



Managed Service Attachment

1. Overview

- 1.1 Calculated Research & Technology, Inc. will be referenced as "CR-T".
- 1.2 Leveraging our Remote Monitoring and Management Tools. The monitoring components of our tool set often allow us to get an early warning that something is filling up or running near capacity. Often this can be resolved before it leads to expensive downtime. The management components of our tool set allow us to enforce configuration standards across the computing environment. More consistency generally leads to better uptime.
- 1.3 Documentation. CR-T keeps current documentation such as Infrastructure Summary and a Network Diagram.
- 1.4 Using Proactive Recurring Service Tickets. CR-T uses its ticketing system to create recurring service tickets for proactive service such as health checks, antivirus system checks, monthly patch updates, & capacity checks.
- 1.5 This agreement is designed to support the EXISTING SYSTEM at a fixed cost and does not include services for installing new equipment or installing major software version upgrades. These services will be proposed and signed off using separate proposals and Scopes of Work.
- 1.6 Depending on your needs, we will either serve as your IT department or as adjunct to your existing IT staff. Just like having a full-time employee, your CR-T vCIO will have regular scheduled calls and business reviews with you to review the ongoing health of your network. You will have an opportunity to discuss strategic growth plans and additional ways that your business can leverage technology.

2. Transition Plan

This is a high-level overview of the transition plan to proactive support

Transition Phase	Objectives
Agreement	Set Expectations Validate Objectives Vision and Scope Confirmed Identify key network elements to be monitored Gather Data on IT objectives and plans
Compliance Check	Document Key Network Elements Identify Compliant and Non-Compliant Systems Review Compliant and Non-Compliant Systems and Devise plan for Compliancy
After Signing	CLIENT and CR-T agree on supported elements and start date
Implement & Compliance	CR-T Implements Monitoring CLIENT Works in Partnership with CR-T to Meet Compliancy Goals. End User Education and Contact Numbers Assigned Document Final Setup and Configuration Validate Complete System Operational Before Go Live Date
Go Live	Review progress on compliance items Go Live
Ongoing Monitoring	CLIENT Formally Accepts Project Completion Outcomes Measured Against Project Objectives Administrative Close

3. Desktop Support

- 3.1 Virus, Spyware and Adware. Software License Antivirus is included in your package from CR-T. It will manage your antivirus systems and identify harmful spyware and adware remotely, and alert you.
- 3.2 Asset Management. CR-T can provide historical and daily, real-time view on all asset information covered under the managed service agreement. Clients can have access to a web based tool to review their current assets. Upon request, we can provide real time reporting on installed software to help ensure your business remains in compliance with licensing laws.
- 3.3 Desktop Monitoring. CR-T will setup monitoring on drive space, CPU, memory, and key Operating System services.
- 3.4 Software Patch Management. CR-T will install monthly Microsoft Critical operating system patches and Apple Security patches, when available, to your systems to help

- protect your information and comply with the latest software regulatory standards.
- 3.5 Desktop Optimization and Management. CR-T will schedule periodic desktop tune-ups as needed. Monitoring and patch deployment tools will be used to make sure you have the current service packs and patches to keep your system healthy. These processes are scheduled during off hours or idle time to not impact the performance of the desktop.
- 3.6 Unlimited Remote Support Helpdesk Incidents. Help desk is available during normal business hours. About 85% of support incidents can be resolved remotely. (a) Unlimited Remote Support Incidents. CR-T will attempt to fix all issues remotely before coming on site. To establish remote control support, the user will be required to allow a CR-T technician access to their system remotely. Instructions will be given over the phone during the support call. (b) Microsoft Application Support. CR-T will support most of Microsoft's desktop products. Technicians are available through helpdesk calls or email. (c) Apple Standard Packages. CR-T will support Apple Standard desktop packages. Technicians are available through helpdesk calls or email. (d) Virus and Malware Removal. CR-T will remotely remove any viruses or other malware that evade the antivirus systems. Some viruses cannot be removed remotely and require escalation to "Onsite" status. (e) Case Management. CR-T provides each authorized user access to our online portal allowing visibility into the current status of helpdesk requests. Resolution notes on each incident create a customized knowledge base accessible by your system administrators and end users. (f) Unlimited Onsite Technical Support. When required we will dispatch a technician to solve those issues that cannot be solved remotely.
- 3.7 Additional Options. (a) Email Protection: Advanced Spam Blocking, Premium Anti-Spam Multi-Language Filter, Triple Virus & Worm Scanning, Email Attack & Fraud Protection, Advanced Administrative & Reporting Portal, Sophisticated Quarantine Management, Outbound Message Filtering, and 7-day Quarantine. (b) VoIP Phone Vendor Management Add-on. Many of our clients have VoIP phone systems. While not designed to replace your VoIP support agreements, for a fixed monthly fee, our helpdesk engineers will act as the go-between to facilitate support for your users.

