

SIACHAIN

Managing a Distributed Network on a
common infrastructure pattern

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SIACHain: A secure private infrastructure based on Distributed Ledger Technology for mission-critical Blockchain applications

Born of SIACHain

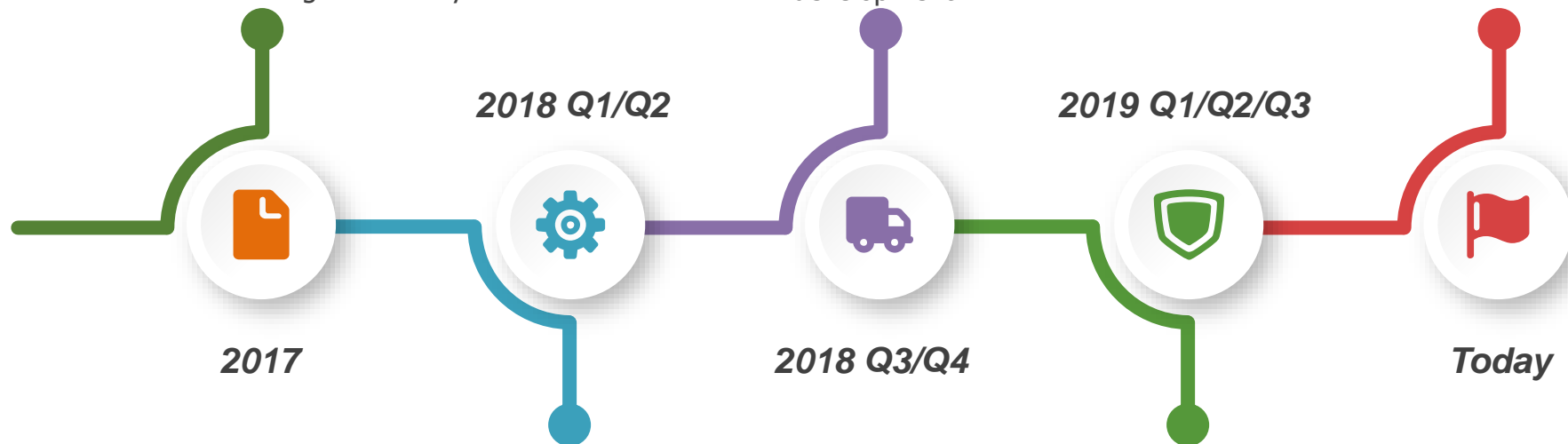
Transform ideas into a disruptive technology solutions. A Private Distributed Infrastructure for Mission Critical Applications is born. The Spunta CordApp optimizes the interbank reconciliation process facilitating the operations of the whole Italian Banking community.

Production

ABILabChain: a Private managed Corda Network is released in Production on SIACHain infrastructure. The Spunta Banche Business Network involves **more than 200 nodes** associated to the Italian financial institutions.

Internal Test

Full Tests performed by SIA Testing Team to ensure full infrastructure functionalities. Bug fixing, software patches and automation pipeline development.



2018 Q1/Q2

2019 Q1/Q2/Q3

2017

2018 Q3/Q4

Today

Lab & PoC

Partnership with R3 aims to speed up the global development and adoption of applications based on Distributed Ledger Technology. Design and Installation of Testing Environments for performance assessment and launch in production of the first Business Network involving 200 geographically distributed nodes: Spunta Project.

External Test UAT

Tests performed directly by the Banks. Implementation of enterprise-grade business continuity solution on SIACHain. High Availability and Disaster Recovery design and implementation. Monitoring and Log analysis designing and implementation.

From design to production: the challenges that SIAchain faced along the path



Blockchain implementation costs

Finding the most suitable blockchain application is not as easy as a majority of them are not fully developed. Furthermore, the most convenient platforms come at a huge cost in terms of implementation and support.



Business Continuity

Most of the Enterprise Permissioned Blockchain platforms don't provide native High Availability and Disaster Recovery support since the ledger is not fully distributed.



