



ALTAIR

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Altair Accelerator Software 2021.2.0

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ArgumentParser

A slimline C++ class for parsing command-line arguments

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Bootstrap

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client-oauth2

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history

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jwt-decode

Version: 2.2.0

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react

Version: 16.9.0

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react-bootstrap

Version: 1.0.0-beta.12

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react-bootstrap-table-next

Version: 4.0.3

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react-cookies

Version: 0.1.1

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react-data-grid

Version: 7.0.0-canary.15

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react-dom

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react-grid-layout

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react-items-carousel

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react-page-visibility

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react-resize-detector

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react-responsive-modal

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react-router-dom

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react-scripts

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react-select

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react-sparklines

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react-time-ago

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react-tooltip

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reactstrap

Version: 8.0.1

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Swagger UI

The VOV REST API interactive documentation is enabled through the use of the Swagger UI library. Swagger is licensed under the Apache 2.0 license, as described in <https://swagger.io/license/>. Distribution version: 3.18.3.

Tcl/Tk

The graphical user interface is implemented with Tcl 8.6.5/Tk 8.6.5.

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tclrmq

The tclrmq library is used to interface with an externally-hosted RabbitMQ message broker server. The distribution of tclrmq included in this version of Altair Engineering software is 1.3.8.

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tcpkill

The utility 'tcpkill' has been included in the release, under the name 'vovtcpkill'. The utility comes with this copyright notice.

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TkConsole

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Release Info: v2.4, CVS v1.82 2004/11/11 17:22:13

Documentation available at: <http://tkcon.sourceforge.net>

treemap-squarify

Version: 1.0.1

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On Windows, the TWAPI Tcl library is used to interface with the Windows API for various functions, such as service management. Distribution version: 3.1.17.

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XYNTService

The XYNTService utility is a general-purpose Windows service wrapper that allows for the creation of custom services for programs that do not have native service support. This utility is only included in the Windows distribution of Altair Engineering software. The distribution of XYNTService included in this version of Altair Engineering software is dated 02.22.2008 and is released under the [Code Project Open License \(CPOL\)](#).

yup

Version: 0.27.0"

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Zlib

The 'zlib' compression library provides in-memory compression and decompression functions, including integrity checks of the uncompressed data. Distribution version: 1.2.8.

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The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://www.ietf.org/rfc/rfc1950.txt> (zlib format), <http://www.ietf.org/rfc/rfc1951.txt> (deflate format) and <http://www.ietf.org/rfc/rfc1952.txt> (gzip format).

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2021.2.0 Release Notes

1

New Features

Internal Number	Products	Case Number	Description
VOV-12728	Accelerator	CS0133915	Added new usage options to <code>nc modify</code> to allow an Admin to increase/decrease grabbed resourcemap for running jobs and to allow selection of jobs for all <code>nc modify</code> use cases by specifying a selection rule.
VOV-12822	Accelerator	None	The web UI dashboard page has a Counters section that shows the number of active Users for an NC queue. This counter had been 0 in past releases. This has been fixed to show the correct value.
VOV-12955	Monitor	None	Jobclass initialization has been moved into the liveness script <code>live_init_jobclasses.tcl</code> instead of <code>vovresourced</code> .
VOV-12956	Accelerator	None	Timevar definitions are now processed in two configuration files. Timevar definitions may be placed now in new configuration file <code>SWD/config/timevars.tcl</code> , where they are processed by the new VOV <code>liveness</code> script. This new config file is the preferred place for Timevar definitions going forward. Timevar definitions in <code>SWD/resources.tcl</code> will also continue to be processed by <code>vovresourced</code> for compatibility with prior releases.
VOV-13090	Accelerator	CS0141521	Support has been added to allow custom values to be used for PIPELOG related ports and range via <code>VOV_PIPELOG_FIRST</code> and <code>VOV_PIPELOG_RANGE</code> . Also <code>VOV_CONTAINER_NETWORK_PROXY</code> environment variable has been added to better support nested container resources, see example container config file <code>containers/c3-enter.sh</code> for more details.
VOV-13136	Accelerator Plus, Hero	None	Integrated Accelerator Plus and Hero with Altair License Manager for both node-locked and floating licenses.
VOV-13137	Allocator, Accelerator	None	Integrated Allocator and Accelerator with Altair License Manager for both node-locked and floating licenses.
VOV-13625	Accelerator	None	Added new <code>NUMUSERS</code> field to the <code>SERVER</code> object. The new field contains the count of users who are currently

Internal Number	Products	Case Number	Description
			connected to vovserver with a web or CLI client or a running job. Vovserver updates this field every 10s.
VOV-13654	Accelerator	None	In Dashboard UI, the server vital signs widget will have the donut under the bullet graph bars.
VOV-13774	Accelerator	None	By setting the new server configuration option, <code>vovservermgr config slave.childProcessCleanupExclusions someChildDaemon</code> in conjunction with setting <code>vovservermgr config slave.childProcessCleanup 1</code> , users can now specify by name named process exclusions to the child cleanup process. If set in conjunction with <code>slave.childProcessCleanup</code> , then slaves should kill all of a job's child processes when that job exits, except for those named here for <code>slave.childProcessCleanupExclusions</code> in a comma separated list. The default value if not set is empty string, "".
VOV-13806	All	None	The web server used to provide Accelerator products' web UI interface and HTTP interface to the main server is changed from the internal web server to nginx in this release. If the internal web server is preferred, it can be selected via the <code>-webprovider</code> option on the <code>ncmgr start</code> command. The impact to users will be that with the new default nginx web server, the REST v3 interface and the Accelerator administrator web UI dashboard page will not be available for use. If either of these capabilities are needed, you should select the internal web server option when the Accelerator queue is started.
VOV-13839	Accelerator	None	With the webport enabled and the webprovider set to "internal" to use the REST service, worker threads dedicated to servicing REST requests have a label of either "RETSERVICE" or "RESTRequestHandler" This can be seen by calling <code>ps -T -p PID</code> with PID being the process id of vovserver.
VOV-13841	All	None	Added new <code>liverecorder.mode</code> configuration parameter for taskers that can be used to specify whether the main tasker process, the subtasker process, or both processes should generate a LiveRecorder recording file. Note that recording files will be generated per job that is executed if subtasker recording is enabled. The default mode is for the main tasker process to be the only one to generate a recording.

Internal Number	Products	Case Number	Description
VOV-13947	All	None	The Installation Guide has been updated to include the information for the Altair License Manager.
VOV-13372	FlowTracer	CS0182759	Enhanced Job status bar to show the colors for the valid and failed jobs based on their exit status. This functionality can be controlled by <code>::VovGUI::configJobStatusBar</code> in the <code>gui.tcl</code> file. All valid jobs with assigned color will appear before default valid (green color), same for failed jobs.
VOV-13135	FlowTracer	None	Integrated Altair License Manager with FlowTracer for both node-locked and floating licenses.
VOV-13138	Hero	None	Integrated Hero with Altair License Manager for both node-locked and floating licenses.
VOV-13133	Monitor	None	Integrated Altair License Manager with Monitor for both node-locked and floating licenses. Added a config key <code>config(alm.enable)</code> in <code>policy.tcl</code> to enable the ALM licensing. The default license manager for Monitor remains the Reprise License Manager (RLM).
VOV-13776	Monitor	None	Implemented Grace Period for Altair License Manager.
VOV-13778	Accelerator, Accelerator Plus	None	Implemented licensing modes 'Full' and 'N' for Altair License Manager for Accelerator and Accelerator Plus. This can be set using config key <code>config(enterpriselicense)</code> in <code>policy.tcl</code> .
VOV-13777	Monitor	None	Enhanced license UI to show Altair License Manager status and make changes to the current license environment.
VOV-13134	Allocator, Monitor, Accelerator	None	Updated Allocator, Monitor, and Accelerator with the actual (new) features names for Altair License Manager.
VOV-13617	All	None	The SSL implementation has been upgraded using the latest third party libraries, OpenSSL version 1.1.1.

