

zycko[®]

MANAGED SERVICE

**Service
Description**

ZYCKO MANAGED SERVICE

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1. Service Agreement

1.1 Terms of Agreement

Supplier will under this agreement deliver Riverbed managed services to all devices agreed prior to contract sign, commencing from contract start date and expires twelve (12) months after the service start date.

Partner, has the right to extend the Term, under the same terms and conditions in this Service Description, for an additional one-year period following the one-year anniversary of the Service Start Date (the Expiration Date) by mutual consent in writing.

To that effect, Partner shall have the option to serve notice of its desire to extend the Term for such one-year period, in observance of a notice period of at least one (1) month prior to the Expiration Date.

1.1.1 Early Termination

The minimum Period of Service is 12 months (i.e. either Year 1 or Year 2).

Early termination may only take place if Supplier materially fails to meet the defined management obligations outlined in this service description and fails to cure the breach of obligations during the cure period of sixty (60) days or such other period that the parties may agree to in writing. In case of suspected breach, partner must show written evidence of failure to Supplier and allow sixty (60) days from Supplier's receipt of such evidence for Supplier to cure the breach.

Should Supplier not have cured the breach within the cure period of sixty (60) days or such other period that the parties may agree to in writing, then Partner shall have the right to service a notice of termination with immediate effect.

1.1.2 Refunds

In the event that partner terminates this contract within a Minimum Period of Service for convenience, partner will not receive any rebate or refund on services purchased for the duration of the relevant Minimum Service Period.

Should partner exercise right to service a notice of termination with immediate effect, then the parties agree that a refund of the Fees shall be due on a pro-rated basis (relative to the remaining period of time within the Minimum Service Period, following the effective date of such termination).

Zycko Managed Services Contract Start Date:-

Please Reference accompanying support contract document in format
<Partner Name> Zycko Support Contract <Contract Number>.pdf

Contract Period:-

Please Reference accompanying support contract document in format **<Partner Name> Zycko Support Contract <Contract Number>.pdf**

2. Core Services

2.1 24x7 Helpdesk Facilities

Supplier's helpdesk unless stated otherwise will be staffed for 24x7x365 hours of operation. Partner or customer can contact the Supplier support contact centre via telephone, email or via the Support Portal (Web).

2.1.1 Telephone Communication

Below is a comprehensive list of international telephone numbers that will provide access to the Supplier's support helpdesk.

Country	Number	Country	Number
Belgium	07 848 02 36	France	09 75 181 656
Germany	0800 762 7872	Hungary	06 80 016 393
Italy	199 241 410	Luxembourg	2088 0660
Netherlands	085 888 0630	Norway	852 26 505
Poland	00 800 112 4162	Portugal	800 813 650
Russia	8 10 8002 801 1012	Spain	90 166 7707
South Africa	0875 502 322	Sweden	0770 791 811
Switzerland	0800 834 570	United Kingdom	0800 072 1089
USA	877 678 7251	All other countries	+44 1285 868699

2.1.2 Electronic Communication

Supplier offers the ability to create new faults or update existing faults via email to support@zycko.com, Supplier's Service Desk utilises email communication as a convenient way to keep partners and customers up to date with key events associated with their incident, delivered with a unique incident reference number to keep track of events at all times.

zycko | PORTAL

Helpdesk Updated - Outlook Office365 down for several sites - ID # ZY4971

Account: Harris Norge AS

The status has been changed to With Engineer.

Please do not reply to this message - it is for information only. To provide an update to this case please email support@zycko.com OR login to the [Support Portal](#) to view/update the helpdesk (you will also be able to view attachments and downloads).

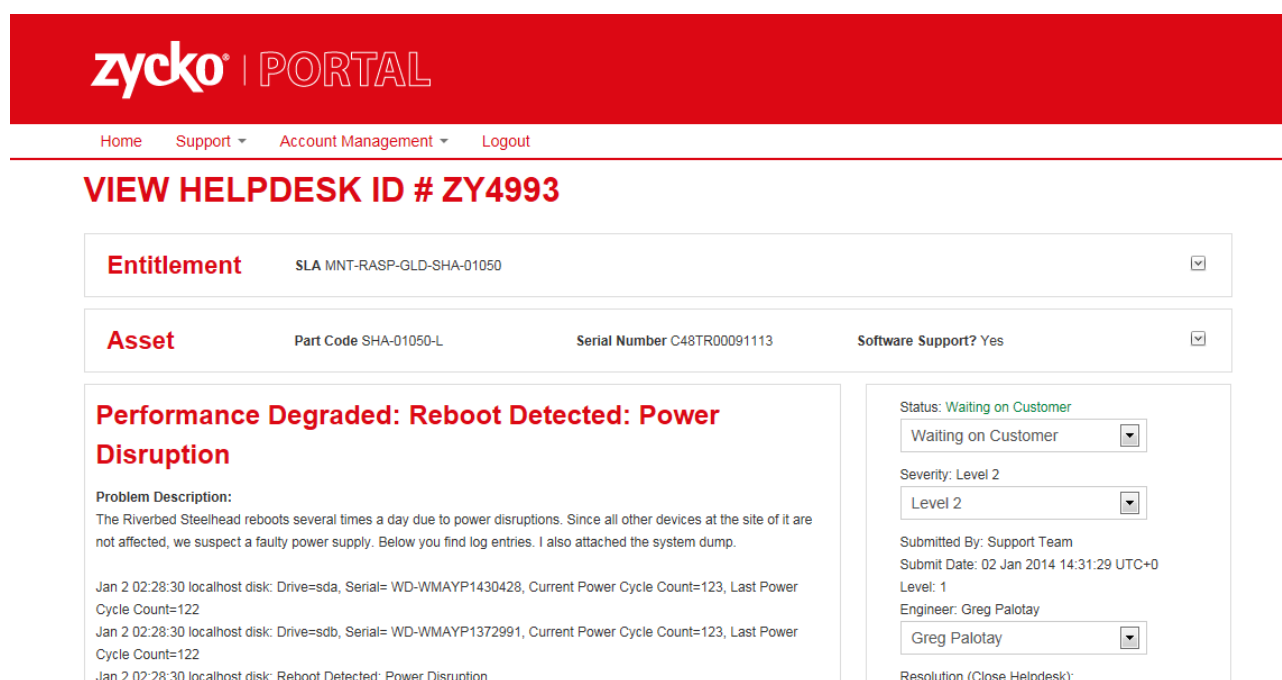
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2.1.3 Online Communication

Communication is further enhanced by providing the ability for partners/customers to access their support contract via the Support Portal.

