As of the date countersigned by Percona (the "SOW Effective Date"), this SOW is attached to and made subject to the terms and conditions of the Technical Support and Consulting Contract ("Agreement") dated 05/14/2013 between Percona, LLC and the Customer indicated below.

I. Services: Percona Support

Subject to the terms and conditions of the Agreement and this SOW, including Exhibit A, during the term of this SOW, Percona will provide technical support Services for Supported Software to Customer for the following servers subject to the limitations and exclusions enumerated in Percona's then-current online Support policies attached as Exhibit B (the "Support Policies") for the database software and high availability technologies specified below (collectively, the "Supported Software") at the support level and on the maximum number of Servers specified below (and as defined in Exhibit A).

Initial Term of this SOW (in Months): 12

Supported Software:

- DBMS Software: MySQL;
- Standard High Availability: Yes
- Advanced High Availability: Yes

Specifications:

- Support Level: Advanced
- Maximum Number of Servers: 8
- Number of Authorized Contacts: 10
- Severity 1 Initial Response Time: thirty (30) minutes
- Remote Access Level: Screen Share/Attended Remote Access

II. Fee

In exchange for the Services, Customer shall pay Percona a fee of $35,720.00, which fee will be invoiced on the SOW Effective Date. The Customer shall remit payment in full within 60 days from the date of invoicing. The fee includes the following products:

- MySQL Support – Advanced

  No payment will be made without AppDynamics PO US6025.

  All invoices should be submitted to accountspayable@appdynamics.com .

III. Term

Unless earlier terminated in accordance with the Agreement, this SOW has a term of 12 months beginning on 07/27/2019 and expiring on 07/26/2020.

In Witness Whereof, *the Parties have executed this Statement of Work. To the extent this SOW is inconsistent with the Agreement, the terms and conditions of the Agreement shall control.*

PERCONA, LLC

Signature: DocuSigned by: Laura Byrnes 1B7E749F9449462...

Name: Laura Byrnes

Title: Director of Contracting

Date: May 31, 2019

APPDYNAMICS LLC

Signature: DocuSigned by: CB1399659FAB42B...

Name: Elise Leung

Title: General Counsel

Date: May 31, 2019

Exhibit A to SOW

Servers. "Server" means a machine that processes data using one or more CPUs, and which is (a) owned or leased, and (b) used or controlled, by Customer. Each Server Backup, Server Blade or Server Virtual Machine contained in or emulated on such a machine constitutes a separate Server. "Server Backup" means a server used only to archive data or to provide standby capability on systems configured for disaster recovery purposes. "Server Blade" means a complete computing system on a single circuit board. A Server Blade will include one or more CPUs, memory, disk storage, operating system and network connections. A Server Blade is designed to be hot-pluggable into a space-saving rack; each rack may contain many Server Blades. "Server Virtual Machine" means a software implementation of a Server that executes programs like, and emulates, a physical Server. A single physical Server or Server Blade can host multiple operating systems and thereby include multiple Server Virtual Machines. Within a Database-as-a-Service environment, all database or server instances, including read replicas and failover replicas, constitute separate Servers. If Section 1 of the signature page of this SOW ("Signature Page") indicates that Customer has purchased Services for a specified maximum number of Servers, Customer shall notify Percona promptly if Customer wishes to increase the maximum number of permitted Servers, or if the actual number of Servers used by Customer actually exceeds the maximum number of Servers; in such notice, Customer shall include the number of additional Servers and the date(s) on which such Servers were first used, and Percona will invoice Customer for Services for the applicable Servers, prorated over the then-current term, and Customer will pay for those additional Services no later than sixty (60) days from the date of Percona's invoice. In the absence of a signed amendment of this SOW, in no event shall Services apply to Servers added by Customer as the result of any acquisition, restructuring or merger.

Authorized Contacts; Initial Response. Customer may designate up to the maximum number of Authorized Contacts specified above to open technical issues with Percona staff. Percona's initial response to Severity 1 inquiries will occur within the time period specified on the Signature Page, 24x7 all days of the year. A Customer Success Manager will be assigned if Customer has purchased Services at the Premium level of support.