Resolved Issues

Internal Number	Products	Case Number	Description
VOV-12564	All	None	Changed default LiveRecorder log directory from . to /tmp. This mainly affects the default behavior for vovserver, whose working directory is the parent of the SWD, which is often stored in an NFS-based location.
VOV-12822	Accelerator	None	The web UI dashboard page has a Counters section that shows the number of active Users for an NC queue. This counter had been 0 in past releases. This has been fixed to show the correct value.
VOV-13180	All	None	Robustness changes to mitigate vovsh backtraces linked to query memory management.
VOV-12963	All	CS0143849	Fixed issue that could cause object IDs to improperly recycle after multiple rollovers.
VOV-13950	All	None	test.check_TIMEVAR.sh was primarily failing due to clock skew. This fixes that.
VOV-14075	All	None	Fix the internal web provider's HTTP responses to include security headers. Previously, the internal web provider did not correctly return the security headers in the following case: when HTTP requests were made to the vovserver web port, responses did not include the standard HTTP security headers for URLs beginning with "/doc".
VOV-7887	All	21377	Clarified documentation of VOV_LIMIT_vmemoryuse.
VOV-14143	All	None	Added missing vovservermgr.bat and vovclientmgr.bat scripts to the Windows package.
VOV-13183	All	None	Fixed a potential memory leak when a client running a long-running query is unexpectedly terminated, causing vovserver to permanently mark a query as "in-use".
VOV-14061	All	None	Fixed HTTP security header setting which prevented some icons to not appear in the Altair online documentation.
VOV-13921	Accelerator	None	In the past, when you changed an initJobClass procedure, you had to restart vovresourced to put the change into effect. Restarting vovresourced is no longer necessary. The online help has been reflected to show this.
VOV-13764	Accelerator	None	Changing http.proxytimeout requires the REST service be restarted if it is already running. This can be done by setting

Internal Number	Products	Case Number	Description
			the webport to 0, waiting 30 seconds, and then setting it back to the desired webport number.
VOV-13380	Accelerator	None	If the vovserver web interface is enabled by setting the web port, then under some high load conditions the web port interface would hang up. In the 2021.2.0 release, the default web server reverts to nginx, which is immune to this issue. As a result, the default vovserver configuration will not support REST v3 or the Accelerator dashboard UI page. To enable REST v3 and the dashborad UI page, a new web server option may be specified by the <code>-webprovider internal</code> option on the <code>ncmgr start</code> or <code>vovproject start</code> commands.
VOV-13167	Accelerator	None	Memory reporting within the tools has changed on Linux to reflect what's reported by the Linux kernel in VmRSS rather than VmSize. The vovserver memory usage information from commands such as <code>vsi</code> , <code>vovselect memorystats from server</code> as well as the memory web page at " <code>http://host:port/server?page=memory</code> " will also report consistent memory use totals based on VmRSS. Also, <code>vovselect memorystats from server</code> and the memory statistics webpage have been enhanced to account for more of the "chunk" based memory pool allocations used within vovserver.
VOV-13531	Accelerator	None	A minor appearance improvement to the web dashboard UI page was made within the Capacity sub-window.
VOV-13326	Accelerator	None	Changed the <code>VOV_DISABLE_SHARED_MEMORY_LOOKUP</code> behavior to return the RSS.
VOV-13769	Accelerator	None	When using the internal REST server (as opposed to the nginx server), the vendor library used to implement it was changed from <code>cpprestsdk</code> to <code>Oat++</code> . The back end no longer allocates a static pool of worker threads to service requests, controlled by the variable <code>http.workerthreads</code> . That parameter is now ignored. The <code>Oat++</code> backend creates a new thread to service each request and terminates the thread after sending the response to the HTTP/REST client.
VOV-13638	Accelerator	CS0191754	The <code>RESD(typeList)</code> parameter in the <code>vovreconciled/config.tcl</code> file can be used to modify the license types handled by <code>vovreconciled</code> . The parameter value is a list of names, by default the value is <code>{License}</code> . The following types are not supported and will be ignored if present: <code>Limit</code> ,

Internal Number	Products	Case Number	Description
			Policy, User, Group and Priority. The type of License will be added if not specified.
VOV-13549	Accelerator	None	Fixed script execution issue with <code>message.cgi</code> where user did not have proper permissions to modify the underlying file, UI will now display message indicating the issue and properly disable the submit button.
VOV-13561	Accelerator	None	Internal bug which may have caused some set statistics to not be reported accurately has been addressed in this release.
VOV-11780	Accelerator	AAP24453	This release contains OpenSSL 1.1.1j which does not exhibit the warning message of the previous packaged version OpenSSI 1.0.2q.
VOV-13720	Accelerator	None	The header section stays sticky at the top and always be visible to the user.
VOV-13672	Accelerator	None	In the Scheduler Vital Signs widget, the values under the horizontal bars are now in sync with the values shown in tooltips, respectively (tooltips appear on hover over the horizontal bars).
VOV-13791	Accelerator	None	The REST HTTP server has a new threading model that no longer uses a pool of worker threads to service client connections. It now creates a new thread for each connection and that thread terminates after transmitting a response to the client. The <code>vov</code> variable <code>http.workerthreads</code> is deprecated. It is visible but not changeable.
VOV-13739	Accelerator	None	The Set Browser link has been modified to point to the classic UI's Set Browser page.
VOV-13816	Accelerator	CS0205113	Address issue where license resources sometimes became unavailable when on life support.
VOV-14110	Accelerator	AAP24923	Fixed bug where <code>TaskerClass.table</code> based resources did not display properly in web UIs extra resources column.
VOV-10345	Accelerator	24403, 24469, 24648	The following system taskers no longer consume a license: <code>vovdbd</code> , <code>WXLauncher</code> & <code>maintainer</code> .
VOV-12107	Accelerator	CS0120865	Added cleanup of unknown process IDs which also fixes the flooding of tasker logs with the following error messages:

Internal Number	Products	Case Number	Description
			"Must kill late child Pid...", "rakeChildren: Child process...", "does not exist anymore: assuming it is done..."
VOV-13510	Accelerator	CS0182762	Fixed issue causing license checkout with empty shared (ISV) string which is resulting in duplicate license checkout.
VOV-13880	Accelerator	None	In the Scheduler vital signs widget, the values shown in the tooltip of the buckets bullet graph will be in-sync with the number jobs submitted.
VOV-13860	Accelerator	CS0208413, CS0208823	Fixed issue that caused the tasker to overload vovserver with messages when a job execution attempt failed due to not being able to successfully fork out the subtasker process that is used to shepherd the job.
VOV-9031	Accelerator	23103	A description on how to set up a tasker in Windows has been added to the online help.
VOV-13861	Accelerator	CS0210064	Fixed issue in which SIGALRM interrupted communications on interactive jobs using VOV_INTERACTIVE_PING keep alive method
VOV-13771	Accelerator	None	When making job related REST API calls, helpful error information is included in the REST response. If using the vov_rest_v3 Python API wrapper, the content of the error will be thrown inside VovRestException.
VOV-13849	Accelerator	CS0208895, CS0218919	Fixed bug where interactive (-I/-Ir) root privileged container jobs potentially resulted in a process group SIGINT being captured and accidentally being sent to systemd, following which bad things may happen, such as a system reboot on subtasker host.
VOV-14116	Accelerator	None	Fix a problem with changing the vovserver's webserver from "nginx" to "internal" using the <code>vovservermgr config webprovider internal</code> command. It was not possible to make this change without restarting vovserver, but with this fix, the transition from nginx to internal web server can be accomplished by a 3 step process: 1) shut down nginx with this command: <code>vovdaemonmgr stop vovnginxd</code> ; 2) delay 5 seconds with <code>sleep 5</code> ; 3) start the internal web server with <code>vovservermgr config webprovider internal</code> .
VOV-13956	Accelerator Plus	None	Fixed race condition with Accelerator Plus that caused jobs to fail due to placement on taskers reserved for different buckets.

Internal Number	Products	Case Number	Description
VOV-13785	Accelerator Plus	CS0142115	Fixed issue that prevented jobs using a jobclass with VOV_JOB_DESC(interactive,useXdisplay) from successfully launching agents when run via Altair Accelerator.
VOV-13872	Accelerator Plus	CS0211355	Fixed issue where SICK status Accelerator taskers were not removed after an appropriate amount of time. The underlying cause was that there were still related jobs running in the base queue, and was repaired by passing the <code>-forcerunning</code> option to the NC base queue forget command for taskers with a SICK status.
VOV-14020	Accelerator Plus	None	Fixed issue with Accelerator Plus in DirectDrive mode that prevented jobs from running when added to a bucket that was empty during a <code>vovwxd</code> daemon restart.
VOV-13731	Accelerator Plus	None	Fixed issue which prevented Accelerator Plus in Direct Drive mode from launching taskers for preexisting jobs when a base queue is restarted and no further jobs are incoming in the Accelerator Plus queue.
VOV-13917	Accelerator Plus	None	Improved logging to identify when Altair Accelerator Direct Drive feature is in use. On <code>vovwxd</code> startup, the <code>vovwxd.log</code> will contain: Initializing vovwxd with Direct Drive... .. vovwxd with Direct Drive initialization successful. During operation, the <code>vovwxd.log</code> will also contain the thread identifier "APPluginAccel" when running in Direct Drive mode.
VOV-13890	Accelerator Plus	None	Fixed issue which prevented WX taskers from reconnecting after server freeze/failover with fastexit enabled.
VOV-13650	Accelerator Plus	None	vovserver has a new config parameter <code>tasker.authorization.delay</code> that specifies the time in seconds that the server wait before authorizing new taskers.This parameter can be useful for WX, where it can reduce the latency of dispatching a job to a newly requested tasker.
VOV-13749	FlowTracer	None	Fixed issue in <code>vov_Isf_agent</code> that prevented it from launching a tasker.
VOV-8715	Monitor	22305	Send warning about nonexistent user to stderr instead of stdout when <code>ftlm_batch_report</code> with user filter is requested
VOV-13464	Monitor	CS0174914	Added ADJUST_CAPACITY periodic maintenance task (Admin > System > Configuration Information).