The Support portal, <http://www.zyckoportal.com> has been developed with the partner community as the key users in mind but also offers the ability for customers to raise cases and interact with the Supplier Support helpdesk if a direct support model has been proposed.

The portal offers the ability to manage support contracts, be alerted to those that are due to expire soon and to be a focussed resource for interaction with the support team should problems arise.



The screenshot shows the Zycko Portal interface. At the top, there is a navigation bar with 'Home', 'Support', 'Account Management', and 'Logout'. Below this, the main heading is 'VIEW HELPDESK ID # ZY4993'. The interface displays several sections:

- Entitlement:** SLA MNT-RASP-GLD-SHA-01050
- Asset:** Part Code SHA-01050-L, Serial Number C48TR00091113, Software Support? Yes
- Performance Degraded: Reboot Detected: Power Disruption**
 - Problem Description:** The Riverbed Steelhead reboots several times a day due to power disruptions. Since all other devices at the site of it are not affected, we suspect a faulty power supply. Below you find log entries. I also attached the system dump.
 - Log Entries:**
 - Jan 2 02:28:30 localhost disk: Drive=sda, Serial= WD-WMAYP1430428, Current Power Cycle Count=123, Last Power Cycle Count=122
 - Jan 2 02:28:30 localhost disk: Drive=sdb, Serial= WD-WMAYP1372991, Current Power Cycle Count=123, Last Power Cycle Count=122
 - Jan 2 02:28:30 localhost disk: Reboot Detected: Power Disruption
 - Status:** Waiting on Customer (dropdown menu)
 - Severity:** Level 2 (dropdown menu)
 - Submitted By:** Support Team
 - Submit Date:** 02 Jan 2014 14:31:29 UTC+0
 - Level:** 1
 - Engineer:** Greg Palotay (dropdown menu)
 - Resolution:** (Close Helpdesk):

2.1.4 Incident or Change Procedure

On receipt of a new incident via either of the support channels, the following details should be obtained and provided as (1st Line) to the support desk in order to progress the call as efficiently as possible.

- Incident or Change Request
- End user company name
- Contact name
- Contact number
- Contact email address
- Serial number of item
- Fault description
- Call reference number (if needed to be referenced by the customer/partner helpdesk)
- Allocated priority to fault (see Appendix A)

In the event that request is to complete a change to the system or systems, a completed change request form should be accompanied with the support request (zms_change_control_formv1.5), a copy of which can be found at the end of the service description.

2.1.5 Onsite Engineer Dispatch

Unless otherwise agreed prior to contract commencement or Riverbed's Platinum support has been purchased, onsite engineer dispatch is not included as part of managed services.

Onsite engineer, offered as part of Riverbed's Platinum support is limited to the replacement of any faulty device covered under a current Riverbed support contract.

For adhoc onsite engineer fees please refer to the charges section (Appendix B), dependant on the skill set required.

2.2 **Availability & Health Monitoring**

2.2.1 Monitoring

Upon service commencement, Supplier will provide availability and performance monitoring of all supported devices 24x7x365, with use of an on-premise virtual or physical collector to retrieve device health information and alerts through the use of the REST API, RiOS command line interface (CLI) interrogation, ICMP, and system log (syslog) data.

2.2.2 Alerting

Supplier will proactively monitor the availability of all supported devices, whilst delivering reactive services on receipt of intelligently filtered Priority 1, 2 and Priority 3 alarms 24x7x365. (Alarm Categories – see Appendix A)

Supplier will monitor each supported device, provided such devices are not down due to outages or maintenance not under the control of, or subject to the responsibility of, Supplier.

2.2.3 Event Notification

All events are identified automatically by the on-premise collector and sent back to the distributed datacentre via a secure ssl tunnel, where a priority level between 1 and 4 is assigned to the event.

As soon as a network fault is known, an Incident ticket will automatically be opened in the Supplier's Support Desk along with notification in the form of email to the partner or customers support desk to allow event tracking of the fault.

Events may also be reported manually by partner or customer personnel to the Supplier support service desk by telephone, E-mail, or the Web portal <https://www.zyckoportal.com>

2.3 MACD's (Moves, Add's, Changes & Deletions)

Zycko Managed Service (ZMS) delivers remote change management services for Riverbed Steelhead and SteelFusion deployments via Zycko's NOC.

All software changes to Riverbed devices supported under a valid ZMS contract are included, except for major software or hardware changes (Listed below), where the feature or functionality requires planning and testing in a lab or production environment.

Any architectural or design changes within the customers wider IT estate, not to best practice or are unsupported and implemented without prior notification to the Zycko helpdesk, and have caused either availability or performance related issues, may be considered out of scope and Supplier shall be entitled to charge in accordance with professional service fees detailed in Appendix B.

Major Software & Hardware changes (Will incur project related costs charged on an hourly basis – See Appendix B)

WCCP or PBR -:

WCCP is a Cisco proprietary protocol used to distribute optimised client connections to Riverbed Steelhead devices in an OOP (Out of Path) deployment, which would usually be required at design and first deployment stage. It is unlikely that a change of this nature would be required once a Steelhead estate has been deployed, but if required would incur professional service and project coordination fees to deliver. PBR offers similar functionality but is standards based.

Inbound or Outbound QoS (Basic & Advanced) -:

QoS on Riverbed Steelhead devices in its basic or advanced form will require careful consideration before implementing, to prevent conflicts with existing network level QoS or the potential to impact applications on the network.

Due to the complexity, further professional services fees will be incurred to design, implement and test changes at our standard hourly rate.

Instances where this deployment includes multiple sites, hourly project coordination fees will be charged to manage the deployment at a project level.

Path Selection (QoS deployment) -:

QoS on Riverbed Steelhead devices in its basic or advanced form will require careful consideration before implementing, to prevent conflicts with existing network level QoS or the potential to impact applications on the network.

Due to the complexity, further professional services fees will be incurred to design, implement and test changes at our standard hourly rate.

Instances where this deployment includes multiple sites, hourly project coordination fees will be charged to manage the deployment at a project level.

Secure Peering -:

Secure Peering, usually agreed at the design or first deployment stage is used to provide encryption between Steelhead devices on the network.

