BUILDING A DAM SECURE FILE SYSTEM WITH iRODS

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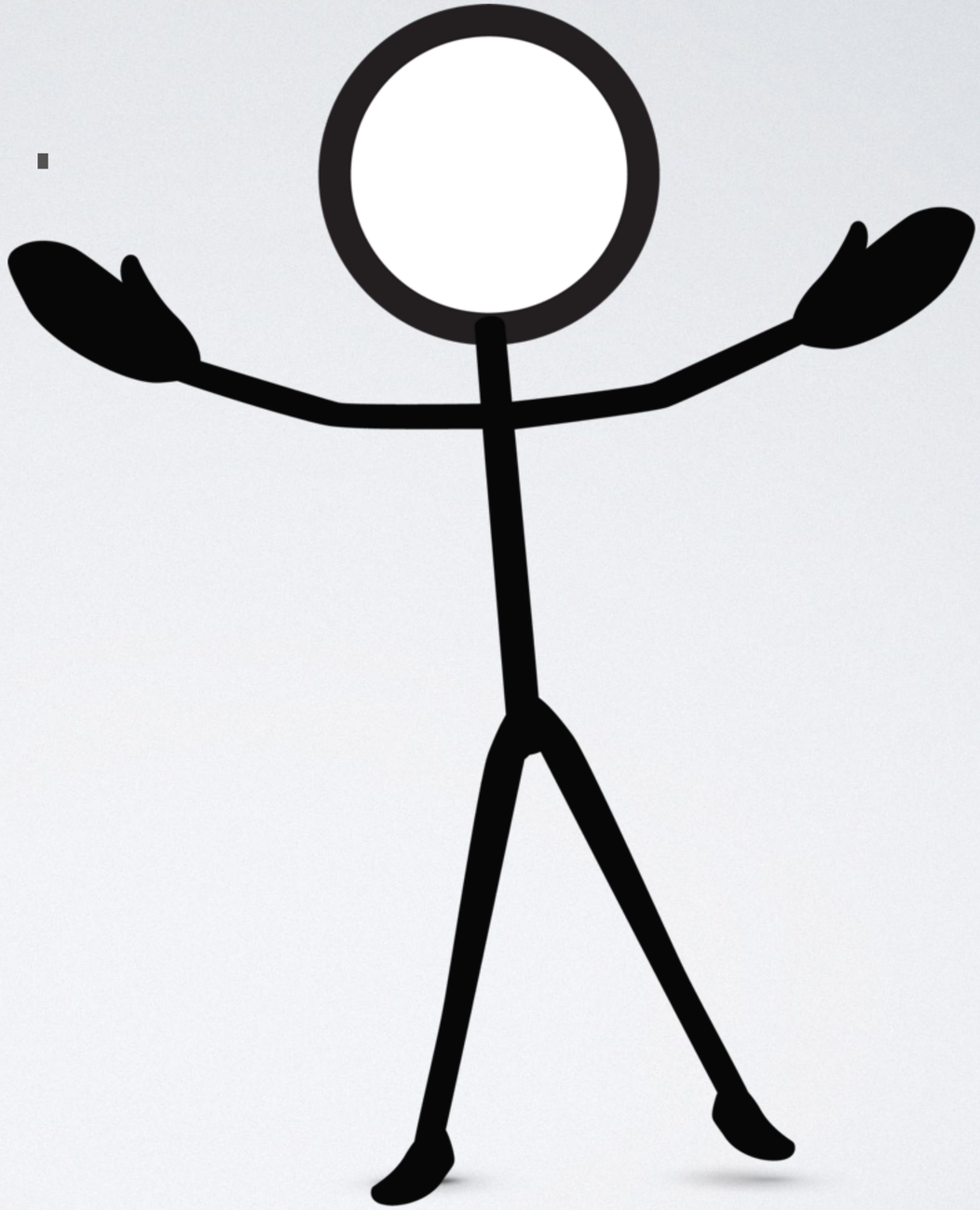
LET'S MEET…

BEN



BEN...

