



Comodo One MSP

Software Version 3.2

Remote Monitoring and Management Administrator Guide

Guide Version 6.1.082316



Table of Contents

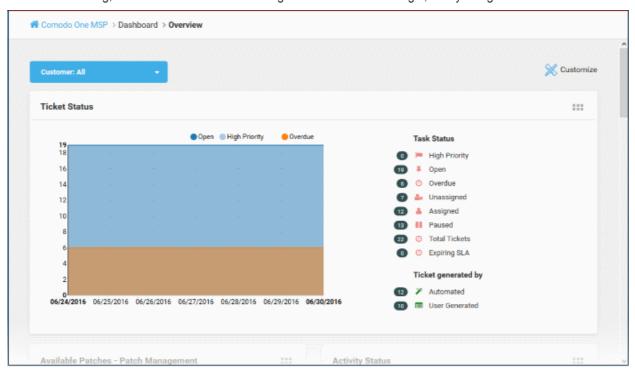
1 Introduction to Comodo One MSP	3
1.1 Sign Up for an Account	5
1.2 The Comodo One MSP Web Interface	12
1.3 Managing Administrators	17
1.3.1 Admin Privilege Levels	22
1.4 Managing Companies	25
2 Introduction to Remote Monitoring and Management Module	30
2.1 Quick Start Guide	33
2.2 System Requirements	52
3 Installing RMM Administrative Console	53
3.1 Logging-in to the RMM Administrative Console	58
4 The RMM Administrative Console	59
5 The Devices Interface	62
5.1 Applying Policies	63
5.2 Running Procedures	65
6 The Sessions Interface	66
6.1 Support Sessions Interface - An Overview	67
6.2 Handling Support Sessions	68
6.2.1 Running Procedures from a Support Session	70
6.2.2 Using RMM Tools	71
6.2.2.1 Access Endpoints through Remote Desktop Connection	73
6.2.2.2 Managing Autoruns	73
6.2.2.3 System Cleaner	77
6.2.2.4 Power Management	80
6.2.2.5 Managing Internet Browser Add-ons	81
6.2.2.6 Active Connections Manager	84
6.2.2.7 Restoring a Client System	85
6.2.2.8 Hardware Monitor Tool	86
6.2.2.9 Accessing Command Prompt Window of Client System	87
6.2.2.10 Managing Currently Running Processes	88
6.2.2.11 Obtaining System Inventory Information	91
6.2.2.12 Transferring Files From / To Client System	92
7 The Jobs Interface	94
7.1 Managing Jobs	95
7.2 Executing Jobs on Endpoints	101
8 The Procedures Interface	
8.1 Managing Procedures	
8.2 Running Procedures on Endpoints	
9 The Policies Interface	108
9.1 Managing Policies	109
Appendix - Issue Codes for Monitors	119





1 Introduction to Comodo One MSP

Comodo One MSP is the integrated platform for Managed Service Providers which combines Device Management, Remote Monitoring, Service Desk and Patch Management modules in a single, easily navigated console.



Applications are available in three areas of the interface - 'Licensed Applications', 'Store' and 'Tool Set':

Licensed Applications. Available for immediate use and accessed by clicking 'Licensed Applications' in the left-hand menu. Licensed applications include:

- Comodo Service Desk A fully featured ticket management system which allows enterprises to implement strong and effective work-flows for internal and customer-facing support departments. Comodo Service Desk allows administrators and staff members to respond to tickets, reassign tickets to other departments or personnel, generate reports, create knowledge base articles and more.
- Comodo Patch Management Provides administrators and MSPs with granular control over the deployment of updates to operating systems and 3rd party applications on network endpoints. Featuring an easy to use interface, Comodo Patch Manager allows administrators to define patching policies and schedules and to remotely monitor the deployment of Windows and Linux operating system updates.
- Comodo IT and Security Manager (ITSM) Allows MSPs to manage, monitor and secure mobile devices and Windows endpoints which connect to customer networks. Once an iOS, Android or Windows device has been enrolled, administrators can quickly apply configuration profiles which determine network access rights, security settings and general preferences. A powerful addition to any MSP toolkit, Device Manager allows you to secure customer data regardless of the device that holds it. ITSM is available by default to customers that signed up for Comodo One version 3.0 and later. Customers that signed up for Comodo One prior to version 3.0 version can integrate CDM to their console, if required.
- Comodo Remote Monitoring and Management (RMM) Comodo RMM is an efficient endpoint
 monitoring application that allows administrators to monitor and manage multiple endpoints from one
 centralized console. RMM is available as an integrated module to customers that signed up for Comodo
 One prior to version 3.0. The customers that signed up for the version 3.0 and later can access RMM
 through the ITSM interface. Refer to the help page at https://help.comodo.com/topic-214-1-771-9524-Remote-Management-of-Windows-Devices.html in the online ITSM Admin Guide for more details.



Store. The C1 Store contains optional applications which allow you to expand your service offerings. Once downloaded, 'Integrated' applications can be used directly from the Comodo One console while non-integrated applications are stand-alone. Most store applications include separate license fees.

- Acronis Cloud Backup A perfect solution for all your backup and disaster recovery needs. This cloud-based application has the ability to backup any application and system including Windows, Linux and Mac. Available with pre and post-paid subscription models, this solution fits the needs of any enterprise.
- cWatch cWatch is a cloud based next generation security information and event monitoring platform that
 allows MSPs to provide high level of security service to their customers. It features advanced event log
 monitoring, built-in reporting, multiple pre-set queries, a powerful custom-query interface, automatic
 assignment of incidents to personnel, customizable dashboards and real-time alerts.
- Comodo Quote Manager Comodo Quote Manager (CQM) is an end-to-end quote management solution
 that allows Managed Service Providers (MSPs) and companies to quickly create, follow up and finalize
 quotes for customers. You can keep track of submitted quotes, send reminders to customers, resolve
 customer queries almost instantly and view detailed sales reports.
- Comodo KoruMail An enterprise antispam and threat prevention solution that uses a sophisticated array
 of spam filters, anti-virus scanners and content analysis engines to prevent unsolicited mail from ever
 entering your customers' networks.
- **Comodo Antispam Gateway (CASG)** CASG is a cloud based email anti-spam protection for corporate mail servers that can reduce spam by up to 97%.
- Comodo Korugan VM Korugan is a Unified Threat Management (UTM) solution that provides multiple, essential security services by controlling firewall policy, antivirus, intrusion prevention, gateway antispam, website filtering, traffic monitoring, VPN, DNS and proxy servers, in a single package. Korugan needs an appliance installed as a Virtual Machine (VM) on the customer network to be protected. Upon subscription of the service, you can download the ISO image of the virtual machine, to be installed on the customers' networks.
- Comodo Korugan Central Manager Korugan Central Manager allows you to manage several Korugan VMs/appliances installed on your customers' networks from a single central console.
- Comodo Dome Shield An enterprise web filtering solution that allows MSSPs to provide comprehensive DNS based security for their customers. Comodo Dome Shield is available as an SaaS solution and allows you to configure granular security and category based web rules.
- Comodo Dome Standard A real time web traffic scanning solution that is capable of providing comprehensive web content and security control for your customers. Includes URL filtering, malware protection, Valkyrie real-time file verdicting and portable containment.

Tool set. The following utilities are available for download from the 'Tool Set' area of the interface:

- Comodo Network Assessment Tool Allows MSPs to perform in-depth scans on customer networks to
 identify a wide range of server, endpoint and network vulnerabilities. The tool will also prepare detailed risk
 reports for scanned networks along with a risk mitigation plan containing actionable advice to address each
 issue.
- Comodo Cleaning Essentials Security software for Windows endpoints which contains tools designed to
 identify and remove malware and unsafe processes from infected computers. Includes a fully customizable
 malware scanner and an advanced system monitoring tool which allows users to identify and kill any unsafe
 processes with a single click.
- Unknown File Hunter Tool A lightweight scanner that is capable of identifying Advanced Persistent
 Threats (APT) and other zero-day threats. While the good and malicious files are identified easily, the files
 that do not fall into these two categories are called 'Unknown'. It is in this category of 'Unknown' that most
 zero-day threats and APTs are to be found. Unknown File Hunter Tool allows to upload these unknown files
 to 'Valkyrie' cloud based servers where these files undergo a battery of tests to determine whether they
 are safe or malicious.

Chapter 1 of this guide covers account set up, an introduction to the Comodo One MSP web interface and initial configuration of administrators and staff members.



- Introduction to C1 MSP
 - Signing up for an account How to create an account
 - The Comodo One MSP Web Interface A snapshot of main functional areas of Comodo One MSP
 - Managing Administrators Explains how to add administrators and staff members
 - Admin Privilege Levels Outline of administrative privileges
 - Managing Companies Explains how to manage companies for an account

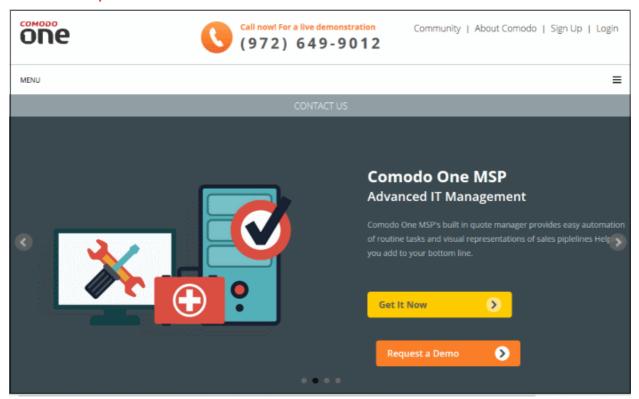
A dedicated guide for the Comodo One interface is also available at https://help.comodo.com/topic-289-1-716-8478-Introduction-to-Comodo-One.html.

Chapters 2 and beyond cover usage of the RMM module. Detailed descriptions other modules can be found in their own dedicated guides.

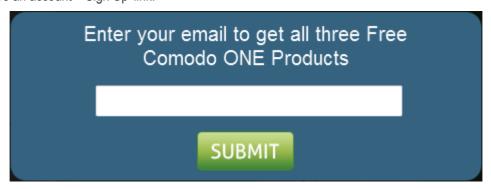
1.1 Sign Up for an Account

Getting a Comodo One MSP account is very easy and can be completed in a few steps.

Visit https://one.comodo.com/

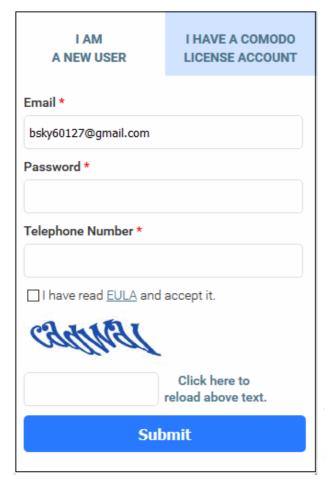


• Click 'Get It Now', then enter your email address in the box. Alternatively, click 'Sign Up' or 'Login' > 'I don't have an account > Sign Up' link.





- Complete the short enrollment form.
 - If you are a new customer, choose the 'I AM A NEW USER' tab and fill a short enrollment form



- Email This field will be pre-populated with email address provided. Enter a new email address if you wish to change it. You will receive the verification link to this email address.
- Password: Enter the password for loggingin to your C1 account. The password should be of at least eight characters, and must contain a combination of lower case and upper case characters, at least one numeral and at least one special character chosen from '("!#\$%^&*")'
- Telephone Number: Enter your contact number.
- End User License Agreement: Read the EULA fully by clicking the 'EULA' link and select the 'I have read EULA and accept it' check box.
- **Captcha**: Enter the Captcha value to verify your application
- Click the 'Submit' button.

A verification email will be sent to the email address registered at the time of your Comodo account creation. If by chance the verification mail is not delivered, you can login to the C1 account and click the 'Your email has not been verified yet. Resend the email again' link.

 If you already have an account with Comodo, click the I HAVE A COMODO LICENSE ACCOUNT' tab and fill a short enrollment form



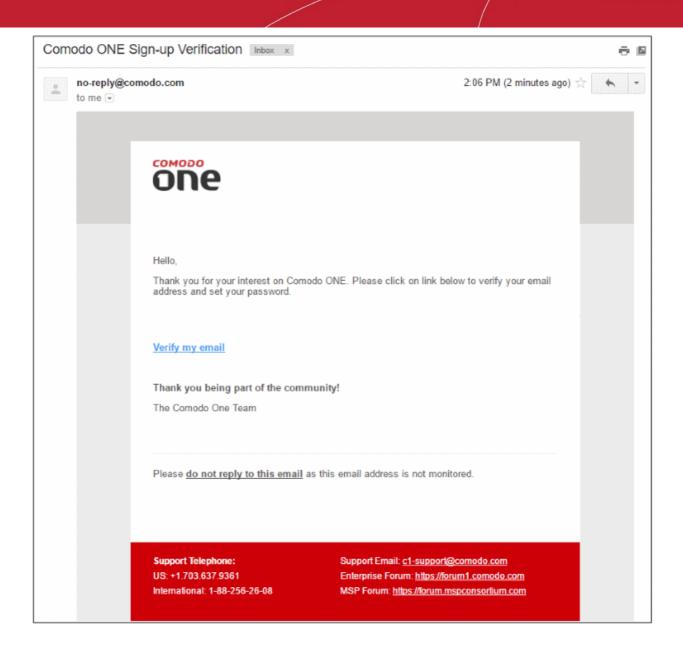
- Comodo License Account Login / Email

 Enter your username or email address used fo login to your Comodo account at https://accounts.comodo.com. You will receive the verification link to the email address you entered while registering your account with Comodo.
- Password: Enter your Comodo Account password. The same password should be used to logging-in to the your C1 account.
- End User License Agreement: Read the EULA fully by clicking the 'EULA' link and select the 'I have read EULA and accept it' check box.
- Captcha: Enter the Captcha value to verify your application
- Click the 'Submit' button.

A verification email will be sent to the email address registered at the time of your Comodo account creation. If by chance the verification mail is not delivered, you can login to the C1 account and click the 'Your email has not been verified yet. Resend the email again' link.

I AM A NEW USER	I HAVE A COMODO LICENSE ACCOUNT	
Comodo License Account Login / Email *		
Password *		
Forgot Your Password?		
☐ I have read <u>EULA</u> and accept it.		
jobsmith	<u>.</u>	
	Click here to reload above text.	
Submit		

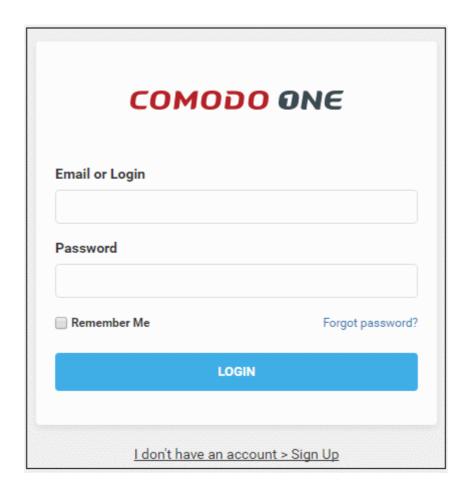




Click the 'Verify my email' link

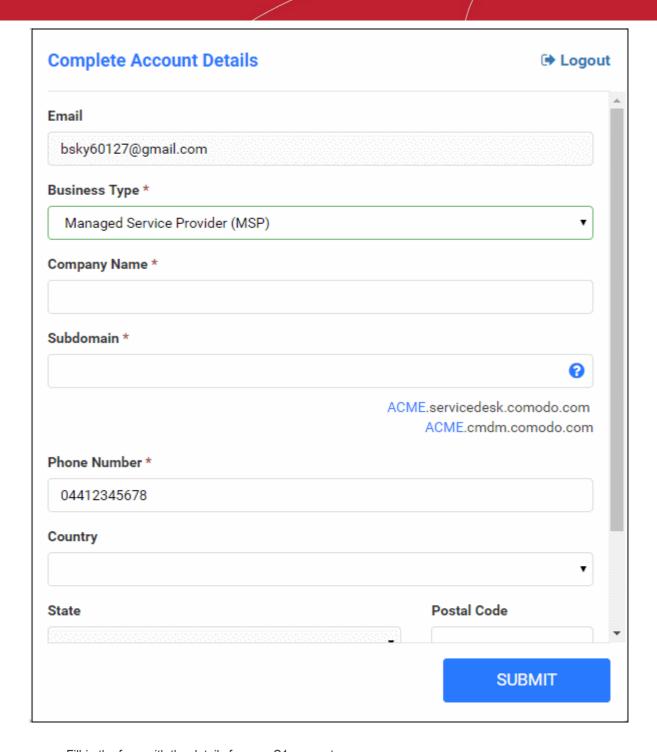
Upon successful verification, you will be taken to the C1 login page.





• Enter your email address and password to login to C1. Upon your first log-in, 'Account Details' form will be displayed.



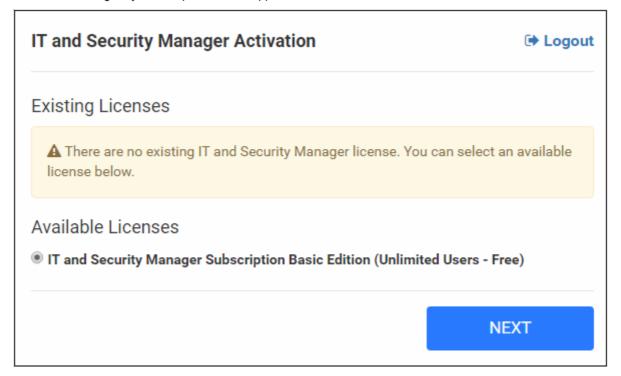


- Fill-in the form with the details for your C1 account
 - **Email** This field will be pre-populated with the email address entered during account creation. You cannot edit this field.
 - Business Type The drop-down allows you to choose the service type of Comodo One. To subscribe for Comodo One MSP service, choose Managed Service Provider (MSP) from the dropdown.
 - Company Name Enter the name of the company that you want to enroll for Comodo One MSP.
 - Subdomain Enter the sub-domain name for creating the URL to access the Comodo One MSP modules, like Service Desk module . For example, if you enter the sub-domain 'milkyway' then you can access the Service Desk module by entering the URL 'https://milkyway.servicedesk.comodo.com'
 - **Phone Number** Enter the phone number of your company
 - Country Choose your country from the drop-down



- State Choose your state/province country from the drop-down
- Postal Code Enter the postal code/zip code of your city.
- Time Zone Select your preferred time zone.
- · Click 'Submit'

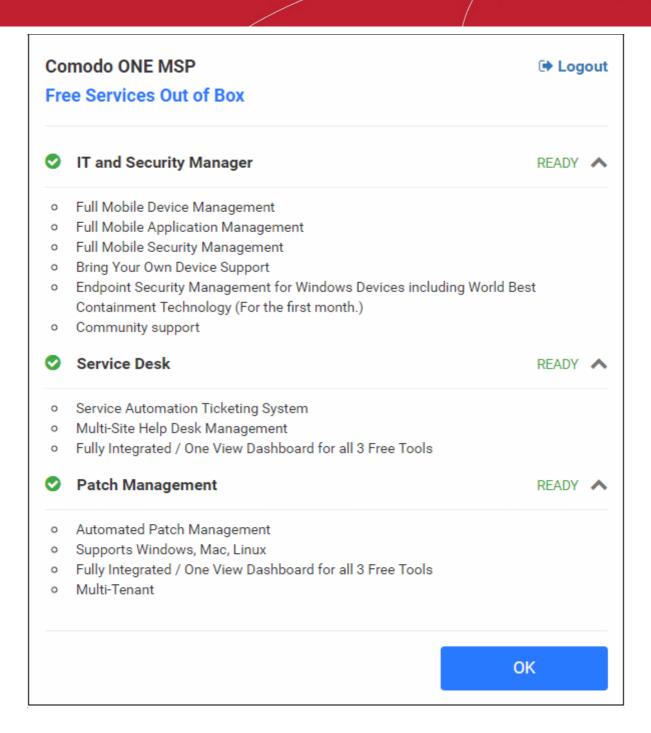
The activation dialog for your free products will appear.