Internal Number	Products	Case Number	Description
VOV-13633	Monitor	CS0188846	Logs containing, "Queued Programs" were not being recorded as queued requests properly for <code>ftlm_parse_lstc</code> .
VOV-13712	Monitor	CS0195003	A denial plot showed incorrect data when the data binning size was 30s and the time span was several months.
VOV-13927	Monitor	None	Fixed issue that prevented ControlCenter jobs from executing on hosts that have an upper/mixed-case name.
VOV-13929	Monitor	None	Fixed issue that prevented the process monitoring facility from recording incoming running processes as checkouts.
VOV-7800	Monitor	21302, 23839	Fixed issue that caused the default bin interval for the denial plot to default to 30s instead of a dynamically calculated optimum value for the report time range. This caused the denials to be binned incorrectly for reports with time ranges that would result in more than 100k bins unless an explicit interval was specified in the report options. Protections were also added to prevent the acceptance of a bin interval that is too short for the report time range (any value that would result in more than 100k bins).
VOV-9665	Monitor	23904	Fixed issue that prevented the <code>ftlm_capacity</code> load operation from finding the data files necessary for loading feature capacity information into the database.
VOV-10568	None	CS0120645	HyperThreading fieldname 'HT' on taskers previously reported incorrectly if HT was available. The field now properly reports if SMT threading (either Intel HyperThreading or AMD SMT) is currently available and enabled by checking value of either <code>/sys/devices/system/cpu/smt/control</code> or <code>/sys/devices/system/cpu/cpu0/topology/thread_siblings_list</code> (or equivalent). directly.
VOV-13611	All	CS0120932	Resolved issue with parsing and filtering via selection rules values that may contain uint64 fields compared with hardcoded integer values. Additionally, users may now explicitly declare uint64 hardcoded values such as <code>vovselect name,totalspace,freespace -from filesystems -where 'totalspace>1U AND freespace>1U'</code>
VOV-13689	Accelerator	None	The Running-jobs axis scale numbers have been placed with an even space.
VOV-14209	Accelerator	CS0236878	Fixed an issue with temporary loss of key file license registration by <code>vovserver</code> when the <code>enterpriselicense</code>

Internal Number	Products	Case Number	Description
			<p>configuration parameter was not explicitly set in <code>policy.tcl</code>. In these cases a <code>vovproject sanity</code> resulted in a temporary switch to RLM licensing. Some specific low level changes made were as follows:</p> <ol style="list-style-type: none">1. Check for the presence of a license key file at server startup so that the default enterprise license mode will be "Off" if a key file is found and the <code>policy.tcl</code> file does not have an explicit setting for the mode.2. Prevent the above check upon every request to check licensing so that the mode doesn't switch unless manually requested.3. Allow for switching the mode out of "Off".4. Restore the mode control and license request sections in <code>license.cgi</code> when the mode is "Off".5. Rename the mode selection in the <code>license.cgi</code> drop-down menu to "Off (use license key file)" so that the actual value is represented along with the intent.
VOV-14180	Accelerator, Monitor		<p>Fixed a bug that arose when SSL certificate files were added by the admin with file names correctly derived from the fully qualified host name from <code>VOV_HOST_HTTP_NAME</code>. The Accelerator products would not initialize the webport and the web UI URL properly when the "internal" webprovider was activated.</p>


Supported Operating Systems

Table 1: x86_64 Architecture

Operating System	Version	Altair Package
Red Hat Enterprise Linux RHEL	6.x, 7.x, 8.x	linux64.tar
CentOS	6.x, 7.x, 8.x	linux64.tar
SLES	12.x, 15.x	linux64.tar
Ubuntu	16.04, 18.04, 20.04	linux64.tar
Amazon Linux	2	linux64.tar
Windows ¹	7, 8, 10	win64.tar
Windows Server ¹	2012, 2012R2, 2016, 2019	win64.tar

Table 2: ARM64 Architecture

Operating System	Version	Altair Package
Red Hat Enterprise Linux RHEL	7.x, 8.x	armv8.tar
CentOS	7.x, 8.x	armv8.tar
Amazon Linux	2	armv8.tar

 **Note:** On ARM64, only Accelerator execution hosts and submit hosts are supported.

Supported Browsers

Table 3:

Browser	Supported
Safari 10.x +	Yes

Browser	Supported
FireFox 55.x+	Yes
Chrome 60.x+	Yes
Edge (current version)	Yes

-
1. On Windows, only the following are supported: FlowTracer, Monitor, and Accelerator (taskers only).

This chapter covers the following:

- [2020.1.0 Release](#) (p. 51)
- [2021.1.1-p1 Release Notes](#) (p. 57)
- [2021.1.1 Release Notes](#) (p. 58)
- [2021.1.0 Release Notes](#) (p. 65)
- [2021.1.0-rs1 Patch Release Notes](#) (p. 77)
- [2021.1.0-p1 Patch 1 Release Notes](#) (p. 78)

2020.1.0 Release

New Features and Enhancements

The following new features and enhancements were introduced this software release:

Product(s)	Case Number	Internal Number	Description
All		VOV-11377	A new document viewer for the Accelerator product family is provided in the web UI. This document viewer provides a modernized interface with new client-side search capability.
All		VOV-11059	Field descriptions have been populated for all supported fields. These can be queried via the "fielddesc" metadata field, available for each object.
Accelerator, Accelerator Plus	CS0121103	VOV-12279	The output of <code>nc info</code> and <code>wx info</code> now includes the project/queue name.
Accelerator		VOV-11378	A modernized web UI dashboard page has been added to the Accelerator web UI. To access the page, browse to the URL generated by this command: <code>nc cmd vovbrowser -url /dashboard</code> . ADMIN privileged users may access this dashboard.
Accelerator	24397	VOV-10124	The following commands <code>nc run</code> , <code>vovset resources</code> , <code>nc modify -res</code> , now support binary unit conversion for all memory based resources as a convenience from Petabytes (PB), Terabyte (TB), or Gigabyte (GB) to Megabytes (MB), which is still used internally and reported by all commands. The input conversion will accept either decimal or integer form and are all case-insensitive, so for example both <code>nc run -r RAM/0.1Tb - sleep 0</code> and <code>nc run -r SWAP/1GB - sleep 0</code> are supported. The currently supported parameter names for which this conversion is supported are RAM/, RAM#, RAMFREE#, RAMFREE/, RAMTOTAL#, RAMFREE/, SWAP/, SWAP#, SWAPFREE#, SWAPFREE/, SWAPTOTAL#, SWAPTOTAL/ and TMP# or TMP/. By default the unit is MB (Megabytes), where 1MB is 1<<20 bytes.
Accelerator	24092, 24093	VOV-9830	Added confirmation WebUI dialogs for MakeDefault and ClearDefault job class - Writing MakeDefault and ClearDefault job class events to server log


Product(s)	Case Number	Internal Number	Description
Accelerator	23068, 23767, 23914, 24923	VOV-9778	Irrelevant alerts are no longer generated. Addressed some implementation issues with <code>vtk_flexlm_exclude_tags</code> . Note that calls to <code>vtk_flexlm_exclude_tags</code> are cumulative and override any tags added with <code>vtk_flexlm_monitor</code> and <code>vtk_flexlm_monitor_all</code> . The <code>-noooq</code> parameter for <code>vtk_flexlm_monitor</code> has no impact at present, please use <code>vovresSetFlags</code> instead. The <code>-order</code> parameter to <code>vtk_flexlm_monitor</code> and <code>vtk_flexlm_monitor_all</code> only orders any specified tags, it no longer adds tags (use <code>-tags</code> to add tags). The optional parameters <code>vovResource</code> , <code>vovMap</code> to <code>vtk_flexlm_monitor</code> are now handled correctly.
Accelerator	21777	VOV-8055	Added a new capability to limit the number of interactive jobs that can run concurrently, both at the global and user levels. This is accomplished by creating a limit resource and setting is as the interactive job limit in the <code>vncrun.config.tcl</code> configuration file. For example: set <code>VOV_JOB_DESC(interactive,limit) Limit:interactive</code> or for per-user a limit: set <code>VOV_JOB_DESC(interactive,limit) Limit:interactive_@USER@</code> The resource must exist prior to adding these lines to the file.
Accelerator	23067	VOV-9017	MAXCPUPROGRESS now provides the maximum sampled percentage of CPU time as an integer used by a job, including all its children, which can be greater than 100 if the job is utilizing multiple cores.
Accelerator	23265	VOV-9130	Added the <code>-sickslave</code> parameter to the <code>vovinvalidate</code> command, to invalidate running/retracing jobs that are no longer attached to a slave.
Accelerator	21342	VOV-7811	Added ability to provide a stop reason when stopping jobs via the web UI.
Accelerator		VOV-12458	Implemented Dialpad menu for mobile screens.
FlowTracer		VOV-10618	Added the <code>NODEGRAPH</code> , <code>JOBGRAPH</code> , <code>NODEGRAPHHIER</code> and <code>JOBGRAPHHIER</code> fields for <code>vovselect</code> or REST to return node dependency information for Set objects. The information can be used to construct a FlowTracer flow graph of nodes.
All		VOV-11323	<code>vovdoc</code> CLI utility is retired
All		VOV-11454	<code>vov_rest_v3.py</code> is the new Python module used to make v3 REST API requests against vovserver.