Lack of Partners

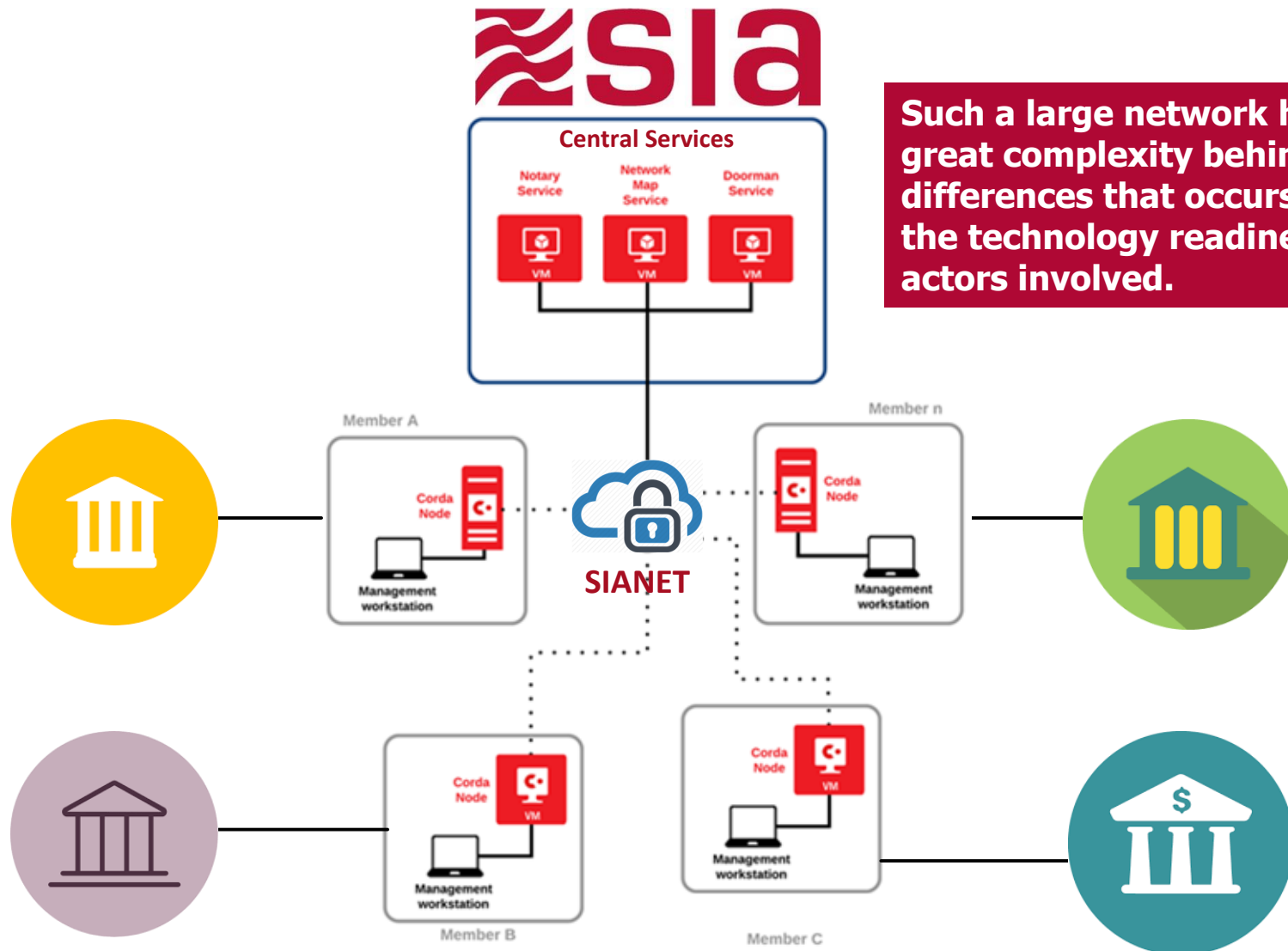
Blockchain is quite novel and understanding its basic principles requires assistance by those that are already knowledgeable. However, getting the right partner is problematic, given the circumstances that most partners are already engaged in other blockchain demands. Therefore one is not likely to get the right kind of solutions.