Click 'Next'

Your free modules will be activated.



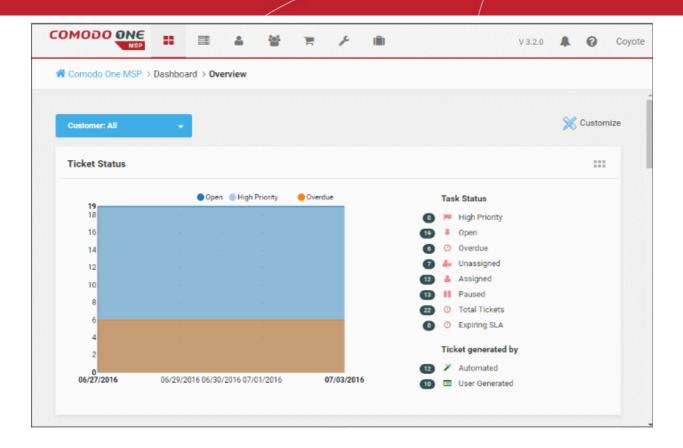


Click 'OK' on completion. You will be taken to Comodo One MSP Dashboard.

That's it. You have successfully created a Comodo One MSP account. Please note that this account will be automatically granted 'Account Admin' privileges and cannot be deleted. This is effectively the 'Master Admin'. You will be able to create 'MSP Admins' and Staff under this account. Refer to the section 'Managing Administrators' for more details. You can login to your account at anytime at https://one.comodo.com/app/login.

1.2 The Comodo One MSP Web Interface

The Comodo One MSP interface allows account administrators and MSP Administrators/Staff to manage and use integrated C1 Modules, add new modules, view dashboard statistics, manage subscriptions and more. Account administrators can also add MSP Administrators and Staff members from this interface.



The name of the user that is currently logged in is shown at top right. The menu bar at the top allows administrators to navigate to different features. A menu icon in red color indicates the respective feature is in use.

Menu Icons

COMODO ONE	Home – Click this to return to C1 dashboard from any interface including licensed applications.
==	C1 Dashboard – Allows you to view the statuses of licensed appliances, notifications and more.
	Licensed Applications – Allows you to open the licensed applications included for your account.
*	Customer – You can add new organizations, edit and delete existing organizations.
	Staff – Allows to add and edit administrators belonging to the account.
=	Store – You can subscribe for more Comodo products from this area.



pc	Tool Set – Download free utility tools from here.
(iii)	Management – Allows you to manage your MSP account.
V 3.2.0	Version Number - Clicking the version number opens the Release Notes page containing new features added and bugs fixed in the current version.
•	Notifications – Displays notifications to the administrators from C1.
•	Help - Clicking the 'Help' link displays shortcuts to visit Comodo One help pages and forum pages.
Logged-in User Name	Clicking on the username allows the following options: • Settings - Opens the 'Settings' interface that allows the currently logged-in administrator to change their password. • Logout - Allows the currently logged-in administrator to logout from C1.

Dashboard - The 'Dashboard' is displayed by default on logging into the console. It contains the following sections:

- Overview Displays pie-charts and bar-charts showing statistical summaries of status of service desk
 tickets, patches available for enrolled endpoints, application status of patch management policies to
 endpoints, statistics of operating systems of network endpoints, their online/offline status and more.
- **Notifications** Comodo pushes the latest news about Comodo One products as notifications. The number of new notifications will be displayed beside 'Notifications' under 'Dashboard' in the left slider pane. Clicking 'Notifications' opens the 'Notifications' screen that displays a list of these notifications.
- Reports Comodo One allows the administrator to manually generate reports on service desk performance reports and to schedule automated report generation. The 'Reports' screen displays a list of reports generated.

Licensed Applications - Allows the Account Admin, MSP Admins and Staff members to access the modules available in Comodo One MSP.

- Comodo Service Desk A fully featured ticket management system which allows enterprises to implement strong and effective work-flows for internal and customer-facing support departments. The support ticketing management system allows administrators and help desk staff to keep track of tickets raised by users, attend to them, reassign them to appropriate department or organizations, generate reports and more. Refer to the dedicated Service Desk guides for more details.
- Comodo Patch Management Allows granular control over the deployment of updates to operating systems and 3rd party applications on network endpoints. Featuring a centralized, easy to use interface, Comodo Patch Manager allows administrators to carry out various functions remotely such as deploy OS updates for both Windows and Linux machines, update 3rd party applications and more. Refer to the dedicated Patch Management guide for more details.
- Comodo IT security and Management (ITSM) ITSM allows administrators to manage, monitor and secure mobile devices and Windows endpoints which connect to customer networks. Once an iOS, Android or Windows device has been enrolled, administrators can quickly apply configuration profiles which determine network access rights, security settings and general preferences. A powerful addition to any MSP toolkit, ITSM allows you to secure customer data regardless of the device that holds it.
- Comodo Remote Monitoring and Management (RMM) A complete endpoint management solution
 which combines endpoint monitoring and alerting with ultra-fast remote desktop sharing, a robust ticketing
 sub-system, application life-cycle management, process and service management, endpoint security



management and custom scripting for automated break-fixing.

Note: RMM is available under 'Licensed Applications' interface only to customers that signed up for Comodo One prior to version 3.0. The customers that signed up for the version 3.0 and later, can access RMM through the ITSM interface. Refer to the help page at https://help.comodo.com/topic-214-1-771-9524-Remote-Management-of-Windows-Devices.html in the online ITSM Admin Guide for more details.

- Acronis Cloud Backup This module is optional and can be added after creating a Comodo One MSP
 account. This is a cost effective tool for MSPs to render backup and disaster recovery services for their
 customers. Available both in local and in cloud for backups, this tool is capable of backing up data from any
 source and recovers to any destination and system.
- Comodo Quote Manager This module is optional and can be added after creating a Comodo One MSP
 account. Comodo Quote Manager allows MSP Administrators and staff to generate and forward price
 quotes for requirements from the customer organizations and manage them.
- cWatch This module is optional and can be added after creating a Comodo One MSP account. cWatch is
 a cloud based next generation security information and event monitoring platform that allows MSPs to
 provide high level of security service to their customers.
- Comodo Dome Standard This application is a real time web traffic scanning solution that is capable of
 providing a comprehensive web content and security control. This module is optional and can be added
 after creating a Comodo One account.
- Comodo Dome Shield This application is an enterprise web access restriction solution that allows administrators to provide comprehensive DNS based security for their customers. This module is optional and can be added after creating a Comodo One account.

Customer - Displays Organizations added by Account Administrator to manage their IT issues and requirements. Any number of companies/departments can be created for the account depending on subscription levels. Companies added here are automatically added to all the integrated modules and be viewed by all MSP Admins when they are in those modules. Module-specific users and administrators can be added under these companies from within each module itself. Refer to the section 'Managing Companies' for more details.

Staff - Admins added here can access all modules in Comodo One and have administrator privileges. For Service Desk, the privileges differ depending on whether the staff member was added with admin privileges (aka an 'MSP Admin') or not. Staff without admin privileges can access only the staff panel in Service Desk while staff member with MSP Admin privileges can access both admin and staff panels in Service Desk. After an MSP Admin or Staff has been created, they will receive an account verification email and be asked to create a unique password. Refer to the section 'Managing Administrators' for more details.

Store: Displays Comodo applications that are available for C1 users. Currently Comodo Quote Manager, Acronis Cloud Backup, cWatch, Comodo Dome Standard, Comodo Dome Shield applications are available as optional modules and can be added as a fully integrated C1 module. All other applications are 'standalone' and planned to be integrated in the upcoming versions.

Tool Set: Allows administrator to download free utility software for use on customer networks. The available applications are:

- Comodo Cleaning Essentials Comodo Cleaning Essentials (CCE) is a set of computer security tools designed to identify and remove malware and unsafe processes from infected computers.
 - Major features include:
 - KillSwitch an advanced system monitoring tool that allows users to identify, monitor and stop
 any unsafe processes that are running on their system.
 - **Malware scanner** Fully customizable scanner capable of unearthing and removing viruses, rootkits, hidden files and malicious registry keys hidden deep in your system.
 - Autorun Analyzer An advanced utility to view and handle services and programs that were loaded when your system booted-up.



CCE is a lightweight, portable application which requires no installation and can be run directly from removable media such as a USB key, CD or DVD. It allows users to quickly and easily run scans and operate the software with the minimum of fuss. For more details, refer to the online help guide of CCE at https://help.comodo.com/topic-119-1-328-3516-Introduction-to-Comodo-Cleaning-Essentials.html

- Comodo Network Assessment Tool Comodo Network Assessment tool (NAT) allows network
 administrators to perform in-depth scans on client networks to identify a wide range of server, endpoint and
 network vulnerabilities. The tool will also prepare detailed risk reports for scanned networks along with a
 risk mitigation plan containing actionable advice to address each issue. Setup is easy with a simple wizard
 which allows users to import networks via Active Directory, Workgroup or IP range. This guide takes users
 through the initial installation and configuration processes before moving onto more detailed descriptions of
 settings and program usage.
- Unknown File Hunter Tool The Comodo Unknown File Hunter (UFH) tool is a lightweight scanner that is capable of identifying unknown and potentially malicious files residing on your customer's network. After scanning networks and systems, it will classify all audited files as 'Safe', 'Malicious' or 'Unknown'. While 'Safe' files are OK and 'Malicious' files should be deleted immediately, it is in the category of 'Unknown' that most zero-day threats are to be found. The UFH scanner allows you to upload these files to our Valkyrie servers where they will undergo a battery of run-time tests designed to reveal whether or not they are harmful. You can view the results of these tests in the UFH interface.

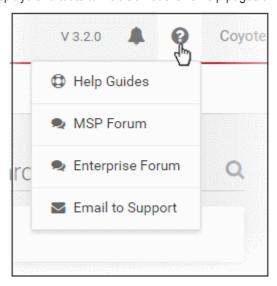
Management: Enables the Account Administrator to manage their Comodo One MSP account.

- Account Allows the account administrator to personalize and edit the account details such as name, email address, address, phone numbers and notes.
- **Subscriptions** Provides information about your App Store purchases such as product types, payment types and the subscription period.
- **Usage** Provides the module usage information such as the storage used for backup module including total quota and total usage.
- Billing Allows account administrators to view past bills as well as current bill invoiced.

Clicking on the logged in user name at the top right allows settings and logout options.

- Settings Opens the 'Settings' interface that allows the currently logged-in administrator to change their password and configure preferred time zone.
- Logout Allows the currently logged-in administrator to logout from C1.

Help - Clicking the 'Help' icon displays shortcuts to visit Comodo One help pages and forum pages.



Version Number - Clicking the version number opens the 'Release Notes' page containing new features added and bugs fixed in the current version.



1.3 **Managing Administrators**

The 'Staff' screen allows Account Administrators to add MSP Administrators. Once created, these users will be able to login into C1 at https://one.comodo.com and will be able to access the service desk, patch management, ITSM and other licensed modules. You can also transfer the account administrator privileges to another MSP administrator.

To open the 'Staff' screen

Click on the staff icon from the menu bar



The 'Staff' interface will be displayed:

Staff List - Table of Column Descriptions	
Column Header	Description
Name	The name of the administrator or staff member
Email	The email address of the administrator or staff member
Verified	Indicates whether the administrator or staff member has verified their email address by clicking the verification link in the notification mail sent to them. The administrator/staff can login to C1 interface only after verifying their email address and creating a password for them.
Admin	Indicates whether the user has MSP Admin privileges. If no check mark is present then it indicates that the user is a staff member. An MSP administrator can create only staff members. The master Account Admin can create both MSP Administrators and staff members.
Account Admin	Indicates whether the user is the 'Master' administrator of the Comodo One MSP account. Only one account admin is allowed for a Comodo One account. Only the Account Admin has the privileges to add MSP administrators and staff members for this account and to add additional modules like Comodo Device Manager, Comodo Quote Manager and so on .

Sorting and Filtering Options:

- Click any column header to sort the list of administrators in ascending or descending order according to the column label.
- Filter the list or search for specific administrator(s) by entering their name or email address in the search field at top right in part or full.

The interface allows account administrators to:

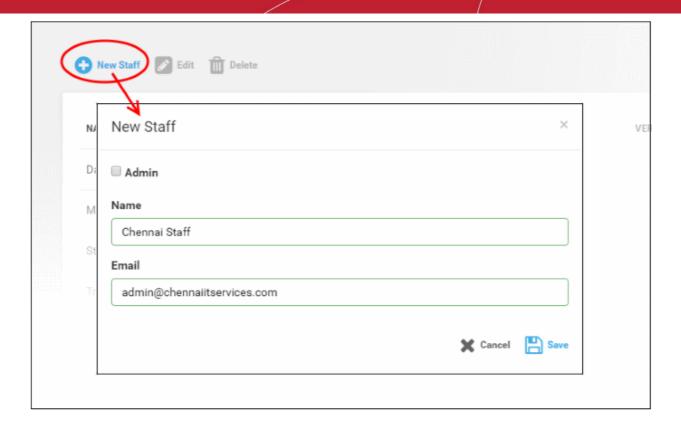
- Add MSP Administrators/Staff
- Edit the details of MSP Administrators/Staff
- Remove MSP Administrators/Staff

To add MSP Administrators/Staff

Click the 'New Staff' button from the 'Staff' interface

The 'New Staff' form will be displayed:





 Select the 'Admin' check box if you want to add an MSP Administrator. Leave it blank if you want to add a staff member.

Note: Staff with 'Admin' privileges can be added only by the Account Administrator.

- Enter the name of the Administrator or Staff in the 'Name' field.
- Enter the email address of the Administrator or Staff to which the verification email will be sent.
- Click the 'Save' button.

A confirmation dialog will be displayed.



Click 'OK'

A verification email will be sent to the email address. After clicking the verification link in the mail, the recipient will be asked to set a unique password for accessing Comodo One.

Editing the details of administrators/staff

The Account Administrator can edit the name of an administrator/staff, assign/remove administrative privileges and transfer account administrator rights to another administrator. The administrator can edit only the name of a staff member.

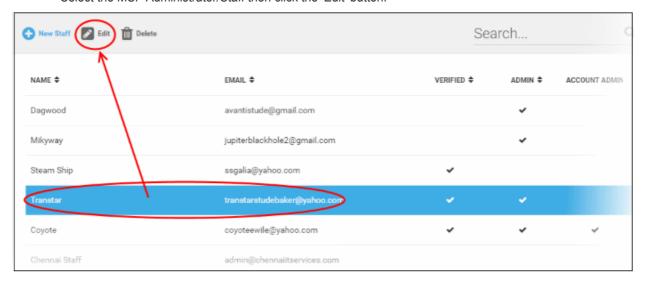
Note: A staff can be edited to assign/remove admin privileges only after they validate his/her email address by



clicking the link in their verification email.

To edit a staff/administrator

• Select the MSP Administrator/Staff then click the 'Edit' button:



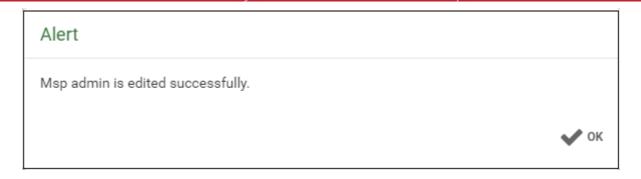
The 'Edit Staff' dialog will open.



- Update the details as required. Please note the email address field cannot be edited.
- · Click the 'Save' button

The following confirmation dialog will be displayed:

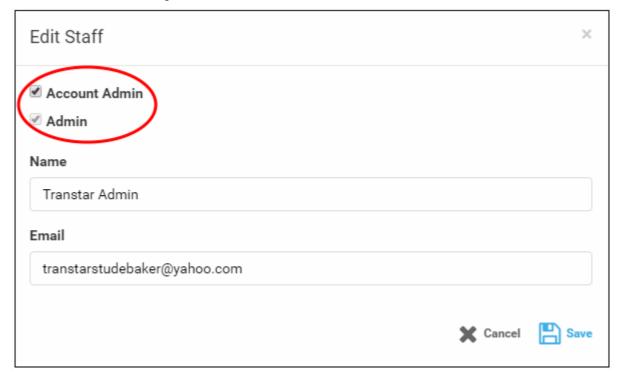




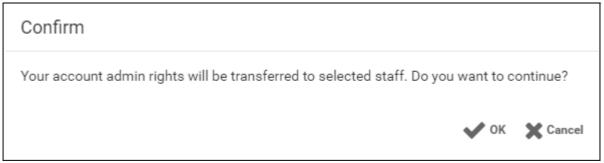
Click 'OK'

To transfer the account admin rights to a different administrator

- Select the administrator and click the 'Edit' button
- In the 'Edit Staff' dialog, select Account Admin checkbox.



A confirmation dialog will be displayed:



Click 'OK' to confirm



Msp admin is edited successfully. You will be directed to login page now. Please login again

Click 'OK'.

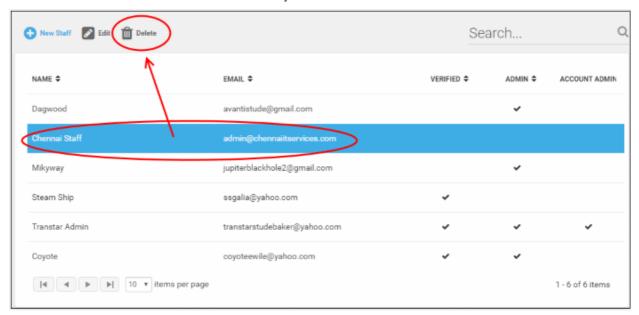
The account administrator rights will be transferred to the selected administrator and you will be logged out automatically. You can login with the same credentials but will have only administrator privileges.