It is unlikely that a change of this nature would be required once a Steelhead estate has been deployed, but if required would incur professional service and project coordination fees to deliver.

Advanced Applications (MS-SQL, Citrix, Microsoft RDP) -:

Zycko are unable to offer support for the enablement of MS-SQL optimisation due to the complexity of the application and the need to understand the client structure and requirements for optimisation.*

In the case of interactive applications (Citrix & Microsoft RDP), the use of advanced QoS, memory level caching and testing is required which will incur additional professional services fees charged at the

standard hourly rate. Instances where this deployment includes multiple sites, hourly project coordination fees will be charged to manage the deployment at a project level.

*Riverbed Professional services will need to be engaged to deliver a package of services.

Domain Authentication-:

It is common for client estates to include a mixed environment of clients supporting encrypted and non encrypted communication to servers.

In order for Riverbed Steelhead devices to achieve the highest level of optimisation for these encrypted communications, it is necessary to join the Steelheads to the local domain.

Zycko's LM service offers assistance in delivering these requirements, dependent on the complexity of the clients Active Directory structure and the customer providing Zycko and associated Steelhead device with reasonable access to the Active Directory domain in the form of secure authentication. In circumstances of multiple forests and/or domains preventing Riverbed Steelheads with clear visibility of accounts, it may be outside of Zycko's control to deliver a fully optimised solution for encrypted SMB or MAPI traffic.

If further analysis and/or onsite professional services is required to identify a resolution, this would be charged at the standard fees (See Appendix B)

SteelFusion or Storage Array scripting-:

Any requests to assist with the writing of customised scripts to aid in the snapshot and backup's of virtual machines on a SteelFusion environment will incur additional professional services fees.

Web Proxy-:

Web Proxy, introduced as a feature in RiOS version 9 requires the use of Riverbed's SteelCentral Controller to manage and deploy the required policies for Web Proxy and cannot be completed without this management server.

If this feature was required, it would incur professional service and project coordination fees to deliver.

Hardware Changes --:

Any requests to assist with onsite hardware changes will incur additional professional services fees.

VSP (Virtual Services Platform) -- :

Zycko's LM service will provide base level change facilities to enable the VSP ESXi platform for access by the client, including any box resource allocation and network connectivity mapping, but this does not extend to assistance or support for the deployment of virtual services on the VSP platform.

SteelFusion Services-:

The consultancy and deployment of SteelFusion is excluded from ZMS and would incur additional professional services fees (See Appendix B)

SteelHead SaaS-:

Riverbed's SteelHead SaaS solution requires a level of consultancy in consideration of the design, layout and location of users attempting to gain optimised connectivity to Cloud services.

This consultancy and deployment is excluded from Zycko's Managed Service and would incur additional professional services fees (See Appendix B)

2.4 Change Control

Changes (including additions, deletions, or modifications) to the supported devices requested by customer/partner will be subject to a Change Control Process as agreed between all parties.

- Complex changes should follow the formal Change Control process so that analysis and approval can be performed for the protection of the network's operational efficiency.
- Simple changes can be requested with less documentation, but still require some rigor to ensure that all parties understand the change, and have access to all information required for making the change.

All changes are to be submitted via the Zycko support desk, utilising the change control form defined in Appendix C.

2.4.1 Planned Works Procedure

Any planned works generated by a customer/partner request or needed to maintain operational efficiencies of the Riverbed estate will be managed and communicated to customer/partner via our Zycko support helpdesk.

Planned works, including the management and delivery of changes is confined to elements that are within our control.

2.4.2 Categories for Planned Works

- **Standard Change** - A change activity that will impact a single device or site, involves less than three configuration variables and can be performed remotely by an ZMS engineer, submitted to the Zycko helpdesk with a minimum of 24 hours notice of the required implementation date/time. (See Service Level Objectives section for implementation response times)
*Any Emergency changes required to restore service for an existing or new fault will be implemented in line with the Incident SLO's
- **Advanced Change** - A change activity that will impact multiple devices or sites, involves more than three configuration variables and can be performed remotely by an ZMS engineer, submitted to the Zycko helpdesk with a minimum of 72 hours notice of the required implementation date. (See Service Level Objectives section for implementation response times)
*Any Emergency changes required to restore service for an existing or new fault will be implemented in line with the Incident SLO's
- **Onsite Change** - A change activity, Standard or Advance that requires onsite assistance, submitted to the Zycko helpdesk with a minimum of 5 working days notice of the required implementation date.
Onsite resource will incur additional professional service fees, skillset dependent (See Appendix B)
*Onsite resource required to restore service as part of an existing Platinum contract will be delivered inline with the Incident SLO's.

2.4.3 Planned Works Approval Process

An approval process is required for each of the planned work categories, with review of all scheduled planned work activities completed daily. Every planned work request must be submitted to the Zycko Support Helpdesk along with any change control request form.

Once received, a valid helpdesk ticket will be raised against the planned works request, and approved as indicated below:

- Standard Change – Requires approval by IT manager/team leader or of similar Level, with full approval only achieved after completion of an impact analysis of the work activity.
- Advanced Change – Requires approval by IT director or similar Level, with full approval only achieved after completion of an impact analysis of the work activity.
- Onsite Change – Requires approval by IT director or similar Level, with full approval only achieved after completion of an impact analysis of the work activity.

Any incorrect or incomplete planned work requests are sent back to the works requester postponing implementation of the activity until correction.

2.5 Configuration Management

Zycko will maintain inventory and configuration information for the Supported Devices of each customer.

In coordination with the local CMC (Central Management Controller) or SCC (SteelCentral Controller), Zycko will create a configuration database that includes current software images, configuration files and version control management inline with network change control and backup processes.

Zycko will retain at least the last three (3) configurations, unless fewer configurations are available.

2.6 Return to Service

As an inclusion to Zycko's managed services, Zycko offer a Return to Service (RTS), providing reinstatement of service and functionality of the equipment within its normal operating environment, following repair.

RTS will...

- re-establish network connectivity,
 - reload latest configuration,
 - ensure client connectivity to applications is restored, consistent and being optimised.
- RTS is only applicable following a physical hardware repair.
 - The RTS service does not include reinstatement of any virtualised server running on the (VSP) unless specifically agreed in advance.