Monitoring and Analytics

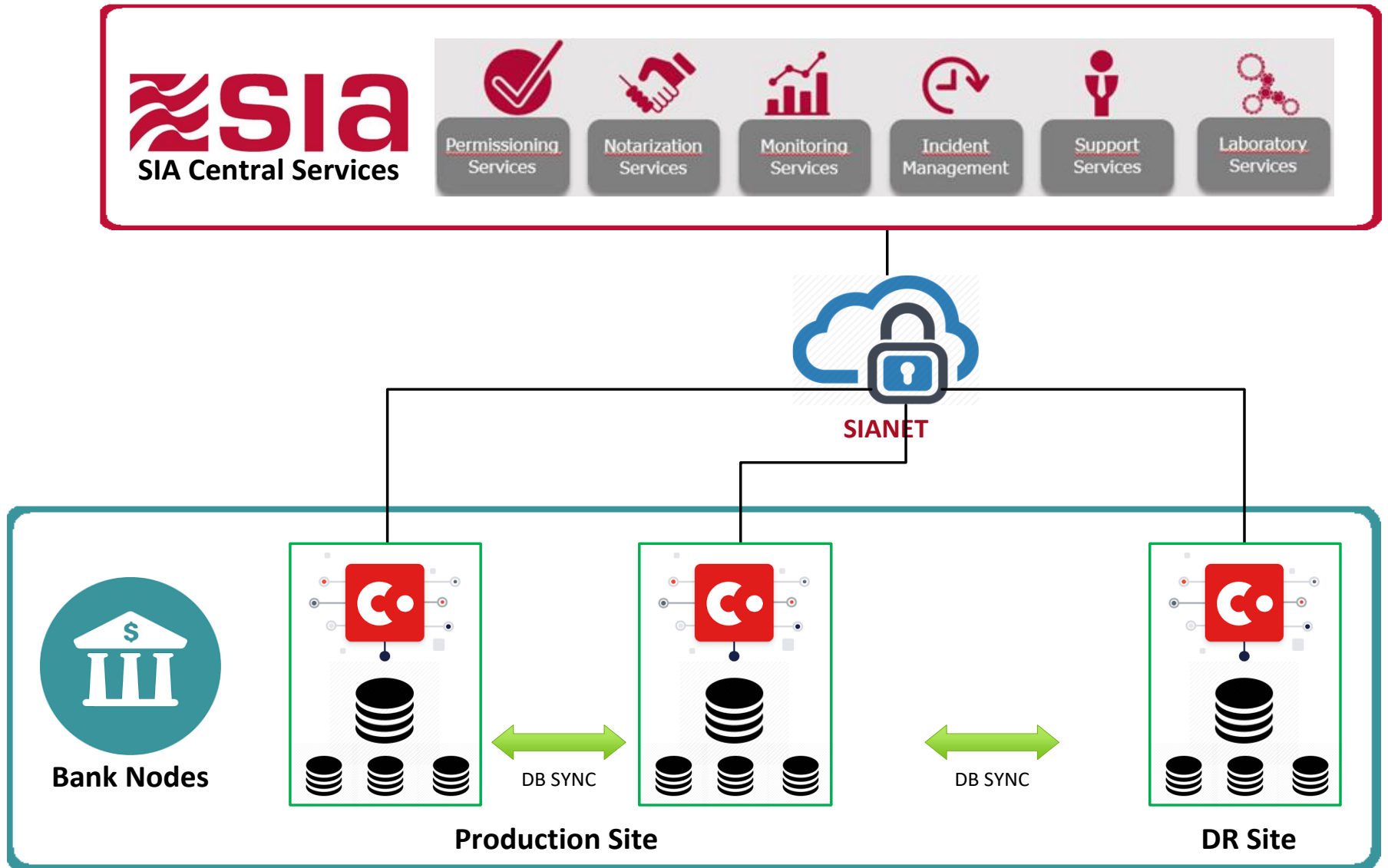
Advanced metrics, monitoring, analytics and alerting gives us real-time visibility into the nodes. It also allows us to quickly identify and resolve issues. We have layers of insights not just into our infrastructure stack, but also the underlying protocols, and can quickly work with protocol core devs to remedy network-wide problems.