Removing an administrator or staff member

Staff and Administrators who are no longer required to access the Comodo One console can be removed from the Staff interface.

To delete MSP Administrators or Staff:

• Select the administrator/staff member that you want to remove from the list and click the 'Delete' button:



A confirmation dialog will appear.



Click 'OK' to confirm removal.



Alert	
Msp staff is deleted successfully.	
	✔ ок

1.3.1 Admin Privilege Levels

Account Admins, MSP Admins and MSP Staff for Comodo One modules are added and managed via the Comodo One MSP web console at one.comodo.com. The following tables summarize the privileges of these user types in the web console itself and each of the individual modules.

Comodo One MSP Web Console

Role	Description
Account Admin	The Account Administrator is the top level administrator and can access all areas and functionality of the Comodo One MSP Administrative console and the individual modules.
	From the Comodo One MSP web console, the Account Administrator can:
	Add and manage companies for the MSP account
	Add and manage MSP administrators
	Add and manage MSP staff members
	Transfer the account admin rights to another administrator
	Add integrated modules from the 'App Store' in to C1
	Subscribe for new products and renew licenses for added modules
	View subscriptions details
	View usage details for modules
	View billing details for modules
MSP Admin	An MSP Administrator has privileges to create new companies and staff members and has all the privileges of staff.
	From the Comodo One MSP web console, the MSP Administrator can:
	Add and manage companies to the MSP account
	Add and manage MSP staff members
	Cannot add new admins
MSP Staff	A MSP Staff member can access individual modules and can execute RMM, Service Desk and Patch Management tasks.
	A MSP Staff member can login and view the Comodo One MSP web console but:
	Cannot add or edit companies enrolled to the MSP account
	Cannot add fellow MSP staff members

Remote Management and Monitoring (RMM)



Role	Privileges
Account Admin	Add endpoints for monitoring and management
	 Create and apply monitoring policies to endpoints
	View service desk requests for policy violations
	 Initiate support sessions and accept support requests from end-users
	 Deploy diagnostic and repair tools, run procedures and execute jobs on endpoints
	Access endpoint computers through remote desktop connection to correct issues
MSP Admin	Same privileges as account admin
MSP Staff	Same privileges as account admin

Service Desk

Role	Privileges
Account Admin	Access both admin panel and staff panel
	Enroll and manage end-users from different companies
	 Attend to and manage support tickets from end-users.
	 Assign and reassign tickets to staff members
	Create new tickets on behalf of end users
	 Set global prices for attending to different types of devices
	View dashboard and system logs
	Configure service desk via the 'settings' interface
	 Manage help topics, SLA plans, ticket filters and more.
	 Create and manage privilege based user groups and assign staff members to them.
	Create and manage departments for the MSP and assign staff members to them.
	Generate announcements for staff members
	Generate and view reports
	 Update knowledgebase articles like FAQ's and canned responses
MSP Admin	Same privileges as account admin
MSP Staff	 Staff members can access the staff panel but not the admin panel Enroll and manage end-users from different companies
	Attend to support tickets from end-users
	View the dashboard
	 Create and manage knowledgebase articles like FAQs and canned responses
	The following privileges are conditional on the privileges of the group to which the staff member belongs:
	 Assign and reassign tickets to other staff
	Create new tickets on behalf of end users
	 Set prices for attending different types of devices for specific company
	 Update knowledgebase articles like FAQ's and canned responses.



Note: The restriction for staff members from accessing the admin panel is not implemented in this version. The restriction will come to force in the next version.

Patch Management

Role	Privileges
Account Admin	Enroll Endpoints for remotely installing and uninstalling patches and applications
	 Add tags to endpoints and create groups of endpoints for bulk management
	 Remotely install recent OS patches and applications on to endpoints and schedule patch/application installation policies
	Remotely restart/shutdown endpoints
	 View patch management operations and reports
	Configure remote logging and notification settings
MSP Admin	Same privileges as account admin
MSP Staff	Same privileges as account admin except:
	Configure remote logging and notification settings

ITSM

Role	Privileges
Account Admin	Manage devices (full control)
	Manage user (full control)
	Manage profiles (full control)
	Manage procedures
	Manage LDAP account
	Manage Google API token
	Manage antivirus settings
	Manage Apple Push Notification service certificate
	Manage Android settings
	Manage custom variables
	Manage EAS token
	Manage email templates
	Access to RBAC (full control)
	Access to compliance page
	Access to push statistic page
	Access to threat report page
	MS Exchange access management
	Access right to antivirus (full control)
	Access to application on devices part (full control)
	Access to subscription section



MSP Admin	Same privileges as account admin
MSP Staff	Same privileges as account admin

1.4 Managing Companies

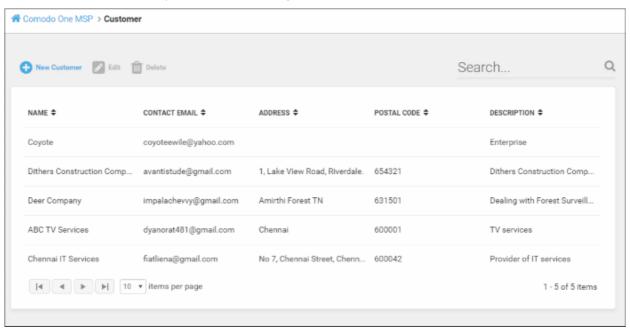
Companies, organizations and departments added through the C1 'Customers' interface will become available for selection in all integrated modules (Service Desk, Patch Management and IT Security and Manager). Admins can then import users and devices to these companies through the individual modules.

The Comodo Service Desk interface also allows customers to create 'standalone' (aka 'Unmanaged') companies. Companies created this way will not be visible in the C1 interface or available in the other modules. For more details about adding companies to Service Desk, refer to the online help page at https://help.comodo.com/topic-289-1-625-7888-Managing-Organizations.html.

To open the 'Customer' screen

Click the customer icon on the menu bar

The Customer interface displays a list of customer organizations added to Comodo One MSP.



The Customer interface displays the list of customer organizations added to Comodo One.

Company List - Table of Column Descriptions	
Column Header	Description
Name	The name of the company
Contact Email	Email address of the contact person of the organization.
Address	The address of the organization
Postal Code	The area postal code of the organization
Description	A short description of the organization



Sorting and Filtering Options:

- Click any column header to sort the list of companies in ascending or descending order according to the column label.
- Filter the list or search for specific company by entering their name, contact email address, address or postal code in the search field at top right in part or full.

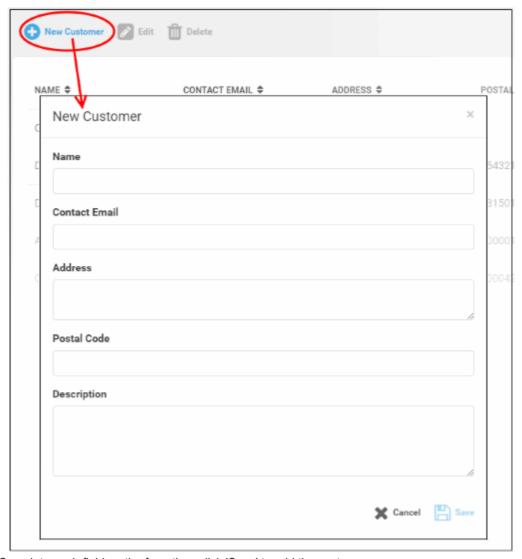
The interface allows Account and MSP Administrators to:

- Add an organization
- Edit the details of an organization
- · Remove an organization

To add an organization

Click the 'New Customer' button from the 'Customer' interface

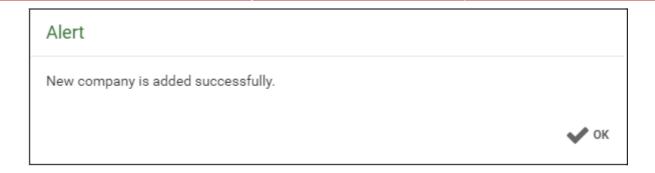
The 'New Customer' form will be displayed.



Complete each field on the form then click 'Save' to add the customer.

A confirmation message will be displayed

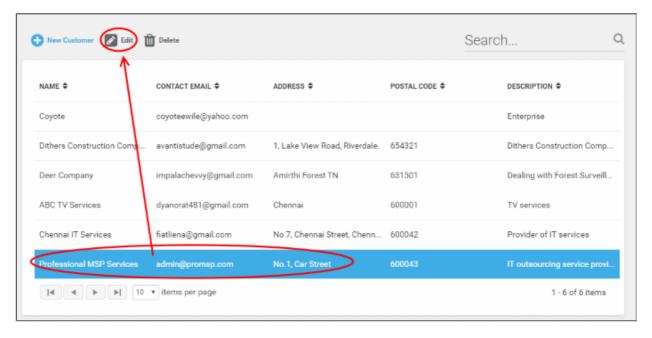




· Click 'OK'

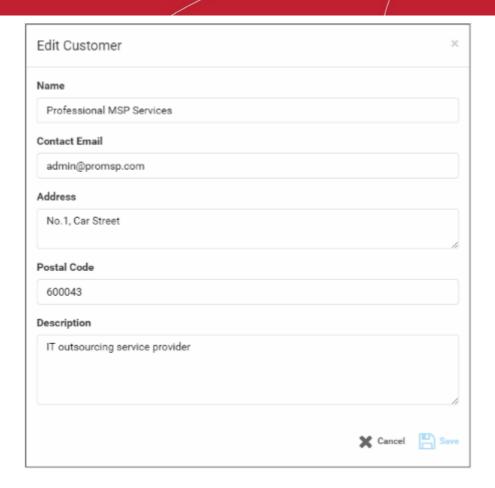
To edit the details of an organization

- Select the organization that you want to update the details
- Click the 'Edit' button



The 'Edit Company' dialog will appear.





- · Update the details as required.
- Click the 'Save' button

A confirmation dialog will be displayed.

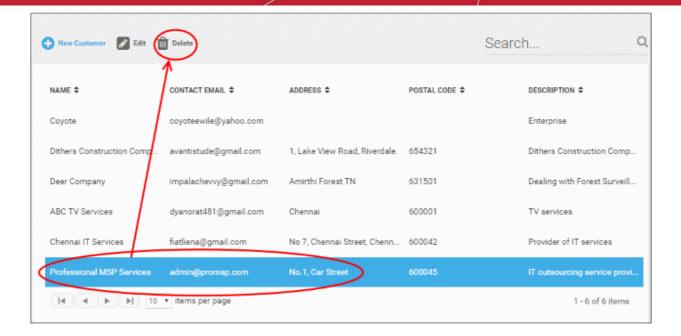


Click 'OK'

To remove an organization from the list

• Select the organization that you want to remove from the list





Click the 'Delete' button.

A confirmation dialog will appear.



· Click' OK' in the confirmation dialog.

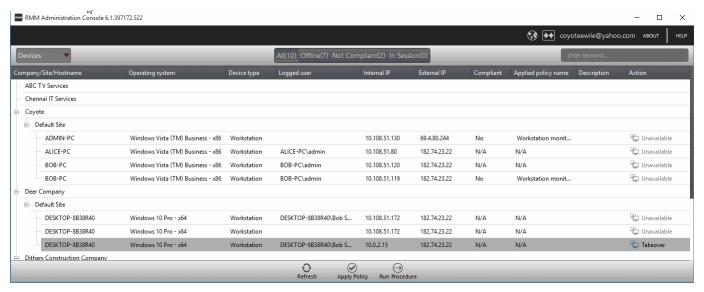
The company will be removed from Comodo One MSP.





2 Introduction to Remote Monitoring and Management Module

Comodo Remote Monitoring and Management (CRMM) grants Managed Service Providers complete visibility and control over the systems they manage. It combines comprehensive endpoint monitoring and alerting with ultra-fast remote desktop sharing, professional services automation (PSA), powerful policy and job creation interfaces, automatic support ticket generation and custom scripting for automated break-fixing. RMM is the single-pane-of-glass that helps MSPs to improve the efficiency of their workflows and take the quality of service they provide to customers to the next level.



Comodo RMM setup and management involves two components - the admin console and the endpoint agent.

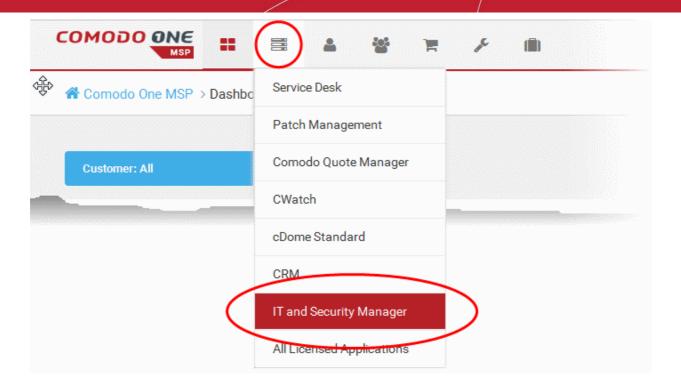
- The admin console is the chief management software and is used to monitor endpoints, define policies and configure/respond to endpoint service desk tickets. The console should be installed on a local workstation or server and can be downloaded from the ITSM.
- The endpoint agent is a small piece of software installed on managed endpoints for communication with the
 admin console. The agent is responsible for forwarding the monitored data from the endpoints to the
 console and to apply policies/running procedures at the endpoints. The endpoint agent is automatically
 installed on each endpoint upon its enrollment to ITSM, so that it is automatically added to the RMM
 console for management. For more details on adding Windows endpoints to ITSM, refer to the online help
 page at https://help.comodo.com/topic-399-1-786-10126-Enrolling-User-Devices-for-Management.html.

Also, you can manually install the agent at an endpoint if needed, from the ITSM console. For details, refer to the online help page at https://help.comodo.com/topic-399-1-786-10139-Remotely-Installing-Packages-onto-Windows-Devices.html.

To Launch the download Screen and Install screen:

- Log into the Comodo One at https://one.comodo.com/app/login with your user name and password.
- Click the 'Licensed Applications' icon from the top and select 'IT and Security Manager', to open the ITSM console

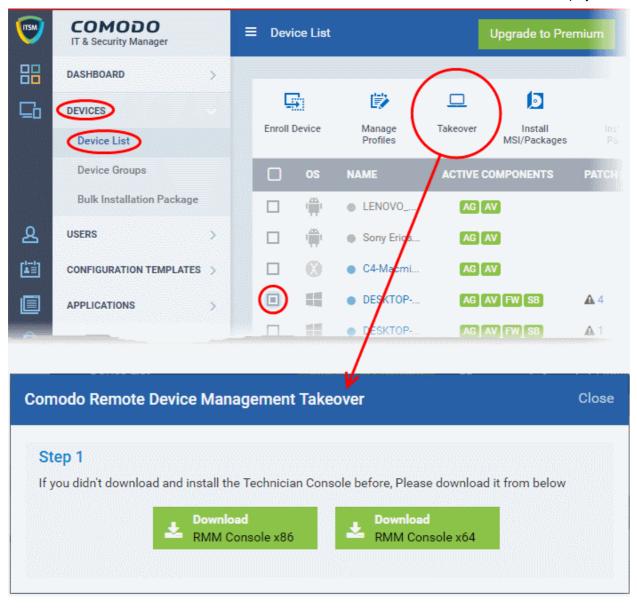




Click 'Settings' on the left and choose 'Extensions'. СОМОДО Extensions Management **Upgrade to Premiun** IT & Security Manager DASHBOARD Remote Monitoring & Comodo ONE ㅁ DEVICES Management Security മ USERS CONFIGURATION TEMPLATES > ON RMM APPLICATIONS APP STORE 0 PROTECTION **6**3 SETTINGS Subscriptions Global Variables Role Management iOS APNs Certificate Android Client Configuration Windows Agent Configuration Extensions Emplates



- Ensure 'Comodo RMM' is switched 'ON':
- Click 'Devices' on the ITSM menu and choose 'Device List'. All devices added to ITSM will be displayed.



- Select a Windows device and click 'Takeover', from the options at the top. This will start a wizard which allows you to download the RMM console setup files .
- Proceed to download by choosing the type of Operating system.

RMM Features and Benefits

- Up-to-the-second inventory of all managed devices in a single console
- Easily configure endpoint security policies using the intuitive policies interface
- Automatically create a service desk ticket if an endpoint falls out of compliance with its policy
- Panoramic, real time information allows you to make better, more informed decisions
- Multiple plug-ins allow you to observe running processes, services, active connections, auto-run
 applications, browser extensions, system restore points and more
- Ability to run system and registry clean operations with a single click
- · Easily transfer files between your computer and endpoint machines



- Built-in RDP software allows you to access client machines directly from the management console
- Run commands in multiple interpreter languages
- Craft and execute procedures which can be used and re-used for common endpoint tasks
- Advanced Procedure Wizard allows you to create and run commands in sequential order
- Remotely restart and shutdown endpoints with the integrated power manager
- Agent runs as a service, the endpoint need not be logged in
- Patent pending rescue option allows administrators to restart endpoints in rescue mode

Guide Structure

This guide is intended to take you through the configuration and use of Comodo RMM and is broken down into the following main sections. The guide can be navigated using the bookmark links on the left.

- Introduction to Remote Monitoring and Management Module
 - Quick Start Guide
 - System Requirements
- Installing RMM Administrative Console
 - Logging-in to the RMM Administrative Console
- The RMM Administrative Console
- The Devices Interface
 - Applying Policies
 - Running Procedures
- The Sessions Interface
 - Support Sessions Interface An Overview
 - Handling Support Sessions
- The Jobs Interface
 - Managing Jobs
 - Executing Jobs on Endpoints
- The Procedures Interface
 - Managing Procedures
 - Running Procedures on Endpoints
- The Policies Interface
 - Managing Policies
- Appendix Issue Codes for Monitors

2.1 Quick Start Guide

This tutorial briefly explains how an admin can setup Comodo Remote Monitoring and Management (RMM).

Note - To use Comodo RMM, you must have an active Comodo One Account (https://one.comodo.com) and have added devices and users to the Comodo IT and Security Manager (ITSM) module. Once you have added devices to ITSM, you will be able to download the RMM console and push the RMM client to managed endpoints.

For more details on enrolling users and adding devices in ITSM, see https://help.comodo.com/topic-214-1-771-9486-Enrolling-User-Devices-for-Management.html.

