asterionDB

AsterionDB's Zero Trust Alignment

> *Incremental improvements will not give us the security we need; instead, the Federal Government needs to make <u>bold changes</u> and <u>significant investments</u> in order to defend the vital institutions that underpin the American way of life.*
>
> *- President Joe Biden, EO 14028*

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AsterionDB is Secure by Design & Default

> *We have to take a different approach to sustainable cybersecurity, which is about technology companies creating technology that is **secure by design** and **secure by default**.*
>
> - CISA Director Jen Easterly CES, January 2023

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AsterionDB Implements Granular Security

> *With zero trust, we have identified the items of value within the house and we place guards and locks within each one of those items inside the house.*
>
> *This is the level of security that we need to counter sophisticated cyber adversaries.*
>
> - DoD ZT PfMO Director Randy Resnick

AsterionDB Locks Down Assets Individually

Zero Trust Maturity Model

Pre-decisional Draft

June 2021
Version 1.0
Cybersecurity and Infrastructure Security Agency
Cybersecurity Division

"

*The goal is to prevent unauthorized access to data and services and make **access control enforcement as granular as possible***.

- Source: CISA Zero Trust Maturity Model

"

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Immediate Challenges To Zero-Trust Adoption

* Ambitious ZT goals

* 5 year timeline for adoption

* Identify and evaluate solutions that speed up and simplify ZT adoption

How Can AsterionDB Help?

✓ Zero-Trust Software Development Platform

✓ Simplify and accelerate Zero-Trust adoption

✓ Last line of defense at the data-layer

Ideal Early Adopters & Use Cases

✓ Large, sensitive unstructured data-sets under application control where users do not directly touch the file system

✓ Examples are: images, scanned documents, log data, insurance, healthcare, fin-tech