The infrastructure has been designed taking into account the necessity of making it simpler for end-users and developers to design and deploy their CordApps in a fast, secure and controlled way.

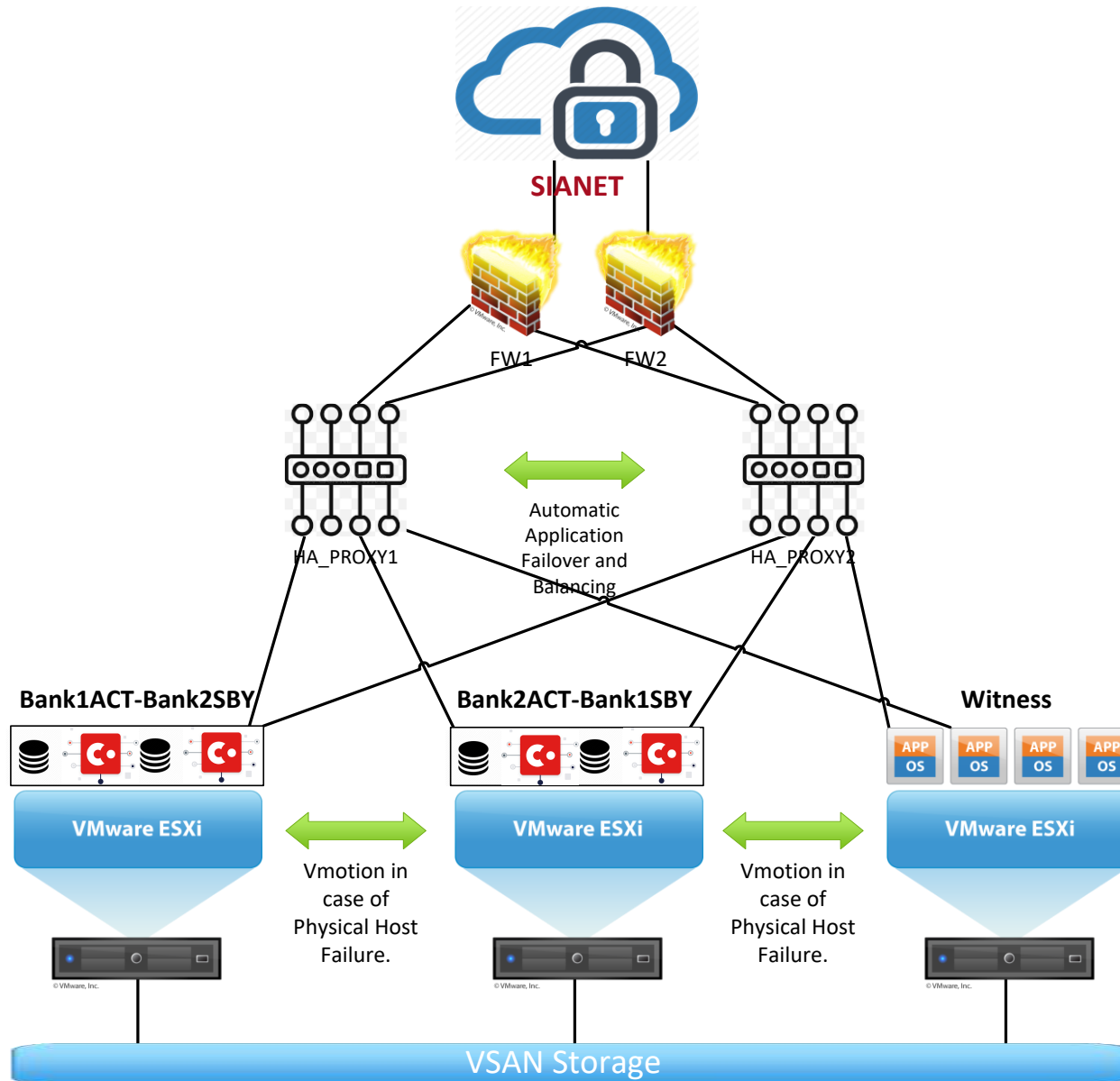


Such a large network hides a great complexity behind the differences that occurs within the technology readiness of the actors involved.