The Zycko Support break-fix maintenance service will deliver replacement hardware within the service levels determined by the contracted service taken out with Zycko/Riverbed.

In most instances, if the incident immediately points towards a hardware failure, the allocated Zycko L2 engineer will give approval to escalate the incident to Riverbed Level 3 to organise despatch of replacement hardware to the customer's site.

Should Zycko L2 support determine that the issue cannot be attributed to a hardware failure then the call will be escalated to Riverbed L3 support via the Riverbed service desk for further investigation and either a software bug fix or hardware replacement will be proposed.

At all times, the allocated Zycko L2 engineer will track the process and delivery of replacement hardware and will organise with customer/partner or Riverbed engineer a convenient time to reinstate the Riverbed equipment to the working condition experienced prior to the fault.*

Customer/partner are responsible for returning the failed hardware to Riverbed within 30 days of replacement.

Customer/partner are also responsible for the shipping charges and if the defective unit is not returned within this time, Riverbed will invoice the customer/partner for the contract price of the replacement unit.

For customer/partner shipments, the customer/partner assumes the risk of damage or loss in transit. In those cases where Riverbed approves and funds the return of the faulty equipment, Zycko will generate a return address label and attach to the helpdesk ticket, accessible via the Zycko online portal.

* Zycko L2 engineer can only reinstate service on successful notification from client/partner that the unit has arrived onsite and will deliver RT services remotely via the NOC.

It is the client/partners responsibility to provide onsite resource to assist in the removal of the faulty unit, rack the replacement, cable and provide remote connectivity (in the form of desktop sharing) to allow Zycko's L2 engineer to reinstate the service. (Silver, Gold & Gold plus Hardware Support contract)

Platinum hardware support contracts include an onsite engineer to assist Zycko in restoring service remotely.

2.6.1 Charging basis

In countries where it is not feasible for Riverbed to provide Platinum hardware replacement contracts and the client is unable to provide suitable onsite IT resource to assist Zycko with the restore of service, onsite engineer services can be purchased on an ad-hoc basis. (See Appendix B)

2.7 **Reporting**

Supplier will provide availability and alert reporting for each device supported under a Zycko Managed service contract as part of the Core service offering.

Accessible via the ZMS Reporting server at <http://manage.zycko.com> customers are able to login to view assets under support along with a history of alerts received from each device.

2.8 Service Review & Advisory Services

The customer will be allocated a Zycko representative who will provide a quarterly review and advisory service in line with the ZMS service generated reports.

It is common for the report to highlight a number of tuning suggestions to either the Riverbed device, applications, clients or network and whilst the Zycko Managed service will deliver MACD's to the steelhead devices being managed, this does not include technical advisory or project management services for changes outside of Zycko's control, but necessary to maintain optimisation efficiencies to best practice.

Areas outside of Zycko Control

Customer application versions or configuration of applications

Customer Domain Services (Signed MAPI,SMB/CIFS optimisation relies on domain service integration)

User software application, OS versions or configurations

Secure Certificates (HTTPS Optimisation relies on the customer providing certificates)

Network Infrastructure

Any further advisory, project management and professional services will incur additional fees. (See Appendix B).

3. Upgrade Services

3.1 Software Management

3.1.1 Notification

Zycko will provide updates to clients/partners following the release of any maintenance or major RiOS software update. The update will be provided during the quarterly service review meeting and will present a breakdown of new features or bug fixes relevant to the clients estate, whilst offering some advice on the potential impact and risks to the business.

3.1.2 End of Sale and Support

The following describes Riverbed's End of Sale and End of Support policies:

Policy for Hardware

Riverbed will repair or replace all defective field replaceable units for a period of five years from the End of Sale (EOS) date for that product under a current support agreement.

Riverbed reserves the right to substitute functionality equivalent product and/or peripherals.

Policy for Software

Zycko's standard practice is to provide software support and maintenance on the following releases:

- The current or latest major or minor release of the software.
- The immediately preceding major or minor release of the software, for a period of one year after general customer availability of the current or latest major or minor release.

- The latest valid major or minor release for any end-of-availability appliance product or software product that has not yet reached end-of-support.

At Riverbed's discretion, they may provide support for older releases. If the customer encounters an error in a version of the software that is other than the latest release of any type, Riverbed may require you to upgrade to a specified later version to obtain a correction of the error.

Riverbed's software releases are designated by the form X.Y.Z (where X, Y, and Z are integers) and are characterized as follows:

- On a Major release the Release Designator X Changes to X' which is greater than X. Y and Z are set to zero. Major releases contain significant new features, and may also contain minor new features and software error corrections.
- On a Minor release X does not change. Y changes to Y' which is greater than Y. Z is set to zero. Minor releases contain minor new features and may also contain software error corrections.
- On a Patch/Fix/Maintenance release X and Y do not change. Z changes to Z' which is greater than Z. This type of release contains software error corrections (maintenance) to existing features and may occasionally contain minor new features that Riverbed elects to provide as part of the Patch/Fix/Maintenance release instead of a Minor release.

3.1.3 Upgrades

Each device covered by a valid ZMS and Software Upgrades contract qualifies for one(1) software upgrade per annum (Maintenance or Major RiOS upgrade) and is additional to any software upgrade included as part of the required on boarding process.

If Riverbed support request a software upgrade to rectify an identified software bug, whilst attempting to solve a support ticket raised via the Zycko helpdesk then this software upgrade will be additional to the qualifying ZMS upgrade.

Software update requirements caused by wider environment changes without prior notification will be considered out of scope for this service offering and any remedial actions required for resolution may be chargeable.

4. Report Services

Quarterly health and performance reporting is provided if "REPORT" has been taken in addition to the CORE service.

Accessible via the ZMS reporting server at <http://manage.zycko.com>, partners or customers are able to login and retrieve the reports in PDF file format.

The report is created from data retrieved from the collector, which is aggregated over time to show immediate and recurring issues, capacity planning and trending.

4.1 Service Review & Advisory Services

The customer will be allocated a Zycko representative who will provide a quarterly review and advisory service in line with the ZMS generated reports.

It is common for the report to highlight a number of tuning suggestions to either the Riverbed device, applications, clients or network and whilst the Zycko Managed service will deliver MACD's to the steelhead devices being managed, this does not include technical advisory or project management services for changes outside of Zycko's control, but necessary to maintain optimisation efficiencies to best practice.