Basic Setup:



- i. Add devices, endpoints and users to Comodo IT and Security Manager as described above.
- ii. Enable the RMM extension in Comodo IT and Security Manager ('Settings' > 'Extensions' > set RMM switch to 'ON')
- iii. Install the RMM Admin console. The console is used to monitor endpoints, define policies and configure endpoint service desk tickets, and should be installed on a local workstation or server. To download the console, open ITSM > Devices > Device List. Select any endpoint from the list and click 'Takeover'. This will allow you to download the console setup files to your local machine.
- iv. Install the RMM client software on target endpoints. The agent facilitates communication between endpoints and the admin console. The agent is automatically installed on managed endpoints once the RMM extension is enabled in ITSM (step ii, above). Should the need arise, you can also install the agent manually by clicking Devices > Device List, selecting your target endpoints then clicking 'Install MSI/Packages' > 'RMM Agent'.

Basic Concepts:

- Action A task which can be run on target endpoints. Examples include install an application, reboot an
 endpoint, create a system restore point, run a registry cleaning task and more. Actions are added to
 procedures.
- **Procedure** A collection of one or more actions. Procedures can be directly run on target endpoints or can be added to a 'Job'
- **Job** A collection of one or more procedures. Multiple procedures can be added to a job to create sophisticated tasks.
- Policy Policies are designed to monitor target endpoints and when issues are identified, service desk
 tickets are automatically generated and sent to the administrator if certain conditions are met. You can then
 investigate the service desk ticket created and run a procedure/job on the endpoint if required.

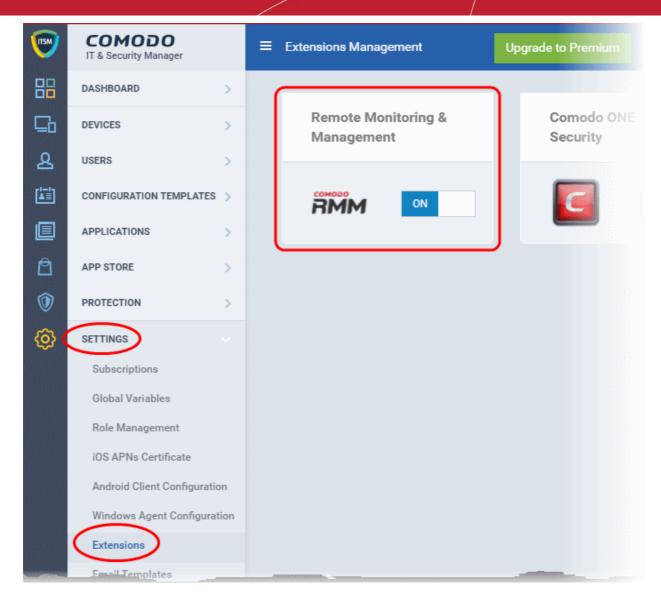
The guide will take you through the basic setup and usage of Comodo RMM. Click any link to go straight to the section you need help with.

- Step 1 Login to Comodo One and download the technician console
- Step 2 Install Technician Console
- Step 3 Login to Technician Console
 - Create procedures
 - Create and execute jobs
 - Create and apply monitoring policies
 - Handle support sessions
 - The Support Sessions Interface
 - Execute pre-defined actions on the endpoint
 - Access the Endpoint through Remote Desktop Connection
 - Run a procedure

Step 1 - Login to your Comodo One Account and Download the Technician Console

- Login to your Comodo One account at https://one.comodo.com/app/login.
- Click the 'Licensed Applications' icon from the top and select 'IT and Security Manager', to open the ITSM console.
- Click 'Settings' at the left and choose 'Extensions' and Ensure 'Comodo RMM' is switched 'ON':



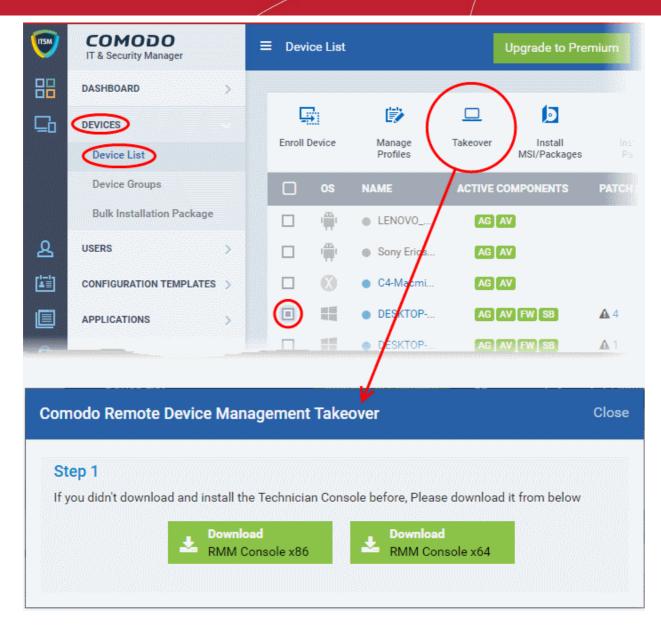


Next, click 'Devices' > Device List from the left.

All devices added to ITSM will be displayed.

 Click the 'Takeover' at the top of the interface. This will start a wizard which allows you to download the RMM console setup files .



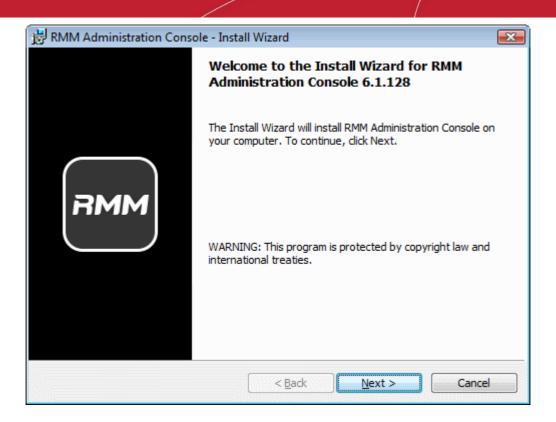


The setup file is available for 32-bit and 64-bit versions of Windows. Choose the version appropriate to the system upon which you want to install the RMM console and click 'Download'.

Step 2 - Install the Technician Console

Double click on the setup file to start the console installation wizard:

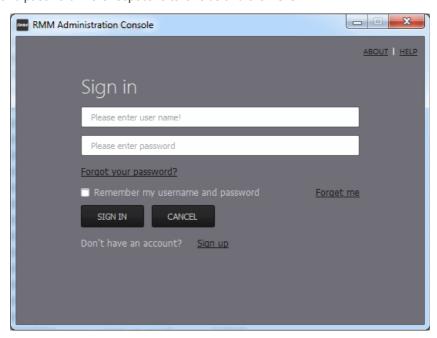




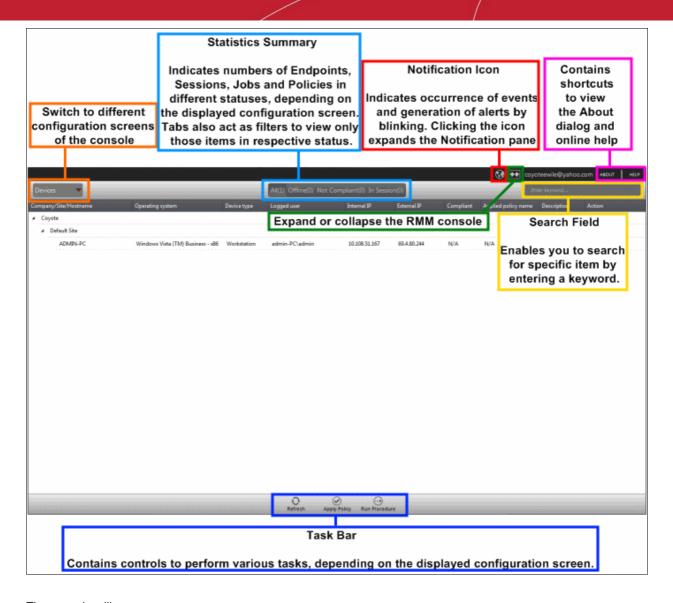
Follow the wizard and complete the installation.

Step 3 - Login to Technician Console

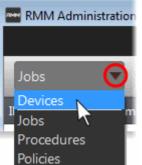
After installation, the console should automatically open at the login screen. Enter your Comodo One username (email address) and password in the respective text fields and click 'SIGN IN'.



You can open the console in future by clicking the RMM desktop shortcut or by clicking 'Start' > 'All Programs' > 'COMODO' > 'RMM Administration Console' > 'RMM Administration Console'.



The console will open.



The drop-down the top left enables you to switch between configuration interfaces:

- Devices Displays enrolled endpoints. You can run procedures and apply policies to endpoints.
- Jobs Lists jobs that are completed and in progress. You can create new jobs with a set of procedures and execute them on desired endpoints.
- Procedures Lists all procedures available for deployment to endpoints.
 Procedures can be run directly on endpoints and/or can be used in jobs to be executed on selected endpoints.
- Policies Displays active monitoring policies which have been deployed to
 endpoints. Service desk tickets are generated if a policy is violated. You can view all policies, create new
 policies and deploy policies to endpoints by clicking the 'Policy Manager' button at the bottom of the
 interface.

Create Procedures

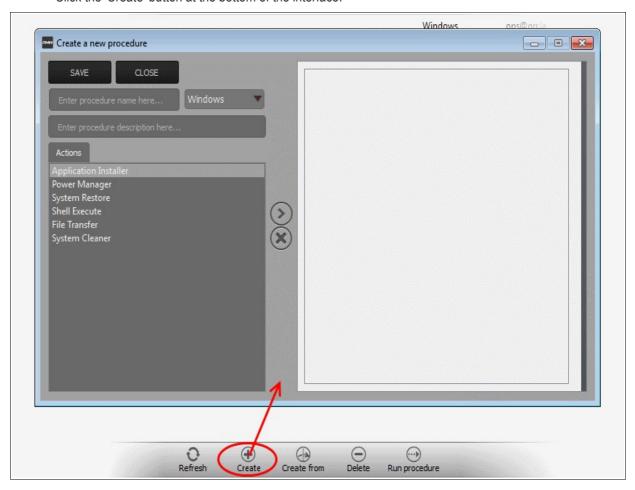
A 'Procedure' is a sequence of one or more actions which is run on managed endpoints. Procedures can be run adhoc on any endpoint and multiple procedures can be added to an RMM 'Job'.

To open the procedures interface, choose 'Procedures' from the drop-down at top left. The interface will list any procedures that have already been created.



To create a new procedure

• Click the 'Create' button at the bottom of the interface:



In the new procedure dialog:

- Enter a name and a short description for your procedure and choose the operating system of the target endpoints
- Choose an action from the 'Action' list and click the right arrow to add it to your procedure.
- Next, you need to configure each action you add to your policy. The following table lists the default actions and associated parameters:

Action	Parameters Required
Application Installer	Choose one of the following install operations: • Application Install • Enter the following parameters: • Download URL of the application • Name of the setup file and any command line switches • Failsafe command for canceling the installation • Patch Management Install
Power Manager	Choose one of the following power control operations: Restart Restart in safe mode Shutdown



Action	Parameters Required
System Restore	Choose whether to create a restore point or to restore the system to a previous state. Enter the name of the restore point to be created or the name of the restore point, to which the system needs to be rolled back.
Shell Execute	Run a particular file on a managed endpoint Basic Enter the execution command for the process
	Enter the parameters to be passed to the process Advanced
	 Enter the working directory for the process Choose the execution options: Wait for process to finish - Completes the process before termination Hide Window - Executes the process at the background
File Transfer	Enter the path of the source file to be copied from the host computer at which the technician console is installed. The file will be copied to the folder c:\lps-temp\file-transfer at the endpoint.
System Cleaner	Execute one of the following system scanning and cleaning tasks:

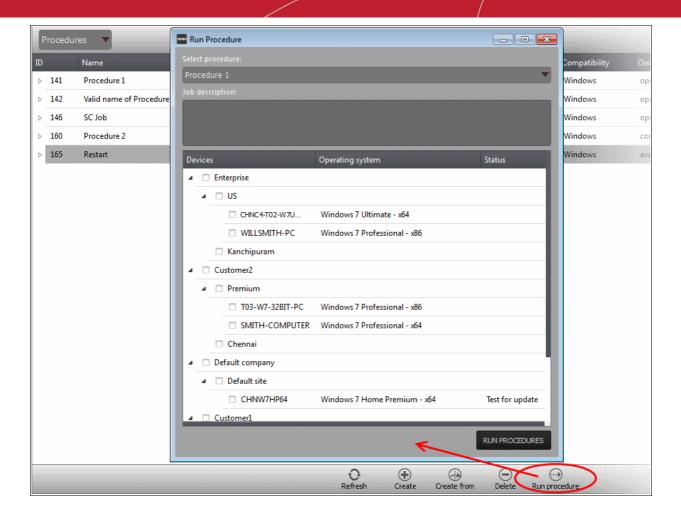
- Repeat the process to add more actions to the procedure. Actions will be executed in order from top-tobottom.
- Click 'SAVE' to save your procedure.
- Your new 'Procedure' will be listed in the 'Procedures' interface. It will be available for inclusion in any job created for target endpoints. The procedure can also be run ad-hoc on any endpoint.
- Repeat the process to add more procedures as required.

Tip: You can create new procedures using an existing procedure as a template. To do so, select an existing procedure and click 'Create From' at the bottom of the interface. Next, edit procedure actions and parameters as required and click 'Save'.

To run a procedure

Click 'Run Procedure' from the bottom of the interface.





- Choose the procedure you want to run from the drop-down at the top
- Choose the endpoints on which you want to run the procedure and click the 'RUN PROCEDURES' button

A new 'Job' will be automatically created when you directly run a procedure.

Create and Execute Jobs

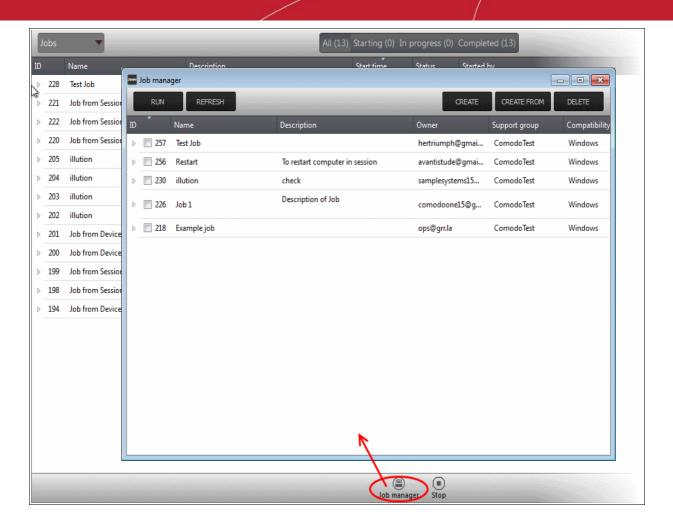
A 'Job' is a collection of one or more RMM procedures. You can construct sophisticated jobs by adding multiple procedures to a single job.

• To open the Jobs interface, choose 'Jobs' from the drop-down at the top left. The 'Jobs' interface displays the jobs created and executed by all admins belonging to your MSP.

To create a new job

Click 'Job Manager' from the bottom of the interface:

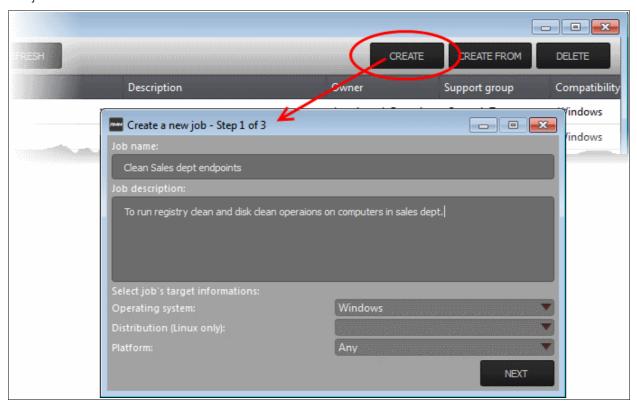




All jobs created so far will be displayed.

Click 'CREATE' from the top of the 'Job Manager' dialog.

The job creation wizard will start.



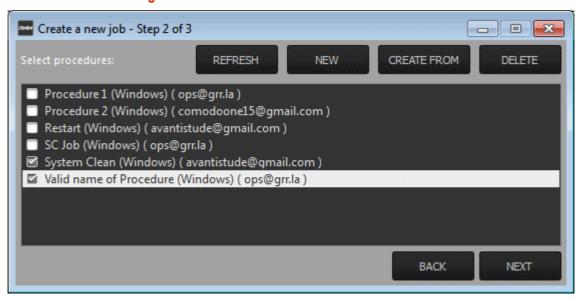


Step 1 - Job Description

- Enter the job details:
 - · Job Name Enter a name for the job
 - Job Description Enter a short description of the job
 - Operating System Choose the operating system of the target endpoints
 - Platform Choose operating system version
- Click 'NEXT' to continue.

Step 2 - Select Procedures

Select the procedures you wish to add to the job. If you have not yet created any procedures, please refer
to this section of the guide.



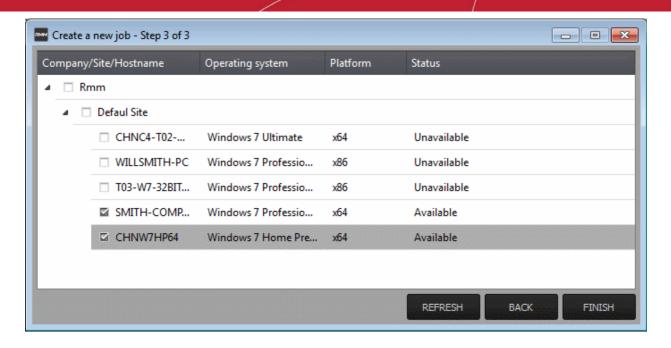
Tip: You can add new procedures from this interface too by clicking 'NEW' from the top of the interface. Refer to the previous section 'Create Procedures' for more details.

Click 'Next'

Step 3 - Select Target Endpoints

Select the endpoints on which you want to execute the job:



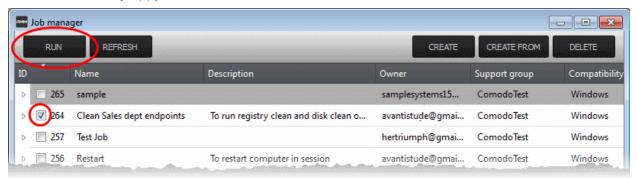


Click 'FINISH'

The job will be added to the list in the 'Job Manager' interface and will be available for execution at any time.