SIACHAIN's infrastructure is an end to end infrastructure that connects the on-premises nodes to SIA's Central Services

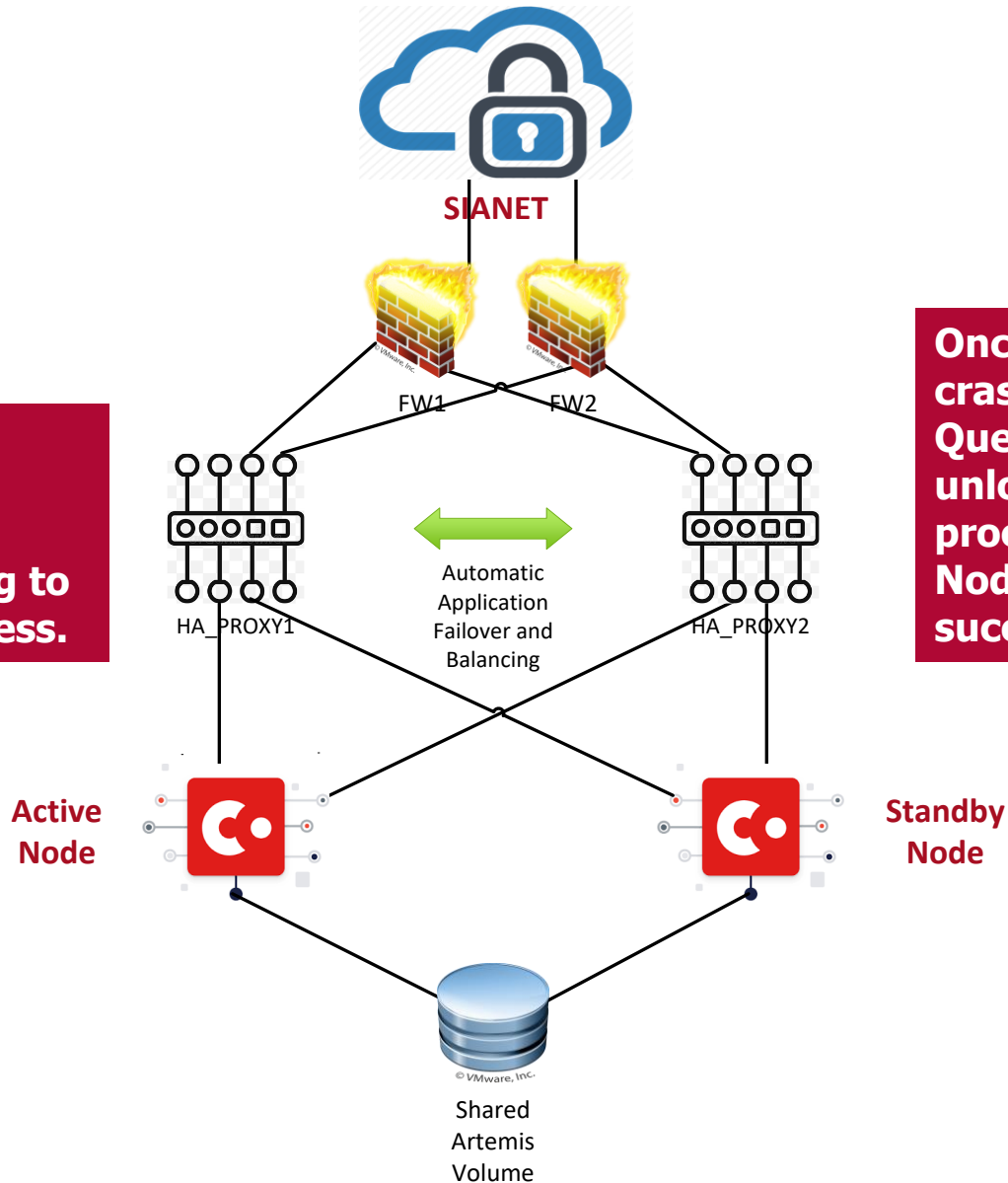


Adding an additional layer of complexity : SIACHain integrates Business Continuity at Infrastructure Level