Data Minimization. Customer acknowledges that the Services do not require the use of information that relates to an identified or identifiable natural person ("Personal Data"), and agrees in the ordinary course to use commercially reasonable efforts to only provide or make available, to its knowledge, data and logs associated with Support issues that do not include Personal Data ("Non-Personal Data"). In the unusual case when Customer believes that Personal Data may prove useful to those Services, before providing such Personal Data, Customer shall use commercially reasonable efforts to : (a) regardless of the method of sharing, anonymize or pseudonymize such Personal Data (such as by using any number of readily-available open source tools); and (b) if provided to Percona outside the scope of remote access (as described in Section 4 of this Exhibit), encrypt such Personal Data via an encryption tool and provide such Personal Data solely in the form of an attachment to a support ticket. "Authorized Data" means Non-Personal Data or Personal Data that meets the requirements described in the foregoing sentence.

Level 2 - Customer authorizes Percona to gain remote access to Customer's environment via Customer-attended screen sharing ("Screen Share"). In the ordinary course, all Authorized Data will be supplied to Percona by the Customer in accordance with this Exhibit by means of a support ticket; however, Customer may request a Screen Share session with Percona to facilitate issue diagnosis and resolution on a per-incident basis. Customer: (a) makes any Screen Share determination in its sole discretion; (b) recognizes that Percona staff may view all information and data visible during a Screen Share session; (c) shall limit visible/accessible data to Authorized Data as reasonably necessary for Percona to provide the Services; (d) is solely responsible for ensuring that only Authorized Data is so provided or exposed to Percona; and (e) represents that it has sufficient authority to provide or expose such data to Percona. The tool used for Screen Share shall be in the sole discretion of Percona, unless Customer has purchased Premium support.

Remote Access. Level 2 - Customer authorizes Percona to gain remote access to Customer's environment via Customer-attended screen sharing ("Screen Share"). In the ordinary course, all Authorized Data will be supplied to Percona by the Customer in accordance with this Exhibit by means of a support ticket; however, Customer may request a Screen Share session with Percona to facilitate issue diagnosis and resolution on a per-incident basis. Customer: (a) has complete control over the information exposed via Screen Share and makes any Screen Share determination in its sole discretion; (b) recognizes that Percona staff may view all information and data visible during a Screen Share session; (c) shall limit visible/accessible data to Authorized Data necessary for Percona to provide the Services; (d) is solely responsible for ensuring that only Authorized Data is so provided or exposed to Percona; and (e) represents that it has sufficient authority to provide or expose such data to Percona. The tool used for Screen Share shall be in the sole discretion of Percona, unless Customer has purchased Premium support.

Support Policies. The Services do not include on-site support, and are subject to the limitations and exclusions enumerated in Percona's then-current online Support policies attached as Exhibit B. Customer agrees to periodically check the Percona website for updated versions of the Support Policies.

Bugs.
Bug Fixes. Development and porting of source code patches for verified, qualifying bugs within Supported Software is provided under this SOW. Customer must provide Percona with a repeatable, verifiable test case demonstrating any bug's behavior in order to have it fixed. No bug can be fixed apart from a verifiable test case. Percona will exercise commercially reasonable efforts when providing bug fixes, but makes no warranty on being able to provide any particular bug fix, or on being able to meet requested timetables for providing a fix. If no fix is possible, Percona will seek a workaround instead.

Percona Bug Fix and Hot Fix Releases. Fixed bugs within Percona software (but not third party software) will be included in the next publicly announced release that is open for code changes following final completion of the fix. The timing of Percona software releases is governed by the general business plans and circumstances of Percona and not by Customer requests under this SOW. Fixed bugs for Percona software can also be made available via a "hot fix" release on Customer request, meaning a version of Percona software built on an expedited basis for and released to the Customer as soon as is practical.

EXHIBIT B
PERCONA SUPPORT POLICIES (as of May 23, 2019)

How do I use Support?

Support is provided 24x7x365 worldwide. You can contact Percona engineers via telephone, instant messaging, email, and our Customer Portal depending on your support tier. If you are a current Percona Support customer you can reach the Percona technical support staff by logging into the Percona Customer Portal:

Customer portal: https://customers.percona.com

Percona support is on duty 24x7x365 to assist our support customers with their database requests.