Product(s)	Case Number	Internal Number	Description
All		VOV-11251	Accelerated processing of Crash Recovery file.
All		VOV-10844	Provide a REST API addition to allow job control. The following operations can be performed via the v3 REST API: 1. Dispatch 2. Forget 3. Preempt 4. Rerun 5. Resume 6. Suspend
All		VOV-10964	Job attributes can now be modified via the v3 REST API in ways that are also possible via the command line with <code>nc modify</code> .

Resolved Issues

The following issues were resolved in this release.

Product(s)	Case Number	Internal Number	Description
All		VOV-5570	Fixed behavior of the ROWCOUNT field used by <code>vovselect</code> and related commands; <code>vovselect</code> will print "0" instead of an empty string when there are no rows in the query, and will print a correct count instead of 0 for "vovselect rowcount from objects".
All		VOV-12721	Fixed an issue with the 2020.1.0 beta that caused a user to be logged out of a web session for one product when the user logged into a different product session in the same browser.
All	24114	VOV-9853	When determining if a shell is configured for a project, the environment variables <code>VOV_PROJECT_NAME</code> and <code>VOV_HOST_NAME</code> must be set. New checks were added to ensure the values of these variables may not be empty strings and may not be set to "unknown".
All	CS0120819	VOV-12027	Add the previously missing documentation for the <code>vovlicensemgr</code> command.
All		VOV-12583	Fixed an issue where querying for "maxnumacores" was returning the total number of cores in the system instead of the maximum number of cores in a NUMA node.
Accelerator	25220	VOV-11515	Added a new server configuration parameter, <code>tasker.uninterruptableSignalCascades</code> , that controls whether taskers should process incoming job control

Product(s)	Case Number	Internal Number	Description
			requests when there is an existing signal cascade being processed. If TRUE, taskers will ignore incoming job control requests if an existing request is in-process and a message will be printed to the slave log indicating as such. Default is FALSE.
Accelerator		VOV-10850	NUMA support has been updated to work correctly on systems configured with the number of sockets unequal to the number of NUMA nodes (Click here for an example). On such systems, the earlier implementation would report the number of NUMA nodes and associated memory incorrectly. The earlier implementation could also result in degraded memory performance if a socket has more than 1 NUMA node.
Accelerator	21578, 24177	VOV-7947	Fix a failure to remove an Accelerator job's pre-command and post-command script log files by the command <code>nc clean</code> .
Accelerator	22946, 29901	VOV-8975	The output of <code>nc getfield JOB cputime</code> with a lowercase <code>cputime</code> is changed to be the integer accumulated CPU time for a job scaled in milliseconds. This is now consistent with the output of <code>nc getfield JOB CPUTIME</code> with an uppercase <code>CPUTIME</code> field name.
Accelerator	21073	VOV-5439	Execution information shows, "job has never run" instead of epoch dates for jobs that have not run yet.
Accelerator	24894	VOV-11041	Large v2 REST queries that produced no results have been fixed in the v3 REST API. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> Note: The problem still persists with v2, the fix is in v3 only.</p> </div>
Accelerator		VOV-11261	Addressed issue where delays were encountered due to vovserver not being immediately notified of an update.
Accelerator		VOV-12337	Fixed timing issue with <code>nc wait</code> command when run immediately after submitting multiple jobs in background mode using <code>nc run</code> command
Accelerator, Accelerator Plus	CS0120716	VOV-12305	Fixed issue that prevented the <code>wxagent</code> job in an Accelerator base queue from reflecting the job placement policy and priority of the user's job in an Accelerator Plus queue.

Product(s)	Case Number	Internal Number	Description
Accelerator	25247	VOV-11657	Performance of <code>vovselect</code> and related Tcl commands has been improved in general, as well as specific enhancements for the ID field in all tables, and the WHY and FairShare-related fields in JOBS.
Accelerator	CS0120864	VOV-12023	Jobs that have been autokilled no longer show duplicate autokill reasons in the job status explanation.
Accelerator		VOV-12032	The integrated REST HTTP server now has a separate log under <code>SWD/logs/httpserver.log</code> .
Accelerator	CS0120906, CS0121020	VOV-12030	Fixed issue that caused taskers to be killed with the message "Tasker instructed to exit brutally". This also fixes server messages like "Cannot find tasker rdc-cad-svr12 (illegal id 365667285) pid=32830"
Accelerator		VOV-12560	Fixed <code>nc stop -after</code> option, which was not waiting for the specified number of seconds before issuing the stop request.
Accelerator	CS0127402	VOV-12628	Fixed a bug where License: was prepended the resource name if the resource parameter was specified in <code>vtk_flexlm_monitor</code> , even if the resource name already started with License:.
Accelerator		VOV-12543	Fixed a crash in <code>vovserver</code> caused by trying to select a job graph or node graph field from a set by name, e.g. " <code>vovselect NODEGRAPH from System:jobs</code> ".
Accelerator, Accelerator Plus, Monitor	24282	VOV-10682	Features names such as set via <code>vtkle_feature_set</code> can now include the '+' character and will be handled properly via the web UI.
Accelerator, Accelerator Plus	CS0121177	VOV-12403	Fixed an issue where NUMA jobs that span multiple NUMA nodes would not return all cores used by the job to the free pool on job completion.
FlowTracer	24393	VOV-10362	Fix to retrace all the jobs of selected sets in <code>vovconsole</code> hierarchically.
FlowTracer		VOV-12090	The default product name is now "ft" and is no longer determined by a prefix of the project name. The product name "auto" is no longer supported.
FlowTracer	CS0120999	VOV-12203	When a job is submitted by FlowTracer to an indirect tasker and the job is associated with a class, the resource list could

Product(s)	Case Number	Internal Number	Description
			contain duplicate entries because it was constructed as a union of two resource lists. Construction of the resource list now ensures duplicates are avoided.
Monitor	23225	VOV-9100	Fixed LM report plotting with "Breakdown By Feature" option.
Monitor	CS0122686	VOV-12627	A defective hypertext link in the Monitor Administrator Guide labeled "Advanced Control of the Product Ports" has been repaired.
None	25011	VOV-11221	Monitor email notifications set in the Admin->Notifications UI page using legacy mode email delivery had failed to successfully deliver email to the recipient.
All		VOV-10844	Provide a REST API addition to allow job control. The following operations can be performed via the v3 REST API: 1. Dispatch 2. Forget 3. Preempt 4. Rerun 5. Resume 6. Suspend
All		VOV-10913	Fixed a bug that caused vovselect to issue an error when requesting the field "env" in all lowercase.
All		VOV-9988	Made the WHY property more prominent in the Main Reasons section of the output of vsvy and related commands for FAILED jobs.
Accelerator	22097	VOV-8599	See VOV-11848.

2021.1.1-p1 Release Notes

Resolved Issues

Internal Number	Products	Case Number	Description
VOV-13861	Accelerator	CS0210064	Fixed issue in which SIGALRM interrupted communications on interactive jobs using VOV_INTERACTIVE_PING keep alive method.
VOV-13860	Accelerator	CS0208413, CS0208823	Fixed issue that caused the tasker to overload vovserver with messages when a job execution attempt failed due to not being able to successfully fork out the subtasker process that is used to shepherd the job.
VOV-13816	Accelerator	CS0205113	Addressed an issue where license resources sometimes became unavailable when on life support.
VOV-13849	Accelerator	CS0208895, CS0218919	Fixed bug where interactive (-I/-Ir) root privileged container jobs potentially resulted in a process group SIGINT being captured and accidentally being sent to systemd, following which bad things may happen, such as a system reboot on subtasker host.
VOV-13890	Accelerator Plus	None	Fixed issue which prevented wx taskers from reconnecting after server freeze/failover with fastexit enabled.
VOV-13872	Accelerator Plus	CS0211355	Fixed issue where SICK status Accelerator taskers were not removed after an appropriate amount of time. The underlying cause was that there were still related jobs running in the base queue, and was repaired by passing the -forcerunning option to the NC base queue forget command for taskers with a SICK status.

2021.1.1 Release Notes


New Features

Internal Number	Products	Case Number	Description
VOV-13210	Accelerator	None	Added functionality to perform actions on sets in the Set Browser page.
VOV-12810	Accelerator	None	The dashboard UI job graph shows actual Y values when user hover the mouse over the graphed lines, and at the intersection points of the graph lines in job plot graph, the tooltip will show the Y-axis values which are intersected.
VOV-12780	Accelerator	24397	The commands <code>nc run</code> , <code>vovset resources</code> , and <code>nc modify -res</code> support binary unit conversion for all memory based resources as a convenience from Petabytes (PB), Terabyte (TB), or Gigabyte (GB) to Megabytes (MB), which is still used internally and reported by all commands. The input conversion will accept either decimal or integer form and are all case-insensitive, so for example both <code>nc run -r SWAP/1GB sleep 0</code> , and <code>nc run -r RAM/0.1Tb sleep 0</code> are supported. The currently supported parameter names for which this conversion is supported are RAM/, RAM#, RAMFREE#, RAMFREE/, RAMTOTAL#, RAMFREE/, SWAP/, SWAP#, SWAPFREE#, SWAPFREE/, SWAPTOTAL#, SWAPTOTAL/ and TMP# or TMP/. By default the unit is MB (Megabytes), where 1MB is 1<<20 bytes.
VOV-12409	Accelerator Plus, FlowTracer	None	Elastic taskers launched via <code>vovwxd</code> will detect and exit mote quickly when their designated bucket is empty or deleted. Accelerator Plus queues using Direct Drive will detect empty queues and stop launching taskers for those buckets more quickly. This functionality can be disabled by setting <code>vovwxd.fastexit</code> server parameter to 0. This is on by default.

