TERM SOFTWARE LICENSE AGREEMENT

This Agreement (defined below) is between the individual or entity agreeing to this Agreement and Univa Corporation, a Delaware corporation (Univa) with its registered office at 2300 N Barrington Road, Suite 400, Hoffman Estates, IL 60169.

BY ACCEPTING THIS AGREEMENT, EITHER BY CLICKING A BOX INDICATING YOUR ACCEPTANCE OR BY EXECUTING A QUOTATION THAT REFERENCES THIS AGREEMENT, YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU ARE ENTERING INTO THIS AGREEMENT ON BEHALF OF A COMPANY OR OTHER LEGAL ENTITY, YOU REPRESENT THAT YOU HAVE THE AUTHORITY TO BIND SUCH ENTITY TO THESE TERMS AND CONDITIONS, IN WHICH CASE “CUSTOMER” SHALL REFER TO SUCH ENTITY. IF YOU DO NOT HAVE SUCH AUTHORITY, OR IF YOU DO NOT AGREE WITH THESE TERMS AND CONDITIONS, THEN YOU MUST NOT ACCEPT THIS AGREEMENT AND MAY NOT USE THE UNIVA SOFTWARE.

1. SCOPE. This Agreement governs the licensing of the Univa Software and Support provided to Customer.

   - Univa Software means the software described in the quotation referencing this Agreement (“Quotation”), all updates and enhancements provided by Univa, Univa’s user documentation for such software, and license keys (Univa Software). This Software is licensed and is not sold to Customer.

   - Third-Party Software/Open Source Software licensing terms are addressed at the bottom of this Agreement.

   - Capacity means the amount of computing resources on which Customer is licensed to use the Univa Software, as described on the applicable Quotation.

2. LICENSE. Subject to the terms of this Agreement, Univa grants Customer a non-exclusive, non-transferable, non-sub licensable, license, solely during the term of this Agreement and in accordance with (and not to exceed) the Capacity, to install and use the Univa Software on Customer-controlled systems (including Customer-controlled cloud computing environments) for Customer’s internal business purposes. If Customer is installing the Univa Software, Univa further grants Customer the right to make a reasonable number of copies of the Univa Software for archival and backup purposes. Customer’s contractors and majority owned affiliates are allowed to use the Univa Software under the terms of this Agreement. Customer is responsible for compliance with the terms of this Agreement.

3. RESTRICTIONS. Univa reserves all rights not expressly granted in Section 2 above. Without limiting the preceding sentence, Customer may not, and covenants that it will not, directly or indirectly, and may not authorize any third party to:
(a) Sell, transfer, assign, sublicense, or rent the Univa Software or use the Univa Software for the benefit of third parties (including through as a software service provider or in an outsourcing environment);

(b) Reverse engineer (except to the extent expressly permitted by applicable law despite this limitation), decompile, disassemble, modify, translate, or otherwise attempt to discover the source code of, the Univa Software;

(c) Except for a reasonable number of backup or archival copies, copy the Univa Software;

(d) Create derivative works from the Univa Software; or

(e) Circumvent or otherwise interfere with any authentication or security measures of the Univa Software.

4. PROPRIETARY RIGHTS AND CONFIDENTIALITY.
   (a) Proprietary Rights. The Univa Software, workflow processes, designs, know-how and other technologies provided by Univa as part of the Univa Software are the proprietary property of Univa and its licensors, and all right, title and interest in and to such items, including all associated intellectual property rights, remain only with Univa. The Univa Software is protected by applicable copyright, trade secret, and other intellectual property laws. Customer may not remove any product identification, copyright, trademark or other notice from the Univa Software.

   (b) Confidentiality. Recipient may not disclose Confidential Information of Discloser to any third party or use the Confidential Information in violation of this Agreement.

   (i) Confidential Information means all proprietary or confidential information that is disclosed to the recipient (Recipient) by the discloser (Discloser), and includes, among other things:
   - any and all information relating to Univa Software or Support provided by a Discloser, its financial information, software code, flow charts, techniques, specifications, development and marketing plans, strategies, and forecasts;
   - as to Univa, the Univa Software and the terms of this Agreement (including without limitation, pricing information).

   (ii) Confidential Information excludes information that:
   - was rightfully in Recipient's possession without any obligation of confidentiality before receipt from the Discloser;
   - is or becomes a matter of public knowledge through no fault of Recipient;
   - is rightfully received by Recipient from a third party without violation of a duty of confidentiality;
   - is independently developed by or for Recipient without use or access to the Confidential Information; or
   - is licensed under an open source license.