Areas outside of Zycko Control

Customer application versions or configuration of applications
Customer Domain Services (Signed MAPI,SMB/CIFS optimisation relies on domain service integration)
User software application, OS versions or configurations
Secure Certificates (HTTPS Optimisation relies on the customer providing certificates)
Network Infrastructure

Any further advisory, project management and professional services will incur additional fees. (See Appendix B).

The report is created from the data collected from the agent, which is aggregated over time to show immediate and recurring issues, capacity planning and trending. The report is divided into sections and utilises a traffic light system to quickly highlight any issues identified.

4.2 Report Structure

Executive Overview

General Health

Contains information about the status and health of the device, at present and during the time covered by the report

Application Optimisation Efficiency

Data Reduction & Application Performance

Pass Through Applications

Performance & Sizing

Disk Load

CPU Performance

Memory

Interfaces

Log Analysis

Software Features

Configuration Inconsistencies

Operation Issues

Conclusions

Appendices

4.3 Presentation

A presentation of the quarterly report will be conducted over a remote web meeting, following the agenda below and providing the customer with an opportunity to engage in a technical and commercial discussion around their Riverbed estate.

- Devices Being Monitored
- Completed and Scheduled ZMS Changes (During reporting period)
- Observations
- Recommendations
- Latest RiOS Features
- Summary of actions

4.3.1 Performance Management

Supplier will provide performance monitoring of supported devices, establish performance baselines, collect performance statistics, create and maintain a historical statistical database, and provide quarterly performance reporting of metrics and trends.

Supplier will establish a performance baseline within 30 days of a new service line implementation. Significant changes in a customer's infrastructure may require that supplier re-establish the performance baseline. Typically, a new performance baseline can be completed within 30 days after the changed or modified infrastructure has been implemented and is operational

5. Customer Responsibilities

5.1 General

Unless otherwise specified in the contract, customer shall be responsible for maintaining all equipment, wiring, power source and or communications services necessary for inter-connection with the Riverbed devices and/or the network.

Zycko is not responsible for the availability, capacity or condition of any customer equipment not covered under this contract.

Partner and/or End User will provide Zycko with reasonable access to appropriate personnel, information and facilities as reasonably requested by Zycko.

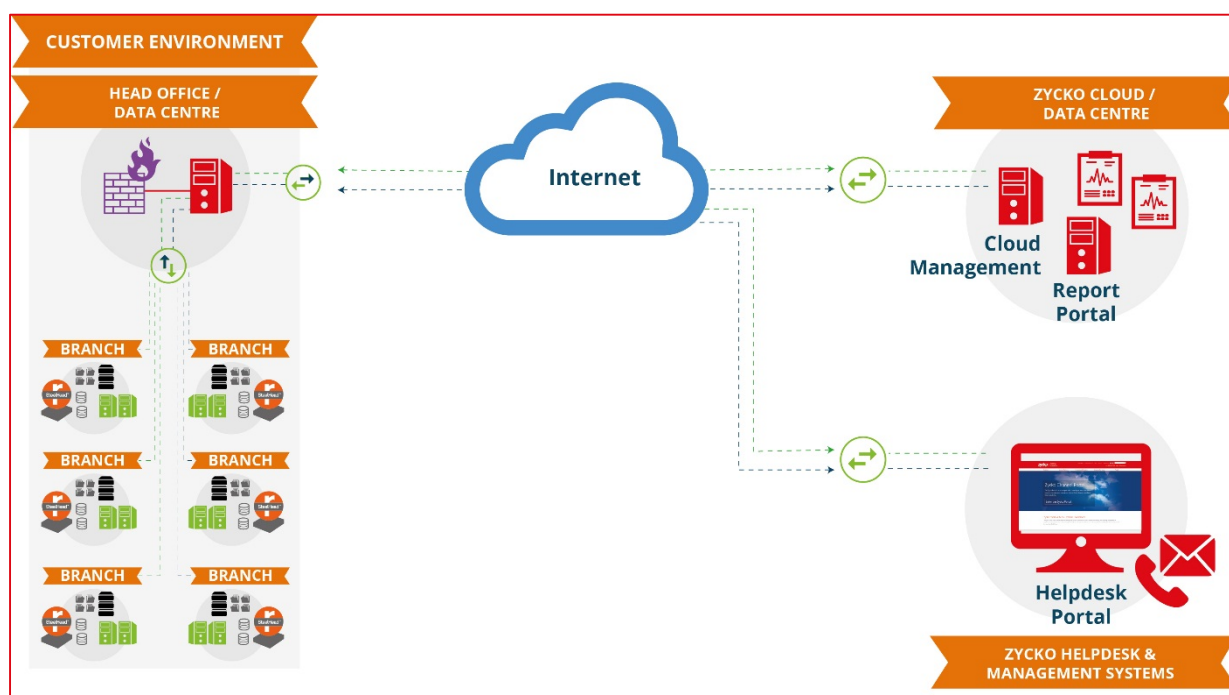
Customer is to inform Zycko in a timely manner and according to a pre-agreed change request procedure of any changes made to the infrastructure or to business critical applications that could affect the service of devices covered under this agreement. In the event that changes are made outside of the change request procedure in an emergency, the partner and/or end user will inform Zycko of any changes in a timely manner.

5.2 Management Collector

It is a requirement that the customer permit external SSL (HTTPS) access through their internet firewall to allow the collector to communicate back to the Zycko data centre for the purposes of data extraction.

Further detail can be provided if the communication needs to be locked down to an IP level for security reasons.

Zycko recommends that this collector is placed in a DMZ behind a customer corporate firewall, to give the customer full control of any communication between Collector and Riverbed devices being managed.



Further to the external connectivity requirements, it is necessary for the ZMS collector has the following access to the Riverbed Devices.

SSH (TCP/22)
 HTTPS (TCP/443)
 ICMP

All Riverbed devices will be enabled for INFO level Syslog (TCP/514) to send alerts through to the Collector.

5.3 Unsupported Hardware & Software

Customers that do not have a valid maintenance service plan as listed in section 5 will not receive major or maintenance software releases, telephone assistance via the helpdesk or any other technical support for the unsupported devices through this agreement.

It is a requirement of Zycko delivering Managed services that the Riverbed Steelhead estate to be managed complies with the end of support terms.

5.4 Remote VPN Connectivity

Where Zycko's managed services have been taken, remote access to the Riverbed Estate being monitored and administered will be required.