IT MANAGER

*DAM THINKER

OCCASIONAL SLEEPER

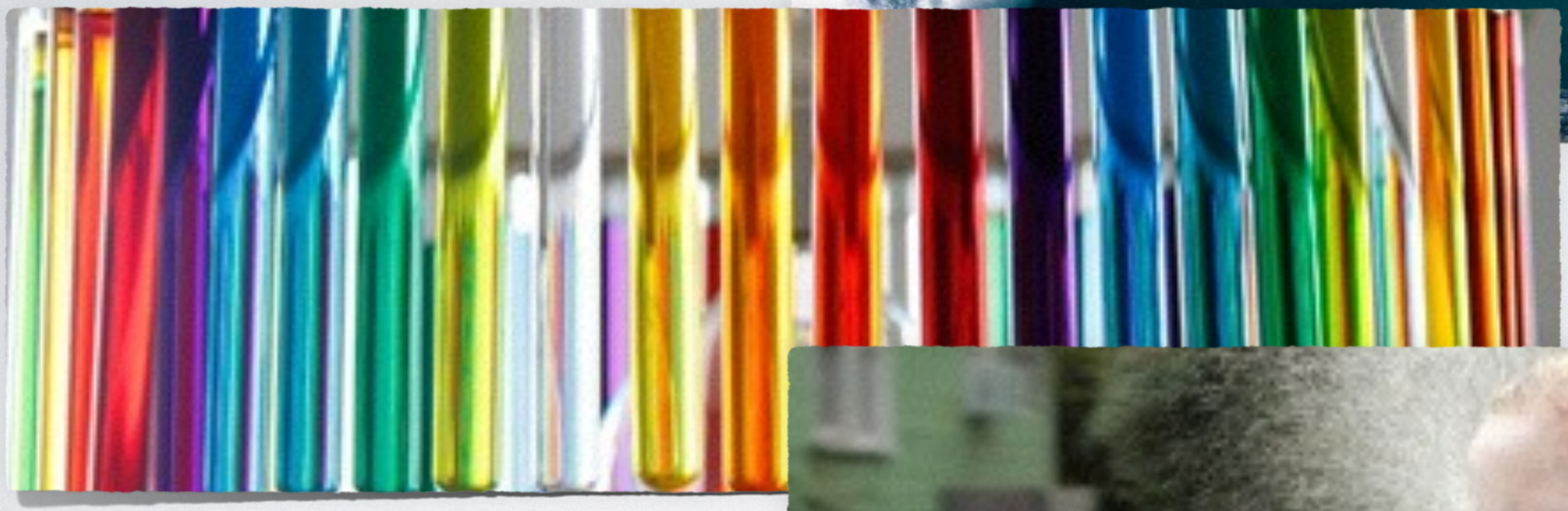
*DIGITAL ASSET MANAGEMENT

WHY DOESN'T **BEN** SLEEP MUCH?

‘DRIVERS’ OF THE CHAOS

(*DATA*)

too
MUCH
Data



too many
VARIANTS

arriving
too
FAST

BEN'S 'DATA' CONCERNS....

INVENTORY

EFFICIENCY

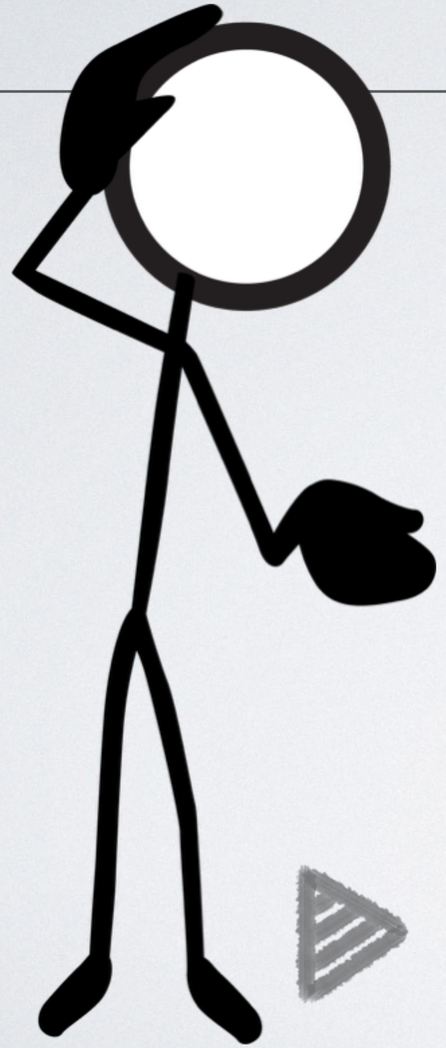
PLACEMENT & PERFORMANCE

SECURITY

INVENTORY

- WHAT DO WE HAVE
- WHERE IS IT
- WHO TOUCHED IT
- WHEN SHOULD IT LEAVE

PLACEMENT / PERFORMANCE



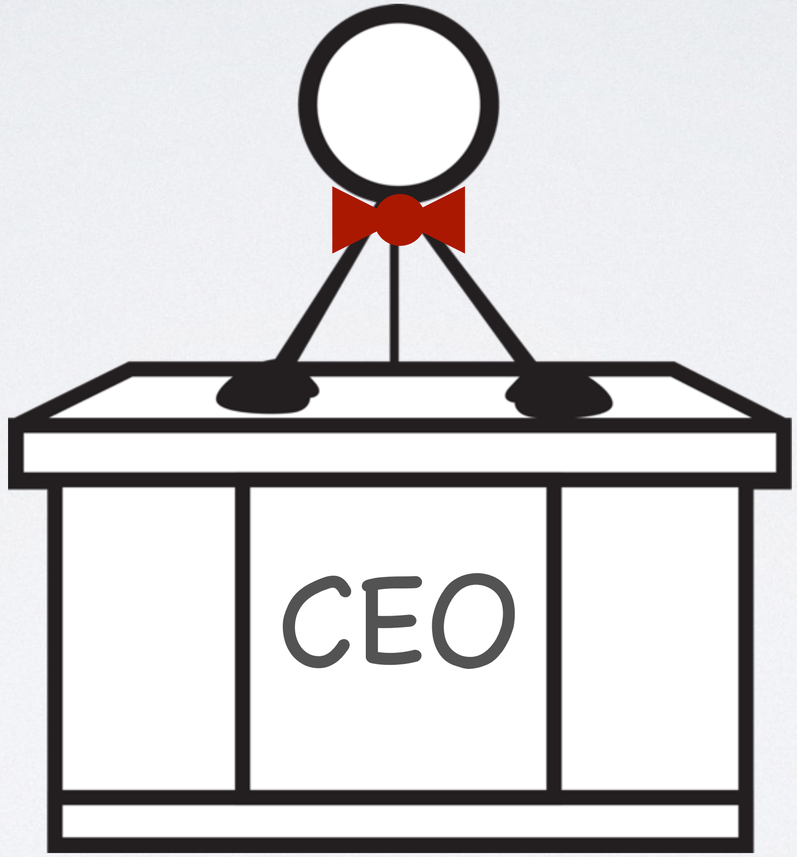
- MULTI-SITE MANGEMENT
- DISTRIBUTED PROCESSING
- LIMITED BANDWIDTH

PROCESSING > FAST STORAGE
IDLE DATA > DURABLE STORAGE

EFFICIENCY

COST

TIME TO ACCESS



EASY

INVISIBLE

WHY THE SECURITY FOCUS?