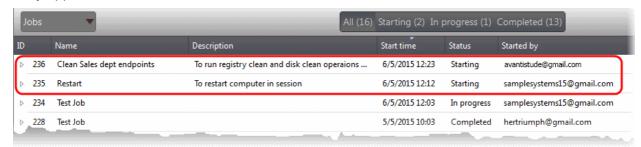
To execute a saved job

- Click 'Job Manager' from the task bar
- Choose the job(s) you want to execute



Click 'RUN' from the title bar of the Job Manager interface.

The job(s) will be started and their status will be indicated in the 'Jobs' interface.

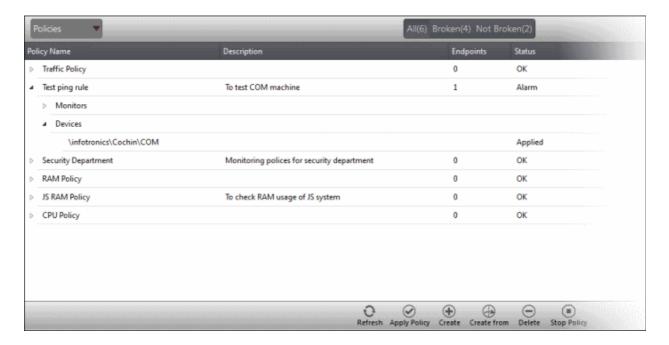


Create and Apply Monitoring Policies

RMM monitors enrolled endpoints based on the policies applied to them. You can create policies to monitor various system events, and define whether service desks tickets are created if an endpoint violates the policy. Admins can remediate the issues by running jobs or procedures on the endpoint or by initiating a support session with the enduser.



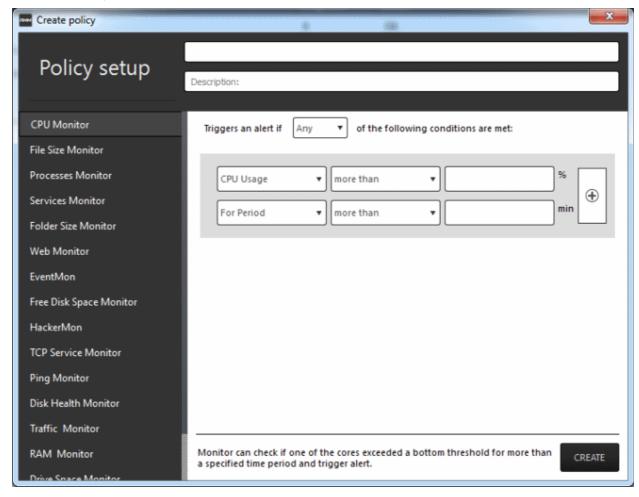
To open the 'Policies' interface, choose 'Policies' from the drop-down at the top left. The interface displays
which policy is in effect on an endpoint and whether or not the endpoint is compliant with its policy. New
policies can be created by clicking the 'Create' button at the bottom of the interface.



To create a new policy

Click 'Create' from the bottom of the interface

The 'Create policy' interface will open.





- Enter a name and a short description for the policy in the respective fields
- Choose the monitoring module from the left.

The parameters pane for the chosen module will open on the right.

• Specify the conditions and thresholds of the rule in the right pane. Your rules are automatically saved as you go along, so you can freely select other modules on the left if you wish to add more rules to the policy.

Tip: You can add any number of conditions for a particular rule by clicking the '+' button at the right. To remove a condition, click the 'X' button to the right.

Add more modules to the policy by selecting them on the left.

A green check-mark is shown next to modules which are included in the current policy.

Click 'Create' to save your policy.

The policy will be added to the list in the 'Policy Manager' interface and will be available for application to desired endpoints at any time.

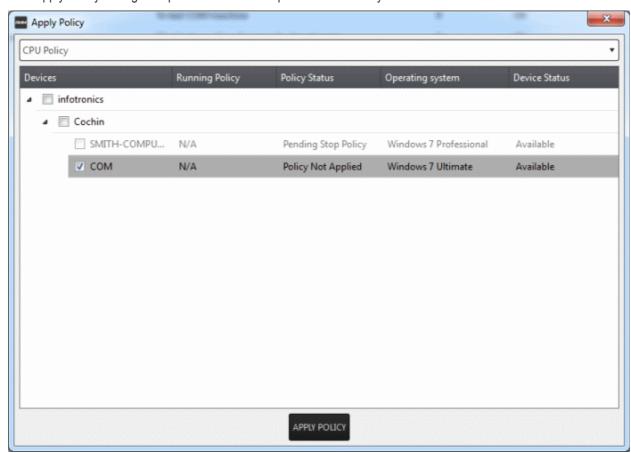
To apply a policy to endpoints

Policies can be applied from the 'Devices' and 'Policies' interfaces.

Click 'Apply Policy' from either of these interfaces

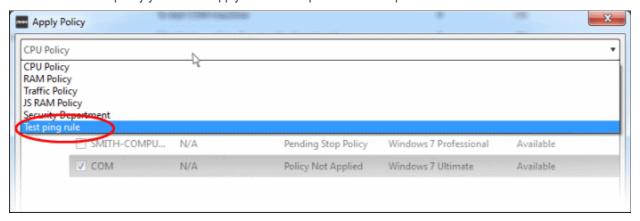


The 'Apply Policy' dialog will open with a list of endpoints enrolled for your account.



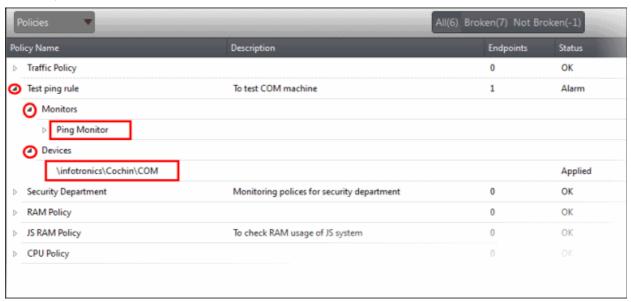


Select the policy you wish to apply from the drop-down at the top



Choose the endpoints to which the policy should be applied and click 'Apply Policy'.

The policy will be implemented on the selected endpoints and will be listed in the main 'Policies' interface.



Tip: Clicking the arrow at the right of a policy name displays the policy's rules.

If any of the monitored parameters exceed the thresholds set by the policy, the endpoint will be indicated as non-compliant (under the 'Compliant' column) in the Devices interface. Also, a support ticket will be automatically created in Service Desk. The Administrator can view the details of the breach by logging-into the Service Desk and resolve the issue by:

- Running procedures;
- Executing jobs;

Or

Initiating a support session and taking remote access of the endpoint(s).

Handle Support Sessions

The support session enables you to take remote desktop control of the client computer and perform maintenance tasks and resolve issues identified in them. By establishing a support session you can:

- Perform actions like cleaning the client's computer, power management, system restore, file transfer, system inventory audit and so on.
- Run procedures to correct issues identified by policy violation service desk tickets.



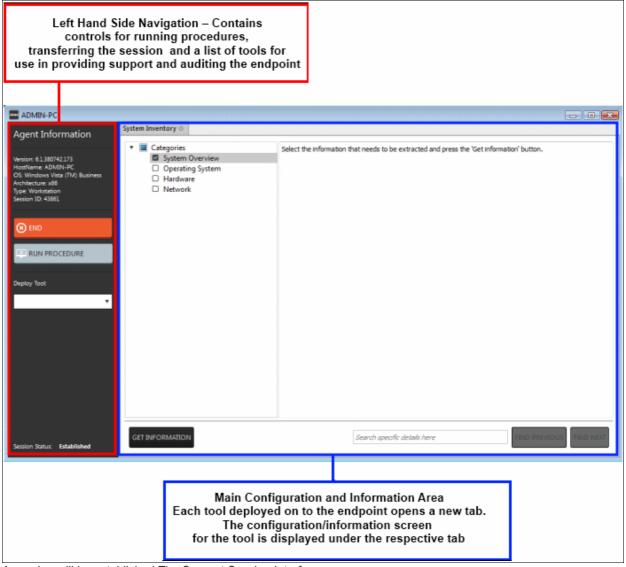
Initiating a support session from the technician console

If you require to perform a maintenance operation or run procedures you can initiate the session by clicking 'Takeover' from the 'Devices' interface.

Open the 'Devices' interface by choosing Devices from the drop-down at the top-left



 Click 'Take Over' under 'Action' in the row of the device (endpoint) to which the support session is to be started.



A session will be established. The Support Session Interface

Left Hand Side Navigation - The left hand side navigation contains controls and buttons for various tasks like running a procedure, deploying tools on to the endpoint to perform various actions and audits, transfer the support session to other clients and so on.

- END Concludes the support session and closes the session window for the endpoint.
- **RUN PROCEDURE** Allows you to run procedures on the endpoint. You can select procedures from those that are available in the 'Procedures' interface. Refer to the section **Run a Procedure** for more details.
- Deploy Tool Allows you to select tools for performing various tasks such as system cleaning, power



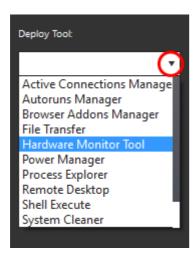
management, system restore and so on. Refer to the section **Execute pre-defined actions** on the endpoint for more details

Main Configuration and Information Area - The main configuration and information area displays the configuration screens for the tools selected from the 'Deploy Tool' drop-down.

Next. see:

- · Execute pre-defined actions on the endpoint
- Access the Endpoint through Remote Desktop Connection
- Run a Procedure

Execute Pre-Defined Actions on the Endpoint



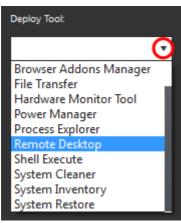
The 'Deploy Tool' drop-down contains handy diagnostic and repair tools which can be deployed to endpoints. For example, you can view all running processes and kill unnecessary processes, access the command line interface of the endpoint, run system clean operations and so on. The service session window console allows any number of tools to be deployed concurrently on to the endpoint. Each tool opens a new tab in the 'main configuration area and displays options and results pertaining to the tool. The following table provides the list of tools available for deployment.

Table of Available Tools for Deployment on to Endpoint	
Tools	Description
Active Connections Manager	Allows you to view all currently active network connections (applications, processes and services), individual connections that each application is responsible for and terminate any unsafe processes that are running on the endpoint.
Autoruns Manager	Allows you to view and edit start-up items, services, drivers, system programs and so forth, that are loaded when the endpoint boots up.
Browser Add-Ons Manager	Allows you to to identify the browser add-ons installed on the browsers and to remove unsafe or malicious add-ons.
File Transfer	Allows you to transfer any file between the your computer and the endpoint.
Hardware Monitoring Tool	Allows you to track and monitor the hardware index to check whether the computer is overheating or voltage is out of the acceptable range to preclude an operating system failure.
Power Manager	Allows you to shut down and restart the endpoint, if required after a critical operation like editing the Windows Registry of the endpoint.
Process Explorer	Allows you to quickly identify, monitor and terminate any unsafe processes that are running on the endpoint. The Process Explorer shows ALL running processes, even those triggered by malware in the computer and those that were invisible or very deeply hidden.
Remote Desktop	Allows you acquire control of the client's computer through Remote Desktop connection in order to investigate and resolve issues. Refer to the section 'Access the



	Endpoint through Remote Desktop Connection' for more details.
Shell Execute	Allows you to open the command prompt window of the endpoint and execute shell commands.
System Cleaner	Allows you to perform Registry clean operation to remove obsolete and unwanted registry entries to boost up system performance and disk clean operations to remove junk or garbage files which occupy a considerable space in the endpoint.
System Inventory	Allows you to view the hardware and software resources of the endpoint. The 'System Inventory' audit provides a valuable information for determining compatibility of the hardware with the operating systems, and identifying any changes to a system that might develop problems.
System Restore	Allows you to revert the endpoint to a previously created restore point (including system files, installed applications, Windows Registry, and system settings) to that of a previous point in time.
	You can also create a restore point with the present configuration of the endpoint to restore it to the present condition in future.

Access Endpoints through Remote Desktop Connection



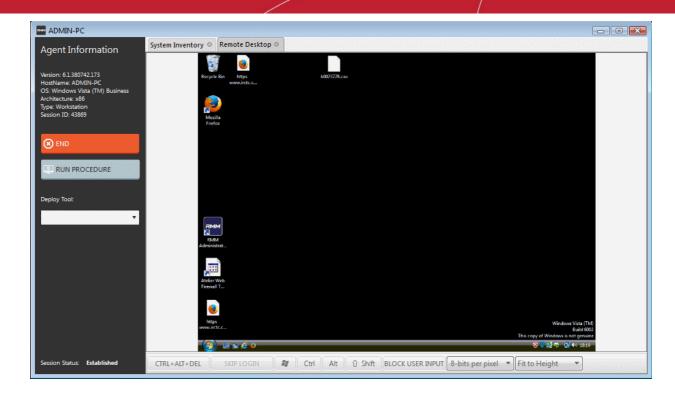
RMM allows you to gain remote desktop access to the endpoint and execute necessary actions to solve issues.

To initiate a remote desktop connection

Take over the endpoint having the RMM client installed and a session is established. Click the remote desktop option and then you can perform tasks like 'Run Procedure'.

The desktop of the endpoint will open in a new 'Remote Desktop' tab in the main configuration area.

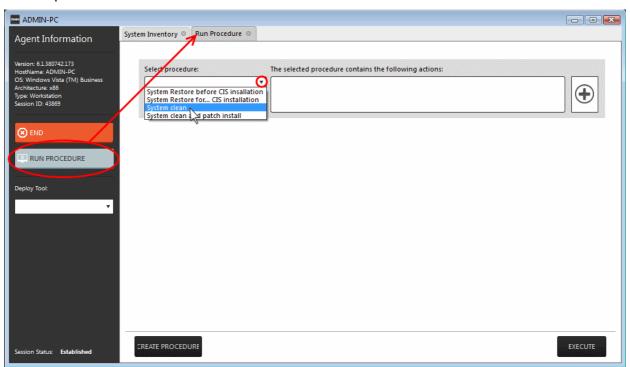




Run Procedures

You can also execute pre-defined procedures on the endpoint from the support session interface.

To run a procedure



Click RUN PROCEDURE from the left.

A new Run Procedure tab will open in the main configuration area. The Select Procedure drop-down will display the pre-configured procedures which are available at the 'Procedures' interface. For more details on creating and managing procedures, refer to the section **Create Procedures**.

Choose the procedure to be run at the endpoint from the 'Select procedure' drop-down.

The sequence of actions contained in the chosen procedure will be displayed in the list at the right.



- Repeat the process to add more procedures by clicking the '+' button at the right end
- Click 'Execute'.

A job will be created with the list of selected procedures for the endpoint and will be executed.

2.2 System Requirements

The list below shows supported operating systems and hardware requirements for endpoints running the RMM agent.

Supported Operating Systems

- Microsoft Windows client family
 - Windows XP (32 bit)
 - Windows Vista (32 bit and 64 bit)
 - Windows 7 (32 bit and 64 bit)
 - Windows 8 (32 bit and 64 bit)
 - Windows 10 (32 bit and 64 bit)
- Microsoft Windows Server family
 - Windows 2003 Server (SP2 or higher) x86 and x64 editions
 - Windows 2003 Small Business Server
 - Windows 2003 Small Business Server R2
 - Windows 2008 Server (SP2 or higher) x86 and x64 editions
 - Windows 2008 Small Business Server
 - Windows 2008 Server R2
 - Windows 2011 Small Business Server
 - Windows 2012 Server

Minimum Hardware Requirement

- Disk space 100 MB
- Memory 100 MB
- Processor Single core 1.8 GHz or better

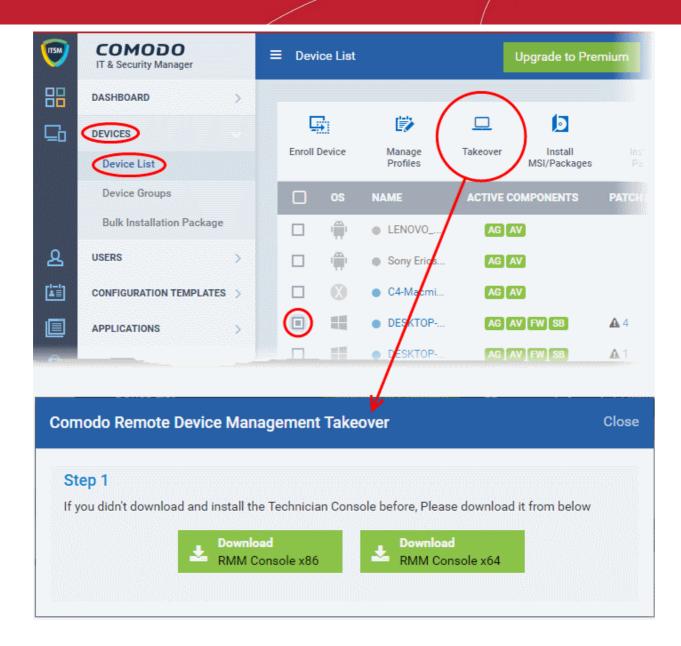
3 Installing RMM Administrative Console

Download the RMM Console setup file

You can download the RMM console setup file from the ITSM console interface.

- Log into the Comodo One at https://one.comodo.com/app/login with your user name and password
- Click the 'Licensed Applications' icon from the top and select 'IT and Security Manager', to open the ITSM console
- Click 'Devices' on the ITSM menu and choose 'Device List'. All devices added to ITSM will be displayed
- Select a Windows device and click 'Takeover', from the options at the top. This will start a wizard which allows you to download the RMM console setup files





 Choose the operating system of the computer on which you have planned to install the console and download the file.

Install the Console

Double click on the RMM console setup icon

Step 1: Welcome Screen

The set up program will start automatically and the 'Welcome screen' of the installation wizard will be displayed.





Click 'Next' to continue.

Step 2: End User License Agreement

Complete the initialization phase by reading and accepting the End User License Agreement (EULA).

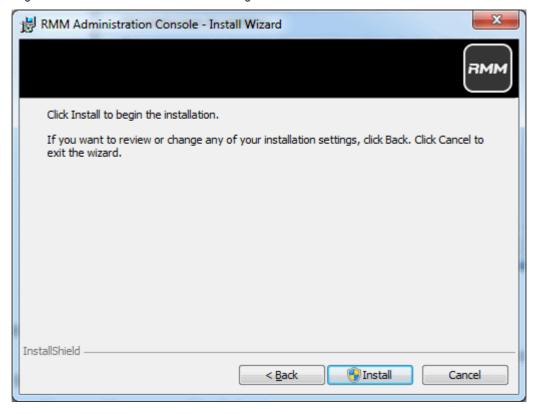


• Click 'I Agree' to continue installation. If you want to cancel the installation, click 'Cancel'.



