NAME

nvvs − The NVIDIA Validation Suite

SYNOPSIS

nvvs [-a] [-c *cfgfile*] [-d *dbglevel*] [-g] [-l *dbgfile*] [-s] [-t] [--version] [-h]

DESCRIPTION

nvvs is the NVIDIA Validation Suite for Unix platforms. NVVS is the system administrator and cluster manager's tool for detecting and troubleshooting common problems affecting NVIDIA Tesla GPUs in a high performance computing environments. NVVS focuses on software and system configuration issues, diagnostics, topological concerns, and relative performance.

OPTIONS

NVVS supports the following command line options.

-a, --appendLog
Append this run to the current debug log file.

-c, --config *path to config file*
Specify a path to the configuration file.

--configless
Run NVVS in a configless mode. Executes a "long" test on all supported GPUs.

-d <debug level>, --debugLevel <debug level>
Debug level 0-5 with 5 being the most verbose.

-g, --listGpus
List the GPUs available for testing.

-l <debug file>, --debugLogFile <debug file>
Encrypted logfile for debug information.

-p <path>, --pluginpath <path>
Custom path for NVVS plugins.

--quiet No console output given. See logs and return code for errors.

-s, --scriptable
Give output in colon-separated, more script-friendly format.

--specifiedtest <specific test to run>
Run a specific test in a configless mode. Multiple word tests should be in quotes.

--statsonfail
Output statistic logs only if a test failure is encountered.

-t, --listTests
List the test suites and test groups available.

-v, --verbose
Enable verbose reporting for some plugins.

--version
Displays the version information and exits.

-h, --help
Displays usage information and exits.

CONFIGURATION FILE

Tests, GPUs, and global parameters are specified via a configuration file which is a standard YAML format, the most basic of which is:

```
%YAML 1.2
---
globals:
  logfile: nvvs

gpus:
- gpuset: all K40c
  properties:
    name: Tesla K40c
  tests:
    name: Long
```

This configuration file will run the 'Long' test suite on all Tesla K40c GPUs found within the system. In addition to the name, indexes, UUIDs, and PCI bus IDs, a brand, such as 'Tesla', can be specified. The one caveat is that if multiple indexes are specified or a brand specification matches more than one GPU on the system, all GPUs must be of the same type (i.e. all must be Tesla K40c).

Please refer to the NVVS User Guide for a more detailed explanation of the NVVS config file and options.

PROPERTIES

The full specification for the properties section is:

index -- A comma-separated list of indexes that the tests should run on.

name -- The canonical name for the device (i.e. Tesla K8).

brand -- The brand name for the device being targeted (i.e. Tesla).

uuid -- The full uuid for the device wanting to be targeted.

busid -- The full PCIe busid for the device wanting to be targeted in **xxxx:yy:zz.n** format.

In the above list, busid and uuid can only match a single unique device whereas index, name, and brand can match multiple devices. For the other three keywords, the resulting list of GPUs is the intersection of one or more of the {index, name, brand} set depending on which keywords the user specifies.

TESTS

The test names are a package of pre-sequenced tests or test groups:

Quick Designed for a job prologue and with basic checks for sanity and configuration.

Medium
Designed for a job epilogue on failure with more involved software and hardware tests, system integration tests, and relative performance checks.

Long Designed for manual execution on a job failure. Contains the components of the “medium” suite but run for a longer time in an effort to stress the system.

FILES

The default installation directory is /usr/share/nvidia-validation-suite/

/etc/nvidia-validation-suite/nvvs.conf
The default NVVS configuration file.

$INSTALL_DIR/plugins/*.so
Pre-packaged plugins for NVVS.

$INSTALL_DIR/configfile_examples/
Example config files for the various GPUs that NVVS supports.

NOTES

For more information about NVVS, please see the online documentation at XXX.

SEE ALSO

nvidia-healthmon(8), **NVML**(3)

NVIDIA Validation Suite User Guide at XXX.

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