The remote access facilities allow Zycko's support engineers to deliver a fast, efficient response and resolution to incidents raised through the Zycko Support desk or access to the estate to deliver MACD's or health checks under ZMS.

Providing Zycko with Remote connectivity provides the following benefits:

- Avoidance of additional costs for on-site visits where telephone only support would prove unsuitable to resolve a software problem;
- Delivery of Zycko Managed Services
- Reduction in the time to implement resolutions and therefore increase in business productivity.

The ZMS collector provides the facility for Zycko engineers to establish a point to point VPN connection for management purposes, secured with one time password, restricted IP connectivity and services.

The enablement of this service is possible using the toggle enable switch within the collectors web management interface and is under the full control of the customer.

In the event the client does not accept enablement of the Zycko VPN service, one of the following remote access services will be required with secure user authentication enabled at the appropriate gateway used for access:

- Provision of a site to site, secure internet VPN supporting IPSEC tunnelling. The cost of the required equipment and internet connectivity e.g. ISDN or ADSL link will be the responsibility of the customer.
- Secure connectivity to the customer's network. This is typically achieved by establishing a Virtual Private Network connection between IPSEC compatible firewalls at the customer's premises or IPSEC/SSL VPN client into the customers firewall or remote access gateway.
- If the customer is not able to make the necessary firewall configuration changes to allow this access, Zycko will provide a quote to undertake this work;
- If the firewall installed at the customer's site is not suitable to allow this connectivity, Zycko are able to suggest and provide a quote for a solution.

Zycko will accept no responsibility for a service gap caused by any changes made by the customer/partner that impact the ability to collect data and/or manage Steelheads under contract.

5.4.1 In-Band and Out of Band Access

Zycko must have both in-band and OOB access to each Riverbed device to deliver ZMS.

5.4.1.1 *In-Band*

In-band access to the primary or auxiliary IP interfaces of the Riverbed Steelhead device in the form of HTTPS Browser access and SSH terminal session is required.

5.4.1.2 OOB – Out of Band

In the event of any Riverbed device failure and in-band management access is not available, it is the customers/partners responsibility to provide Zycko with all required system logs retrievable via the console interface before a replacement hardware unit will be despatched to site.

In any event the customer has no technically competent resource onsite to deliver on this obligation; the customer must provide and install at their cost a dedicated RS232 terminal device for remote troubleshooting purposes per device.

Where available, Zycko will provide the customer with the option to purchase a device to achieve the required access.

6. Professional Services

6.1 Service Hours

Zycko support services operate 24 hours a day, 365 days a year, and can offer full service for this period if required, however the standard hours of cover for tuning and configuration undertaken by professional services outside of the standard ZMS MACD's are UK Business Hours.

Where the work requires resource out of UK business hours Zycko will calculate the required time to complete the works charged at the standard professional service fees rates (See Appendix B).

6.2 Shared Resource

All work completed under Zycko's Managed services is delivered remotely with a team of Shared Resource, if the need arises to facilitate a dedicated onsite resource additional fees will be incurred. (See Appendix B)

6.3 Additional Administration and Support Activities

As part of providing a complete service to the customer, other chargeable administration or support tasks may also be undertaken by Zycko which are outside of the standard managed services.

These activities may include:

- Disaster Recovery or Business Continuity Testing
- Shut down and service restore support for any computer room or site power related work.

These will incur additional fees (See Appendix B)

7. Service Levels

7.1 Service Levels

Zycko Support service plans are available in four levels: Silver, Gold, Gold Plus, and Platinum and mirror Riverbed’s own plans exactly. Each level offers the same capability of response according to the severity of the problem with the key differentiator between them being the time taken to replace hardware should it suffer failure and for Platinum onsite engineer to install it.

7.1.1 Software Maintenance Offerings

With all Silver, Gold, Gold Plus, or Platinum support plans, Zycko Riverbed Support provides access to software upgrades for maintenance releases and updates ensuring you have access to all of the latest product features and functionality as they are released.

7.1.2 Hardware Replacement Service Level Agreements (SLAs)

Riverbed provides a standard, limited out-of-the-box warranty for a total of one year from the date of purchase. Under this warranty and in the event of hardware failure the unit may be shipped to Riverbed for replacement or repair at the Partner/Clients expense. In addition to the standard warranty, the table below represents the additional Zycko Riverbed Support offerings available for hardware replacement SLAs.

Level	Support	Software	Hardware
Silver	24x7 Availability Phone, Email, and Web	All Maintenance Releases All Software Updates	Replacement/Repair
Gold	24x7 Availability Phone, Email, and Web	All Maintenance Releases All Software Updates	Next Business Day Advance Replacement/Repair*
Gold Plus	24x7 Availability Phone, Email, and Web	All Maintenance Releases All Software Updates	Up to 4 Hour On-Site Hardware Replacement **
Platinum	24x7 Availability Phone, Email, and Web	All Maintenance Releases All Software Updates	Up to 4 Hour On-site Replacement/Repair with On- Site Field Engineering Support **

Notes

It is important to understand that the clock begins to tick for any of these SLAs once a diagnosis of hardware failure has been determined as the cause of the underlying issue and agreed to by Riverbed.

Replacement hardware is not provided on demand.

* For Gold agreements a replacement unit will be shipped from one of the many Riverbed support depots located across the globe, as appropriate. Advance replacement for RMAs under Gold agreements authorised by 2:00 pm local time in the time zone of the depot nearest to the installation address of the failed item will be shipped for next business day delivery, otherwise it will be shipped on the following business day for arrival on the next business day thereafter. Delivery time may depend on international customs clearing and export/import laws and regulations for non-US

Destinations; remote destinations may take longer than one day. Please request a check if you have any locations that you normally experience extended delivery times to.

** The 4 hour premium services are not available in all areas. Please check with your Riverbed partner organisation for specific location coverage.

7.1.3 Incident Prioritization & Response

All calls will be handled in the manner consistent with the allocated prioritisation.

Priority 1

Priority 1 cases severely impact the client's ability to conduct business. This may mean that the client's systems are down or not functioning and no procedural workaround exists. The objective is to get the client back online by whatever means necessary within 24 hours and to downgrade the problem severity accordingly.

The support desk will respond to a Priority 1 case within 30 minutes. The target response for a P1 issue is immediate. Support should be working on the fault or have escalated to a level 2 technical engineer within ½ hour of receipt of call.