Step 3: Ready to Install

The next stage is confirmation of the installation settings.



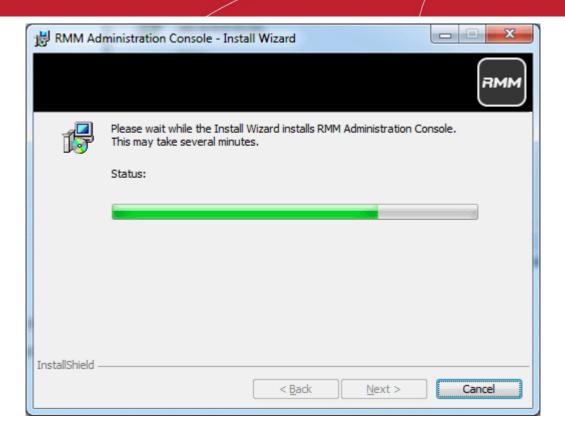
The program will be installed in the default location C:\Program Files\Comodo\RMM Administration Console

• If you want to review the installation settings, click 'Back'. To continue with the installation, click 'Install'.

Step 4: Setup Progress

Installation will begin and the progress will be displayed.





Step 5: Finalizing the Installation

On completion, the 'Install Wizard Completed' dialog will be displayed.



Click 'Finish' to complete installation and exit the wizard.

On completion, the login dialog will open. Refer to the next section 'Logging-in to the RMM Administrative Console' for more details.

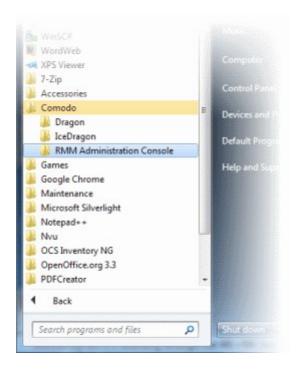


3.1 Logging-in to the RMM Administrative Console

After installation, the RMM Administrative Console can be started from the Windows Desktop or from the Start menu.

Start Menu

Click 'Start' and select All Programs > Comodo > RMM Administration Console

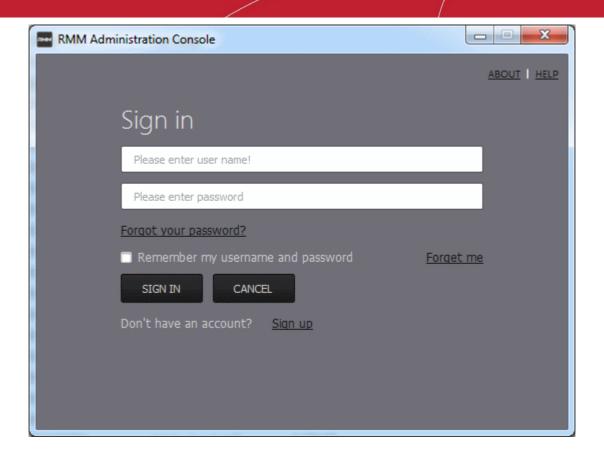


Windows Desktop

Just double click the RMM icon
 in the desktop to start RMM Administrative console

The RMM 'Sign in' screen will be displayed.



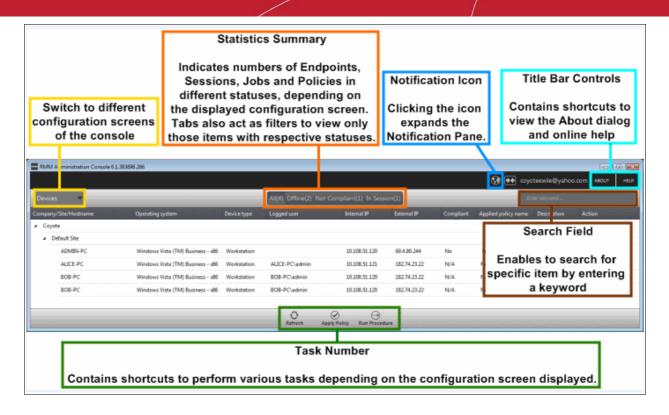


- Enter the Comodo One Client Security credentials or that was reset by you on clicking the verification link in the 'Admin Verification' email.
- If you are using the portable version, just double click on the file and enter the Comodo One Client Security credentials.

On successful verification, the RMM Administration Console will be displayed.

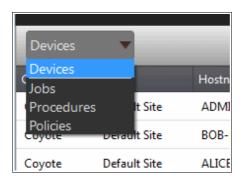
4 The RMM Administrative Console

The Administrative Console is the nerve center of Comodo Remote Monitoring and Management (CRMM), allowing administrators to view details of monitored endpoints, create policies, automatically run procedures and more, on the endpoints.



The console consists of the following main areas that can be selected from the drop-down menu near the top left - 'Devices', 'Jobs', 'Procedures' and 'Policies'.

Main Functional Areas



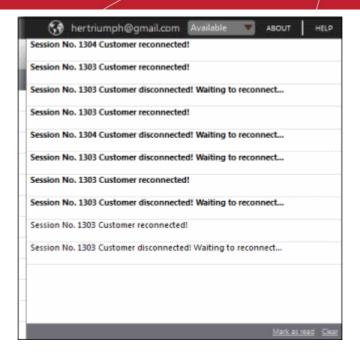
- **Devices** View the list of monitored devices and manage them. You can run procedures and apply configuration policies on endpoints.
- Jobs View the jobs that are completed, started and in progress. You can also stop the job from this
 interface.
- Procedures Create procedures from a set of predefined actions such as 'System Restore', 'File Transfer',
 'Shell Execute' and run them on endpoints
- Policies Create policies and deploy them onto endpoints so as to generate service desk tickets if policies are violated.

Notification Icon

The notification icon at the top right of the interface blinks to alert the admin when an endpoint in session is disconnected or reconnected.

Click on the icon to view the messages



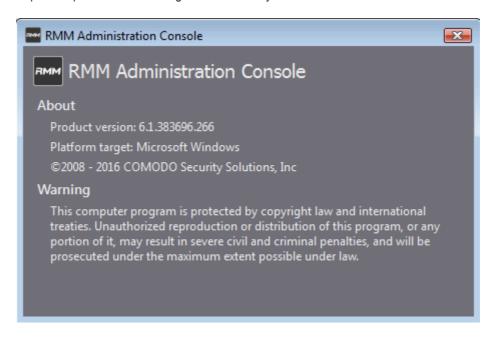


The messages that are in bold indicate that they are not read.

- Click the 'Mark as read' link below the message window after viewing the messages
- Click the 'Clear' link to remove the messages from the window.
- Click on the notification icon again to close the message window.

About

Opens the 'About' dialog of RMM admin console that contains the version number, copyright information, license information and option to purchase and change the license key.



Help

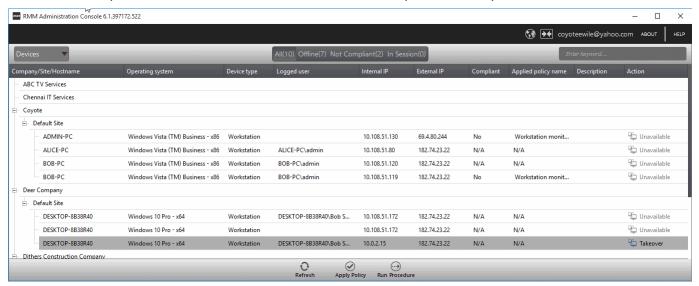
Opens the online help guide main page. The RMM admin help guide contains detailed explanations of the functionality and usage of the application.



5 The Devices Interface

The 'Devices' screen allows admins to view and manage company endpoints which are monitored by the RMM interface. The interface provides address, system and user details about each endpoint and allows administrators to directly apply policies and run procedures.

To open the 'Devices' screen, choose 'Devices' from the drop-down at the top left.



The list of all Windows devices that are enrolled through for your ITSM console and enabled for management through RMM console by installing the RMM agent will be displayed with their details.

Tip: New endpoints for management through RMM can be added only through ITSM console. Once an endpoint is enrolled to ITSM, the RMM agent will be automatically installed on it, to add it for management by RMM. For more details on enrollment of endpoints to ITSM, refer to the online help page at https://help.comodo.com/topic-399-1-786-10126-Enrolling-User-Devices-for-Management.html.

Devices - Column Description	
Column Header	Description
Company	The name of the company under which the devices are enrolled.
Site	The device's location of a company. session - column description
Hostname	The name of the enrolled device.
Operating system	The operating system of the enrolled device
Device type	Indicates whether the device is a workstation or a server
Logged user	The name of the logged user for the device
Internal IP	The IP address of the device inside the internal network
External IP	The IP address of the device in the external network
Compliant	Indicates whether the device is compliant or non-compliant for applied policies. Refer to the section 'Managing Policies' for more details.
Applied policy name	Displays the name of the policy applied for the device



Description	The description provided for the device while adding
Action	Indicates whether the device is ready for remote session, in session or not available for remote session

To view the details of endpoints enrolled for companies at different sites under a single column, click the 'Company' header twice.

The 'Company/Site/Hostname' headers will be clubbed under a single column and the details displayed.

Click the button beside a row to expand or collapse the section

From the 'Devices' interface an admin can:

- Apply Policies
- Run Procedures

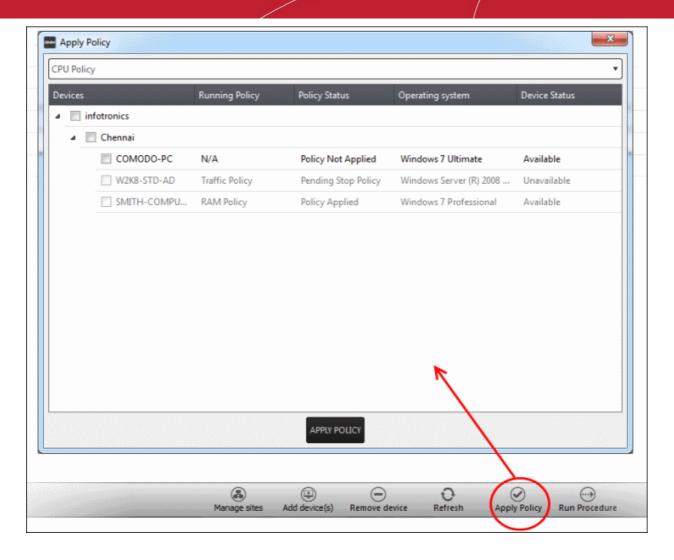
5.1 Applying Policies

Policies help your team respond to potential issues on managed endpoints by allowing you to set thresholds for CPU usage, RAM usage, Drive Space and more. Policies are constructed by setting conditions in one or more 'Monitors'. If the conditions of a monitor are met then a ticket is created in the Service Desk module. For example, you can configure the 'RAM Monitor' to notify you/create a ticket if RAM usage exceeds a certain % for a certain length of time.

Policies are created from the 'Policy Manager' interface and can be deployed from there as well as from the 'Devices' screen. Refer to the section 'The Policies Interface' for more details about creating policies.

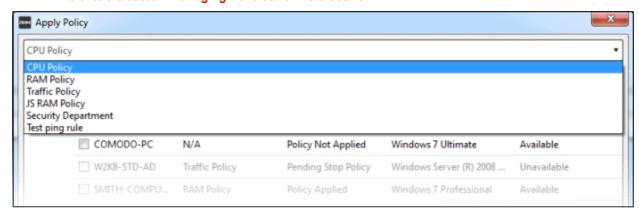
To apply a policy from the 'Devices' screen, click the 'Apply Policy' button at the bottom of the interface





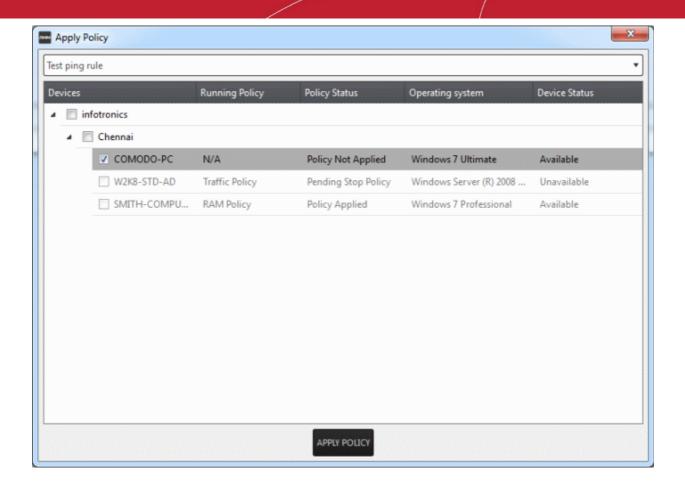
The 'Apply Policy' dialog will be displayed.

• Select the policy to be applied from the drop-down. The policies are created from the 'Policies' screen. Refer to the section 'Managing Policies' for more details.



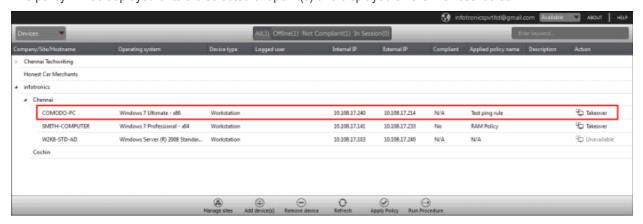
Next, select the endpoint(s) that should be deployed the chosen policy. Please policies can be applied to
endpoints that are 'Available' under the 'Status' column





Click the 'Apply Policy' button at the bottom.

The policy will be deployed onto the selected endpoint(s) and displayed on the 'Devices' screen.



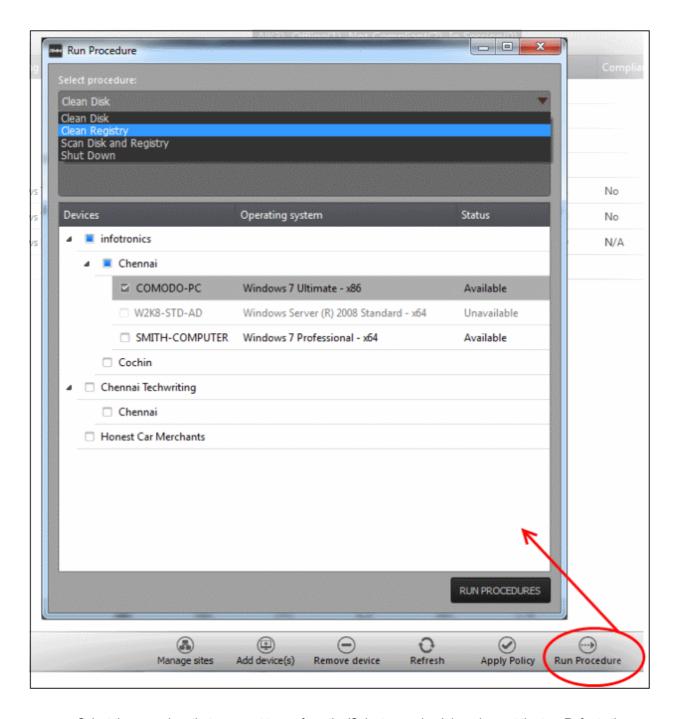
If you want to stop a policy applied to an endpoint, it can be done from the 'Policies' interface. Refer to the section 'Managing Policies' for more details.

5.2 Running Procedures

A 'Procedure' is a set of actions such as 'Restart' in 'Power Manager' to be run on an endpoint. You can also configure a series of actions with parameters, to be performed in sequence while creating a procedure. The 'Procedures' are created in 'The Procedures Interface' and you can run a procedure from the 'Devices' screen as well as from the 'Procedures' screen. Refer to the section 'The Procedures Interface' for more details about how to create and manage procedures.

To run a procedure from the 'Devices' screen, click the 'Run procedure' button at the bottom of the interface





- Select the procedure that you want to run from the 'Select procedure' drop-down at the top. Refer to the section 'Managing Procedures' for more details about how to create and manage procedures.
- Enter the name of the job in the 'Job description' field
- Select the endpoints from the 'Devices' list that you want to run the procedure
- Click the 'Run Procedures' button at the bottom

The procedure will be run on the selected endpoints and it will be created as a job and displayed in the 'Jobs' interface with its status showing 'Starting', 'In-progress' or 'Completed'. Refer to the section 'The Jobs Interface' for more details.

6 The Sessions Interface

CRMM allows admins to establish support sessions with users and take over endpoints remotely in order to assess



the nature of problem and then take corrective actions such run procedures and deploy tools. You can also transfer a session to another admin from the support sessions interface.

To open the 'Sessions' screen, click 'In Sessions' from the top middle pane.



Sessions - Column Description	
Column Header	Description
Company	The name of the company under which the devices are enrolled.
Site	The device's location of a company.
Hostname	The name of the enrolled device.
Operating system	The operating system of the enrolled device
Device type	Indicates whether the device is a workstation or a server
Logged user	The name of the logged user for the device
Internal IP	The IP address of the device inside the internal network
External IP	The IP address of the device in the external network
Applied policy name	Displays the name of the policy applied for the device
Description	The description provided for the device while adding
Action	Indicates whether the device is ready for remote session, in session or not available for remote session
Applied policy name	Displays the name of the policy applied for the device

6.1 Support Sessions Interface - An Overview

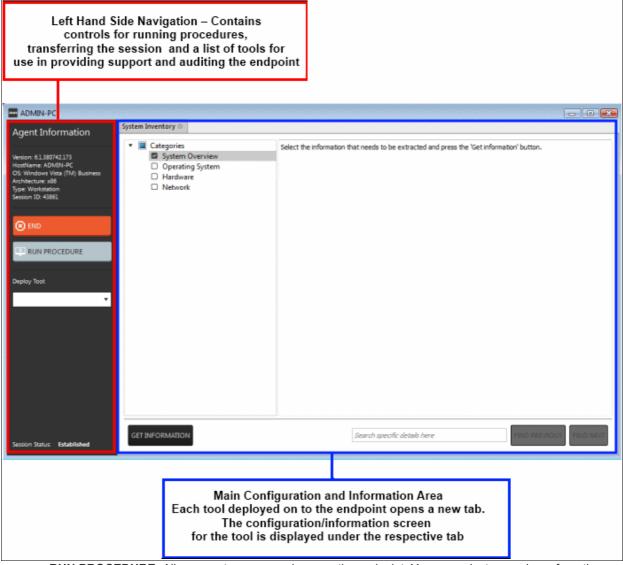
The Support Sessions Console has a streamlined interface that provides fingertip access and control over all the features and functions of the service.

The left hand side of the interface contains the sessions area which contains the controls for transferring a session, running procedures and a list of tools for use in providing support. The deploy tools drop-down, which contains a set of diagnostic tools that can be deployed on a remote computer. These utilities are an invaluable resource when troubleshooting issues on a client computer.