.As with other emergency service providers, Percona prioritizes work based on incident severity in order to ensure that customers experiencing severe production outages are restored to service as soon as possible. Real time contact methods such as telephone and instant messaging should be reserved for critical situations that demand and directly benefit from immediate feedback.

Does Percona provide login troubleshooting?

If your support tier offers login support, we will login to your systems on request to gather diagnostic information to help resolve issues more quickly. However, support engineers will only perform support-related tasks on supported software. Support engineers will not perform routine remote DBA tasks or help you with non-covered software, for example. During a login session, the engineer will not make any changes to your system; they will only review and advise you.

What are the standard login methods?

Our preferred login method to connect directly to customers systems is via SSH or RDP. If customers need screen share, our preferred methods are with teamviewer or join.me.

Remote Access Checklist

This checklist will help make the most of your time with Percona by ensuring that our access to your servers is correctly set up before we begin working with you.

Please make sure you've provided us with the items listed below, so that we can log in to your servers. If there's more than one server, please tell us each server's function (e.g., "master" or "read-only slave"), and all other information that applies to each server. This helps ensure we are working on the intended servers. Be sure to point out critical things we should be careful not to disturb.

Note: Legacy Keys

Engineer Keys

As of Q1 2016, engineer public SSH keys are available from the percona.com domain and can be easily downloaded in similar fashion to percona-toolkit.

For example:

- https://www.percona.com/get/engineer/KEY/firstname.lastname.pub
- https://www.percona.com/get/engineer/KEY/firstname.lastname.pub.sha256
- https://www.percona.com/get/engineer/RPMS/noarch/percona-engineer-firstname.lastname-1-20180702git.noarch.rpm

Where firstname.lastname is the first and last name of the engineer assigned to work with you.

We provide two types of engineer key packages:

1. Individual packages that create the username for the engineer should it not already exist on the system, as well as the Percona group if it does not already exist, and installs the public SSH keys into /home/username/.ssh/authorized_keys
2. A shared package that does not perform any group or user setup, but instead installs all firstname.lastname.pub files into /usr/share/percona/engineer

The shared package is available from:

- **https://www.percona.com/get/engineer/RPMS/noarch/percona-engineer-shared-1-20180702git.noarch.rpm**

This package installs all engineer public SSH keys into /usr/share/percona/engineer/keys

No user management is performed. You need to perform this yourself. The files are used only for reference purposes.

As an example, to add all engineer keys to shared Percona users after installing the shared package:

```
mkdir -p /home/percona/.ssh/
chmod 700 /home/percona/.ssh/
cat /usr/share/percona/engineer/keys/*.pub > /home/percona/.ssh/authorized_keys
chmod 600 /home/percona/.ssh/authorized_keys
```

Please note that old keys are not removed or managed in any way by this method. You must remove them yourself.

RPM packages available via percona.com/get/engineer are not at this time GPG signed. We plan to add this in the future. At the time of this writing, percona.com's SSL configuration gains an A+ grade on qualys SSL Labs, and we support Forward Secrecy.

Engineers connect from service bastions with public IPs 54.214.47.252 (bastion.percona.com) and 54.214.47.254 (bastion2.percona.com). Please configure your firewall to allow access from these IP addresses to relevant services within your network.

MySQL Percona User

Create a MySQL user named percona, grant all privileges on *.* and give us the password (or leave it in a file in Percona's engineer home directory, preferably named .my.cnf).

Extended information about the required MySQL account on your database server that can also be provided:

- What is the username and password of the MySQL account we should use?
- Have you granted SELECT, SUPER, PROCESS, RELOAD ON *.* to the user?
- What is the IP address or hostname of the MySQL server?
- On what IP address does MySQL listen, if bind_address is set in its configuration?
- What is the port or socket, if they are non-standard?
- If possible, create a "percona" database and give us all privileges to it (to create temporary tables while optimizing queries). This is completely optional, but it's helpful to us. You can do it by running: CREATE DATABASE percona; GRANT ALL ON percona.* TO 'user'@'host';

Security Policies

When you exchange information with us, or give us access to your servers, please make sure you do it securely. If you need to upload sensitive data to our servers securely for data recovery purposes, please request our GPG key. This lets you encrypt large files that only we can decrypt.