"THE HACK OF THE CENTURY"

SECURITY

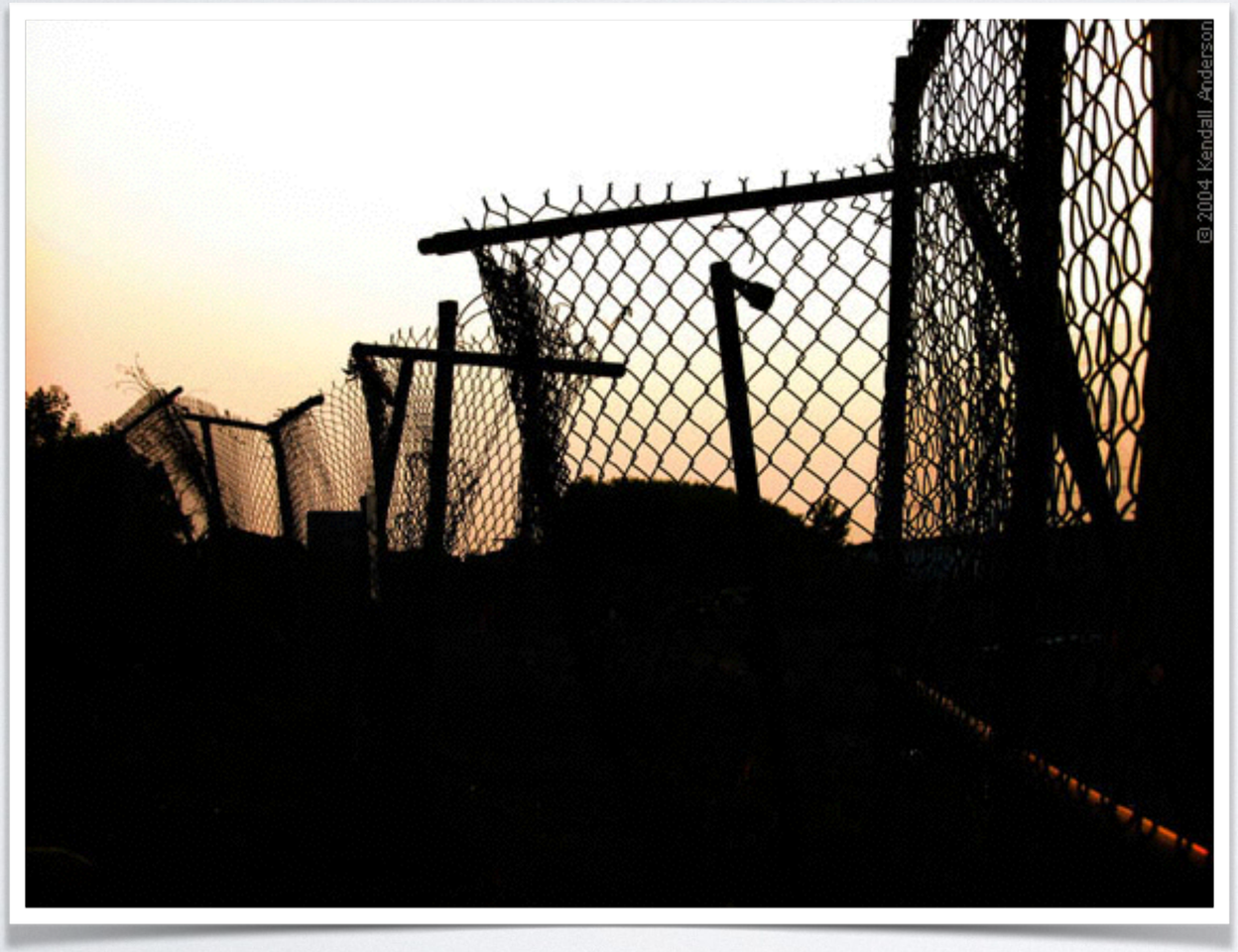
- [x] TRUST
- [x] BOUNDARIES
- [x] MACHINE ATTACKS