Resolved Issues

Internal Number	Products	Case Number	Description
VOV-13517	All	None	Fixed issue that prevented the Property Editor GUI utility in vovconsole from launching successfully.
VOV-13183	All	None	Fixed a potential memory leak when a client running a long-running query is unexpectedly terminated, causing vovserver to permanently mark a query as "in-use".
VOV-7887	All	21377	Clarified documentation of VOV_LIMIT_vmemoryuse.
VOV-13523	All	None	Fixed an issue that caused <code>vovshow -queries</code> to fail when trying to access a non-existent array element.
VOV-13568	All	None	Fixed an issue where comma list resource maps were not selectable in the Web UI.
VOV-13743	All	None	Corrected format of output for <code>vtk_time_psp</code> that was returning hh:mm format when the given date/time was on a different day/year. Now returns hh:mm only for current day, otherwise month abbreviation and day (Apr 14) for the same year, else Year month abbreviation (Dec 2020).
VOV-13706	All	None	The vovtasker binary was missing from 2021.1.0. As a workaround, in previous product versions where it may be missing in the installation, copy vovslave to vovtasker.
VOV-13610	All	None	Fixed issue with displaying working taskers in Altair Accelerator 2021.1.0
VOV-13351	All	CS0173855	Fixed some cases where the Server Working Directory (SWD) contained <code>slaveClass.table</code> or <code>taskerClass.table</code> , and these configuration files were ignored by taskers/slaves. Scenarios that had been broken were: <ul style="list-style-type: none"> • <code>slaves.tcl</code> and <code>slaveClass.table</code> present in SWD • <code>slaves.tcl</code> and <code>taskers.tcl</code> and <code>taskerClass.table</code> present in SWD • <code>taskers.tcl</code> and <code>taskerClass.table</code> present in SWD
VOV-13439	All	CS0175205, CS0187053	Code related to <code>vovps</code> has been modified to be more robust in handling of non-fatal errors emanating from <code>vovps</code> command and to be more inline with typical <code>ps</code> command output.

Internal Number	Products	Case Number	Description
VOV-12897	All	CS0140687, CS170776	On some network configurations, a warning about IPV6 could be issued when running an INTERACTIVE job that could not be filtered out by turning down the verbosity. This has been fixed. The <code>-v</code> switch to <code>nc run</code> on an interactive job will turn off the warning.
VOV-13014	All	None	With multi-platform product installs, the Accelerator documentation bookshelf link in the Web UI was nonfunctional. This only impacted customers who download and un-tar both <code>common.tar</code> and <code>win64.tar</code> with the intent of installing both <code>linux64</code> and <code>win64</code> into the same master installation directory.
VOV-13171	All	CS0164654	The timeout duration for PR saves can now be controlled via a server configuration parameter.
VOV-13837	All	None	Fixed issue that caused some vtx-wrapper links to point to an incorrect absolute path.
VOV-13502	All	None	This fix provides for mitigation of a hang in the http(s) service. It reinstates the nginx service found in earlier releases. The use of the patch is required for production systems using the https service - typically Accelerator. The patch prevents the use of the REST v3 API and the new web based Dashboard, which is dependent on the REST v3 API. A subsequent release will address this shortcoming. The use of nginx should be seen as temporary and a subsequent release is expected to provide integrated https within vovserver. To start nginx, pass <code>-webprovider nginx</code> to <code>ncmgr start</code> , <code>lmmgr start</code> , etc. You should see <code>vovnginxd start</code> as one of the vov daemons. <code>vovservermgr config</code> will also show the webprovider setting as being either 'internal' or 'nginx' depending on how you have configured the system.
VOV-13416	All	None	Added configuration section to the <code>sds.cfg</code> file to allow inclusion kafka producer configuration properties such as those needed to enable ssl communication.
VOV-13162	Accelerator	None	The "Match Jobs to Handles" HTML topic now reflects the code colors that coincide with the software.
VOV-9353	Accelerator	23568	In the past, a stopped tasker and a newly started tasker were not aware of each other's NUMA usage, and so could assign CPU or Node affinity that overlaps. Taskers using

Internal Number	Products	Case Number	Description
			NUMA on the same machine, with the same vovhost and queue name, will now share NUMA usage to avoid over allocating NUMA resources on the same machine.
VOV-7487	Accelerator	20455, CS0120837	<p>Passing bash functions through snapprop is a fragile operation that only works when the following conditions hold:</p> <ol style="list-style-type: none"> 1. The function must have been explicitly exported, for example <code>export -f f</code>. 2. The bash and sh shells must be the same on the submission and execution sides (this holds on CentOS 6-8 but not on Ubuntu). 3. The bash function encoding must be the same on the submission and execution sides (this depends on the bash version, CentOS 6,7 have the same encoding, but CentOS 8 has different encoding). <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p> Note: Bash encodes functions in two ways (subsequent to the 2014 shellshock vulnerability):</p> <ol style="list-style-type: none"> 1. <code>BASH_FUNC_<function-name>()=()</code> (CentOS 6,7) 2. <code>BASH_FUNC_<function-name>%%=()</code> (CentOS 8, MacOS, Ubuntu, albeit the latter does not satisfy 2. above) </div>
VOV-7736	Accelerator	21176	Fixed building of resource maps from resources with OR and AND words in resource names.
VOV-13629	Accelerator	CS0178114, CS0186671, CS0192772, CS0194045, CS0196466	Fixed an issue where a failed PTY connection for a job would cause subsequent jobs on the tasker to fail as long as the original job was still running, and in some cases, the tasker could become unresponsive.
VOV-13651	Accelerator, Accelerator Plus	None	Fixed issue in <code>node.cgi</code> which resulted in the CPU Time displayed for job being multiplied by 1000.
VOV-13152	Accelerator, Accelerator Plus	CS0159375	Fixed spurious error message when receiving (RESMAP,CHANGE) events in some clients.

Internal Number	Products	Case Number	Description
VOV-13293	Accelerator, Accelerator Plus	CS0169911	Added check for ADMIN privilege which blocks the regular user from stopping the job using <code>nc stop -allusers</code> if the requesting user is not ADMIN.
VOV-13161	Accelerator	CS0163181	Fixed issue where setting a project or site message in <code>/cgi/messages.cgi</code> would not result in a message being registered.
VOV-13324	Accelerator	None	<p>Tasker based support has been added for the following vovselect fieldnames:</p> <p>CHOSENTASKERID, LASTTASKERID, LASTTASKERNAME, TASKERGROUP, TASKERID, TASKERLIST, TASKERNAME, TASKERSLOTSSUSPENDABLE, TASKERSLOTSSUSPENDED, TASKERSLOTSUSED, TASKERSTATUS for jobs, TASKERID for clients, TASKERGROUP, TASKERHOST, TASKERNAME, TASKERSLOTSSUSPENDABLE, TASKERSLOTSSUSPENDED, TASKERSLOTSUSED, TASKERTYPE for slaves or taskers.</p> <p>The same are available for use as symbolics such as @LASTTASKERID@ or @TASKERNAME@, etc.</p>
VOV-13398	Accelerator	None	An error in the online help regarding <code>vtk_server_config suddenshutdown <server-pid></code> has been addressed.
VOV-13388	Accelerator	None	Fixed issue that can cause vovserver to crash upon receipt of a REST request when <code>thread.service.max</code> and <code>thread.service.enable.query</code> are both greater than zero in the vovserver policy.
VOV-13363	Accelerator	None	Fixed <code>ncupgrade</code> abort by changing the vovserver stdout message to <code>Vovmessage (stderr)</code>
VOV-13346	Accelerator	CS0120637, CS0164333, CS0186238	Fixed an issue where a redirect in the nginx configuration would cause <code>vovresourced</code> to crash
VOV-13413	Accelerator	CS0175672	Fixed issue where <code>vwn</code> incorrectly attempted to contact the server after the <code>VOV_VW_PING</code> interval.
VOV-13438	Accelerator	None	Removed <code>vovproject enable</code> command from <code>ncupgrade</code> so that it can read from stdin and can be used for testing automation.