Left Hand Side Navigation - The left hand side navigation contains controls and buttons for various tasks like running a procedure, deploying tools on to the endpoint to perform various actions and audits, transfer the support session to other clients and so on.

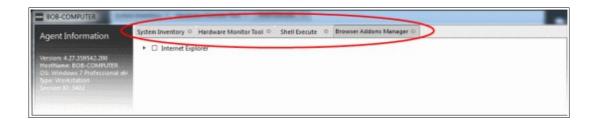
• END - Concludes the support session and closes the session window for the endpoint.





- RUN PROCEDURE -Allows you to run procedures on the endpoint. You can select procedures from those
 that are available in the 'Procedures' interface. Refer to the section 'Running Procedures from Support
 Sessions Interface' for more details.
- **Deploy Tool** Allows you to select tools for performing various tasks such as system cleaning, power management, system restore and so on. Refer to the section 'Using RMM Tools' for more details

Main Configuration and Information Area - The main configuration and information area displays the configuration screens for the tools selected from the 'Deploy Tool' drop-down.



6.2 Handling Support Sessions

The support sessions interface allows admins to accept support requests from customers through emails or service desk requests. By establishing a support session you can:



- Take remote desktop control of the client computer
- Perform actions like cleaning the client's computer, power management, system restore, file transfer, system inventory audit and so on.

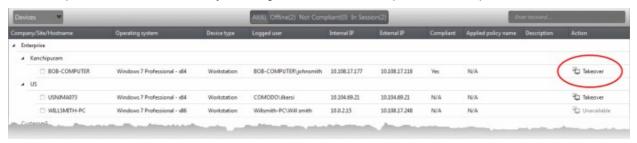
A support session can be initiated from the RMM admin console. Refer to the section 'Initiating a support session from the RMM admin console' for more details.

Initiating a support session from the RMM admin console

If you require to perform a maintenance operation or run procedures you can initiate the session by clicking 'Takeover' from the 'Devices' interface.

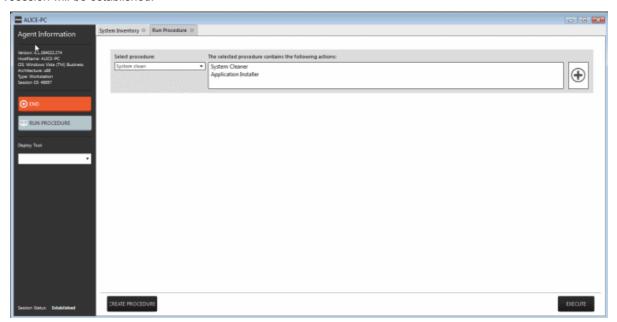
To start a support session

Open the 'Devices' interface by choosing 'Devices' from the drop-down at the top-left



 Click 'Take Over' under 'Action' in the row of the device (endpoint) to which the support session is to be started.

A session will be established.



Now, the action will have the status 'In_session' that indicates that the session is taken over and will be available in the 'Devices' and the 'Sessions' screens.



The Support Session Interface

Refer to the section 'Support Sessions Interfaces - An Overview' for more details about the interface.



To conclude a support session and close the session window, click the 'End' button

Refer to the following sections for more details about:

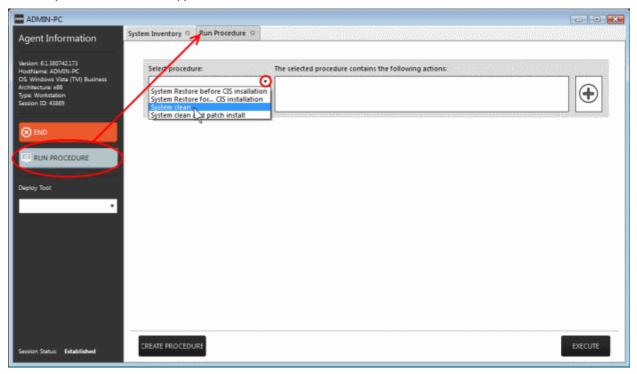
- Run a Procedure
- Using RMM Tools



6.2.1 Running Procedures from a Support Session

'Procedures' that are created in 'The Procedures Interface' can be executed on an endpoint from the support session interface. A 'Procedure' is a set of predefined actions that can be run on endpoints. For example, you can execute Disk and Registry clean-up, enable/disable Windows Processes, manage System Restore points, configure power management, install third-party applications and so on. Refer to the section 'Managing Procedures' for more details about creating a new procedure.

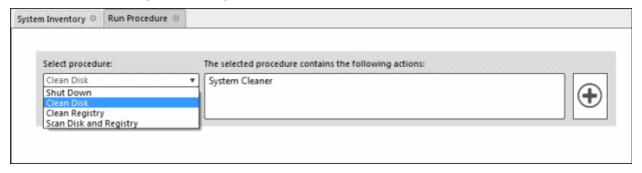
To run a procedure from the 'Support Sessions' interface, click the 'Run Procedure' button on the left





A new 'Run Procedure' tab will open in the main configuration area.

Click the 'Select procedure' drop-down



The drop-down will display available procedures. Refer to the section 'Managing Procedures' for more details about creating a new procedure.

Select the procedure that you want to run on the endpoint

The sequence of actions contained in the chosen procedure will be displayed in the list at the right.

- Repeat the process to add more procedures by clicking the

 button on the right
- Click the 'Execute' button at the bottom

A job will be created with the list of selected procedures for the endpoint and will be executed in sequence. The 'Run Procedure' tab will no longer be available in the support session interface after the procedure is executed. Refer to the section 'The Jobs Interface' for more details about jobs.

Tip: You can add new procedures from this interface too by clicking the 'Create Procedure' button at the bottom of the interface. Refer to the section 'Managing Procedures' for more details.

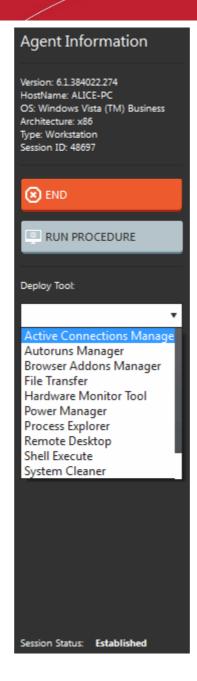
6.2.2 Using RMM Tools

CRMM ships with a set of handy diagnostic and repair tools that allow admins to quickly analyze and run fixes on an endpoint. For example, you can view all running processes, kill unnecessary processes, access the command line interface of the endpoint, run system clean operations and so on. The support session window allows you to deploy any number of tools onto the endpoint. Each tool opens a new tab in the main configuration area and displays options and results pertaining to the tool.

To deploy a tool

Click on the 'Deploy Tool' drop-down from the support sessions interface

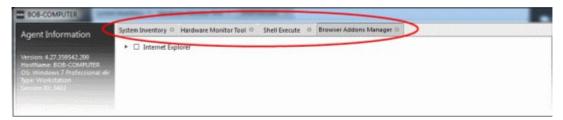




· Choose the tool that you want to deploy on the endpoint in session from the drop-down

Tip: You can choose several tools concurrently from the drop-down to be deployed on to the endpoint

The selected tools will be available as separate tabs in the main configuration area and each tab displays options and results pertaining to the tool.



Click on a tab to open the tool page to view the tool options.

The following sections provide detailed explanations on the available tools:



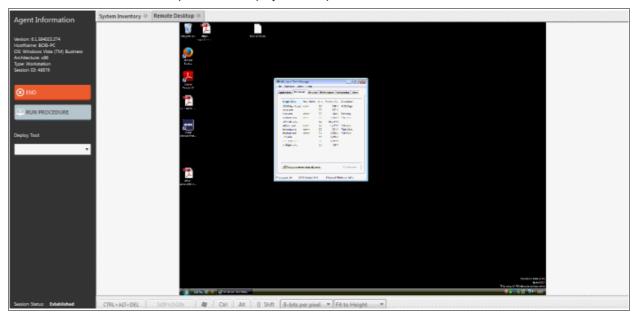
- Remote Desktop
- Autoruns Manager
- System Cleaner
- Power Manager
- Browser Add-Ons Manager
- Active Connections Manager
- System Restore
- Hardware Monitoring Tool
- Shell Execute
- Process Explorer
- System Inventory
- File Transfer

6.2.2.1 Access Endpoints through Remote Desktop Connection

RMM allows you to gain remote desktop access to the endpoint and execute necessary actions to solve issues. During the time that you are working with the endpoint, the end-user can view the actions taken by you and can operate the computer if required.

To initiate a remote desktop connection

· Select 'Remote Desktop' from the 'Deploy Tool' drop-down on the left



The desktop of the endpoint will open in a new 'Remote Desktop' tab in the main configuration area. You can take all the necessary measures to rectify the problems in the endpoint.

6.2.2.2 Managing Autoruns

The Autoruns Manager tool allows admins to view and edit endpoint start-up items which are loaded when the system boots-up. Unnecessary start-up items can hog system resources and lead to the system becoming sluggish or unresponsive.

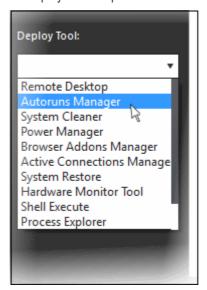
Start-up items can also have a significant impact on the security of the computer. Some forms of malware will add a start-up item to run in the background which facilitates the execution of key loggers, rootkits, buffer overflows and



Denial of Service (DoS) attacks.

To deploy the Autoruns Manager tool

Select 'Remote Desktop' from the 'Deploy Tool' drop-down on the left



A new 'Autoruns Manager' tab will be created in the main configuration area.



Select the category of the start-up item from the drop-down at the bottom:



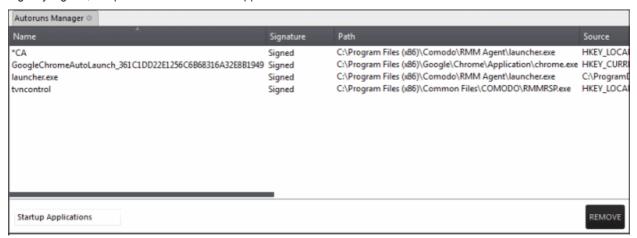
- Startup Applications Displays the autorun items identified from standard autostart locations such as the Startup folder for all users, the Registry Run keys, and standard application launch locations.
- Services Displays the modules loaded as Windows Services.
- Drivers Displays the kernel-mode drivers that are in currently enabled on the system.
- Native Applications Displays the native system applications that

are currently running on the system.



Startup Applications

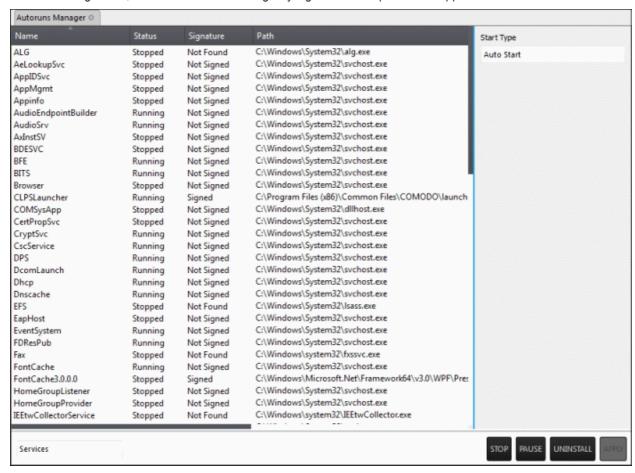
Selecting 'Startup applications' displays the autorun items identified from standard autostart locations such as the Startup folder for all users, the Registry Run keys, and standard application launch locations, whether they are digitally signed, the path and source of the application.



To remove a startup application, select it and click the 'Remove' button at the bottom. The selected item will
be removed only from the startup item. The user will be able to run the application manually in future.

Services

Selecting 'Services' applications displays Windows Services that are currently loaded in to the system with their current running status, whether the service is digitally signed and the path of the application.



To view the start type of a service, select it and the 'Start Type' drop-down displays its status

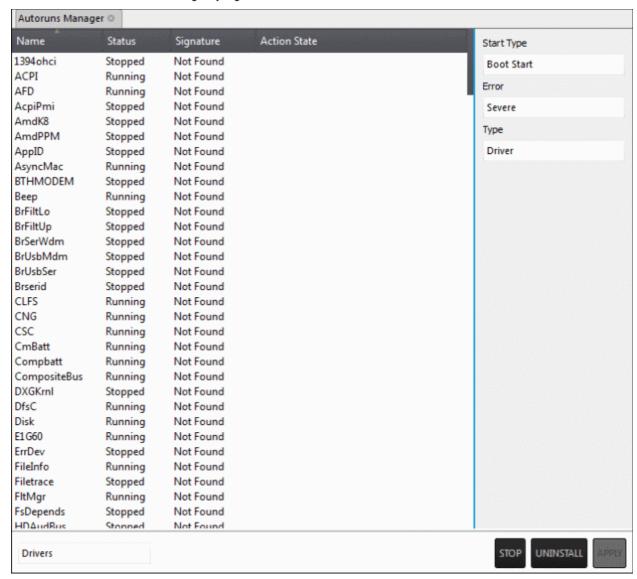


- To totally remove a service from the computer, select it and click 'Uninstall'
- To stop a running service, select it and click 'Stop'
- To restart a stopped service, select it and click 'Start'
- To change how a service should start, select it, choose the option from the 'Start Type' drop-down and click 'Apply'.



Drivers

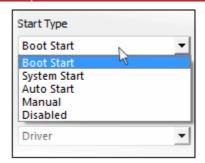
Selecting Drivers displays the device drivers that are currently loaded into the system with their current running status and whether the driver is digitally signed.



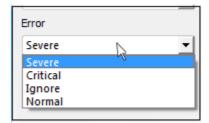
- To remove a driver from the system, select it and click 'Uninstall'
- To start/stop a driver, select it and click the 'Start/Stop' button



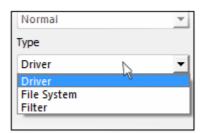
To change the way a driver should start, select it and choose the option from the 'Start Type' drop-down



To change the error severity of a driver, select it and choose the option from 'Error' drop-down



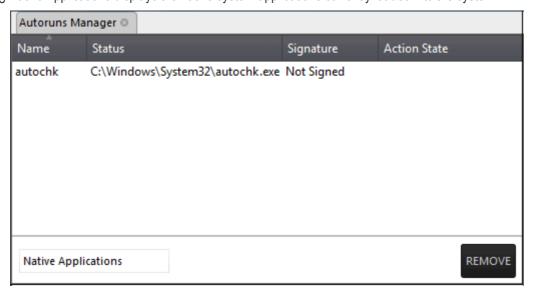
To change the file type of a driver, select it and choose the option from the 'Type' drop-down



Click 'Apply' for your changes to take effect

Native Applications

Selecting Native Applications displays the native system applications currently loaded into the system.



To remove an application, select the item and click 'Remove'.

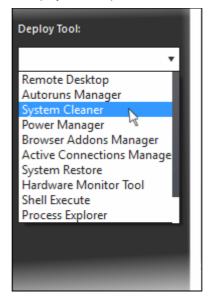
6.2.2.3 System Cleaner

The System Cleaner tool allows admins to improve the security, performance and usability of systems of damaging and/or wasteful files which generally enhances the performance of the system. It optimizes and repairs your Windows registry and erases your digital paper trail by cleaning history, cache, cookies, needless archives.



To run the System Cleaner

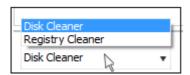
Select 'System Cleaner' from the 'Deploy Tool' drop-down on the left



A new 'System Cleaner' tab will be created in the main configuration area.



• Select the category of the clean-up task from the drop-down at the bottom:

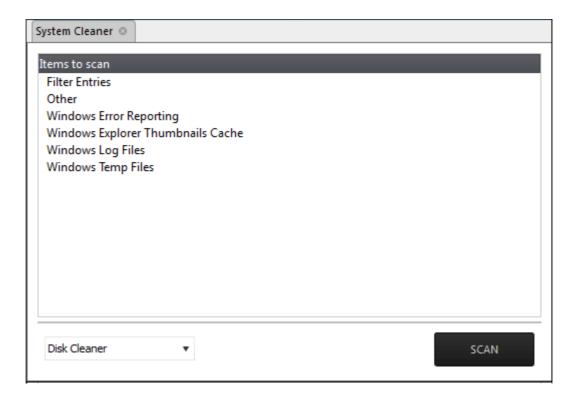


- Disk Cleaner Scans and removes junk or garbage files, potentially unwanted files from a computer. (temporary files, trash, old backups and web caches, local shared objects, log files or any other trace and so on).
- Registry Cleaner Cleans and repairs Windows registry by scanning and removing unnecessary and corrupted entries to increase the performance and stability boost.

Disk Cleaner



Selecting 'Disk cleaner' displays the list of items to be scanned such as Filter Entries, Windows Error Reporting and so on.



- Select the items to be scanned
- · Click 'Scan'

The scanner will start and identify the files to be cleaned.

- Click 'Back' to select the new item(s) to be scanned.
- Click 'Clean' to remove junk files.



The scanner will remove the junk files. Click 'OK' to return to the 'Disk Cleaner' screen.

Registry Cleaner

Selecting 'Registry Cleaner' from drop-down displays the items that might maintain invalid entries.





- Select the item to be scanned
- · Click 'Scan'

The scanning process will start.



Click 'Stop' to abort the scan process.



- Click 'Back' to select the new item(s) to be scanned
- · Click 'Clean' to remove invalid entries

The scanner will remove the junk entries. Click 'OK' to return to the 'Registry Cleaner' screen.

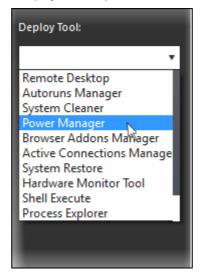
6.2.2.4 Power Management

The 'Power Manager' tool in the support session window enables the technician to shut down and restart an endpoint, if required after a critical operation like editing the Windows Registry of the client's computer.

To deploy the Power Manager tool



Select 'Power Manager' from the 'Deploy Tool' drop-down on the left



A new 'Power Manager' tab will be created in the main configuration area.



Select the power-off option

- To reboot the endpoint in Safe Mode, select 'Restart in Safe Mode with networking'. Upon restarting, the endpoint will automatically reconnect to your support session.
- To reboot the endpoint, select 'Restart'. Upon restarting, the endpoint will automatically reconnect to your support session.
- To shutdown the endpoint, select 'Shutdown'. The Shutdown option is not enabled by default. If you need the option, first select the 'Enable Shutdown option' check box.
- Click the 'Execute' button at the bottom.

The power-off action as per your selection will be executed immediately.