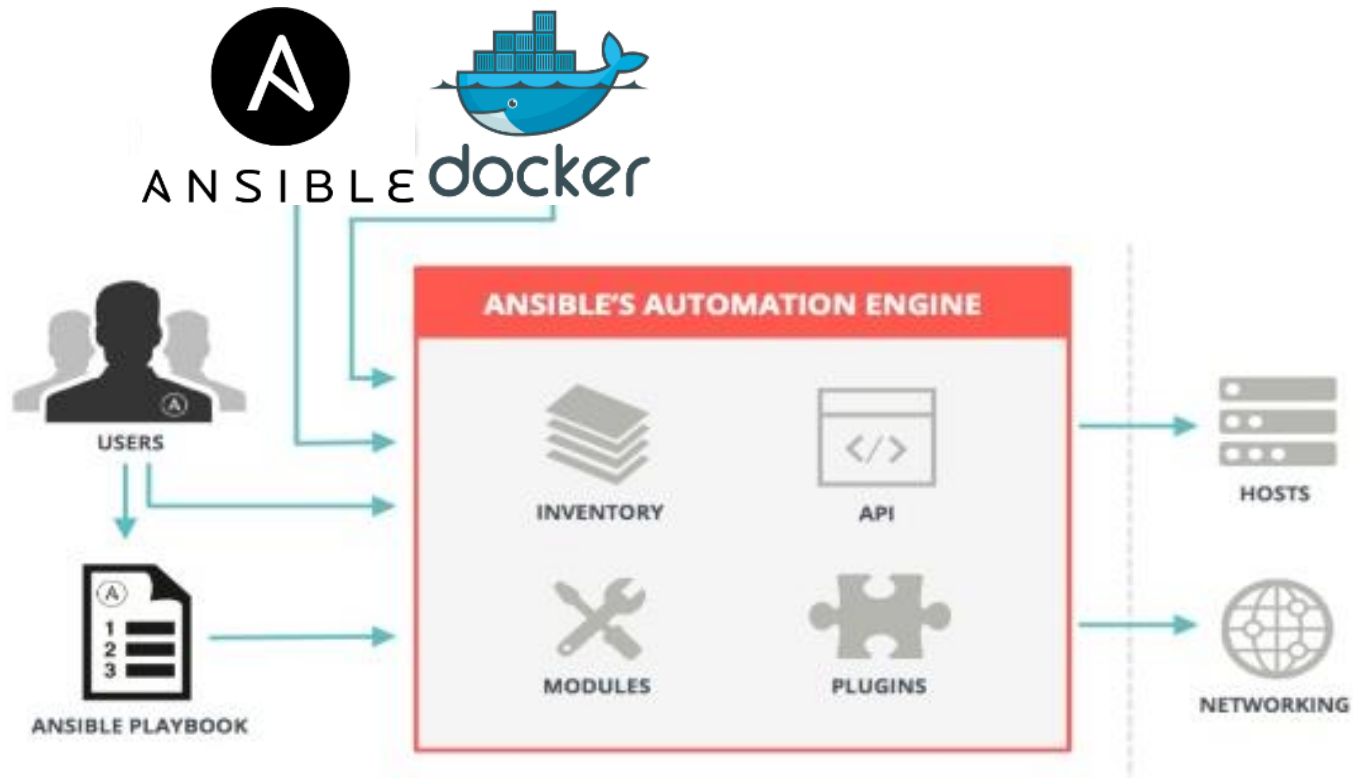
Redundancy of Corda Nodes has been recognised as a value added feature of enterprise-grade Business Networks

Both Corda Nodes (Active & Standby) points to the same Artemis Queue trying to start the Corda process.



Once the Active Node crashes, the Artemis Queue is automatically unlocked and the process on the Standby Node will then start successfully.