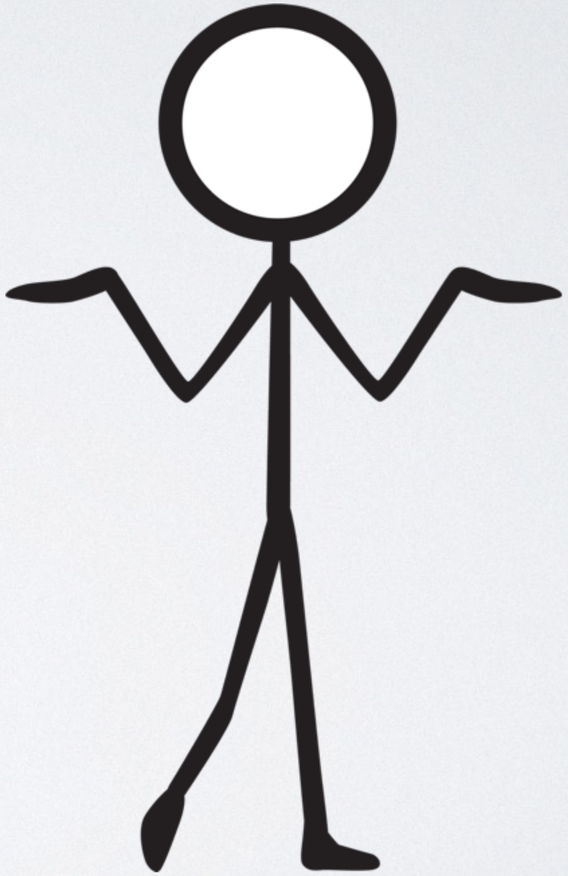
TRUST

IDENTIFYING ‘BAD ACTORS’ *VIA MULTIFACTOR AUTHENTICATION*

- ☑ ID / PASSWORD
- ☑ TOKEN
- ☑ INHERENCE
- ☑ GEO-LOCATION

BOUNDARIES: *POUROUS*



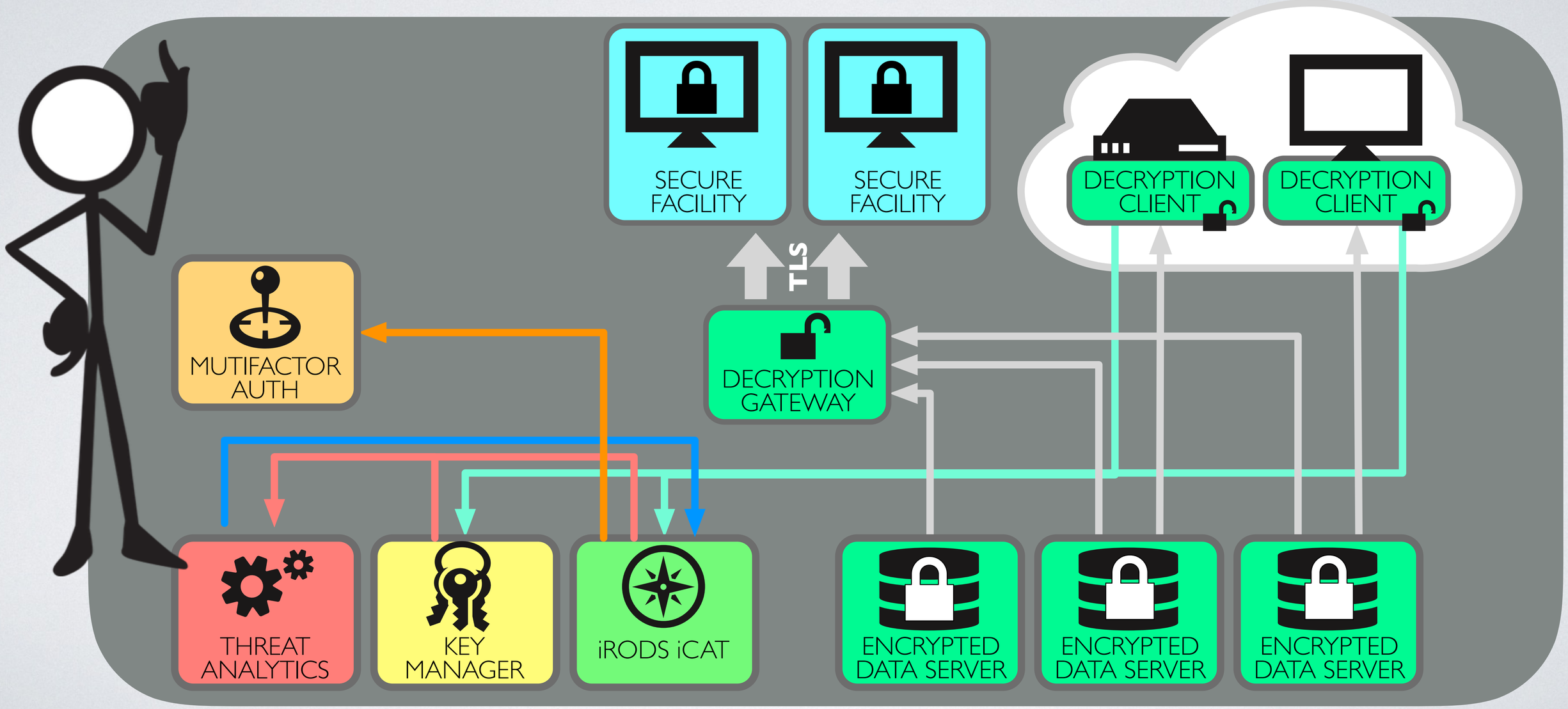


ADVANCED MACHINERY

FAST
SCALABLE
ATTACKS

WHAT SHOULD BEN DO?

DAM SECURE iRODS!