4. Server Support

- 4.1 Virus, Spyware and Adware. Central Console License Antivirus is included in your package from CR-T. We will manage your antivirus systems and identify harmful spyware and adware remotely, and alert you.
- 4.2 Asset Management. CR-T can provide historical and daily, real-time view on all asset information on covered assets. Clients can have access to reports to review their current assets. Upon request, we can provide real time reporting on installed software to help ensure your business remains in compliance with licensing laws.
- 4.3 Server Monitoring. CR-T monitors system drive space, CPU, memory, and key Windows services to assist each client with long term capacity planning and real-time event notification.
- 4.4 Event Log Monitoring. CR-T will proactively monitor your event logs for keywords to help ensure that warnings and signs of trouble are handled prior to them affecting your network health. Through advanced web based monitoring tools, CR-T engineers are alerted to critical issues as they occur.
- 4.5 Log File Maintenance. Depending on your business needs, CR-T will determine the correct log maintenance schedule for your server. This process of maintaining your log files reduces your storage needs, increases your server performance and reduces the risk of downtime.
- 4.7 Server Optimization and Management. CR-T will monitor servers 24/7 through our systems management software and schedule monthly server tune-ups to keep your system healthy. These processes are scheduled during off hours or idle time to not impact the performance of the server.
- 4.8 Unlimited REMOTE Support Helpdesk Incidents. Help desk is available during normal business hours. About 85% of support incidents can be resolved remotely. (a) Unlimited Remote Support Incidents. CR-T will attempt to fix all server issues remotely before coming on site. All server support remote control sessions are logged in the management system. (b) Virus and Malware Removal. CR-T will remotely remove any viruses or other malware that evade the antivirus systems. Some viruses cannot be removed remotely and require escalation to "Onsite" status. (c) Microsoft Server Support. CR-T has technical consultants familiar with many Microsoft Server products.
- 4.9 User Account Administration. CR-T will handle add/remove/change requests through its helpdesk service.
- 4.10 Microsoft Patch Management. CR-T will install monthly Microsoft Critical operating system patches to your systems to help protect your information and comply with the latest software requirements.
- 4.11 Backup Monitoring and Administration. As part of the compliance check, CR-T will assess your backup needs and make recommendations on how to best protect your business. Once a backup regimen is in place CR-T will monitor your backup daily by ensuring that daily jobs are running, and investigate any critical errors. CR-T does not include the cost of storage in this agreement. We can create a separate contract to manage your storage needs.
- 4.12 Unlimited ONSITE Server Technical Support. Part of our escalation process will involve dispatching an onsite technician, when required, to solve those issues that

cannot be solved remotely.

4.13 IT Architect. You will be assigned an IT Architect who will proactively assess your infrastructure, remotely, and on-site, to help determine changes, additions, improvements, etc.

5. Network and Infrastructure Support

5.1 Managed Switch. System Management tools will be used to provide historical monitoring and monitoring of devices in a critical state. Devices in a critical state will generate alerts that are sent to CR-T's 24x7 Helpdesk where we will notify clients of the issue at hand.

5.2 Router Management. System Management tools will be used to provide historical monitoring and monitoring of devices in a critical state. Devices in a critical state will generate alerts that are sent to CR-T's 24x7 Helpdesk where we will notify clients of the issue at hand.

5.3 Firewall/VPN Management. System Management tools will be used to provide historical monitoring and monitoring of devices in a critical state. Devices in a critical state will generate alerts that are sent to CR-T's 24x7 Helpdesk where we will notify clients of the issue at hand.

