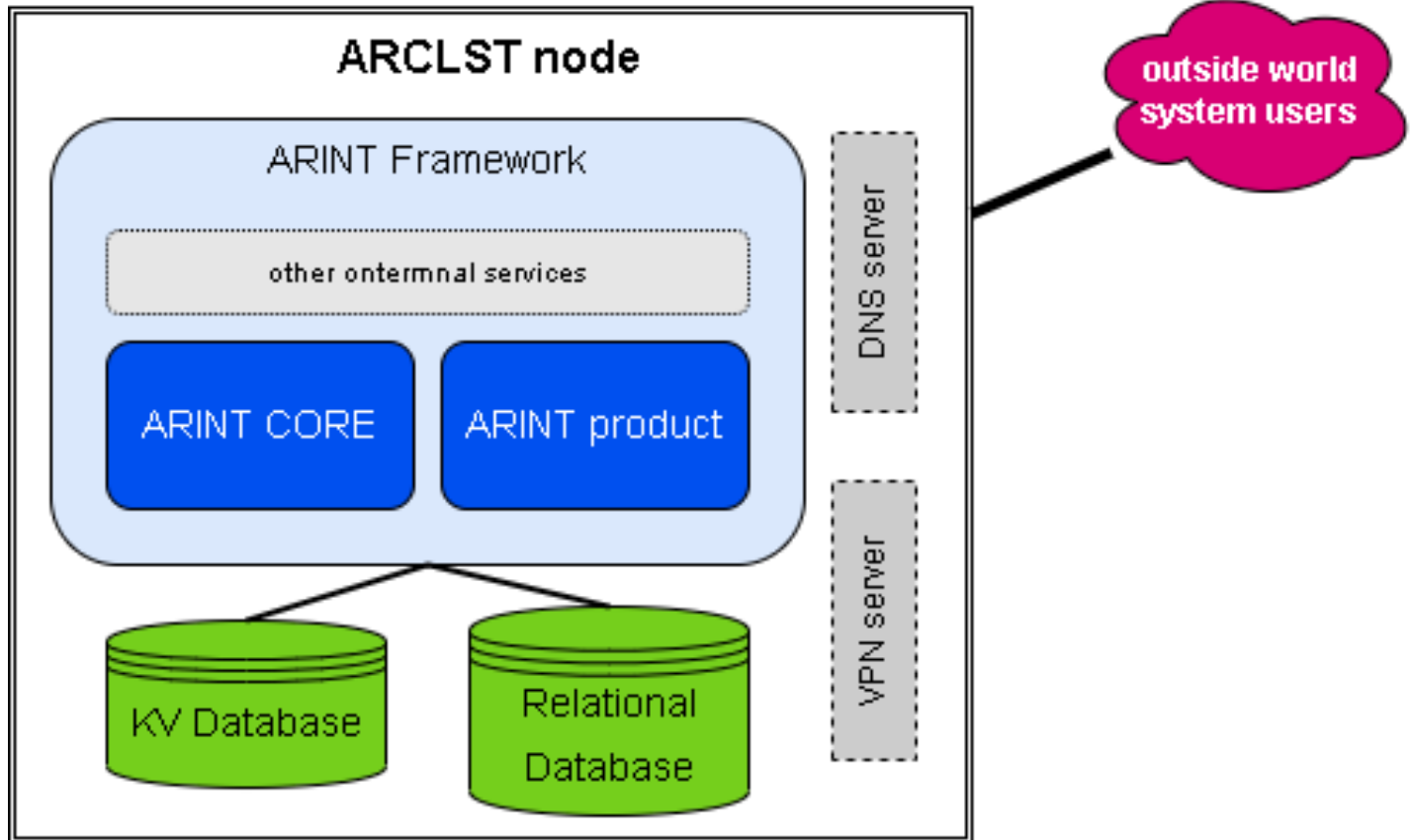
ARCLST auxiliary components

Auxiliary² components can help in various implementation projects depending exclusively of client (customer) options and its infrastructure existing assets.

- [0 to 1] *internal DNS (or dynamic DNS)* which is a standard DNS inside the *ARCLST*. No ARINT component will use it but will allow for a "nice" outside LAN addressing of *ARCLST* components when customer explicitly wants and needs that, otherwise ARINT has a proxy and balancer included which assure its addressing as system and for business purposes
- [0 to 1] *internal VPN server* that will allow to "enter" in *ARCLST* LAN space. That's not needed for normal purposes but only if customer need for its own infrastructure operations and easy management

Normally these components are left at router glance as being normal included functionalities in enterprise / business router.