✓ Power users that organize and analyze unstructured data
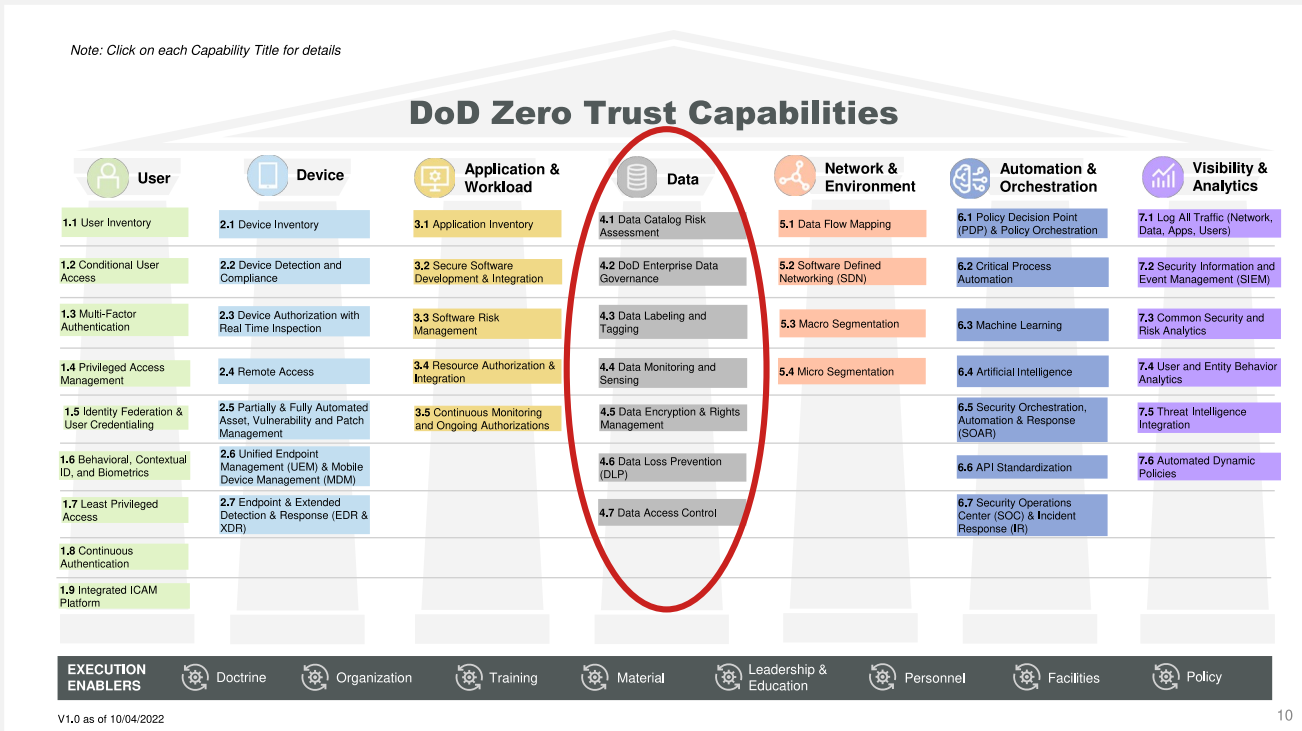
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AsterionDB Accelerates Building The CISA Data Pillar
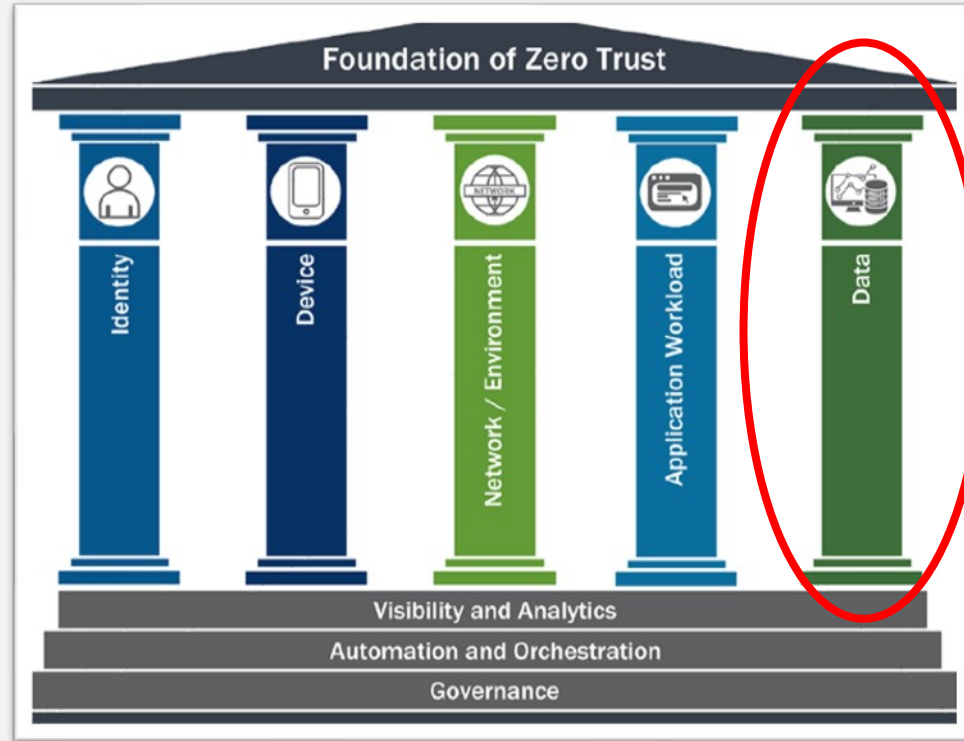
Source: CISA Zero Trust Maturity Model

AsterionDB Accelerates Building The DoD Data Pillar

Source: DoD ZT Execution Roadmap

The Dangers of Lateral Discovery

✗   Infiltrators map the network

✗   Apparatus is available for them to use

✗   Long delay between intrusion and detection

✗   Infiltration leads to infestation!