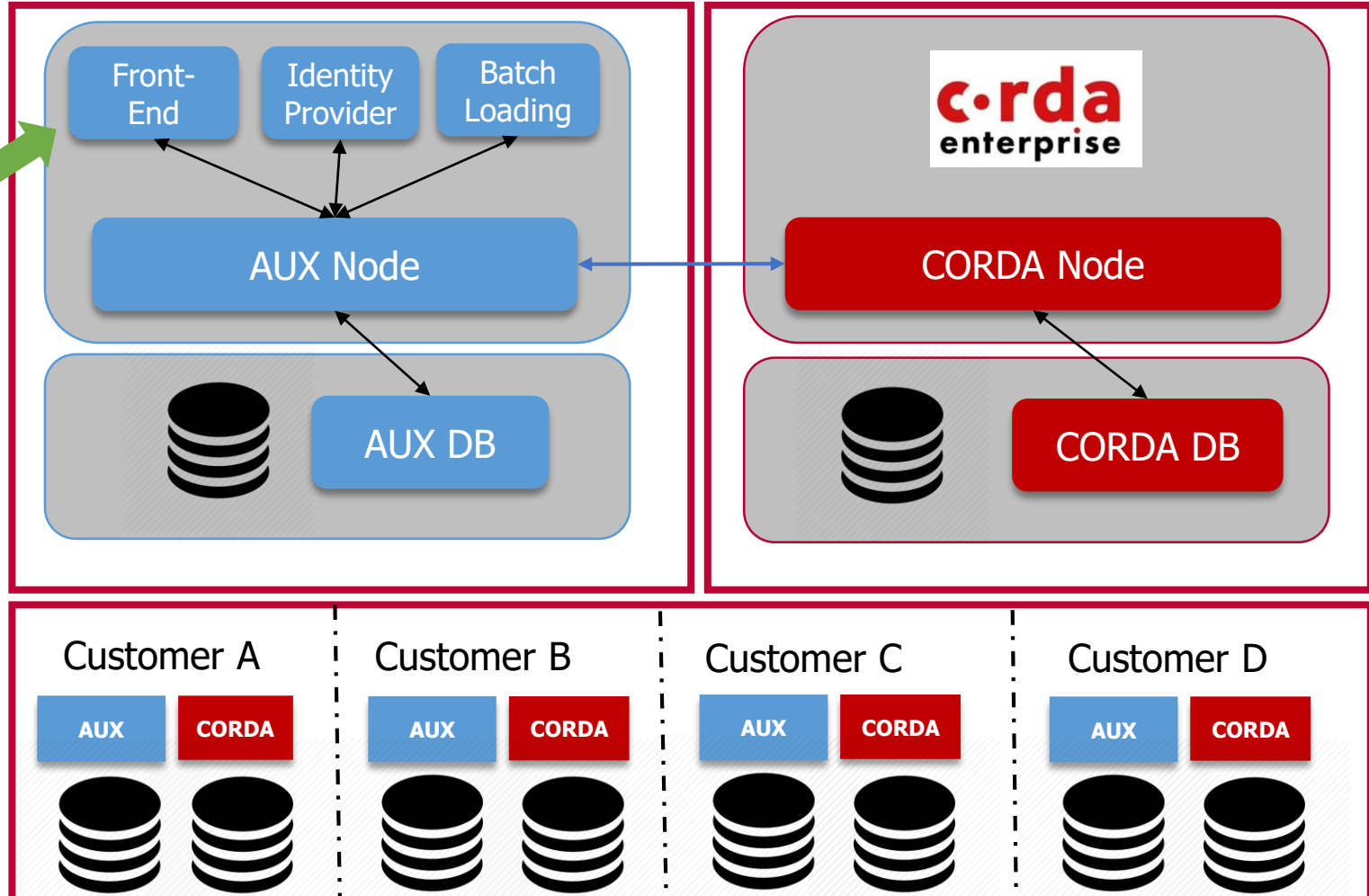
SIChain's architecture involves a variety of technologies and the technology governance allows SIAS to orchestrate the whole network to be at the same technological readiness