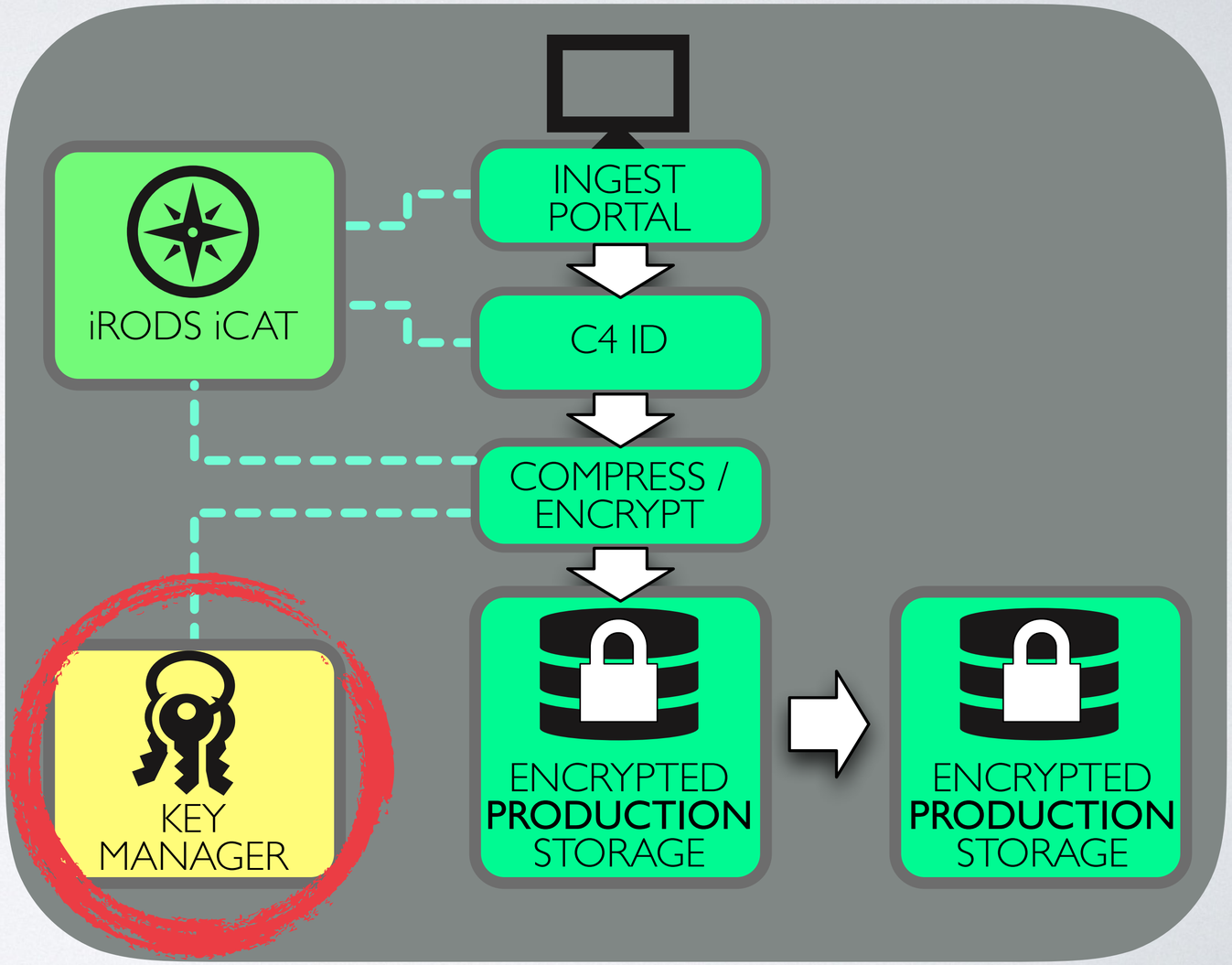
DAM SECURE INVENTORY

POLICY-BASED INGEST

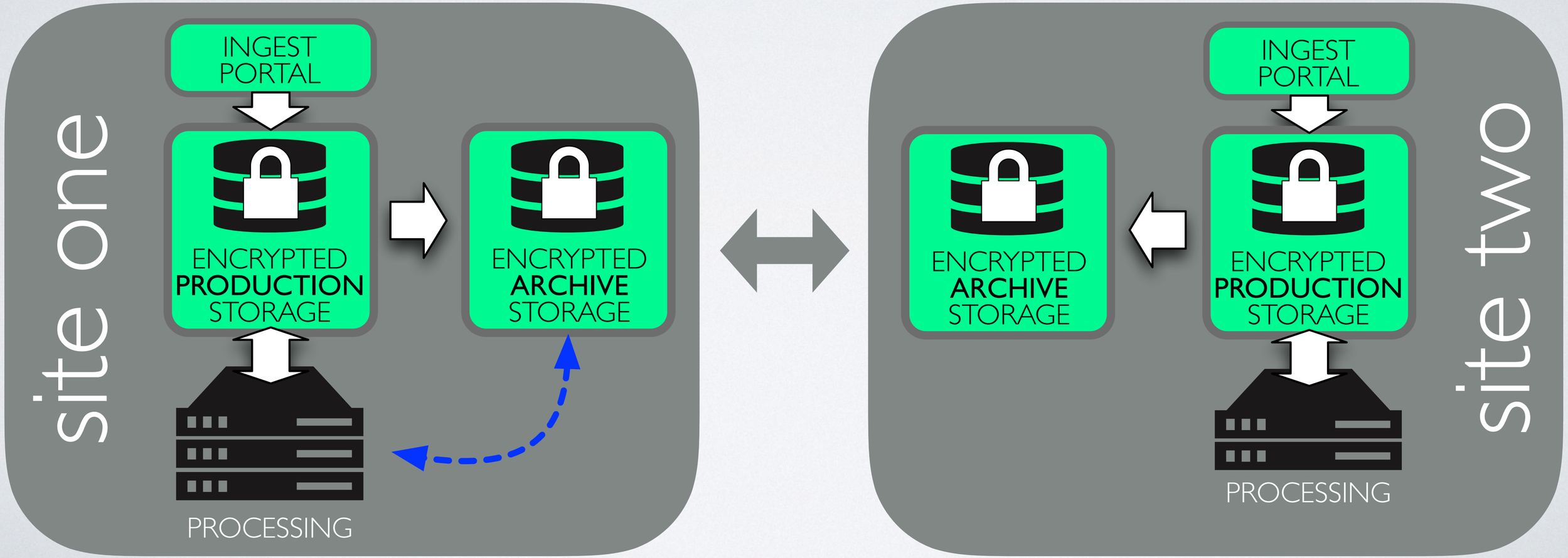
RELIABLE INVENTORY
(WHAT & WHERE)