Customer acknowledges that any misuse or threatened misuse of the Univa
Software may cause immediately irreparable harm to Univa for which there is no adequate remedy at law. Univa may seek immediate injunctive relief in such event.

5. PAYMENT. Customer will pay all fees due under a Quotation within 30 days of the invoice date, plus applicable sales, use and other similar taxes.

6. WARRANTY DISCLAIMER. UNIVA DISCLAIMS ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE UNIVA SOFTWARE MAY NOT BE ERROR FREE, AND USE MAY BE INTERRUPTED.

7. TERM AND TERMINATION. This Agreement commences on the date it is accepted by or on behalf of Customer and expires as set forth on the applicable Quotation. This Agreement will be automatically renewed on its expiry for an additional one year period unless a written notification of termination has been received 60 days prior to term expiry. Either party may terminate this Agreement upon a material breach of the other party after a 30 day notice/cure period, if the breach is not cured during such time period. Upon termination of this Agreement or expiration of an order, Customer must discontinue using the Univa Software, de-install it and destroy or return the Univa Software and all copies, within 5 days. Upon Univa’s request, Customer will provide written certification of such compliance.

SUPPORT INCLUDED. Univa’s technical support and maintenance services (Support) is included with the fees paid under an order. Univa may change its Support terms, but Support will not materially degrade during any paid term. More details on Support are located at: http://www.univa.com/resources/files/support.pdf

8. LIMITATION OF LIABILITY AND DISCLAIMER OF DAMAGES. IN NO EVENT WILL UNIVA BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, EXEMPLARY, PUNITIVE, TREBLE, OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOSS OF BUSINESS, REVENUE, PROFITS, GOODWILL, DATA, OR ECONOMIC ADVANTAGE, AND COSTS OF SUBSTITUTE GOODS OR SERVICES) ARISING OUT OF OR RELATING TO THIS AGREEMENT, HOWEVER CAUSED, AND BASED ON ANY THEORY OF LIABILITY, WHETHER FOR BREACH OF CONTRACT, BREACH OF WARRANTY, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY, OR OTHERWISE, EVEN IF CUSTOMER IS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. EXCEPT FOR CUSTOMER’S PAYMENT OBLIGATIONS, UNIVA’S TOTAL LIABILITY (INCLUDING ATTORNEYS’ FEES) ARISING OUT OF OR RELATED TO THIS AGREEMENT WILL NOT EXCEED THE AMOUNT PAID BY CUSTOMER UNDER THE QUOTATION GIVING RISE TO THE CLAIM DURING THE 12-MONTH PERIOD PRIOR TO THE DATE THE CLAIM AROSE. THESE LIMITATIONS WILL APPLY NOTWITHSTANDING ANY FAILURE OF THE ESSENTIAL PURPOSE OF ANY LIMITED OR EXCLUSIVE REMEDY.

9. INTELLECTUAL PROPERTY INDEMNITY. If a third party claims that the Univa Software infringes that party's patent, copyright or other intellectual property right, then Univa will defend Customer against that claim at Univa's expense and pay all costs, damages, and attorney's fees, that a court finally awards or that are included in a settlement approved by Univa, provided that Customer:

(a) promptly notifies Univa in writing of the claim; and
(b) allows Univa to control, and cooperates with Univa in, the defense and any related settlement. If Univa receives information about an infringement claim related to the Univa Software, then Univa will at its discretion and at no cost to Customer obtain a license to enable Customer to continue to use the Univa Software or modify the Univa Software so that it is no longer infringing. If Univa determines that these alternatives are not reasonably available, Univa may terminate the license to the Univa Software and refund any unused fees. Univa’s obligations above do not apply if the infringement claim is based on Customer’s breach of this Agreement, the use of the Univa Software in combination with products not supplied or approved by Univa in writing, or Customer’s failure to use any updates made available by Univa.

This section contains Customer’s exclusive remedies and Univa’s sole liability for infringement claims.

10. GOVERNING LAW AND EXCLUSIVE FORUM. This Agreement is governed by the laws of the State of Illinois, without regard to conflict of law principles. Any dispute arising out of or related to this Agreement may only be brought in the state of Illinois. Customer consents to the personal jurisdiction of such courts and waives any claim that it is an inconvenient forum. The prevailing party in litigation is entitled to recover its attorneys’ fees and costs from the other party.

