



VARIA
MULTI-FACTOR AUTHENTICATION SERVICE PLATFORM

VariA X Series Multi-Factor Authentication Service Platform (MFASP)

Solution Overview

VARI A MFASP X SERIES – AN OVERVIEW

VariA X Series Multi-Factor Authentication Service Platform (MFASP) is a jointly-developed appliance set, based on Intel® Software Guard Extensions (Intel® SGX) and Intel® Active Management Technology (AMT). VariA MFASP X Series serves as a multi-factor authentication solution that acts as a formidable line of defence against unauthorized system access across an enterprise.

“One single vulnerability is all an attacker needs, but, with VariA, vulnerability is eliminated at every granular layer”



VariA MFASP X Series (for illustration purpose only)

The solution provides a purpose built generic standalone multi-factor authentication that provides an additional layer of authentication, in addition to your current authentication.

Powered by advanced Intel Xeon Scalable platform and Intel Software Guard Extensions (Intel SGX) technology, VariA MFASP X Series secures the logins of employees, partners, contractors, vendors, and guests. VariA MFASP X Series safeguards identities, mitigating cyber threats with more deterministic performance and efficient cost containment. It also reduces the trusted computing base (TCB) to the smallest possible footprint, prevents memory bus snooping, memory tampering, and “cold boot” attacks against memory images in RAM; thereby, providing hardware-based attestation capabilities to measure and verify valid code, data signatures, and the TCB.

With the introduction of 2nd-Gen Intel Xeon Scalable processors comes Intel SGX which was designed to help create more secure environments without having to trust the integrity of all the layers of the system. The technology isolates specific application code and data to run in private regions of memory, or enclaves. ***It ensures security at every layer.***

It provides a safe place for code and data in the application. With this, undetected malicious software cannot access secrets. It utilizes a small amount of CPU memory to protect sensitive application information and ensures physical attack protection (via Application isolation).

Combining SGX with another technology called Intel® Active Management Technology, VariA MFASP X Series delivers an unprecedented edge-to-cloud security for mission critical used cases in industrial banking, retail and other sectors.

“The appliance creates a hardware protected container for apps to protect secrets at run time and at rest. This means secrets remain protected even when attackers have full control of the platform. So even if an attack happens, our customers’ data remains safe. It can be tailored to the customers’ needs and features flexible simplified configuration and maintenance”

Below are some elaborated details on key features of the Intel technology that is an intrinsic part of the solution series.

Intel SGX

Intel® Software Guard Extensions (Intel® SGX) is a set of instructions that increases the security of application code and data, giving them more protection from disclosure or modification. Developers can partition sensitive information into enclaves, which are areas of execution in memory with more security protection.

To help address the reality of widespread security holes and compromised systems, Intel set out to design a hardware assisted trusted execution environment to help minimize the attack surface. Intel SGX delivers new Intel® Architecture instructions that can be used by applications to set aside regions that are more private and are for select code and data that can help prevent direct attacks on executing code or data stored in memory.

SGX protects selected code and data from disclosure or modification. Applications are partitioned into enclaves in memory that increase security. Enclaves have hardware-assisted confidentiality and integrity-added protections to help prevent access from processes at higher privilege levels. Through attestation services, a relying party can receive some verification on the identity of an application enclave before launch. With these capabilities, applications are prepared for more security.

“Intel® SGX offers such a granular level of control and protection”

Intel AMT

Intel® Active Management Technology, included as part of the Intel vPro® platform, which spans Intel® Core™ vPro® processors and Intel® Xeon® processors, helps reduce overall PC maintenance and administrative costs. With features to remotely discover, repair, and help protect networked computing assets, Intel® Active Management Technology allows IT Ops to support a mobile workforce. Hardware-based Intel® Active Management Technology provides persistent out-of-band connectivity that operates independently of the OS allowing remote support for appliance issues.

“With Intel AMT, one benefits from Remote Manageability at the Edge”

Combining best of both technologies, VariA MFASP X Series bring unprecedented level of “edge-to-cloud” and datacentre security for its customers. The solution set comprises three different models that is meticulously designed to cater to specific needs of an enterprise, regardless of the nature, size or complexity of the enterprise.