5.4 UPS. CR-T will monitor SNMP enabled or USB connected UPS systems for proper voltage levels and battery status.

5.5 Environmental Sensor. CR-T will monitor SNMP enabled Environmental Monitoring systems for temperature and humidity levels.

5.6 Unlimited Remote Technical Support. When required, a technician will be assigned to issues that arise and work remotely to solve the issue.

5.7 Managed Switch. CR-T will ensure your Ethernet switches are configured properly to optimize network performance and ensure critical business systems run properly.

5.8 Router Management. CR-T will liaison with your ISP to troubleshoot Data issues and configure your network for optimal performance. CR-T will also open trouble tickets with your ISP or Data Carrier and work to get outages resolved. We will assist you with communications with your hosting provider to make sure you get the services you need. System Management tools will be used to provide bandwidth historical monitoring.

5.9 Unlimited Onsite Technical Support. When required we will dispatch a technician to solve those issues that cannot be solved remotely or over the phone free of charge.

6. Application Support

6.1 SQL Application Monitoring and Support Add-on

(a) Change Request Management. CR-T will handle all basic change request management for your SQL server accounts including adding/removing accounts, password resets and permissions troubleshooting. (b) Setup and Monitoring of Maintenance Plans. CR-T will evaluate your current SQL Server maintenance plans, including backup and recovery processes, log file review and maintenance, server optimization and index optimization. CR-T will recommend any changes to boost overall performance and high availability where needed. CR-T will then proactively manage the SQL Server; alerting you and your staff of any issues while working to resolve the issue. (c) Periodic Test Restores of Backup Data. CR-T will perform periodic restores of your SQL data to verify the integrity of your data protection plans. Sufficient free disk space will be required. (d) SQL Patch Management. CR-T will ensure your Microsoft SQL Server installations have the latest required SQL service packs and patches recommended by Microsoft. CR-T will work with you and your staff with scheduling of these items to not impact daily processes. (e) SQL System Monitoring. CR-T has developed monitoring templates that continuously monitor SQL Server specific parameters such as database query rates and the maximum log file size. (f) Quarterly Performance Checks. While key statistics are monitored continuously, we will run performance checks quarterly to evaluate your SQL Server for performance bottlenecks and recommend actions to fix any issues that may arise.

6.2 Exchange Application Monitoring and Support Add-on

(a) Change Request Management. CR-T will handle all basic change request management for your Exchange server accounts including adding/removing accounts, password resets and permissions troubleshooting. (b) Configuration Review. CR-T will run the Microsoft Exchange Best Practice Analyzer on your current Exchange Server configuration, including backup and recovery, log file maintenance, server optimization. Where needed, we will recommend changes to boost performance and availability. (c) Periodic Test Restores of Backup Data. CR-T will perform periodic restores of your Exchange data to a recovery storage group to verify the integrity of your data protection plans. Sufficient free disk space will be required. (d) Exchange Patch Management. CR-T will ensure your Exchange Server installations have the latest required Exchange service packs and patches as recommended by Microsoft. (e) Microsoft Exchange System Monitoring. CR-T has developed monitoring templates that continuously monitor Exchange specific parameters such as message queues and the maximum size of the information store.

6.3 SharePoint Monitoring and Support Add-on

(a) Change Request Management. CR-T will handle all basic change request management for your SharePoint Server software. We can manage adding/removing accounts, password resets, permissions troubleshooting and licensing issues. (b) SharePoint Patch Management. CR-T will ensure your SharePoint Server installations have the latest required SharePoint service packs and patches recommended by Microsoft. CR-T will work with you and your staff with scheduling of these items to not

impact daily processes. (c) Performance Monitoring. We will constantly monitor performance and alert you to performance bottlenecks that may occur over time from the many services active with SharePoint server. We will recommend any fixes to the hardware and/or software that will help improve upon the performance of your SharePoint server. (d) This agreement does not cover ANY type of SharePoint Customization or Development.