For security and accountability reasons, please do not do any of the following:

- Don't permit Percona to log into a shared account. Create a dedicated Percona user.
- Don't install our SSH keys in the root's home directory.
- Don't permit Percona to use a common MySQL account such as root. Create a dedicated Percona user in MySQL.
- Don't permit our SSH key to be forwarded to another host. If we must access your systems through an intermediary server (ex: jump-host), please create an SSH key on that server and install the matching public key on the systems we should be able to access.

Other Types of Access

We can work with nearly any type of access. Direct SSH access to the server is most efficient, however, any more elaborate types of access (such as proprietary VPN programs, platform-dependent technologies such as GoToMyPC, etc.,) can be less efficient – sometimes significantly less efficient.

Many of these applications cannot co-exist, so they require elaborate tricks with virtual machines, etc. Multiple hops are also less efficient, as keystroke latency becomes a problem. The use of a graphical desktop on a remote system is also difficult.

In general, Cisco VPN and OpenVPN are the most efficient VPNs for Percona to use. We can also support VPN termination via our bastion host. If you're using VPN, please tell us all the necessary information:

- What type of VPN system are we connecting? Do we need to download a client?
- Please send us the configuration file; e.g., the .PCF file (if you're using a Cisco VPN), OpenVPN, or other configuration information
- Otherwise, please tell us all of the following that apply: the domain server's hostname and IP address, username, password, group name, group password
- VPN might not work well with DNS, so please tell us the IP addresses for the servers

If you're using any other type of connectivity such as VNC, Remote Desktop, GoToMyPC, or similar, please provide the details.

Troubleshooting

The most common reason we can't log in is that the installed SSH key is for a different user than the one Percona was assigned. The next most common reason is that there are line breaks, incorrect permissions or other problems with the key file. After you've set the key up, please let us know so we can test it.

If you are using VPN, consultants will login from their own machines using your VPN client, so do not restrict access to any specific range of IP addresses. Also, be sure to use the engineer's own public SSH key, provide password authentication or provide an SSH key of your choosing communicate securely.

Performance Audit Checklist

A performance audit is our most popular service. In order to expedite a performance audit, please ensure that the following tools are installed on each machine:

- Perl DBI and DBD::mysql
- MySQL client, vmstat, iostat, mpstat and optionally numactl, innotop, and dstat
- If there is no outside network access, please install the **Percona Toolkit**

These tools are very helpful for observing what the machine is doing, so we highly recommend you install them. If you can't install any of the above for some reason, we can still perform a limited audit. It may result in less information being analyzed by the audit.

For our analysis, we need the slow query log. Please note the original values so that you can change them back:

```
SHOW VARIABLES LIKE '%slow%';
SHOW VARIABLES LIKE '%long%';
SHOW VARIABLES LIKE 'log_output';
```

Then, rotate your logs (you can move the current one and issue FLUSH LOGS;) and set these values:

```
SET GLOBAL log_output=FILE;
SET GLOBAL slow_query_log_use_global_control='log_slow_verbosity,long_query_time,log_slow_rate_limit';
SET GLOBAL log_slow_verbosity='full';
SET GLOBAL slow_query_log=1;
SET GLOBAL long_query_time=0;
SET GLOBAL log_slow_slave_statements=1;
SET GLOBAL log_slow_rate_limit=100;
```

Some of these variables are only available in Percona Server, so it is fine if they don't get set.

Once you have one hour or 1GB (whichever is first) of data, set the values back to their defaults and save the file off. Please upload the log to our sftp or another secure location, after compression, and provide it to our consultants.

It may be good to do this on both a master and a read slave.

Note: When you set long query time to 0 it may have some io impact as all queries will be collected. In that case, you may want to use 0.1 or 1.