Continuous efforts are made to isolate, diagnose, and deliver a solution or repair. When the severity level has been changed to Priority 2 or Priority 3, the appropriate guidelines should be followed.

Priority 2

Priority 2 cases are high-impact problems that disrupt the client's operation but there is capacity to remain productive and maintain necessary business-level operations. The problem may require a fix on the client's system prior to the next planned commercial release of the software.

The support desk will respond to a Priority 2 case within 60 minutes and support must be working on the fault or have escalated to a level 2 technical engineer within 2 hours of receipt of call if no resolution has been reached. The Support team must make continuous efforts to isolate, diagnose, and deliver a workaround or solution during the client's normal business hours.

Priority 3

Priority 3 issues are medium-to-low impact problems that involve partial loss of non-critical functionality. The problem impairs some operations but allows the client to continue to function.

The support desk will ensure calls receive an acknowledged receipt within 4 hours. Configuration issues are to be referred to the Zycko technical team by email to support@Zycko.com and will be dealt with on the next business day on a best endeavours basis.

Priority 4

Priority 4 issues include minor problems and all other errors. The inconvenience is slight and can be tolerated. The support desk will respond within 24 hours following the receipt of a case and will be dealt with in an appropriate time. Information only - Client initiated changes - calls will be handled on a best endeavours basis. The Helpdesk engineer will record the changes and update equipment / infrastructure records.

7.1.4 Incident Escalation Process

In the event of the helpdesk not being able to determine the cause of or resolve an issue remotely, even with escalation to a senior accredited engineer, then a TAC case with Riverbed's L3 support will be opened. The senior engineer involved will maintain responsibility for the interaction with Riverbed TAC until resolution, keeping the helpdesk ticket updated at all times.

It is expected that the Zycko support desk will on average resolve at least 90% of all calls for support within the L1 and L2 resource in-house with on average less than 10% of calls requiring escalation to Riverbed TAC Level 3 teams.

In the event of the helpdesk not being able to determine the cause of or resolve an issue remotely then the default path is to instigate the shipping of a replacement item that will provide similar or greater functionality than that installed as per the advance hardware replacement schedule above.

If for any reason this should not be possible such that the contract SLA will not be attained, the following procedure should be taken.

Escalation Procedures

If problems are not responded to as targeted above, Customers may escalate the issue to appropriate Zycko Support management personnel. Zycko Support provides systematic escalation management to Customers with current service plans. The Zycko Support escalation process notifies levels of management throughout the life cycle of the technical issue. This ensures that the appropriate resources resolve outstanding technical problems as efficiently as possible.

Severity	Notifications		
	Escalation Engineer	Manager	Executive Staff
1. Critical	Within 1 Hour	1 Hour	4 Hours
2. High	Within 4 Hours	8 Hours	24 Hours
3. Minor	Within 8 Hours	Weekly	N/A
4. Informational	Within 24 Hours	N/A	N/A

To escalate a case, email support@zycko.com or call one of the following numbers.

Country	Number	Country	Number
Belgium	07 848 02 36	France	09 75 181 656
Germany	0800 762 7872	Hungary	06 80 016 393
Italy	199 241 410	Luxembourg	2088 0660
Netherlands	085 888 0630	Norway	852 26 505
Poland	00 800 112 4162	Portugal	800 813 650
Russia	8 10 8002 801 1012	Spain	90 166 7707
South Africa	0875 502 322	Sweden	0770 791 811
Switzerland	0800 834 570	United Kingdom	0800 072 1089
USA	877 678 7251	All other countries	+44 1285 868699

Appendix A – Riverbed Alarm Definitions

The alarm status of Riverbed Steelhead devices falls into one of the following states: These are conditions that may result in the following priority severity, but actual severity of any case is determined by the business impact at the time of raising a support case.

Priority 4 - Needs Attention – Non Service Affecting (NSA)

Accompanies a healthy state to indicate management-related issues not affecting the ability of the Steelhead appliance to optimize traffic.

Asymmetric Routing - Indicates that the system is experiencing asymmetric traffic

Certificate Revocation List Expirations - Indicates a failure with the Certificate Revocation List (CRL) verification on the server certificates.

Duplex - Indicates duplex errors have been detected on an interface

Domain Authentication Alert - Indicates that the system is unable to communicate with the DC, has detected an SMB signing error, or delegation has failed.

Priority 3 - Degraded – Degradation (DA)

The Steelhead appliance is optimizing traffic but the system has detected an issue.

Connection Forwarding - Indicates that the system has detected a problem with a connection-forwarding neighbour.

CPU Utilization - Indicates that the system has reached the CPU threshold for any of the CPUs in the Steelhead appliance.

Link State - Indicates that the system has detected a link that is down. You are notified through SNMP traps, email, and alarm status.

Memory Error - Indicates that the system has detected a memory error.

Memory Paging - Indicates that the system has reached the memory paging threshold.

Secure Vault - Indicates a problem with the secure vault.

Priority 2 - Admission Control – Service Affecting (SA)

The Steelhead appliance is still optimising traffic but has either reached its connection limit or could be due to one of the following reasons.

Connection Limit - Indicates that the system connection limit has been reached. Additional connections are passed through unoptimised. The alarm clears when the Steelhead appliance moves out of this condition.

CPU - Indicates that the appliance has entered admission control due to high CPU use. During this event, the appliance continues to optimize existing connections, but new connections are passed through without optimization. The alarm clears automatically when the CPU usage has decreased.

MAPI - Indicates that the total number of MAPI optimized connections have exceeded the maximum admission control threshold. By default, the maximum admission control threshold is 85% of the total maximum optimized connection count for the client-side Steelhead appliance. The Steelhead appliance reserves the remaining 15% so the MAPI admission control does not affect the other protocols. The 85% threshold is applied only to MAPI connections. In RiOS v6.5 and earlier, the system is now passing through MAPI connections from new clients but continues to intercept and optimize MAPI connections from existing clients (including new MAPI connections from these clients). RiOS continues optimizing non-MAPI connections from all clients. The alarm clears automatically when the MAPI traffic has decreased; however, it can take one minute for the alarm to clear.

Memory - Indicates that the appliance has entered admission control due to memory consumption.

TCP - Indicates that the appliance has entered admission control due to high TCP memory use.