Internal Number	Products	Case Number	Description
VOV-13424	Accelerator, Accelerator Plus	CS0176272	The handling of the resource parameter to <code>vtk_flexlm_monitor</code> has been improved. If the a resource name is specified then this name is the actual resource name used (in a previous release it was always prepended by <code>License:</code>). If a resource name is not specified, it defaults to <code>License:<feature></code> . This is consistent with <code>vtk_flexlm_monitor_all</code> behavior.
VOV-13465	Accelerator, Accelerator Plus	CS0180449	Resolved issue when using <code>vtk_tasker_define</code> with <code>-tsdport</code> .
VOV-13458	Accelerator	CS0180796	During jobclass initialization the <code>VovUserError</code> proc does not exit or generate any output.
VOV-13563	Accelerator Plus	CS0186685	Fixed an issue which resulted in stalled WX buckets reporting a waitreason of <code>License:xyz</code> when really just waiting on HW in the base queue. Fixed an issue which prevented the setting of <code>resmap.sw.types</code> in the <code>policy.tcl</code> file.
VOV-13560	Accelerator Plus	None	The custom <code>vnc_policy.tcl</code> file for PBS integration is no longer required and should be removed upon upgrading to 2021.1.1. This file is located in <code>\$SWD/vnc_policy.tcl</code> and was originally copied from <code>\$VOVDIR/./common/etc/config/vovwxd/vnc_policy_pbs.tcl</code> .
VOV-13484	Accelerator Plus	None	Fixed an issue which could result in some slaves not being recognized as <code>vovwxd</code> slaves resulting in them not being counted toward <code>max,slaves</code> . Optimized scheduling for WX/PBS jobs by enabling the bucket shortcut and removing per slave resources.
VOV-13772	Accelerator Plus	None	The Accelerator Plus online help has been updated to reflect the addition of the Direct Drive functionality.
VOV-13562	Allocator	CS0187051	Fixed a race-condition in Allocator that resulted in random crashes in complex configurations.
VOV-10426	FlowTracer	24499	NodeEditor has renamed 'In Queue' to 'Queue' and times shown are now based upon <code>buckettime</code> to give more accurate breakdown of the job's timeline.
VOV-12348	FlowTracer	None	A threshold of 4 is now applied before issuing warnings about <code>WXLauncher</code> is not running.

Internal Number	Products	Case Number	Description
VOV-13419	FlowTracer	CS0172898	Fixed vovconsole performance degradation for drawing the sets and switching between horizontal and vertical view.
VOV-13323	Monitor	None	Fixed issue that caused remote LM parser to fail and return no data.
VOV-13066	Monitor	CS0151123	The registering of multiple hosts defined through env variable VOV_LICMON is now handled correctly. However its use should be minimized due to the additional overhead involved and consequential impact on job start up time.
VOV-13390	Monitor	None	Fixed an issue that prevented licenses provided by Altair license key files from being monitored.
VOV-13446	Monitor	None	Fixed rare issue that caused an "Unexpected return -90" message in the vovserver log when the top job of a bucket cannot be dispatched to a tasker at the time the dispatch function is called.
VOV-13440	Monitor	None	Fixed issue that prevented licensing detail tables from being displayed on the licensing administration web UI page on Windows.
VOV-13426	Monitor	CS0154262	Some valid Accelerator and Monitor license key files with vovversion set for the early part of year 2021 were not working because of a bug in license keyfile validation code.
VOV-12980	Monitor	CS0144723	Fixed ftlm_batch_report for checkouts that have not been moved yet to Altair Monitor database.

2021.1.0 Release Notes

New Features and Enhancements

The following new features and enhancements were introduced this software release:

Table 4:

Product	Issue Number	Case Number	Description
All	VOV-9454	23741	Most of the VOV Tcl files from the installation package now contain the proper Altair copyright statement and version number.
All	VOV-12801		Introduce the new "tasker" lexicon for Accelerator product environment variables. Environment variable names containing old term "SLAVE" will get new names containing "TASKER" in the place of "SLAVE". The old environment variable name will be honored unless the new name is being used. This compatibility measure will ease the transition for administrators.
All	VOV-12797		New Tcl VTK function names are added to move to the new "tasker" lexicon. Old VTK function names containing the string "slave" are deprecated, and new VTK function names containing the string "tasker" are added and should be transitioned to from this release forward.
All	VOV-9297		Support for SuSE Linux Enterprise Server (SLES) 15 has been added to the Altair Accelerator products.
All	VOV-12111		Support for CentOS and RHEL 8 has been added to the Altair Accelerator products.
All	VOV-13321		Support for Ubuntu 14.04 has been dropped.
All	VOV-13306		This release discontinues support for the SLES 11 operating system.
All	VOV-13127		All references to the term "slave" have been replaced with the new term "tasker" throughout the online help documentation.
Accelerator	VOV-12708		A REST API guide and tutorial document is added to the Accelerator documentation bookshelf reader.

Product	Issue Number	Case Number	Description
Accelerator	VOV-12537		<p>SlaveLists are deprecated and replaced with TaskerLists with the following additional functionality:</p> <ul style="list-style-type: none"> • The Taskerlists now contain the tasker names instead of only NC-internal IDs. As a result, the taskerlist does not have to be recreated when a tasker is stopped and then restarted, as had been the case with slavelists in previous releases. • The TaskerLists definition will be stored in the PR so they will survive vovserver stop-and-restart sequences. • Added support for resource 'TaskerList:XXX' in <code>nc run</code> • 'SlaveList:XXX' resources will be automatically replaced by 'TaskerList:XXX' resources.
Accelerator	VOV-12458		Implemented "Dialpad" or "Waffle" menu for mobile screens and at high zoom levels on the dashboard UI page.
Accelerator	VOV-12743		Implemented Subsets table in Set Detailed View page.
Accelerator	VOV-12747		An actions dropdown menu has been added, enabling the actions (delete, run with priority) to be performed on selected jobs. Added a search bar, allowing the user to filter the jobs by entering search strings.
Accelerator, Accelerator Plus	VOV-12150		The documentation shown by " <code>ncmgr start -h</code> " is expanded to explain some additional features that require an Accelerator queue to have the webport enabled. In the 2020.1.0 release, the following new features require the webport: 1) REST v3 API and 2) the new administrator dashboard UI page.
Accelerator	VOV-12964		Fixed CSS issues in bulk actions drop down.
Accelerator	VOV-12812		Enabled client activity logging for <code>nc cmd</code> commands.
Accelerator	VOV-12744		Added a Details section for the selected set in the Set Detailed View page.
Accelerator	VOV-12739		Added UI functionality in the Dashboard > Set Browser screen. Users can now perform actions like retrace, and delete on sets, and also filter the displayed list of sets by text string.
Accelerator	VOV-12460		Added NC queue color to the dashboard user interface.

Product	Issue Number	Case Number	Description
Accelerator	VOV-12762		Implemented storybooks for the Table component user interface.
Accelerator	VOV-9778	23068, 23767, 23914, 24923	Irrelevant alerts are no longer generated. Addressed some implementation issues with <code>vtk_flexlm_exclude_tags</code> . Note that calls to <code>vtk_flexlm_exclude_tags</code> are cumulative and override any tags added with <code>vtk_flexlm_monitor</code> and <code>vtk_flexlm_monitor_all</code> . The <code>-noooq</code> parameter for <code>vtk_flexlm_monitor</code> has no impact at present, please use <code>vovresSetFlags</code> instead. The <code>-order</code> parameter to <code>vtk_flexlm_monitor</code> and <code>vtk_flexlm_monitor_all</code> only orders any specified tags, it no longer adds tags (use <code>-tags</code> to add tags). The optional parameters <code>vovResource</code> , <code>vovMap</code> to <code>vtk_flexlm_monitor</code> are now handled correctly.
Accelerator	VOV-12277		A new command option for <code>nc run</code> has been added called <code>-dpinitialport N</code> which allows the user to specify the starting port that <code>partialTool</code> will use to find an open port to communicate among the subtasks in the cohort. This will be reflected in a new job property named <code>DP_INITIAL_PORT</code> that can be observed being set on the job.
Accelerator	VOV-12736		The React dashboard has now implemented a Sets List view.
Accelerator	VOV-12742		Implemented Jobs table in Set Detailed View page.
Accelerator	VOV-13292		Two new server configuration parameters have been added: <code>http.workerthreads</code> and <code>http.proxytimeout</code> . <code>http.workerthreads</code> specifies the number of worker threads that the new REST HTTP server will start when <code>vovserver</code> starts with a valid webport. <code>http.proxytimeout</code> enables you to specify the timeout in seconds, used when the main webserver forwards some requests, like CGI pages, to the older http server listening on the VOV port.
Accelerator	VOV-11930	CS0120821	A new command line parameter was added for <code>nc run</code> for <code>dp</code> jobs called <code>-nocohortwait</code> . This instructs <code>partialTool</code> for each cohort task to finish when its subtask process has finished rather than wait for the primary job to complete (which is the default behavior). Passing <code>-nochortwait</code> to <code>nc run</code> sets a new property named <code>DP_COHORTWAIT</code> to 0. By default, this is set to 1 when <code>-nocohortwait</code> is not passed, and <code>partialTool</code> will behave like it always has.

