NVM Express (NVMe) Integrators List Policy v1.0

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1 - Purpose

The following document outlines the policies around the NVMe Integrators list (IL) and shows how participating companies can have their products included in the public NVMe Integrators List.

The NVMe Integrators List will serve as a means for component suppliers to indicate conformance to the NVMe specification and interoperability with other NVMe products. While listing on the Integrators List does not guarantee conformance or interoperability it provides a reasonable degree of confidence that a testing product will work well in a multi-vendor environment.

2 - Location

The NVMe Integrators List will be hosted on the UNH-IOL website at www.iol.unh.edu. The exact URL will be published by UNH-IOL. This site will be linked to from nvmexpress.org. The list will be maintained by UNH-IOL.

3 – Definitions

NVMe Host Platform - Any combination of PCIe Host hardware (Motherboard or add-in card), NVMe Host Software (OS/Driver), and/or IP, that allows communication with an NVMe enabled SSD. Examples of an NVMe Host Platform are: server, server board, motherboard, add-in card, RAID Controller, or IP device.

NVMe Device - an NVMe SSD, SSD Controller, or SSD Controller IP.

Product Under Test - The NVMe Host Platform or NVMe Device being tested to determine eligibility for the NVMe Integrators List.

Interop Partner - An NVMe Host Platform or NVMe Device that is tested with the Product Under Test according to the NVMe Interop Test Suite Document to determine the eligibility of the Product Under Test for the NVMe Integrators List.

4– Eligibility

Products must meet the following requirements to be eligible for the NVMe Integrators List.

If the Product Under Test is an NVMe Device: In order for the product to be eligible for the NVMe Integrators List there must be a UNH-IOL NVMe Conformance Test

Report for the product with no failing items. The Test Report must be completed according to the most recent version of the NVMe Conformance Test Suite (CTS) Document available publically on the UNH-IOL website.

Optional features may be included in the testing defined in the CTS document. If a device does not support certain optional features, those items would be marked as 'Not Applicable' in the Conformance Test Report, and would not be considered a failing item. If a product claims support for an optional feature, and that feature is included in the current CTS document, the product under test must pass the test for that feature in order to be eligible for the NVMe Integrators List.

Additionally, in order for an NVMe Device product to be eligible for the NVMe Integrators List there must be a UNH-IOL NVMe Interop Test Report for the product. The Test Report must be completed according to the most recent version of the NVMe Interop Test Suite (ITS) Document available publically on the UNH-IOL website.

The Interop Test Report must document testing of the Product Under Test with at least 4 different NVMe Host Platforms, and the product under test must pass with at least 3 of the NVMe Host Platforms. Among the passing NVMe Host Platforms, there must be at least two different drivers, and two different Operating Systems. At least one of the drivers must be one of the publically available reference drivers: either the Windows OFA reference driver available from www.openfabrics.org, or the the Linux reference driver available in the public Linux distribution (since Kernel version 3.3.0). Note that the number of reference drivers required for Integrators List Eligibility may increase in the future at the discretion of the NVMe Promoters Group.

If the Product Under Test is an NVMe Host Platform: In order for an NVMe Host Platform product to be eligible for the NVMe Integrators List there must be a UNH-IOL NVMe Interop Test Report for the product. The Interop Test Report must document testing of the NVMe Host Platform with at least 4 different NVMe devices, and the product under test must pass with at least 3 of the 4 NVMe Devices.

When UNH-IOL issues reports for a product, they will include a notice on whether the Product Under Test is eligible for the Integrators List or not. In order to have an eligible product included on the Integrators List, the participating company must specifically request UNH-IOL to list the eligible products. Products will not be automatically listed. UNH-IOL will not list products that are not eligible. UNH-IOL will not list products that the participating company has not requested to have listed on the Integrators List.

A participating company could request conformance and interop testing according to the most recent version of the CTS and ITS, but not immediately request a product be posted to the IL, perhaps waiting for the product to be announced publically. If the CTS or ITS changes after the product is tested, but before the

request for listing occurs, the product would remain eligible for listing, but the listing would indicate which CTS and ITS version the test was performed to.

A participating company may request testing be performed on their product according to the previous version of the CTS or ITS (rather than the most recent version). If the testing is performed using the previous version of the CTS or ITS, within 6 months of the release date of the newest CTS or ITS, the product would be eligible for the Integrators List. If the testing is performed using the previous version of the CTS or ITS, more than 6 months after the release date of the newest CTS or ITS, the product would not be eligible for the Integrators List.

5 – Information in Listing

The following information must be provided with each listing request, this information will be included in the listing on the public NVMe Integrators List.

Product type (accepted products types are: NVMe SSD, SSD Controller, or SSD Controller IP, server, server board, motherboard, add-in card, RAID Controller, or IP device).

Manufacturer

Model Name and Family Name (i.e. different capacities of one SSD are in a single family)

Firmware revision

Revision of conformance test performed (i.e. 1.0, 1.1, 1.2 etc...)

Revision of interop test performed (i.e. 1.0, 1.1, 1.2 etc...)

Description of Interop Partners used (hardware version, OS, driver version, BIOS). This information in contained in the UNH-IOL NVMe Interop Test Report created by UNH-IOL and provided to the participating company.

Date of listing

IL listing is considered permanent. If the CTS or ITS is revised, listings for previously tested products will remain on the public IL (i.e. listings for products tested against version 1.0, are not removed when version 1.1 becomes available).

6 – Listing by Similarity

It is expected that some products will have only minor differences, such as storage capacity, or endurance parameters. In cases such as this, a participating company can request that certain products be added to a product listing, thus they are listed by similarity. The products listed by similarity must have the same Firmware revision and Model Name, and the listing company confirms that there are no substantive changes to the NVMe interface.