CENTRAL METADATA

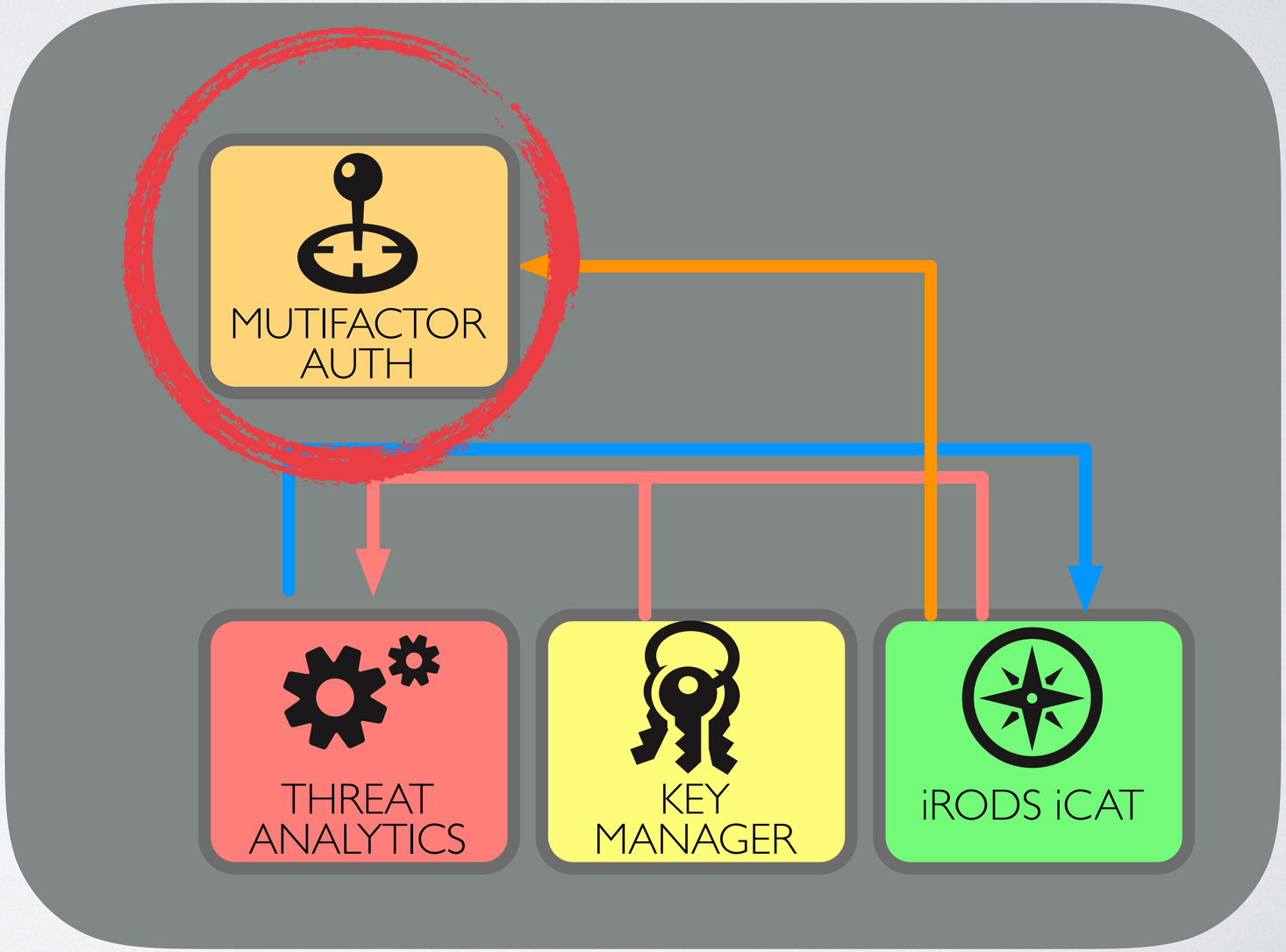
SECURE PROVENANCE
(WHO & WHEN)