6.4 Critical Line of Business Application Support Add-on

(a) Vendor Account Management. We understand that your company relies on many external software programs to keep your business running. Often with the interaction of vendor software and your systems, it is difficult to trouble shoot and understand where issues and problems originate. Is it your systems or issues with the vendor's software? CR-T will facilitate your software vendor relations. Our expert IT staff can work with your vendor to get your applications running smoothly and troubleshoot issues you may be having with their software. (b) Change Request Management. CR-T will handle all basic change request management for your vendor software. We will follow vendor supplied instructions for adding/removing accounts, password resets, permissions troubleshooting and licensing issues. (c) Configuration Review. CR-T will evaluate your current vendor software configuration, including backup and recovery, security, and performance. Where needed, we will work with the vendor and recommend changes to boost performance and availability. (d) Software Patch Management. CR-T will work with your software vendor and ensure your critical application installations have the latest required service packs and recommended patches. (e) Performance Monitoring. We will constantly monitor performance and alert you to performance bottlenecks and work with the vendor to recommend actions to fix performance issues.

6.5 "Streamline IT" Case Management Option Add-on. CR-T provides your system administrators access to our online ticket management system allowing full access into the current status of helpdesk tickets. (a) Resolution notes on each incident create a knowledge base accessible by your system administrators and end users. (b) Your in-house IT staff will have full access to share responsibility of working tickets as well as full access to all the stored configuration items and documentation.

7. Helpdesk Policy

7.1 Helpdesk Contact Methods. CR-T will accept helpdesk requests via email, phone, voicemail or the client portal. CR-T can be reached at 801-222-9036, emailed at truehelp@cr-t.com, or via the end user portal at <https://truehelp.cr-t.com/support>.

7.2 Helpdesk Hours of Operation. (a) Clients have access to helpdesk during normal working hours 8:30AM through 5PM Mountain Time. Monday through Friday, excluding CR-T Holidays: New Year's Day, Memorial Day, Independence Day, Pioneer Day, Labor Day, Thanksgiving Day, Day after Thanksgiving, and Christmas Day. Extended hours may be added through Help Desk advanced agreement. (b) Client requests for support outside of normal working hours will be billed at Time and a Half rates in fifteen (15) minute increments unless incident is covered under an Agreement. (c) Client requests for support outside of normal working hours on CR-T Holidays will be billed at Double Time rates in 1-hour increments unless covered under an Agreement.

7.3 Helpdesk Response Times. (a) CR-T will strive to have calls answered as quickly as possible, however, it is possible due to high call volumes there may be delays during peak hours. (b) CR-T will target 80% of calls answered within 30 seconds. (c) Emails and voicemails will receive a response within 30 minutes.

7.4 Escalation. (a) Issues being worked on by Tier 1 technicians will be escalated to Tier 2 engineers after 30 minutes, unless a viable solution is in process of being implemented. Final escalation to senior engineer team or third-party vendor support will occur after 1-hour with Tier 2 engineers. (b) Response times will vary with escalation depending on engineer availability and severity of the issue.

7.5 Issue Priority and Response Time. Engineers will respond to the call as soon as possible according to the priority levels below.

Priority Level	Priority Level Description
1	Critical work stoppage issue, system down, blocking multiple employees.
2	Issue disrupts productivity of multiple employees, no obvious workaround to the issue.
3	Issue disrupts productivity of one employee, or there is a workaround to the issue.
4	Issue does not disrupt productivity or is general technical question.

7.6 On Site Support. Most problems can be solved remotely within 1 hour; only in the event of escalation and failure to solve the problem remotely will we send an engineer onsite.

7.7 Reporting. (a) CR-T will provide business executive summary reports. Ad hoc reports are available as requested. (b) Reports will be provided via email to the primary client contact.

7.8 Helpdesk Tools. (a) With the user's permission, the support representative can view your screen and share control of your mouse and keyboard. (b) The user is in full control of the computer always. The user can override control of the mouse and keyboard and end the screen-sharing session at any time.