Product	Issue Number	Case Number	Description
Accelerator, FlowTracer, Monitor	VOV-10198		Add support for Windows Server 2019.
Accelerator	VOV-12947		Added breadcrumb navigation to the Sets page, through which the user can navigate to the hierarchical sets.
Accelerator	VOV-12452		Add a sub-window for scheduler health monitoring and vital signs in the Accelerator admin dashboard web UI.
Accelerator	VOV-12733		Support is added for Accelerator on ARM64 systems running Centos 7, Centos 8, or Amazon Linux 2. This support is for execution hosts and submit hosts only. The "armv8" hardware resource name is added for this architecture.
Accelerator Plus	VOV-12295	CS0121114	<ol style="list-style-type: none"> 1. Fixed an issue where the NUMA_AFFINITY property on jobs always showed it as being bound to specific CPUs, even though it was bound to the entire NUMA node. 2. Fixed an issue where WX vovtaskers were overriding the affinity set by the NC vovtasker, causing WX jobs to be bound to only a subset of the available CPUs.
FlowTracer	VOV-12556		Add support for FlowTracer on Windows.
Hero	VOV-12891		Added a <code>-P <NAME=VALUE></code> parameter to the hero submit command (similar to the <code>NC -P</code> parameter).
Hero	VOV-12932		Added the <code>-modules</code> , <code>-stagein</code> , <code>-stageout</code> parameters to the <code>hero -zebu submit</code> command. The <code>DeclareEmulator</code> specification now includes the following parameters: <code>-type</code> (for future use), <code>-environment</code> , <code>z-zebu_system_dir</code> , <code>-zebu_root</code> . The commands specified in the <code>-stagein</code> , <code>-stageout</code> parameters depend on the resources <code>Limit:zebu_stagein_load</code> , <code>Limit:zebu_stageout_load</code> .
Monitor	VOV-5671		The <code>vtk_feature_add_or_create</code> API now expects an additional parameter for the associated ISV string. See the documentation for the new syntax. The <code>vtk_featureuser_*</code> APIs have had their names changed to <code>vtk_checkout_*</code> . The old <code>vtk_featureuser_*</code> names are still supported but <code>vtk_checkout_*</code> will be the official documented names.
Accelerator	VOV-6572		This should be fixed as a side effect of implementing the mutator API. See release notes for VOV-8899.

Product	Issue Number	Case Number	Description
All	VOV-9298		Support for Ubuntu 18.04 and 20.04 is added.
All	VOV-13364		Starting with the 2021.1.0 release, the Accelerator Products images come with digitally signed certificates that can be used to reliably confirm authenticity of the installation media images.

Resolved Issues

The following issues were resolved in this release.

Table 5:

Product	Issue Number	Case Number	Description
All	VOV-13252		<p>Web server improvements (when the web port is configured as non-zero):</p> <ol style="list-style-type: none"> Added the following headers to all HTTP responses: <ul style="list-style-type: none"> Strict-Transport-Security X-Frame-Options X-Xss-Protection X-Content-Type-Options X-Content-Security-Policy Content-Security-Policy Added support for web ports higher than 32000.
All	VOV-13181		Some stability improvements were made in the Webserver code to avoid potential crashes of vovserver.
All	VOV-12989	CS0145649	Fixed an issue where stopping more than 1 vovtasker by name (<code>vovtaskermgr stop <tasker1> <tasker2>...</code>) was renaming only the last named tasker to <code><taskername>_stopped_<timestamp></code> .
All	VOV-9560	23740	Fixed an issue with <code>vovnotifyd</code> using only the first RAM value for jobs with multiple RAM requests (e.g.: <code>-r+ RAM/100 -r+ RAM/200</code>) to determine if the job is exceeding requested RAM usage (health check of requested RAM).
Accelerator	VOV-11388	25153	Fixed an issue with the vovserver failing to start when <code>epoll</code> is enabled (<code>set config(useepoll) 1</code>) in <code>policy.tcl</code> .

Product	Issue Number	Case Number	Description
All	VOV-12582		The <code>vovtaskermgr start</code> command will now only utilize the configured <code>rshcmd</code> (one of: <code>inetd/rsh/ssh/vovtsd</code>) for starting remote taskers. Prior to this change, the <code>inetd</code> method was always attempted, and the <code>vovtsd</code> method would be attempted if the configured <code>vovtsd</code> port was non-zero.
All	VOV-12512		All references to PBS Works support have been updated to direct the user to the new Altair One website.
All	VOV-6287	20738	Fixed the issue in the error message "too many elements in array" where the max array was not getting updated as per the <code>config(maxJobArray)</code> .
All	VOV-13247		Network security testing port scans had in certain cases caused <code>vovserver</code> to hang up in an infinite loop.
Accelerator, Accelerator Plus, Monitor	VOV-13009	CS0133888	In the help information displayed by <code>nc cmd vovdaemonmgr -h</code> , a note was added indicating that the <code>-f</code> (force) option applies only to the <code>start</code> subcommand, and only when a daemon list is specified.
Accelerator	VOV-12418	CS0121215	By default, interactive jobs will also write to a logfile just like normal jobs do. You can also specify the log file with the <code>-l</code> parameter to <code>nc run</code> like normal jobs. If you do not want an interactive job to write to the log file, use <code>-nolog</code> as a parameter to <code>nc run</code> .
Accelerator	VOV-12135		The axis labels in the jobs histogram in the dashboard UI page showed repeated "1" labels with a small number of running or queued jobs.
Accelerator	VOV-13000	CS0128274	Fixed an issue where incrementing grabbed resources was not incrementing the count of used resources in some cases.
Accelerator	VOV-13039	CS0146315	The network data sent as a result of <code>nc info</code> was made more compact, which will make running the command more efficient.
Accelerator	VOV-13113		Fixed CSS issues in Set Browser page.
Accelerator	VOV-13026	CS0149221	Handle window/weight inheritance for new FairShare groups that are being created during job submission. The window will be inherited from the parent. Both the window and weight will be inherited from a sibling group named "default".

Product	Issue Number	Case Number	Description
Accelerator	VOV-12714		Fixed the following issues with job container support: <ol style="list-style-type: none"> 1. The VOV_CONTAINER_<resource> (where <resource> is CORES, RAM, or TMP) environment variable was not being set in the hook environments for containers that were configured to use the job's resource specification as container limits. 2. The VOV_CONTAINER_JOB_RUNDIR environment variable was not being set in the hook environments if the job's run directory had been configured as an equivalence, as would be the case for jobs submitted from within the user's home directory.
Accelerator	VOV-13108		As per the new API response, changes made to the footer version text.
Accelerator	VOV-13272		Increased virtual memory limit for <code>nc run</code> .
Accelerator, FlowTracer	VOV-12908		The Accelerator new dashboard UI for administrators, when accessed, will increase the vovserver memory "Size" metric printed by the <code>vsi</code> command. The large reported memory size is virtual memory address space size, with only modest associated increase in actual memory usage. The number of worker threads used by the web server can be controlled with <code>config(http.workerthreads) N in policy.tcl</code> . Changing this value will require a vovserver restart, because it can only be set once before the multithreaded webserver is initialized. Also, a timeout value for when the multi-threaded webserver has to delegate some requests, such as CGI pages, to the old vovserver web server, can be configured by setting <code>config(http.proxytimeout)</code> . This value can be changed at any time.
Accelerator	VOV-12977	CS0143428	Fixed an issue with interactive jobs (<code>nc run -I</code>) failing with the error message "Job has problems with PTY. Bad pipes".
Accelerator	VOV-12811	CS0129987	<code>vtk_resourceemap_set</code> now requires that the user either own the resource, or the user have ADMIN security rights for it to take effect.
Accelerator	VOV-10921	24781, 24803	To better clarify jobs that have been queued due to reserved taskers, additional information has been added to the output of the <code>nc why</code> command. Under the "Per-slave/per-tasker analysis" section, a count of taskers that would have been

Product	Issue Number	Case Number	Description
			compatible but are reserved will be shown as: 'n is currently reserved by others'
Accelerator	VOV-5980	21105	The <code>nc modify</code> command has been modified to exit with a status of 1 if any part of the modification request fails.
Accelerator	VOV-12892		With certain types of product install methods, the Accelerator documentation bookshelf link in the Web UI had not been functional. This only impacted customers who download and un-tar both <code>common.tar</code> and <code>win64.tar</code> with the intent of installing both linux64 and win64 into the same master installation directory. The workaround was to un-tar and install win64 first, then go back and un-tar <code>common.tar</code> and <code>linux64.tar</code> , and then install linux64 only. If you had an existing installation the workaround was to un-tar <code>common.tar</code> and reinstall linux64 only.
Accelerator	VOV-12547		Fixed an issue with the <code>-I1</code> option for interactive jobs that prevented the user from typing in the terminal window and interacting with the job.
Accelerator	VOV-11452		Added <code>-orphanreservations</code> option to the <code>vovforget</code> command for forgetting the reservations not attached to any tasker. Behaviour is modified to allow overlapping reservation in the system, but it will never be in effect unless the dominant reservation is deleted. Fixed an issue where the tasker reservation gets duplicated after server restart. Also, changed the tasker instance reservation (created using <code>vtk_tasker_define</code> (<code>-reserve</code> option) or by passing the <code>-e</code> option to <code>vovtasker</code>) to be non-persistent by default. No change in behavior for tasker reservations created using <code>vtk_reservation_create</code> .
Accelerator	VOV-11662	29869	Fixed "no such variable 'killTimePP'" alerts when health checks are enabled for stuck jobs with <code>-stuckKillTime</code> .
Accelerator	VOV-9254	23430	Fixed issue that prevented child FairShare groups from being displayed when viewing the top-level group via <code>vovfsgroup show</code> .
Accelerator	VOV-11261		Addressed issue where delays were encountered due to vovserver not being immediately notified of an update.
Accelerator	VOV-7490	20070, 24363	Fixed an issue leading to "URGENT vovnotifyd Cannot send mail. can't read "code": no such variable" alerts. Reduced the severity to WARN, in case of failures to send mail. Also,

