



# STAC Update for Big Workloads

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- Non-trivial Monte Carlo
  - Heston-based Greeks for multi-asset, path-dependent options with early exercise
  - Metrics: Speed, capacity, quality, efficiency (starting 2014)
- 4 public reports to date using STAC-A2 Pack for Intel Composer XE
  - 2-socket Sandy Bridge
  - 4-socket Sandy Bridge
  - Xeon Phi
  - 2-socket Ivy Bridge
- Intel presented 4 steps to optimized an implementation
  - See [www.STACresearch.com/intel/4steps](http://www.STACresearch.com/intel/4steps)

# STAC-A2 – What to look forward to

- STAC has tested other IA systems
  - Results to be available shortly in the STAC Vault
- Additional vendors still working on implementations
  - Refinement of specs is reaching its crescendo
  - Expecting some published results soon
  - As well as new STAC Packs in the STAC Vault
- Architecture-neutral C baseline available shortly
  - Good basis for tools vendors to demonstrate their benefits

[www.STACresearch.com/a2](http://www.STACresearch.com/a2)

# “Big Data”

- A SIG member (IBM) asked STAC to test IBM Infosphere Big Insights against Apache Hadoop
  - See the results at [www.STACresearch.com/ibm](http://www.STACresearch.com/ibm)
- Anecdotal market experience:
  - Continued uptake of Hadoop in investment banking. Mostly small clusters at this point. A few large clusters.
  - Increased usage of analytic databases.
  - Continued uptake of NoSQL.
- Market understanding of sweet spots is maturing

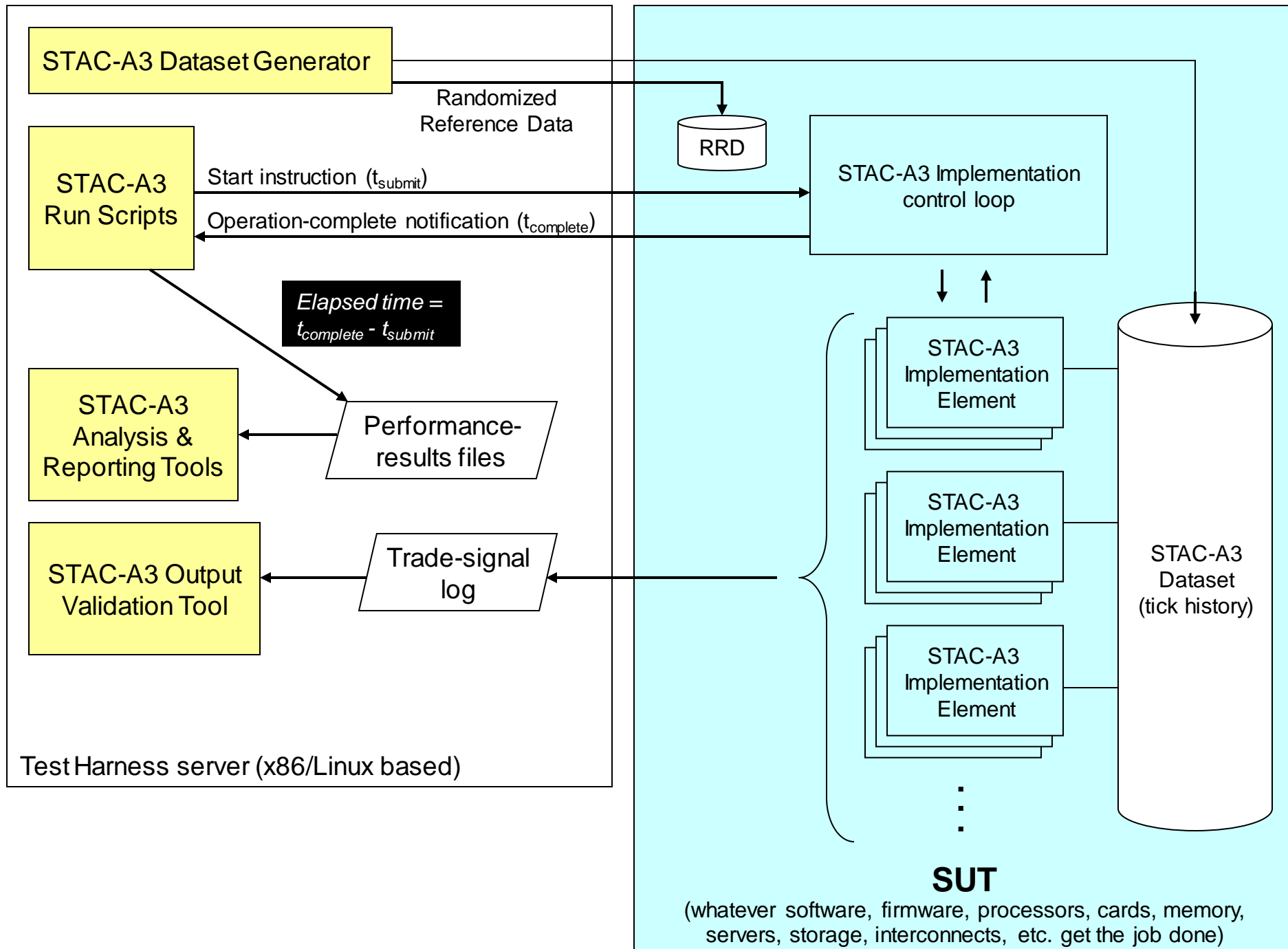
# STAC Big Data SIG

- Big data is a big tent
  - Too big?
- Interests very diverse
- Plan to split into use-case driven groups
- Possibly also a Hadoop-specific group