11. MISCELLANEOUS.
(a) Inspection. Upon request by Univa, Customer must provide a usage report at least 60 days before the renewal anniversary. Univa, or its representative, may audit Customer’s usage of the Univa Software at any Customer facility. Customer will cooperate with such audit. Customer agrees to pay within 30 days of written notification any fees applicable to Customer’s use of the Univa Software in excess of the license.
(b) Entire Agreement and all Quotations referencing this agreement (collectively, the “Agreement”), constitutes the entire agreement between the parties, and supersedes all prior or contemporaneous negotiations, representations or agreements, whether oral or written, related to this subject matter.
(c) Modification Only in Writing. No modification or waiver of any term of this Agreement is effective unless signed by both parties.
(d) Non-Assignment. Neither party may assign or transfer this Agreement to a third party, except that the Agreement may be assigned upon notice as part of a merger, or sale of all or substantially all of the business or assets, of a party.
(e) Export Compliance. Customer must comply with all applicable export control laws of the United States, foreign jurisdictions and other applicable laws and regulations.
(f) US Government Restricted Rights. Univa provides the Univa Software, including related data and technology, for ultimate federal government end use solely in accordance with the following: The government hereby agrees that the software qualifies as “commercial” computer software. Government technical data and software rights related to the software include only those rights customarily provided to the public as defined in this Agreement. This customary commercial license is provided in accordance with FAR 12.211 (Technical Data) and FAR 12.212 (Software) and, for Department of Defense transactions,
(g) Independent Contractors. The parties are independent contractors with respect to each other.
(h) Enforceability. If any term of this Agreement is invalid or unenforceable, the other terms remain in effect.
(i) No PO Terms. Univa rejects additional or conflicting terms of a Customer’s form-purchasing document.
(k) Survival. All terms that by their nature survive termination or expiration of this Agreement, will survive.

Rev. March 2019

NAVOPS LAUNCH 2.0

Navops Launch migrates workloads to the cloud, allowing enterprises to control spending, automate applications and manage data placement by selecting and deploying cloud resources. By leveraging five key categories of metrics - cloud cost, resource utilization, queue information, workload consumption and workload characteristics - users get more results faster, and at significantly reduced cost. Navops Launch brings together several products and services into an integrated system:

- **Univa Grid Engine** (workload management)
- **Slurm** (optional workload management)
- **Tortuga** (cloud framework)
- **Unisight** data collection, reporting, and automation applets for managing cloud resources
- A **Navops Launch** web interface for cloud spend, rightsizing, automation and correlating application workload to cloud
- **Dex** for authentication/authorization via Oauth2 and OpenID
- Pre-built cloud images to simplify installation

Navops Launch is designed for the following use cases:

- Providing additional capacity to on-premise Univa Grid Engine clusters by bursting to the cloud.
- Creating and managing cloud-only installation of Univa Grid Engine or SLURM clusters.
- Managing cloud spend and efficiency.
- Automating application and data placement into the cloud
- Correlating cloud resource utilization with application workload consumption and characteristics.

Navops Launch currently supports [Amazon Web Services](https://aws.amazon.com), [Microsoft Azure](https://azure.microsoft.com) and [Google Cloud Platform](https://cloud.google.com) as cloud providers.

**KNOWN ISSUES**

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Navops Launch should have a static public IP address. Most cloud providers provide dynamic public IP addresses by default, and this IP address will most likely change if Navops Launch is stopped and restarted. It is currently very difficult to change the IP address of the Navops Launch management server once it has been installed, and thus it is recommended that ip address never change. Consult the cloud provider documentation to understand how to create VM instances with a static public IP address.

Navops Launch needs to be able to connect to port 8333 on its public IP address, otherwise the web service will not be able to start. When setting up a new network in the cloud, make sure the appropriate security/firewall rules are set to enable this. The list of network ports which need to be open is listed in the Navops Launch Documentation.

Univa Grid Engine requires selinux to be set in permissive mode to guarantee proper job operations. All machines with Univa Grid Engine components installed will have selinux, if available, set to permissive mode.

Removing an advanced configuration setting on a cluster in the web UI will not remove the setting from the underlying Tortuga cluster profile. Removing the setting from the cluster profile must be done manually using the Tortuga age-cluster command line utility.

When analyzing spend data Navops Launch supports spend filtering and grouping by Cloud Provider tags or labels. While Google Cloud Platorm and Microsoft Azure integrate all Cloud Server tags in their billing data Amazon Web Services requires you to configure Cost Allocation Tags in order to publish tags into spend data. In order for AWS instance tags to be made available to Navops Launch they must be added to your billing account as Cost Allocation Tags.