Priority 1 - Critical – Service Affecting (SA)

The Steelhead appliance might or might not be optimizing traffic; you need to address a critical issue.

Data Store - Indicates that the RiOS data store is corrupt or has become incompatible with the current configuration.

Hardware - Either Critical or Degraded, depending on the state

Fan Error - Indicates a fan is failing or has failed and needs to be replaced.

Flash Error - Indicates an error with the flash drive hardware.

IPMI - Indicates an Intelligent Platform Management Interface (IPMI) event.

Memory Error - Indicates a memory error; i.e when a system memory stick fails.

Other Hardware Error - Indicates a hardware error. The following issues trigger the other hardware error alarm.

- *Power Supply* - Indicates an inserted power supply cord does not have power, as opposed to a power supply slot with no power supply cord inserted.
- *RAID* - Indicates that the system has encountered RAID errors (for example, missing drives, pulled drives, drive failures, and drive rebuilds).
- *Licensing* - Indicates whether your licenses are current.
- *Network Bypass* - Indicates that the system is in bypass failover mode.
- *Temperature* - Indicates that the CPU temperature has exceeded the critical threshold

Optimisation Service

Internal Error - The optimization service has encountered a condition which might degrade optimization performance.

Unexpected Halt - The optimization service has halted due to a serious software error.

Service Status - The optimization service has encountered an optimization service condition.

Appendix B – Charges

Remote Professional Services Fees – Hourly Charge

Hourly Remote Engineer Professional Services Fee (Mon to Fri - 09:00 to 17:30)	\$240.00
Hourly Remote Engineer Professional Services Fee (Mon to Fri – 17:31 to 00:00)	\$360.00
Hourly Remote Engineer Professional Services Fee (Sat or Sun – 09:00 to 18:00)	\$480.00

Onsite Engineer Fees – Per Day

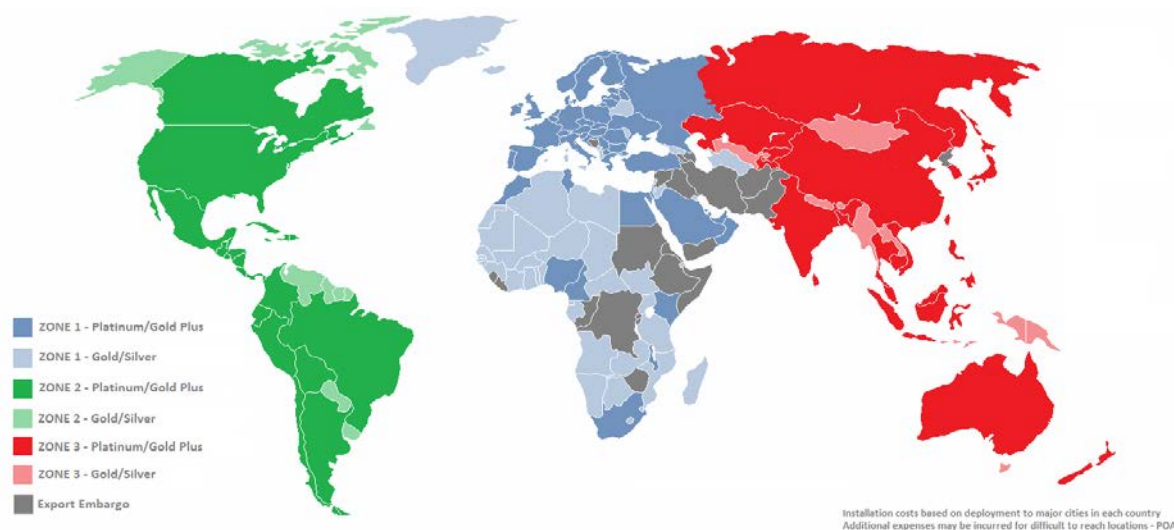
Hands and Eyes Level Engineer	
Zones 1, 2 & 3* (Local Weekday Business Hours)	\$800.00
Zones 1, 2 & 3* (Local Weekday out of Business Hours)	\$1,200.00
Zones 1, 2 & 3* (Local Weekend Hours)	\$1,600.00
Riverbed RCSP Qualified Engineer	
Zones 1, 2 & 3** (Local Weekday Business Hours)	\$1,520.00
Zones 1, 2 & 3** (Local Weekday out of Business Hours)	\$2,280.00
Zones 1, 2 & 3** (Local Weekend Hours)	\$3,040.00

*Fees provided are based on engineer dispatch to major cities in each country. Additional expenses may be charged for hard to reach locations.

** Expenses will be charged for engineer dispatch from the closest Zycko office location to the required site.

Project Coordination – Hourly

Hourly Project Coordination Fee	\$64.00 per hour
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Appendix C – Change Control Form

End User Co. Name Date Change Raised

Name of person raising change
Contact No
Contact Email

Serial No of Device (For whole estate, Provide at least one Serial#)

Customer Device ID/Name

Change Type (Standard, Advanced, Onsite)
(Please see Service Terms below **)

Onsite Change Address (if Relevant)

Partner/Customer helpdesk Incident No (If Relevant)

Description of change required (if assistance to define this is needed please describe the scenario and an engineer will contact you using the details above to discuss it)

Reason for change

Required Implementation date (Change window date, time & Time zone)
(Please see Service Terms below ** for timescales)

Completed By ZMS Engineer

Risk & Impact assessment

Agreed Change Window – Date/Time/Time Zone e.g. (01/02/15 21:00hrs GMT)

This change will require sign off from the authorised approver and evidence in the form of email attached to helpdesk.

**

Standard Change - A change activity that will impact a single device or site, involves less than three configuration variables and can be performed remotely by a ZMS engineer, submitted to the Zycko helpdesk with a minimum of 24 hours' notice of the required implementation date/time.

Advanced Change - A change activity that will impact multiple devices or sites, involves one or more configuration variables and can be performed remotely by a ZMS engineer, submitted to the Zycko helpdesk with a minimum of 72 hours' notice of the required implementation date.

Onsite Change - A change activity, Standard or Advance that requires onsite assistance, submitted to the Zycko helpdesk with a minimum of 5 working days' notice of the required implementation date. **Onsite resource will incur additional professional service fees, skillset dependent.**

Terms & Conditions

Contract Terms

Please Reference accompanying support contract document in format

<Partner Name> Zycko Support Contract <Contract Number>.pdf