The primary SKUs of X Series, comprises of the X3 Series, X5 Series and X7 Series, which aim to be the right solution fit for a small, mid-sized and large-sized enterprise, operating in multiple industry verticals.

VARIA MFASP X3 SERIES

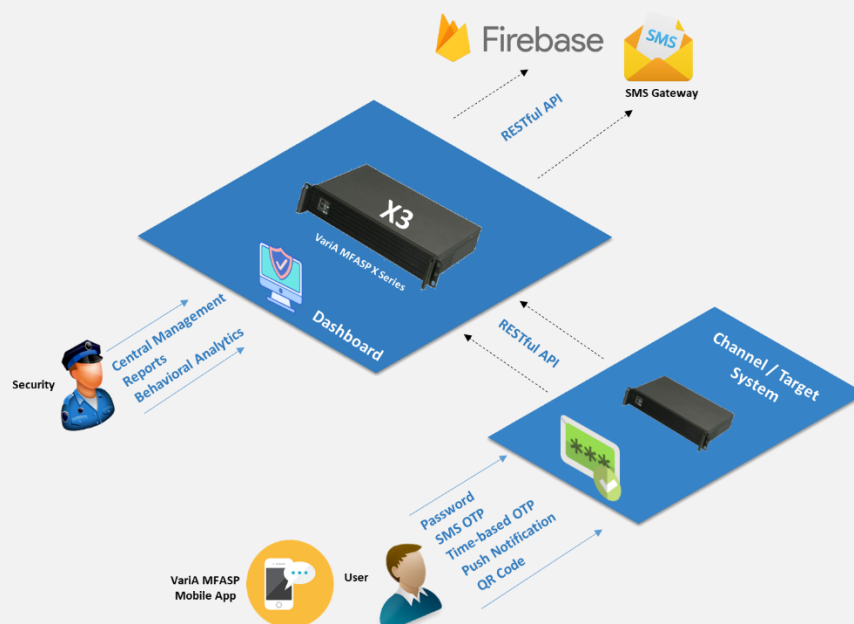
Large companies and corporations are often popular targets of cyber-attacks. And their internal ecosystem revolves around many hundreds and thousands of user accounts that need to be secured to protect confidential information. However, increasingly, even small businesses are not immune, and, for some hackers, is the easier target. While, larger, well-established companies and corporations are setting aside budgets to protect their enterprise, smaller organisations typically do not have sufficient budget nor are aware of the need.

Securing authentication for a critical system in a small business is now made easy and cost-efficient with VariA MFASP X3 Series

This entry level standalone model is designed for small-sized deployments to offer basic MFASP functionality for a single channel, and it can support up to 500 end users. Channel refers to a target application, while end users refer to the user accounts belonging to the target application.

VariA MFASP X3 Series supports securing the usual password authentication with an additional factor of SMS one-time password (OTP). A secure-random code is sent to the end user's mobile phone to confirm the identity of the person. For cases where mobile phone reception is unreliable or weak, end users can opt for time-based one-time password (TOTP). The TOTP mechanism is trusted and used by major companies like Google, Microsoft, Facebook, and Amazon.

When paired with the VariA MFASP Mobile App, end users can secure their logins with a push notification. Just with a tap on their internet-enabled smartphone, end users can conveniently log in securely to their account. Last but not least is the QR code feature that enables end users to gain access by merely scanning an automatically-generated QR code.