Product	Issue Number	Case Number	Description
			added an alert if the list of recipients for notification emails is empty.
Accelerator	VOV-12464	CS0122942	Requests for CGROUP:RAM with more than 1 RAM specification will now limit RAM usage to the total amount requested by all RAM specifications rather than the last one. For example the command: <code>nc run -r CGROUP:RAM RAM/60 RAM/40 -- sleep 0</code> will limit ram usage to 100 megabytes rather than 40.
Accelerator, Accelerator Plus	VOV-13030	CS0149277	Fixed an issue with Ctrl-C not working as expected with interactive jobs (<code>nc run -I/-Il/-Ir</code>).
Accelerator, Accelerator Plus, FlowTracer	VOV-4998	CS0143832	For all products, strict job name checking has been enabled and invalid job name characters will cause an error. For Accelerator and Accelerator Plus, this can be overridden by putting the following in <code>\$VOVDIR/local/vncrun.config.tcl</code> <pre>set ::jobname_lexicon legacy</pre> <p>or</p> <pre>set ::jobname_lexicon replace</pre> <p>Legacy will use the more lax job naming rules from earlier releases. Replace will identify invalid characters in the job name, replace them with "_", and issue a warning to the console An issue with <code>vsm</code> being enabled to handle some invalid job name characters was addressed.</p>
Accelerator, Accelerator Plus	VOV-13051	CS0121039	Fixed an issue with interactive jobs (<code>nc run -I</code>) failing with error messages similar to "Error=98: Address already in use [vovttyserver2:244]" and "FATAL ERROR: Cannot open PTY port (with remote signal handling): Cannot open pty server sockets [vncrun.tcl:2257]". This is accompanied by job errors similar to "Cannot connect to PTY server on submission host lava1 13316 Z@:x=XGa56cT_Hd6 from lava5".
Accelerator	VOV-12519		For consistency across CLI and web UI, the default values for the following VovPreemptRule options have changed in some cases from previous versions. <ul style="list-style-type: none"> The option <code>-resumedelay</code> default is now 5 seconds previously the CLI default was 10 seconds.

Product	Issue Number	Case Number	Description
			<ul style="list-style-type: none"> The default pool name is now mainpool, previously the web UI default was MainPool. The default for <code>-mqthresh</code> is now 0.1=10%, before the web UI default was 0.01. The <code>-killage</code> option default is now 60, previous version of the web UI had a default of 0. For <code>-skipresumedjob</code> option default is 120, previous versions of the web UI had a default of 0. For <code>-preemptslavenum</code> new default will always be 1, some variants of CLI had a default value of 2 previously.
Accelerator	VOV-10558	23924	Empty job class sets are not deleted, thereby preserving all properties for future submissions.
Accelerator	VOV-12807		When you hover the mouse over the job graph line in the dashboard UI window, a small pop-up displays the Y unit, the Y number, and a time. The Y number is actually an average over a surrounding time window, and not an instantaneous value as implied by the information shown.
Accelerator	VOV-13169		When vovserver was configured with webport and failover was configured, it was found that vovserver could lose access to the webport and get restarted with the webport disabled. This has been fixed. Also, if Accelerator was configured to use License Monitor, it was observed that failover could leave an extra copy of the <code>voveventmon</code> process launched by <code>vovresourced</code> running every time vovserver crashes and restarted. <code>vovresourced</code> has been modified to properly shut down <code>voveventmon</code> in the case where vovserver has crashed.
Accelerator	VOV-13036		Fixed a server crash caused by memory corruption when running queries from a 2016.09 client.
Allocator	VOV-10997	CS0156459	Suppressed the log, "Could not add FTResJob...", as it is not impacting the functionality.
Allocator	VOV-12724	CS0130000	Fixed issues with the allocation of resource groups in Allocator. Prior implementations based the allocation on demand for the component resources only. The new implementation bases the allocation on demand for the resource group and all of its component resources.

Product	Issue Number	Case Number	Description
Allocator	VOV-11883	CS0120726	Fixed issue when the same feature serviced by different daemons with different tags which makes <code>-ExcludeTagRx</code> ignored.
Allocator	VOV-11894	CS0120781	Fixed CSV export of the Home > Overview and Home > Resources > Matches tabular reports.
Allocator	VOV-11224	24981	Fixed an issue with Allocator showing incorrect "Distributable" values when 'SetReserverForUser' is used with * (all users).
Allocator	VOV-13025	CS0145466	Added a config key <code>MQ(pjProbeKillTimeout)</code> for the maximum time that the <code>vovlad</code> daemon should wait for existing probes to be killed at startup.
FlowTracer	VOV-7956	21595	Addressed issue that prevented alert text from being displayed in the <code>vovconsole</code> alerts window.
FlowTracer	VOV-12960	CS0143848	Fixed issue with keyword substitution for array job submissions that caused arbitrary matches to the array reference job's ID and IDINT values to be substituted with the ID and IDINT values from the individual array jobs in the job metadata. For example, an array job submission of "echo 000001070" where the reference job was coincidentally job 1070 would result in the command being changed in each individual array job to reflect its own ID, such as "echo 000001072" for job 1, "echo 000001074" for job 2, and so on.
FlowTracer	VOV-12815	CS0137268	Evaluation of resources when used with an indirect tasker (taskerVNC) now applies the jobclass followed by the resource list which is the opposite of what was done previously.
FlowTracer	VOV-12203	CS0120999	Re-evaluation of a job class to compute the union of resources when used with an indirect tasker(taskerVNC) is no longer done. This is typically relevant for FlowTracer integration with either Accelerator (NC) or Accelerator Plus (WX). To restore the old behavior, please contact Altair support.
FlowTracer	VOV-12901		Fixed an issue where the user may see PIPELOG related errors in the console on Windows, when running a FlowTracer job directly from the command line, such as : <code>vov cmd.exe /c echo "Hello"</code>

Product	Issue Number	Case Number	Description
FlowTracer	VOV-12918	CS0142609	Improved the behavior of the Taskers > NC Interface: <code>vovvxd vovconsole</code> menu option, which configures and starts the <code>vovvxd</code> daemon. The daemon will be configured to use the default queue name (<code>vnc</code>) unless the <code>NC_QUEUE</code> environment variable is present.
FlowTracer	VOV-10189		Schedule priority and execution priority are now saved in the persistent representation.
FlowTracer	VOV-12813	CS0137660	systemjob state is now saved in the representation so that it's persistent across FlowTracer restarts.
Hero	VOV-12931		Wrapper daemon now runs on the emulator <code>vovtasker</code> associated with the emulator. Previously it ran from wherever the <code>autostart</code> command was executed. Fixed an issue that prevented the command <code>hero -zebu stop_all_wrappers</code> from working correctly in some instances.
Monitor	VOV-9774	24058, CS0121121	Fixed problem parsing MathLM licenses when one of HH MM SS time values starts with 08 and 09.
Monitor	VOV-12253	CS0120851	Fixed MathLM parser for features with "Sub" and space prefix.
Monitor	VOV-12634	CS0126701	Fixed Altair Monitor GUI to correctly show expiration date if one of the licenses expired.
Monitor	VOV-12324	CS0121132, 21139	The output format for more recent versions of Sentinel RMS has changed. The new format caused <code>ftlm_parse_sentinel</code> to incorrectly calculate capacity. It now recognizes the new format and only counts instances of capacity appearing inside a feature block. Support for older formats has been retained.
Monitor	VOV-9100	23225	Fixed LM report plotting with "Breakdown By Feature" option.

2021.1.0-rs1 Patch Release Notes

The following new features and resolved issues were introduced this software release:

Product	Issue Number	Case Number	Description
Accelerator	VOV-13399		Added Rapid Scaling - a feature that provides high-throughput, cost-conscious scheduling in the cloud.
Accelerator	VOV-13470		The Rapid Scaling PDF has been updated to reflect the changes relative to the 2021.1.0-rs1 patch.

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New Features

Internal Number	Products	Case Number	Description
VOV-13502	All	None	<p>This fix provides for mitigation of a hang in the http(s) service. It reinstates the nginx service found in earlier releases. The use of the patch is required for production systems using the https service - typically Accelerator. The patch prevents the use of the REST v3 API, a subsequent release will address this shortcoming. The use of nginx should be seen as temporary and a subsequent release is expected to provide integrated https within vovserver. To start nginx, pass '-webprovider nginx' to ncmgr start, lmmgr start, etc. You should see vovnginxd start as one of the vov daemons. 'vovservermgr config' will also show the webprovider setting as being either 'internal' or 'nginx' depending on how you have configured the system.</p>