



# ENERGY STAR

## Version 1.1 Storage Program Updates

February 21, 2018  
U.S. Environmental Protection Agency





## Agenda

- Recent Developments
- Adoption of Emerald V3.0.1 and ES Version 1.1
- Certification Details & Timeline
- Status of other ENERGY STAR IT Specifications
- Questions?



# Current Storage Certified Product List

- 181 products certified
- 14 manufacturers represented

Online Category Breakdown	
Online 2	53
Online 3	95
Online 4	33

Workload Configuration Representation	
Transaction	102
Streaming	88
Capacity	21

Storage Type	
Block I/O Only	155
Block I/O + NAS	26



## Recent Developments

- January 4, 2018 - EPA published the ENERGY STAR Version 1.1 Storage Draft Specification
- January 25, 2018 – Met with stakeholders in San Jose, CA to discuss the following:
  - Emerald V3.0.1
  - ENERGY STAR Version 1.1 Storage Draft Specification
  - Upcoming storage technology
- February 14, 2018 – EPA published the ENERGY STAR Version 1.1 Storage Final Test Method



## Adoption of Emerald Version 3.0.1

- EPA has adopted the Emerald V3.0.1 specification in the finalized ENERGY STAR Version 1.1 Storage Test Method and the final ENERGY STAR Version 1.1 (to be released on May 21).
- Partners can begin testing storage products at the conclusion of this SNIA training to prepare products for certification by the upcoming Version 1.1 specification.
  - Expands scope to include File I/O configuration certification



## New File I/O Guidance in Version 1.1 Specification

- EPA has provided new File I/O specific guidance in the following areas:
  - New required workload tests
  - Workload Weighting Requirements
  - Active and Idle State Efficiency Results to Display



# New File I/O Guidance in Version 1.1 Specification

**Table 6: Required Workload Tests for all File I/O Configurations**

Workload Test
DATABASE
SW Build
VDA
VDI
Ready Idle <sup>3</sup>

**Table 10: Active and Idle State Efficiency File I/O Test Results Displayed**

Workload Test	Transaction Optimization	Streaming Optimization	Composite Optimization
DATABASE	Yes	No	No
SW Build	No	No	Yes
VDA	No	Yes	No
VDI	Yes	No	No
Ready Idle	Yes	Yes	Yes

**Table 8: Workload Weighting Requirements for all File I/O Systems**

Workload Test	Transaction Optimization	Streaming Optimization	Composite Optimization
DATABASE	50%	0%	0%
SW Build	0%	0%	100%
VDA	0%	100%	0%
VDI	50%	0%	0%



## Questions Received Regarding Certification

- How soon will data appear on the EPA website?
  - The QPX service will ideally go live on May 21, but CBs won't be able to submit to EPA before May 21 at the earliest.
    - Models can be tested prior to this date and CBs can start certifying products once the Version 1.1 specification is released.
  - The QPL refreshes daily, so once the system begins accepting Version 1.1 submissions they should appear fairly quickly.
- Is reaccreditation to ISO 17025 necessary for Version 1.1?
  - No, labs that have attended this training OR submitted an updated scope of accreditation are permitted to test products to the Version 1.1 specification prior to the effective date.





## Timeline

- Now – SNIA Emerald V3.0.1 training
- Early March – At the conclusion of this training, stakeholders can begin testing File I/O products for certification
- May 21, 2018 – Finalize ENERGY STAR Version 1.1 Storage specification
  - Version 1.1 is immediately effective on this date
- Late 2018 – Begin development of ENERGY STAR Version 2.0
  - Plan to incorporate Emerald Version 4



## Status of other ENERGY STAR IT Specs

- Version 3.0 Computer Servers
  - Currently working towards releasing the Draft 3 specification
  - Intend to finalize mid-2018
- Version 2.0 Uninterruptible Power Supplies
  - Finalized on December 22, 2017
  - Effective January 1, 2019
- Version 1.0 Large Network Equipment
  - No updates at this time, still in effect



# Questions or Comments?



**Please send any additional comments to [storage@energystar.gov](mailto:storage@energystar.gov) or contact:**

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**ENERGY STAR is the simple choice for energy efficiency.**