[www.STACresearch.com/bigsig](http://www.STACresearch.com/bigsig)

# Backtesting SIG

- Objective:
    - Benchmarks for technology stacks used for strategy backtesting (STAC-A3)
  - Group:
    - 7 end-user firms
    - 13 vendors
    - Still open
  - Have developed framework specifications
  - Working on implementation in parallel with refinement of specifications
- [www.STACresearch.com/backtesting](http://www.STACresearch.com/backtesting)



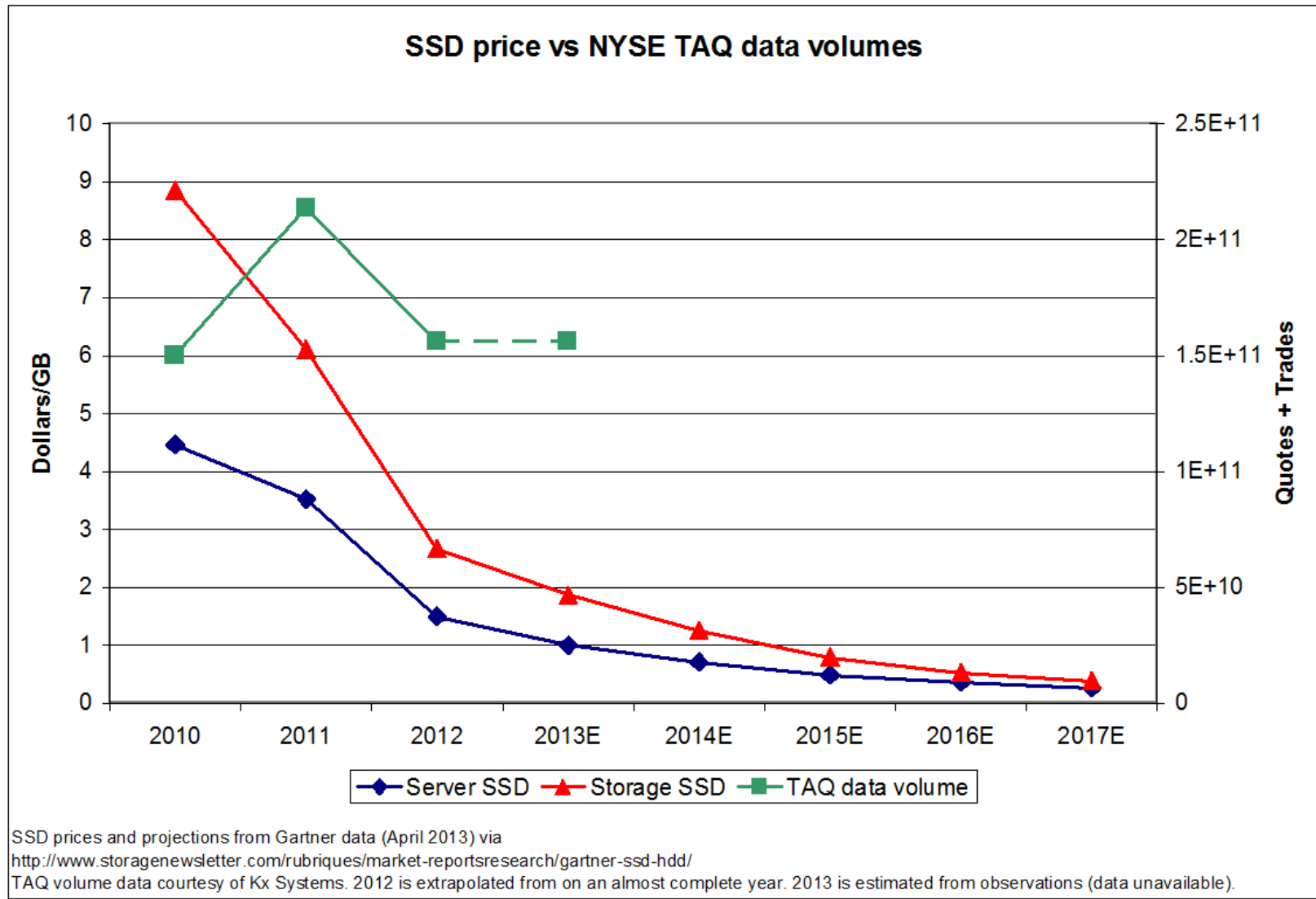
# STAC-M3

- Several more reports issued with kdb+ 3.1:
  - Intel DC S320 SSD
  - Intel DC S3700 SSD
  - Scalable Informatics siFlash/Intel Ivy Bridge
  - Scalable Informatics Ceph Storage Cloud
  - IBM FlashSystem 810
- Reconvening STAC-M3 Working Group
  - Primarily to enhance specs to provide more insight into caching

[www.STACresearch.com/m3](http://www.STACresearch.com/m3)



# Changing economics



# Testing the new world of flash

- These economics are changing what's feasible to analyze in real time
- Proliferation of interconnects and form factors
- STAC undertaking second phase of SSD testing now