✗   Infection of software supply chain

Solution Summary

- ✓ Converge all logic & data in an Oracle database
- ✓ API accommodates non-Oracle use-cases
- ✓ Build new or retrofit existing applications
- ✓ On premises, cloud, & edge equivalence
- ✓ Ready for evaluation & adoption
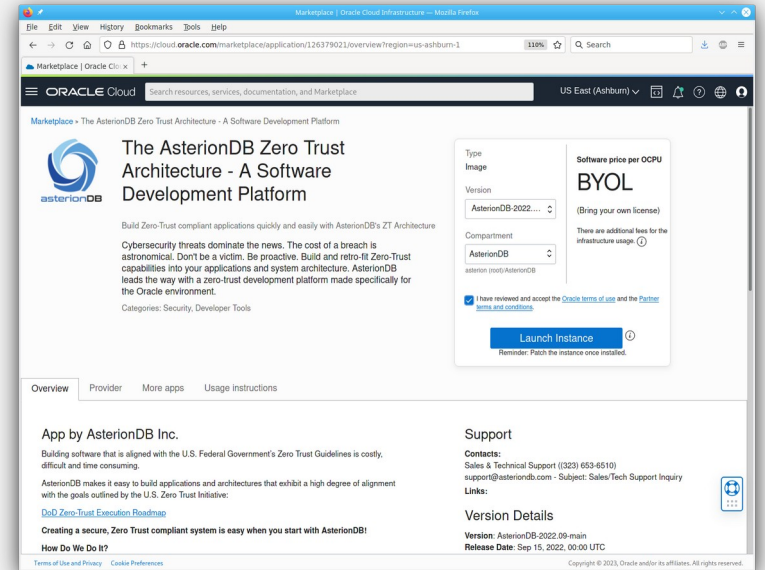
Leveraging the Oracle Database

- ✓ Rated as the most secure database available

- ✓ Oracle Label and Tagging

- ✓ Integrated data encryption, access control and loss prevention

- ✓ Simplified scaling and orchestration

- ✓ Unified backup, restore and disaster recovery

- ✓ Integrated redundancy and location independence

- ✓ Consolidate audit and compliance

Some of Our Unique Capabilities

Capability	Benefit
Move Away from the Legacy File System	✓ Reduce attack surface and vectors ✓ Limit lateral discovery ✓ Flexibility with keywords and tags
Granular Security	✓ Assets are locked by default ✓ Complete logging and access control
Single-Point API	✓ Limit API discovery ✓ Security choke point

Product Demonstration

- ✓ Web application (management)
- ✓ Content ingestion via web-app
- ✓ Integrated HTTP streaming
- ✓ File system gateway
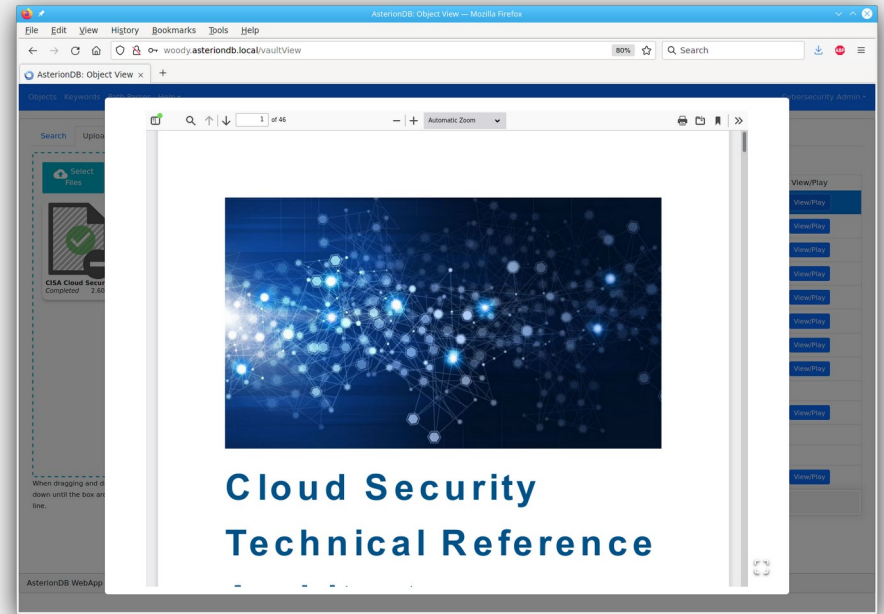
Topics For Further Discussion

Security
- ✓ No File System (NoFS)
- ✓ Single-point API
- ✓ Schema visibility & security
- ✓ Granular security
- ✓ Apparatus security

Operations
- ✓ Backup & disaster recovery
- ✓ Scaling & load balancing
- ✓ Consolidation, convergence & efficiency

DevOps
- ✓ Simplified audit & compliance
- ✓ Unified data fabric
- ✓ Simplified Deployment & update
- ✓ Data-layer business logic
- ✓ Extended data-layer logical capabilities

Use Cases
- ✓ Horizontal platform
- ✓ AI/ML, Big-Data, Cloud migration, Device & infrastructure control
- ✓ Retrofit existing applications

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