CHANGE LOG

2.0

- New Navops Launch web UI for cloud bursting and clusters in the cloud.
- Graphing and tracking of cloud spend and efficiency.
- New automation engine for creation of automation applets using filters, expressions and actions.
- Data migration to the cloud for jobs submitted in Univa Grid Engine.
- Cloud cost centers for tracking cloud usage and spend for projects, departments and organizations.
- Flexible cloud and Univa Grid Engine cluster tagging for cloud servers and jobs running in the cloud.
- New navopsctl command line tool for controlling and managing, cloud connectors, cloud connector profiles, cost centers and cloud servers.
- Dex Authentication and authorization via OpenID and Oauth2.
- Optional Vault support for centralized management of Navops Launch secrets and passwords.
- GraphQL API for cluster and cloud data.
- Custom cloud pricing API for determining best Instance/VM based on CPU and memory requested.
- New Python Automation Action plugin interface.
- Support for Hybrid cloud with Amazon Web Services (AWS), Google Cloud Platform (GCP) and Microsoft Azure (Azure).
- AWS spot fleet support.
- AWS Auto Scaling Group, GCP Autoscaling Instance Groups and Azure Scale Sets.
- New documentation.

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May 29, 2019

- Overall documentation improvements and clarifications
- Added support for GCP as a cloud provider
- Improved input validation and error messages in the Web UI:
  - Cloud connector names and cluster names are now validated using the same naming rules as the back-end (see below)
  - When creating clusters, the number of schedulers is now set to 1 by default, and cannot be changed
- Tortuga upgraded to version 7.0.3, which includes the following changes:
  - Hardware profile and software profile names are now restricted to the following characters: a-z,A-Z,0-9, -, _
  - Software profiles are now set by default to have a maximum of 25 nodes. This maximum can be changed or removed as required via the CLI.
  - Resource adapter setting names are now case insensitive.
  - Initial support added for a future Data Migration kit.
  - The logging namespace has been normalized and refactored.
  - The kit installation process is now more robust; it completely rolls back a kit install if the installation fails.
  - The commands idle-node, acitvate-node, and transfer-node have been obsoleted and are no longer supported.
  - Fixes, additions, and clarifications to the documentation.
- Changes to the Univa Grid Engine kit:
  - Fixed a bug in the REST API statistics endpoint, which was causing the TensorFlow demo to fail.
  - Improved handling of qmaster-UGE REST disconnects.
  - Cluster names are now restricted to the following characters: a-z,A-Z,0-9, -, _
  - Initial support added for a future Data Migration kit.
  - Nodes in the deleted state are no longer shown in the uge-cluster command.
- Changes to the Unisight kit:
  - Fixed issue preventing the Unisight kit from being used outside of Navops Launch.
- AWS resource adapter kit upgraded to version 7.0.3:
  - setup-aws now uses the same AMI as the installer, or if not found, asks the user to provide one.
  - Spot instance support has been refactored and improved.
  - The logging namespace has been normalized and refactored.
  - Resource adapter settings help text have been improved.
  - Fixes, additions, and clarifications to the documentation.
- Azure resource adapter kit upgraded to version 7.0.3:
  - The logging namespace has been normalized and refactored.
  - Fixes, additions, and clarifications to the documentation.
- GCP resource adapter kit upgraded to version 7.0.3:
  - The logging namespace has been normalized and refactored.
  - Fixes, additions, and clarifications to the documentation.
- The Tortuga Upgrader now removes deprecated resource adapter settings during the upgrade process.

1.1.0

December 21, 2018

- A Tortuga upgrader, capable of upgrading from Unicloud 6.2.x to Tortuga 7.0.x. For upgrading from earlier versions of Unicloud, please contact Univa support.
- Univa Grid Engine upgraded to version 8.6.4.
- Documentation on how to install custom SSL certificates.
- Tortuga upgraded to version 7.0.2.
- Verified support for Azure and GCE cloud providers.
- Support for performing installations without an internet connection.
- Support for specialized installation scenarios where the Tortuga installer and compute nodes do not have a direct internet connection.
- Documentation updates:
  - Several content and reformatting improvements.
  - Tortuga-specific documentation on how to install custom SSL certificates.
- Several minor bugfixes and improvements.

1.0.1

November 15, 2018

- Univa Grid Engine upgraded to version 8.6.3.
- Fixed an issue when integrating with existing Univa Grid Engine clusters.
- Fixed broken documentation link in the web UI.
- The tortuga CLI will now print the help text by default if the command is incomplete.
- Additional documentation on creating applets.

1.0.0

October 25, 2018

- Initial release.