A short architectural overview can go a long way towards giving us a “head start” on the performance audit. Please provide brief documentation that includes:

- Programming language(s) used
- Deployment diagrams (if any)
- Components used (load balancers, caching systems, etc...)
- Database replication/sharding Information
- Planned upgrades/changes – alerting us in advance of any new features or changes planned during the time of the audit can save significant time and rework
- Anything else you feel is worth mentioning

You don't have to go to extremes with any of this. Too much information can cause extra work, too (lists of tables and columns are not necessary). Keep in mind that we have probably seen dozens of systems like yours, so just giving us “hints” about what's unique or noteworthy about your systems can be very effective. For example, “it's a social networking application using Ruby On Rails and

we are not sharded yet, but we do a lot of caching" tells us a great deal.
We highly recommend that all of our customers have alerting and monitoring systems in place.

We have a comparison of a few recommended monitoring solutions on our blog here: https://www.percona.com/blog/2017/03/16/monitoring-databases-a-product-comparison/. If you need help installing or configuring them, please let us know. We are glad to assist.

Amazon RDS - Relational Database Service

Ideally you can provide Percona remote SSH access to a secured Linux server in your own controlled VPC subnet in AWS. You will securely (by way of GPG or other encryption medium) provide a MySQL account for Percona against your RDS instance so that all communication between MySQL client and RDS happens on Amazon's private internal network. Any auditing or compliance requirements are to be made known to Percona prior to engagement.

Which servers should I include in my Support subscription?

For each application for which you intend to receive support, Percona requires that you include all production database servers that store the data related to this application. This allows us to assist you with covered support requests before those issues cause production outages, and protects you by ensuring every server related to your business-critical applications receives timely responses to support requests.

If the application you wish to cover makes use of a complex configuration, such as multiple region DR or database clustering, we require that all servers that underpin that application be included in your support subscription. As an example, if you had a master-master cluster with a slave for performing backups and an identical environment in another region for DR, you would need to include all six servers in your support subscription to guarantee that Percona can provide support for any of the database issues that could arise. For customers with complex configurations or a large or dynamic overall server count, an enterprise-wide contract with unlimited servers may be a better option.

In addition to the above, Percona recommends that any servers that are used to provide testing, development or staging environments for your organization related to the covered applications also be included. Covering these non-production servers allows us to help you stage and test database software upgrades or hot fixes, replicate issues outside of your production environment and gather and analyze query metrics before potentially problematic changes go into your production environment.

Please be aware that Percona can only provide assistance with servers that are covered as part of your support agreement.

What types of incidents are covered?

In a nutshell, we will fix software that is not working correctly, and coach you in specific tasks with which you require help. More specifically, we provide:

- Problem resolution support for the covered software, to diagnose and fix discrete problems with specific symptoms, when it is reasonable to believe that the problem is caused by the software's misbehavior. Examples include server crashes and wrong results to queries
- Advisory support answer your questions about how to use the covered software. For example, we can advise you with installation, upgrades, and backups; help you to understand how to use particular software features, and explain the purpose and behavior of a configuration option.
- Customers with consultative support can seek assistance with topics specific to your deployment, including assistance with writing or tuning queries and stored routines, optimizing schema definitions, indexing strategies, and server configurations for performance, and other similar tasks unrelated to product usage, service restoration, or bug fixing. Note that consultative support is not a replacement for dedicated Consulting engagements and is intended to resolve incidents that are well-defined with narrow scope.
- Some common topics for which customers use us include:
  - Advice on performance issues
  - Advice and best practices on MySQL and MongoDB operations
  - Advice on backup and recovery
  - Advice on advanced data recovery
  - Analysis of software bugs
  - Analysis of software crashes and outages
  - Analysis and advice on replication
  - Advice on high availability
  - Assistance with query tuning

What types of incidents are not covered?