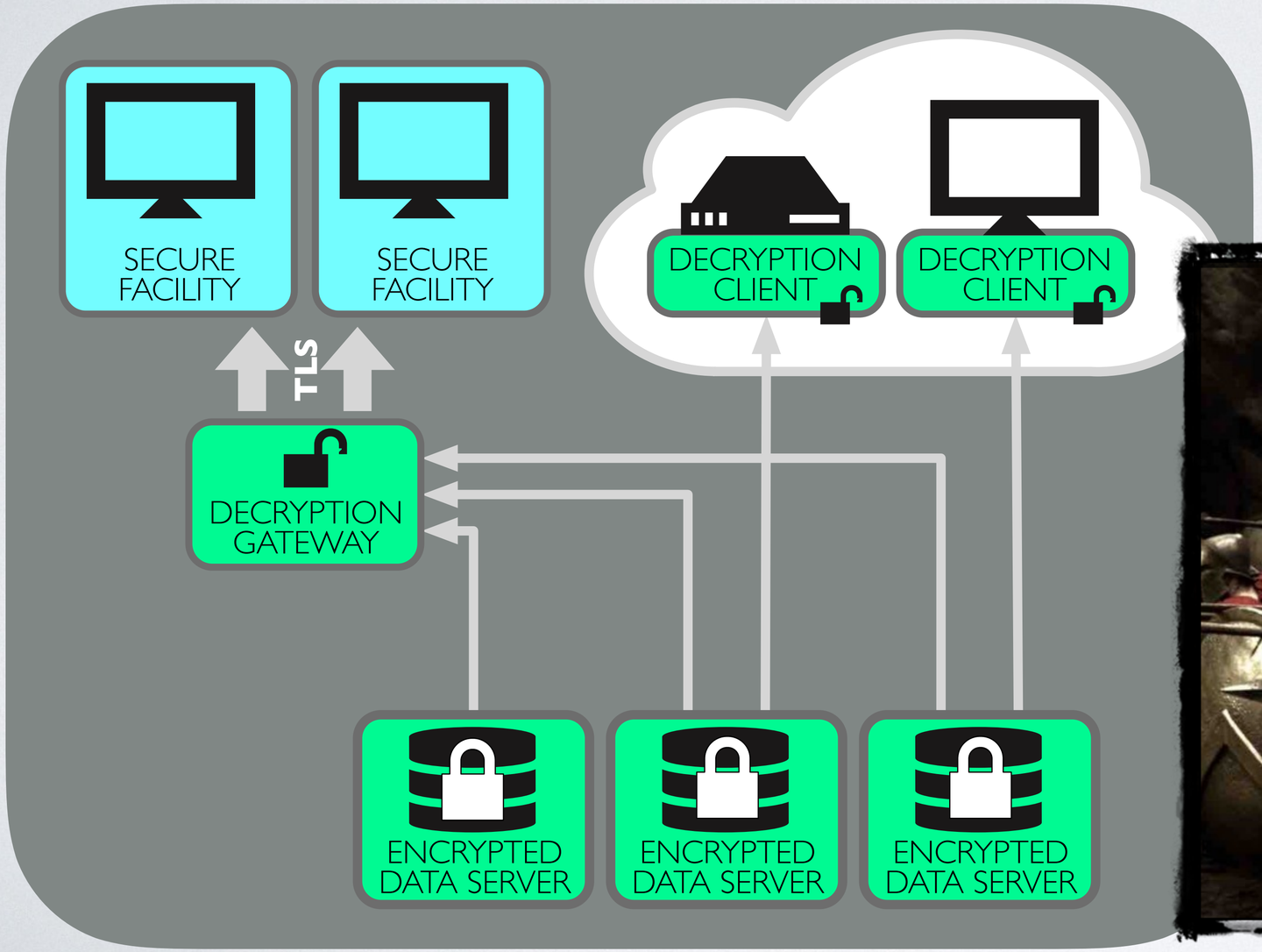
DAM SECURE PLACEMENT & PERFORMANCE



SECURITY: SPOT BAD ACTORS

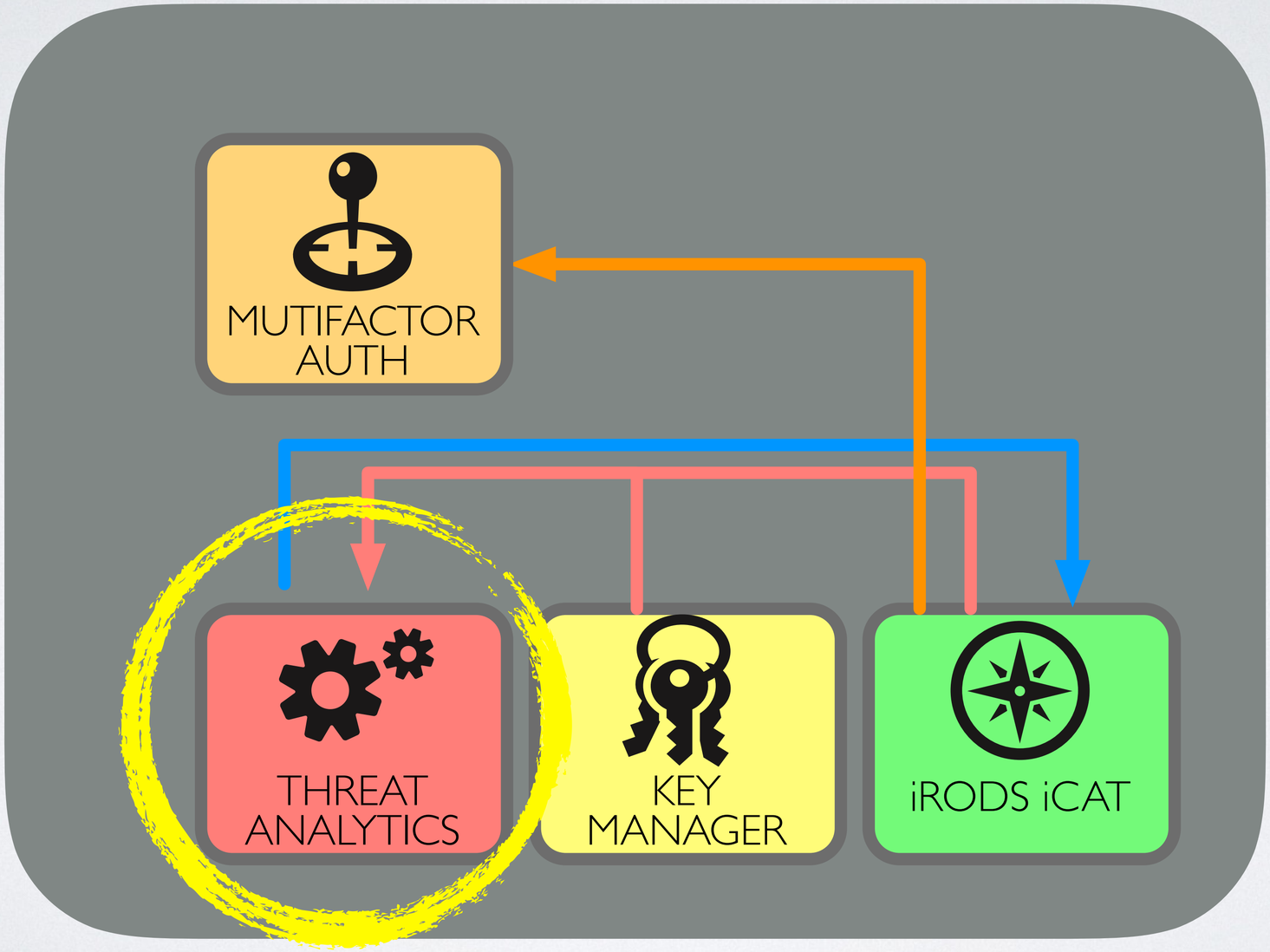


SECURITY: NO BOUNDARIES

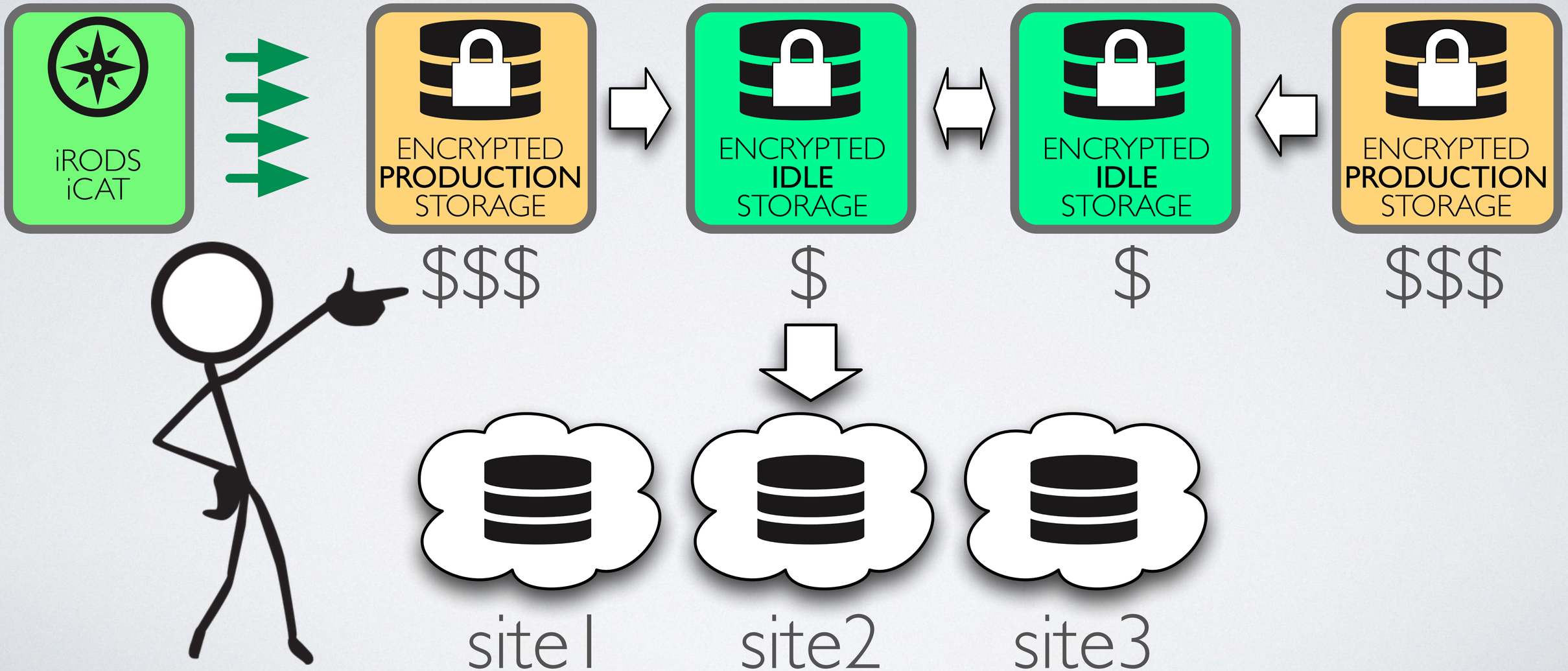


SELF-DEFENDING PORTABLE DATA

SECURITY: vs MACHINES



DAM SECURE EFFICIENCY



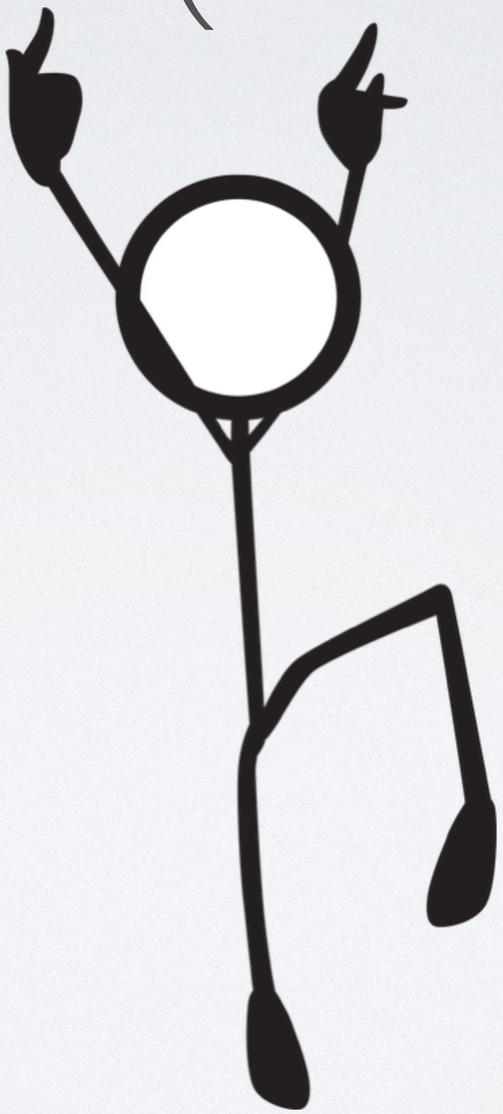
BEN HAS NO (DATA) WORRIES!

INVENTORY ✓

EFFICIENCY ✓

PLACEMENT & PERFORMANCE ✓

SECURITY ✓



BEN IS HAPPY THANKS TO:

LINKS

- **iRODS Data Management**: pixspan.com/medical_imaging.php
- **Daystrom Integration**: daystrom.com/technical-expertise/data-grids.html
- **HGST Storage**: hgst.com/company/resources/hgst-erasure-coding-and-self-protecting-technology
- **C4 ID**: etcentric.org/wp-content/uploads/2015/09/C4-ID-ETC-Whitepaper.pdf
- **Pixspan Compression**: pixspan.com/medical_imaging.php
- **FireEye TAP**: fireeye.com/products/threat-analytics-platform.html

iRODS UGM2016

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