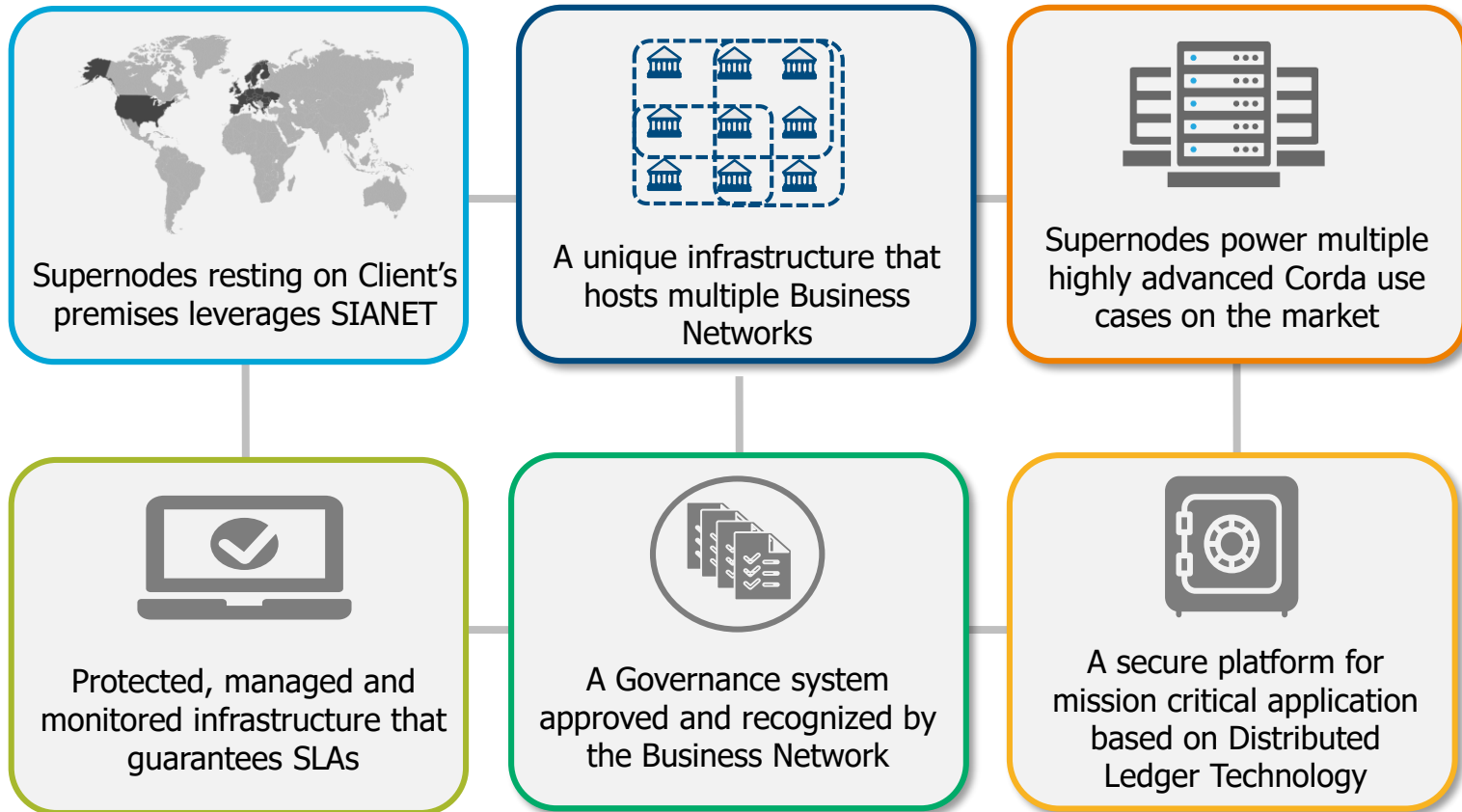
SIACHain Nodes supports also the front-end web server for accessing the blockchain ledgers in order to facilitate the Participant to easily&quickly join the Business Network



Operator's access



SIA has designed a multi-DLT infrastructure based on a private network of nodes residing on Client's premises supporting permissioned communities





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