7.9 Patch Management. (a) CR-T is responsible for the following patch management for supported servers, desktops and network devices: i. Desktops: Microsoft operating



system, Microsoft Office and designated critical Line of Business applications ii. Servers: Microsoft Operating system, IIS, Exchange, SQL and designated critical applications. iii. Network Devices: Vendor specific patches. (b) CR-T will provide service pack upgrades. (c) CR-T will provide critical security. (d) The client will allow CR-T remote and onsite access to their networks to manage deployment of patches. (e) This service is specifically "NOT" designed to update or patch "ANY FIRMWARE" on a regular schedule. This would include but is not limited to 3rd party drivers, firewalls, switches, routers, phone systems, etc. This service is provided on a per incident basis when troubleshooting an issue. Due to the disparate and unpredictable nature of patching in any given environment, CR-T makes "NO WARRANTY" as to the appropriateness of any patch, the effect on the system being patched or any hardware, software or data associated with any system being patched. If a patch that is deployed does cause a failure of the system, CR-T will review whether there is a simple resolution to the problem. If a quick resolution is not possible, the client can elect to have CR-T investigate the issue and work toward fixing the issue in accordance with your service agreement. CR-T is unable to make any guarantee as to the results of the patch management service beyond that we will make reasonable efforts to complete the process within a reasonable amount of time and within the current environment.

7.10 Hardware and Software Policies. (a) CR-T must be made aware of any changes to Server, Desktop and Network hardware that will affect support calls and maintainability in writing 5 days before the change. (b) Server hardware is required to have hot-swap disks available in the event of drive corruption. (c) Desktop, Server and Network hardware must be covered by a manufacturer warranty during the term of the contract. Third-party warranties are not included. (d) Application software must be supported and properly licensed during the term of the contract. Software that falls out of support or fails to meet vendor licensing will not be supported. (e) All software or hardware that falls out of support will still require payment under the terms of this support contract. It is up to the client to provide sufficient coverage and does not affect the payments to CR-T in any way.

7.11 Services not Covered by Proactive Agreement. (a) Maintenance vs. Installation or Upgrade: i. This agreement is intended to MAINTAIN the EXISTING system. Installing anything new into the system is expressly not covered by this agreement. ii. For example, if you are currently running MS Office 2012, then all the Microsoft patches for MS Office 2012 will be upgraded as part of this agreement, but upgrading to MS Office 2016 is not covered by this agreement. iii. Also for example, if you purchase a new printer and need it setup and added to all the workstations, it would NOT be covered by this maintenance agreement. If, however a printer fails and is replaced under an agreement, the labor to re-configure the system for the replacement printer would be covered by the agreement. (b) Issues out of Contract Scope. Issues manifesting themselves as a network, server or desktop issue where the client does not have the appropriate support contract will be considered "Out of Agreement". (c) Issues with Third Party Software Not Explicitly Noted in Agreement. Installation or troubleshooting of nonstandard third-party software not specified in managed service agreement. (d) ALL Issues with Hardware. This agreement does not cover replacement hardware costs of ANY kind.

8. System Compliance

CR-T, through its experience, has realized that systems that abide by basic rules cost less to support. When CR-T initially starts working with a new Client we will look at all your systems and mutually agree which ones we will work to make compliant and which we will categorize as semi-compliant and non-compliant. After the agreement is signed there will be a 90-day grace period where we work with you to get your systems to their highest compliance level.

8.1 Compliance Categories. Network devices including servers, desktops, and network components. Will fall into one of three categories: Compliant, Semi-compliant or Non-compliant. CR-T bases its support pricing on servicing compliant systems. Semi-compliant or non-compliant systems will incur an additional charge.

8.2 Keeping Systems in Compliance. Network devices will be evaluated on a quarterly basis and if systems fall into a higher charge category the client will have 30 days to get that system back into compliance. Systems that move from non-compliant or semi-compliant to compliant will revert to standard pricing 30 days after the move to compliance.

8.3 Compliance Check. CR-T will schedule a one-time network compliance check to determine the health and compliance level of the equipment we will be managing. The result will be a document outlining the CR-T's key network elements and whether they are in a compliant state.