The following types of incidents are excluded:

- Bug fixes for non-open-source versions of MySQL or MongoDB, such as OEM-licensed MySQL, MongoDB Enterprise, or Amazon® RDS for MySQL servers
- Performing tasks for you, rather than advising you in your efforts to perform them. For example, we can coach you on how to configure replication, but we will not set up replication for you. If you need assistance in setting up replication, consulting would be happy to assist you
- Open-ended requests, such as reviewing a server to find whether anything is wrong with it. This type of open-ended performance review or system audit is covered under a Consulting Audit or a Percona Care Package. Each incident must be filed to resolve a pre-existing specific question or situation

- Architecture and design advice, such as choosing a good scaling strategy. This type of request requires a deep analysis and review of your requirements and setup and is handled by a consulting architecture and design review

What are the different severity levels and response times?

Severity 1 (urgent)

A problem that severely impacts your use of the software in a production environment (such as loss of production data or in which your production systems are not functioning). The situation halts your business operations and no procedural workaround exists.

Severity 2 (high)

A problem where the software is functioning, but your use in a production environment is severely reduced. The situation is causing a high impact to portions of your business operations and no procedural workaround exists.

Severity 3 (medium)

A problem that involves partial, non-critical loss of use of the software in a production environment or development environment. For production environments, there is a medium-to-low impact on your business, but your business continues to function, including by using a procedural workaround. For development environments, where the situation is causing your project to no longer continue or migrate into production.

Severity 4 (low)

A general usage question, reporting of a documentation error, or recommendation for a future product enhancement or modification. For production environments, there is low-to-no impact on your business or the performance or functionality of your system. For development environments, there is a medium-to-low impact on your business, but your business continues to function, including by using a procedural workaround.

Response time commitments for each severity differ based on your support level.

What platforms are supported?

Support itself is platform independent, your questions will be answered regardless of the OS you use. Bug fixes are provided according to this list of supported platforms.

What kinds of bugs will Percona fix?

Percona will fix bugs within Percona software subject to the Percona Software and Platform Lifecycle. Fixes for non-Percona software are available depending on your support level. Refer to the relevant Support Tier page for your supported product.

When requested, Percona will investigate possible bugs that cause crashing, freezing, incorrect results, data corruption, performance problems, or security breaches. Bugs must be verified via repeatable test cases.

Percona engineers can help you with creating test cases. Collaboration with you is key for us to be able to verify and fix any bug that we are working on. We will work with you to collect analytics data and test potential workarounds. With any issue reported to

us, our number one goal is to restore service. When it comes to handling bugs, the quickest way to restore service and prevent downtime is often to provide a workaround (for example changing settings, changing sql, starting with special flags, etc.).

Fixing a bug is a complex and often time-consuming process. Sometimes it is not possible or feasible to fix a particular bug, but we will apply our best effort in good faith. If no fix is possible, we will seek a workaround instead.

Percona can merge bug fixes from newer versions to older versions of the software, or undo fixes that were added in newer versions.

What is the difference between a bug fix and a hot-fix?

For Percona software, once we are able to repeat a bug and the development work is completed, a bug fix will be included in the next released version of the software and you will need to upgrade after the release to receive the fix.

Customers who have hot fixes as part of their offering are entitled to a custom build of the current version of Percona software with the fix applied as soon as development has completed the fix. This gives you access to critical bugs as soon as possible. Note, you will not need to upgrade server versions to receive the fix.

We are unable to guarantee that bug fixes will be incorporated into other flavors of the software, but bug fixes will always be available for Oracle® and MongoDB to adopt freely if they so choose.

Fixes created by Percona that are applied to non-Percona software (ex: MariaDB Server, or MySQL Community instead of Percona Server for MySQL, etc.) are hot fixes by default, as we do not issue regular maintenance releases of that software.

What is the timing of bug fixes?

Bug fixes in Percona software will be included in the next scheduled release that is open for code changes. This may not be the immediate next release because it may already be frozen or being built.

A hot fix is available more quickly because it is a special build of the software product incorporating the fix you need. This lets you keep using exactly the same version plus just the bug fix you need.

We report bugs upstream wherever possible and work to leverage our relationship with the open source community, partners, and other vendors to find solutions for our customers. All bug fixes created by Percona are made available at no charge to the open source community and upstream vendors such as Oracle, MariaDB, MongoDB, and PostgreSQL so that the fixes may be incorporated into their versions of the software. However, the decision when or whether to incorporate those fixes is beyond Percona's control.