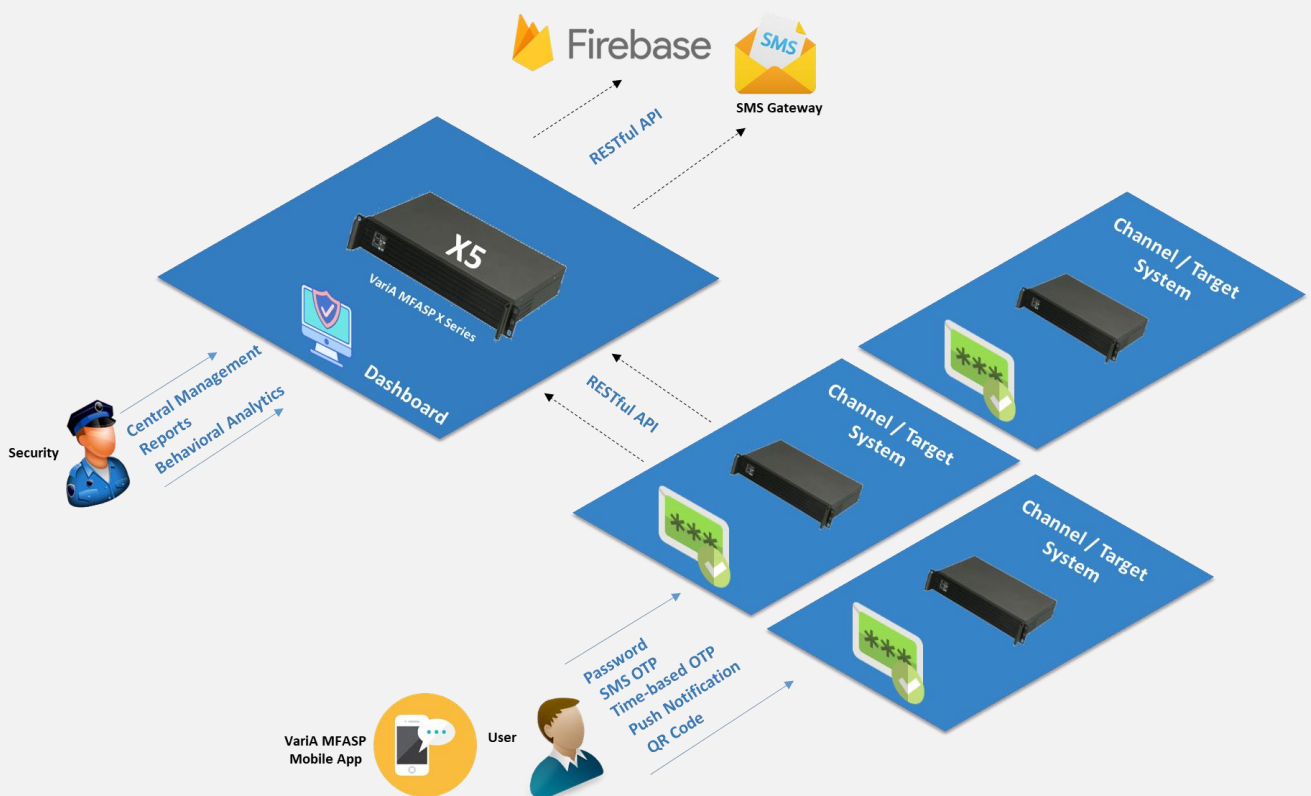


VARIA MFASP X5 SERIES

As an enterprise matures, so does its IT environment complexity. It is inevitable to have more and more systems deployed into the internal ecosystem, and that means more accounts which need to be secured with multi-factor authentication.

Securing authentication of users and meeting the budget in a growing mid-sized enterprise is now effortless with VariA MFASP X5 Series

This enterprise level Mid-range X5 Series model is carefully designed for medium-sized deployments of up to 2,000 end users distributed across 3 target systems or channels. This model packs more processing power under the hood, and additionally, has power redundancy and RAID 1. Paired with redundant instances, the VariA MFASP X5 Series can be configured for high-availability and disaster recovery, fulfilling stringent IT requirements for most enterprises.