- All licensing must be up to date; active support agreements must be in place for critical software.
- All desktops and servers must meet vendor minimum recommended processor speed, memory, and available hard drive space.
- All desktops, servers and network devices and software must be at the vendor recommended service pack and patch level.
- All hardware must be within warranty or replacement systems available during the life of the contract.
- All servers, desktops and network devices have current antivirus (as applicable), and must be free of viruses and spyware/adware at the commencement of the service contract.
- Regularly scheduled offsite backup rotations are completed for servers and critical

data and MUST use Imaging Technology allowing for full image restore.

- The network must have an active firewall.
- The SQL, Exchange, IIS or other server software supported must be free of viruses and up to the current recommended patch levels.
- The SQL, Exchange, IIS or other server software supported must be running on the minimum vendor recommended hardware, running with best practices implemented and not have any throughput limitations that would cause excessive requests for support.
- The Network must be secure with a best practices security audit conducted.
- Hot-swap disks available for servers in case of drive failure.
- Procedures are documented for adding users, workstations and setting up remote access.
- CR-T reserves the right to refuse to cover all part, section, or component of any equipment or software based on the initial network assessment. The client will have a grace period of 90 days to get their systems to the agreed to compliance level, thereafter CR-T has the option of increasing the rate on non-compliant systems.

8.4 Compliance Level

Compliance Level	Compliance Level Description	Additional Charges
Compliant	No more than one item in violation on compliance checklist	None
Semi-Compliant	No more than two items in violation on compliance checklist	25% additional support cost for each semi-compliant system
Non-Compliant	Does not meet three or more items from compliance checklist	50% additional support cost for each non-compliant system

9. Contract Terms

9.1 Payment Terms. In addition to the "PAYMENT TERMS" as referenced in the Master Service Agreement, payments are due at the beginning of the contract and are due upon receipt. For example, if an agreement is signed on December 30th for service beginning January 1st, an invoice for January service will be dated December 30th and due upon signature. An invoice for February will be created on February 1st and will be due according to PAYMENT TERMS outlined in the Master Service Agreement. CLIENT is required to indicate the CR-T invoice number on their payment. CR-T has the option of discontinuing all services if more than two (2) months billing is outstanding.

9.2 Term. In addition to the "TERM" as referenced in the Master Service Agreement, this Agreement is effective upon the date signed, and shall remain in force for a period of one year. The Managed Services Attachment will be renewed for a subsequent yearly term beginning on the day immediately following the end of the Initial Term, unless written notice is given thirty (30) days prior to expiration date.

9.3 Adding/Removing Desktops, Servers or Network Devices. The Client may add Desktops, Servers or Network devices to the plan at any time effective the next billing cycle. CR-T understands that in larger organizations the number of desktops may vary considerably from the time the original contract was signed. CR-T will do a quarterly audit and adjust the contract price up or down if the change is greater than 5% of the cost of the current support contract. These changes do not affect any other terms of the contract. If, because of the quarterly review, the client loses or gains discounts the client will be billed at the new rate for the remainder of the contract effective the next billing cycle. Servers, Desktops or Network devices can be added at any time, a prorated amount will be charged to the client to adjust until the next regularly scheduled payment. Servers, Desktops and Network devices can be substituted with at least a 30-day notice and are subject to the compliance standards. Servers, Desktops and Network devices can be removed from support but prorated fees for cancellation of service for that device will be charged according to the cancellation section listed above.

9.4 Entire Understanding. This Agreement states the entire understanding between the parties with respect to its subject matter, and supersedes all prior proposals, negotiations and other written or oral communications between the parties with respect to the subject matter of this Agreement. No modification of this Agreement, and no waiver of any breach of this Agreement, shall be effective unless in writing and signed by an authorized representative of the party against whom enforcement is sought. No waiver of any breach of this Agreement, and no course of dealing between the parties, shall be construed as a waiver of any subsequent breach of this Agreement.

9.5 Interpretation. Unless expressly stated otherwise, all capitalized terms used in this Agreement shall have their same meaning as in the Master Service Agreement. To the extent, the provisions of this agreement are inconsistent with the provisions of the Master Service Agreement, this Agreement Attachment shall control.

9.6 Signatory Authority. The parties acknowledge and agree that each signatory to this Agreement is possessed of all rights and authority to execute this Agreement and that it will not challenge the legitimacy, terms or enforceability of this Agreement based

on the identity or authority of any such signatory.