Trust-Native is a methodology to integrate and optimize infrastructure technologies and components, and construct trusted production environment, by which developers can build secure, reliable, efficient and scalable technical infrastructure to meet the highest standard of financial services.

We are striving to empower infrastructure applications to have “5S” properties.

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What is 5S?

Scalability
Service hyper-scale 11.11 Global Shopping Festival transaction surges.

Stability
Multi-active architecture spanning 5 availability zones in 3 regions for world’s leading disaster recovery capability.

Speed
Responding Ant Forest daily traffic spike in minutes.

Simplicity
One-stop financial cloud-native application R&D experience powered by SOFAStack.

Security
System level defense-in-depth enabled by defaulting to secure containers.
The Influence of TNT
Rewards of SOFA and MOSN

2019.4.1 OSChina GVP: SOFABoot, SOFARPC, SOFABolt

2019.5.29 sofa-rpc sofa-tracer sofa-mosn joined CNCF Landscape

2019.7.3 SOFAStack (Scalable Open Financial Architecture Stack) won OSCAR Peak Open Source Tech Renovation Award (Independent R&D) in CAICT

2019.11.26 OSChina GVP: SOFATracer


2019.12.16 the Second Prize of COSCL China Outstanding Open Source Project


2020.11.25 SOFAStack won Outstanding Gitee Org


2020.12.30 MOSN COSCL China Outstanding Open Source Project


2021.5.26 SOFAStack community won 2021 Cloud-Native Tech Renovation Solution/Product Prize

2021.9.17 MOSN community joined Trusted Open Source Community Union

2021.9.17 SOFAStack service mesh got Outstanding-Level in Trusted Cloud Service Mesh Evaluation
Publications from Trusted Hardware and Kernel Team

2020

- ASPLOS
  Catalyzer: Sub-millisecond Startup for Serverless Computing with Initialization-less Booting. ASPLOS2020: 467-481
  Dong Du, Tianyi Yu, Yubin Xia, Binyu Zang, Guanglu Yan, Chenggang Qin, Qixuan Wu, Haibo Chen

- SoCC
  Characterizing serverless platforms with serverlessbench. SoCC2020: 30-44
  Tianyi Yu, Qingyuan Liu, Dong Du, Yubin Xia, Binyu Zang, Ziqian Lu, Pingchao Yang, Chenggang Qin, Haibo Chen

2021

- ATC
  Yong-Hao Zou, Jia-Ju Bai, Jielong Zhou, Jianfeng Tan, Chenggang Qin, Shi-Min Hu

- CCS
  Demons in the Shared Kernel: Abstract Resource Attacks Against OS-level Virtualization. CCS

Publications from Secure Computing Team

Occlum:
Secure and Efficient Multitasking Inside a Single Enclave of Intel SGX, ASPLOS2020:955-970
Youren Shen, Hongling Tian, Yu Chen, Kang Chen, Runji Wang, Yi Xu, Yubin Xia, Shoumeng Yan
Introduction of Our Open Source Projects

SOFASTack™ (Scalable Open Financial Architecture Stack) is a set of middleware for rapidly building financial-grade cloud-native architectures and best practices refined in financial scenarios, and has the following features. Open: the technology stack is fully open source, community-neutral, community-compatible, open-source ecology-compatible, pluggable components, SOFAStack components and other open-source components can be integrated or replaced.

Financial grade: contains the components needed to build financial grade cloud-native architecture, allowing users to focus more on business development, meeting the current and future needs of user scenarios, having experienced the refinement of large-scale scenarios, especially the demanding financial scenarios.

Cloud-native: based on SOFAStack can quickly build cloud-native microservices system, quickly develop more reliable and scalable, more easily maintained cloud-native applications.

Homepage: https://www.sofastack.tech/

MOSN (Modular Open Smart Network) is a cloud-native network proxy platform developed mainly in Golang language, open-sourced by Ant Group and validated by hundreds of thousands of containers at production level in the Double 11 promotion. MOSN provides multi-protocol, modular, intelligent and secure proxy capabilities for services, incorporating a large number of cloud-native common components, and also integrating Envoy as a network library, with high performance and easy to scale. features. MOSN can be integrated with Istio to build Service Mesh, or used as a standalone Layer 4 or 7 load balancer, API Gateway, cloud-native Ingress, etc.

Homepage: https://mosn.io/
Kata Containers is a strongly isolated, OCI-compliant container runtime project based on virtual machine technology that runs perfectly on Kubernetes clusters. Kata Containers provide additional protection between among containers or between containers and hosts by providing a complete, isolated OS execution environment for container applications, preventing applications from accessing host resource directly. Kata Containers has the following features.

Security: Running in a separate kernel, application and user kernel flaws do not affect host security.
Isolation: In addition to security isolation, it can also provide performance isolation and fault isolation, making the host more secure and stable.
Compatibility: Compatible with industry standards such as OCI/CRI
High performance: as secure as a virtual machine and as fast as a container.

Homepage: https://katacontainers.io/

Layotto is a cloud-native product developed with MOSN as the core and Runtime theory. It is a practice that combines the two ideas of Service Mesh and Runtime, aiming to provide a set of distributed capability primitives for applications with complete functionality, high applicability and rich governance, so that developers can no longer be bound by the detailed differences between various infrastructures and cloud vendors, and focus on capability-oriented programming to improve development efficiency. The Layotto project is also exploring the Serverless space.

Homepage: https://github.com/mosn/layotto

We are hiring!

We always appreciate infrastructure talents from all over the world. We are hiring interns and full-time employees. We have offices in Hangzhou(Headquarter), Shanghai, Beijing, Chengdu, Guangzhou, Nanjing, and Chongqing, and San Francisco.

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Wechat office account