ARCLST schematic architecture

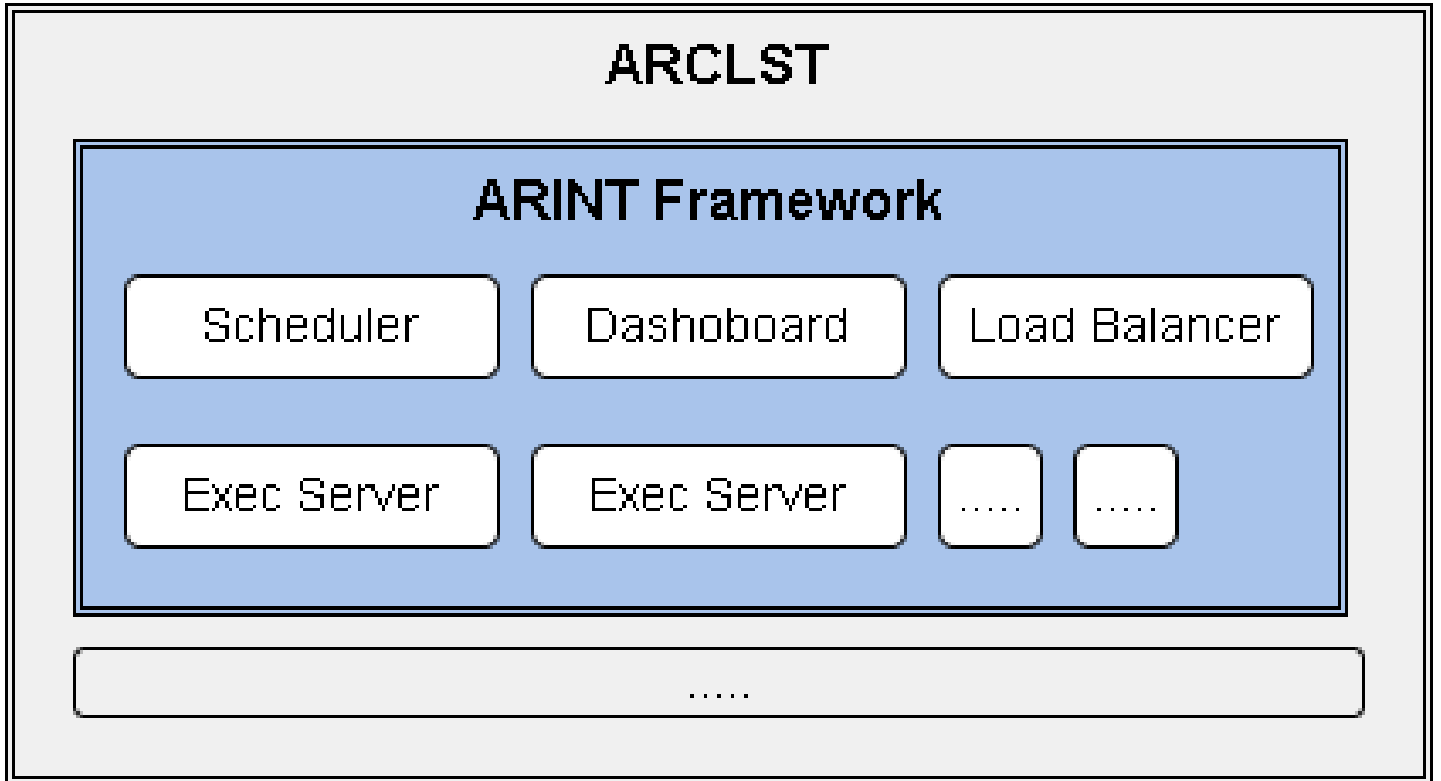


ARINT Framework

ARINT Framework contains the following components:

- [1] **Load Balancer** - this is the load balancer and active-active operating assurance component. Default is build using `HAProxy`
- [1] **Scheduler** - this assure all scheduling (one time or repetitive) of services execution
- [1] **Dashboard** - this is an own administration dashboard available (access controlled and exposed) through *ARINT CORE* (normally as `iframe`)
- [1 to n] **Exec Server** - this are servers (physical or virtual) where services are effectively executed

ARINT Framework schematic architecture



ARINT CORE

-#TODO wip...

ARINT RDatabase

-#TODO wip...

ARINT KVDatabase

-#TODO wip...

ARINT products

-#TODO wip...

Auxiliary components

DNS server

-#TODO wip...

VPN server

-#TODO wip...

... IN REVIEW ... PLEASE BE PATIENT - coming soon -(#TODO - continue review ...)

Notes and remarks

1. ARINT Framework machines was in previous versions called ARSRV [←](#)
 2. These components are considered "auxiliary" because in most cases they are not needed anymore and in consequence are not part of installation process (to not induce useless overhead at system resources level) [←](#)
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Last update: August 28, 2023