VARIA MFASP X7 SERIES

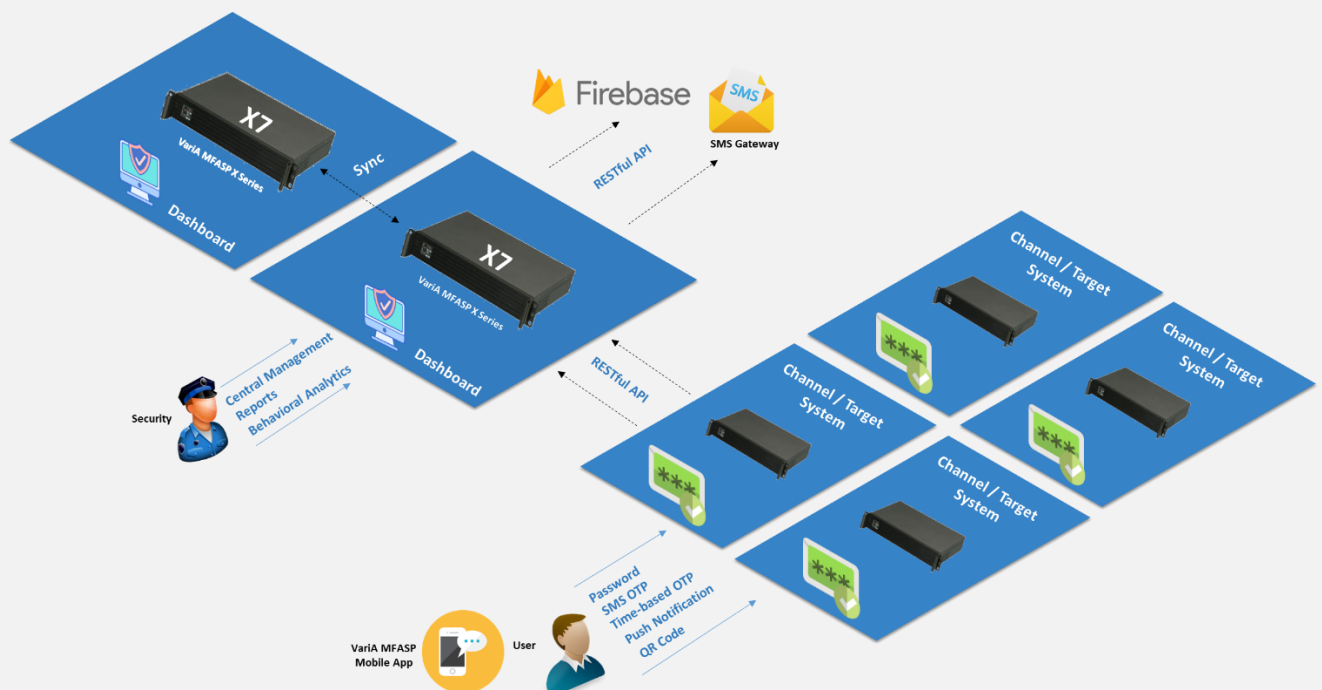
As enterprises move from a reactive to a proactive secure access management strategy, they need to be well-equipped with security solutions to ensure that their IT ecosystem is not compromised and it can meet all audit compliance mandates.

Compliance may become a tall order with changes in existing regulations and increase in new regulations are creating compliance challenges and cross-boundary regulatory needs may be causing the organizations to rethink compliance strategies.

In addition, the management would increasingly see a need to manage user accounts centrally to reduce operational overheads and have full visibility of who is accessing their systems.

Varia MFASP X7 Series is perfect for larger enterprises, protecting all user authentications across multiple target systems, while meeting international compliance mandates

This high-end X7 Series model supports high-end deployments with up to 5,000 end users, across 5 target systems or channels. It provides power redundancy and RAID 1. Paired with redundant instances, the Varia MFASP X7 Series can be configured for high-availability and disaster recovery, fulfilling stringent IT requirements for most enterprises.



For a complete overview of features offered by VariA MFASP X3, X5, and X7 Series, please refer to the VariA MFASP X Series Feature List.

For general enquiries on this solution set, please write to sheaf_sales@silverglobe.com.

About Silverlake

Silverlake is a leading Technology Innovations, Banking, Financial and Cyber Security solutions provider in the ASIA Pacific region. Silverlake's business transformation itself is fueled by its relentless desire to delight its customers. Executing parallel efforts in pursuing technology innovations as well as keeping its more than three-decade legacy of deploying core banking at 100% success rate is paramount to the company's strategy.

For direct purchase enquiries on the above solution, please visit www.silverlakesheaf.com/rimba/ or write to sheaf_sales@silverglobe.com

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