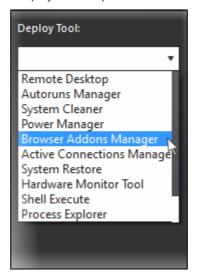
6.2.2.5 Managing Internet Browser Add-ons

Some of the websites and program downloaded from Internet install browser extensions silently on to the browsers in the computers, without the knowledge of the user. These add-ons, like extensions, plug-ins and so on, can be used by hackers to execute malicious activities on the user computers, including stealing confidential and sensitive information like credit card numbers and passwords typed in the web-based forms. The 'Browser Addons Manager' tool in the support session console enables the admin to identify the browser add-ons installed on the browsers and to remove unsafe or malicious add-ons.



To deploy the Browser Addons Manager tool

· Select 'Power Manager' from the 'Deploy Tool' drop-down on the left



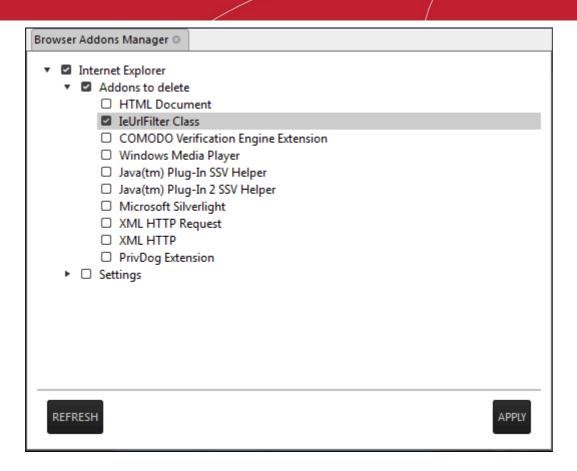
A new 'Browser Addons Manager' tab will be created in the main configuration area.



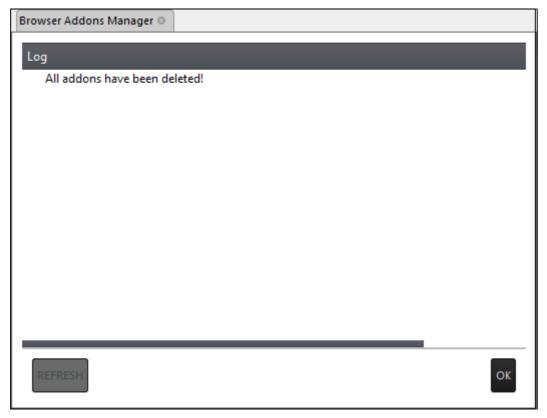
The tab will display all the browsers on the endpoint.

• Click on the • beside a browser to expand it to a tree structure





 To remove a browser add-on(s), select the check boxes(s) beside them and click the 'Apply' button at the bottom



All the selected add-ons will be removed at-once from the endpoint.



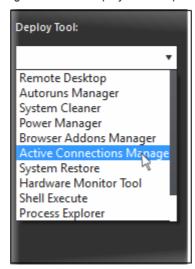
Click 'OK' to switch back to the list of browser add-ons.

6.2.2.6 Active Connections Manager

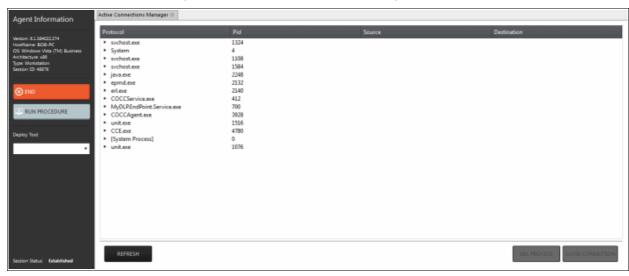
The 'Active Connection Manager' tool provides a high-performance solution for technicians to view all currently active connections (applications, processes and services), individual connections that each application is responsible for and terminate any unsafe processes that are running on an endpoint.

To manage active connections

Select 'Active Connections Manager' from the 'Deploy Tool' drop-down on the left



A new 'Active Connections Manager' tab will be created in the main configuration area.



The tab will display all the active connections on the endpoint.

- Protocol Displays a list of applications and system process that are running on the endpoint.
- Pid Displays the Process Identification number of the processes invoked by the application.
- Source Shows the source IP address and source port that the application is connecting through
- Destination Shows destination port address that the application is connecting to.
- To close unsafe connections, select the connection to be closed and click the 'Close Connection'.
- To stop an active process, select the connection and click the 'Kill Process'.

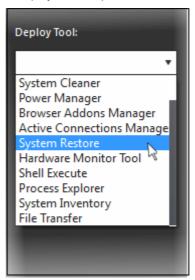


6.2.2.7 Restoring a Client System

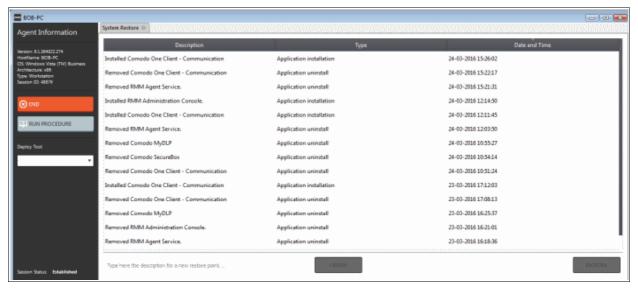
The 'System Restore' tool enables an admin to revert an endpoint to a previously created restore point (including system files, installed applications, Windows Registry, and system settings) and also create a new restore point for future use

To create a 'System Restore' point

Select 'System Restore' from the 'Deploy Tool' drop-down on the left

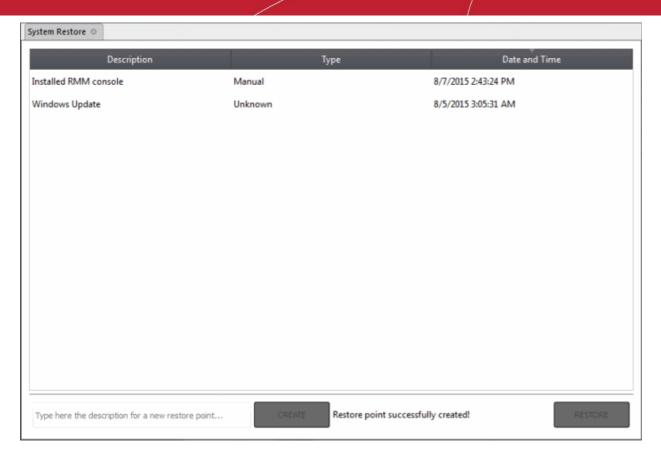


A new 'System Restore' tab opens in the main configuration area. From here you can create a restore point manually or restore system.



• Type a description of the restore point and click 'Create' to start the process. On successful completion, the newly created restore point will appear in the session window.





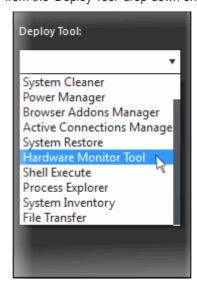
• To restore the endpoint to a previous point, select it from the list and click the 'Restore' button at the bottom A system restore request will be sent to the endpoint and the system will be set to be restored. The user now can restore the system to the restore point selected by the admin.

6.2.2.8 Hardware Monitor Tool

Hardware Monitor tool displays real time temperature of each processor core of CPU.

To monitor endpoint's hardware

Select 'Hardware Monitor Tool' from the 'Deploy Tool' drop-down on the left



A new 'Hardware Monitor Tool' tab will be displayed in the main configuration area.





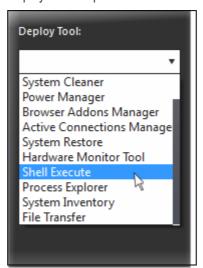
- Sensor Displays the details of the endpoint's CPU
- Value Real time temperature of a core in centigrade
- Max The maximum temperature recorded for a core

6.2.2.9 Accessing Command Prompt Window of Client System

Highly infected computers would not allow the command prompt window to be opened in the computer to perform the corrective actions. But the 'Shell Execute' tool in the support session window allows an admin to open the command prompt window of the endpoint. The administrator can execute programs to cleanup and repair highly infected computers, from the command line through the Shell Execute tool.

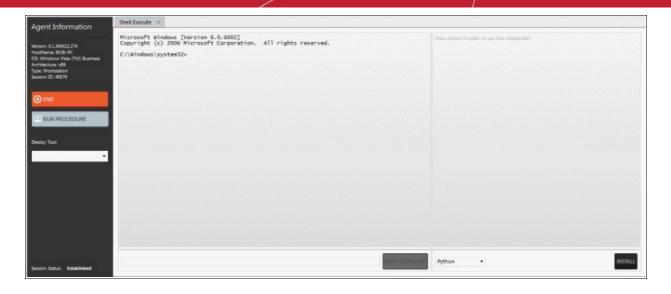
To deploy the 'Shell Execute' tool

Select 'Shell Execute' from the 'Deploy Tool' drop-down on the left

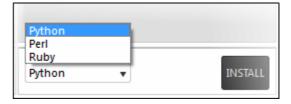


A new 'Shell Execute' tab opens in the main configuration area. From here you can install script languages and run the commands.





- To execute a Windows Shell command or a DOS command, type the command in the field beside 'Run command' and press 'Run command'.
- To run third-party scripts languages, select the scripts language from the drop-down



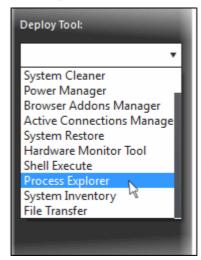
• Click 'Install' to install the language interpreter to interact with the operating system.

6.2.2.10 Managing Currently Running Processes

The 'Process Explorer' is an advanced system monitoring tool that allows admins to quickly identify, monitor and terminate any unsafe processes that are running on endpoints. The Process Explorer shows ALL running processes, even those triggered by malware in the computer and those that were invisible or very deeply hidden. The administrator can identify which of those running processes are unsafe and shut them down with a single click.

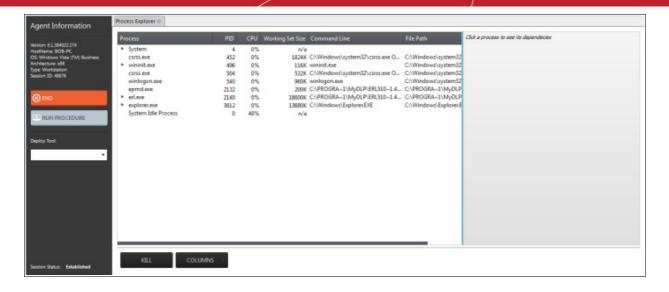
To deploy the 'Process Explorer' tool

· Select 'Process Explorer' from the 'Deploy Tool' drop-down on the left

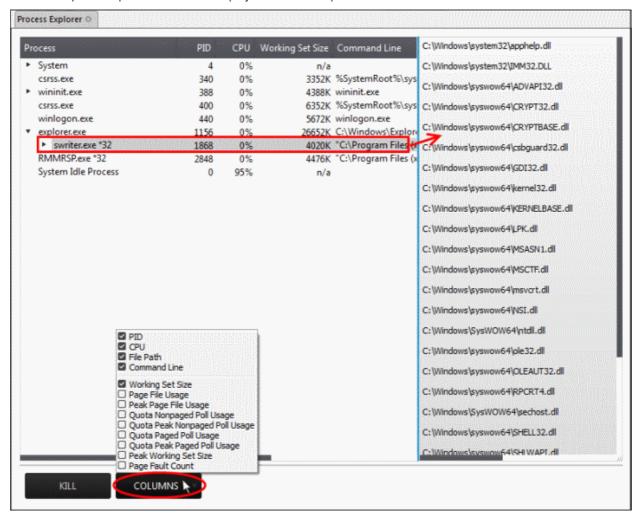


A new 'Process Explorer' tab opens in the main configuration area. All the processes currently running on the endpoint will be listed.





- Click on the beside an item to expand it to a tree structure
- To view the dependent processes, handles and DLLs of a process, select the process from the list. The dependent processes will be displayed on the next pane.



By default, the Process Explorer window displays the details of the process under five columns. To view more granular details of each process, an admin can add more columns to the window.

To add more columns, click on the 'Columns' drop-down and select the details to be displayed for each



process.

Process Explorer - Descriptions of Columns	
Column	Description
PID	Displays the Process Identification number. Clicking on the column header enables sorting the entries in ascending or descending order of the PID numbers.
CPU	Displays the CPU usage of the process as a portion of overall CPU usage by the process in percentage. Clicking on the column header enables sorting the entries based on the CPU usage.
File Path	Displays the location of the executable that has initiated the process
Command Line	Displays the command line command of the executable that has initiated the process
Working Set Size	Shows the size (in KB) of the virtual memory, occupied by the page files, referenced by the process. Clicking on the column header enables sorting the entries based on working set.
	Background Note: The working set of a process is the collection of information referenced by the process periodically. This collections are stored as page files in the secondary memory, such as the portion of the hard disk partitions allotted as virtual memory.
Page File Usage	Indicates the memory space occupied by the process in the virtual memory, created in the hard disk drive
Peak Page File Usage	Indicates the highest memory space occupied by the process in the virtual memory since the process has been started.
Quota Nonpaged Poll Usage	Indicates the quota amount of physical memory space (in KB) allotted for non paged pool usage by the process. The non paged memory pool consists of virtual memory addresses that would reside in physical memory as long as the corresponding kernel objects of the process are allocated.
Quota Peak Nonpaged Poll Usage	Indicates the maximum quota amount assigned for non paged pool usage for the process since the process has been started.
Quota Paged Poll Usage	Indicates the quota amount of virtual memory space (in KB) allocated for the process for paging.
Quota Peak Paged Poll Usage	Indicates the maximum quota amount of virtual memory space (in KB) for the paged pool usage by the process since it has been started.
Peak Working Set Size	Indicates the maximum working set size of the process, since it has been started.
Page Fault Count	Indicates the number of interrupts occurred during the read/write access by the process to the virtual memory location, that is marked 'not present'.

• To terminate unsafe or unwanted process, select the process and click the 'Kill' button at the bottom. Repeat the process to terminate more processes.

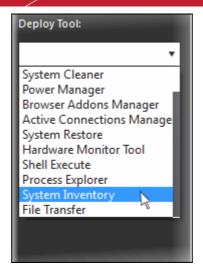
6.2.2.11 Obtaining System Inventory Information

The System Inventory tool enables an admin to retrieve the hardware and software resources of endpoint. The 'System Inventory' report provides a valuable information to the admin for determining compatibility of the hardware with the operating systems, and identifying any changes to a system that might develop problems.

To deploy 'System Inventory' tool

Select 'System Inventory' from the 'Deploy Tool' drop-down on the left



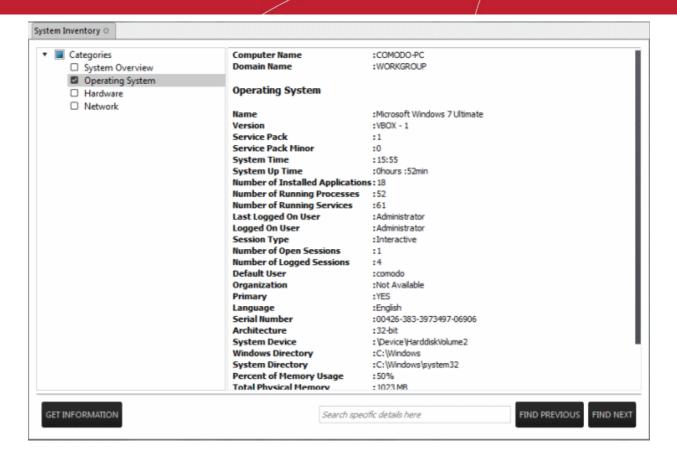


A new 'System Inventory' tab will be displayed in the main configuration area.



Click on the ► beside 'Categories' to expand/collapse the category list





- Select the category(ies) of information you wish to view.
- Click 'Get Information'

The information on the selected category(ies) will be displayed in the next pane.

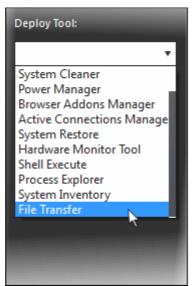
• To search for a specific information, type the search criteria in the 'Search specific details here' text box and click 'Find Next' or 'Find Previous'

6.2.2.12 Transferring Files From / To Client System

The 'File Transfer' tool allows an administrator to transfer files both ways between the host and endpoints.

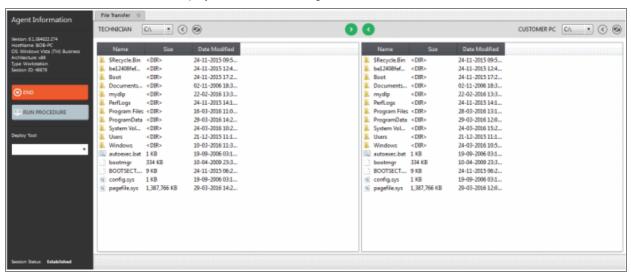
To transfer files

· Select 'File Transfer' from the 'Deploy Tool' drop-down on the left



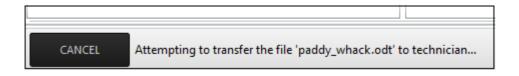






- Navigate to the location using the 'Drive' drop-downs
 and select the source/destination for file transfer
- Select the files to be transferred to host/user computer
- Click the button to go back to the parent folder
- Click the button to refresh the list
- Click the button to transfer files from host to endpoint
- Click the button to transfer files from endpoint to the admin computer

The file transfer progress will be displayed at the bottom.



Click the 'Cancel' button to abort the file transfer process

A confirmation message will be displayed at the bottom.

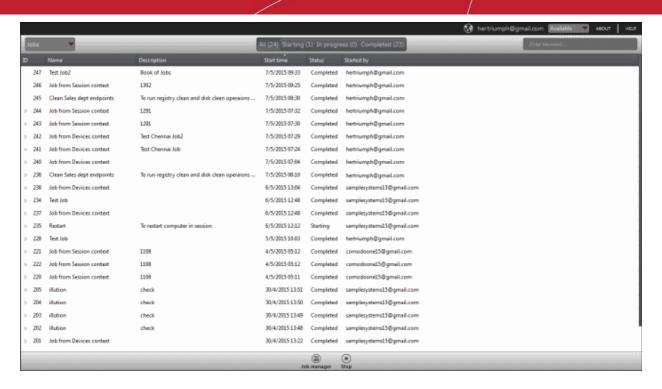
The 'paddy_whack.odt' file has been successfully transferred to technician in 'C:' folder.

7 The Jobs Interface

A 'Job' is a collection of **procedures** compiled to run on selected endpoints. You can create new jobs by including the existing procedures and selecting the endpoints for execution. Procedures that are run from the 'Devices', 'Procedures' and 'Sessions' interfaces are also created as jobs and displayed on the 'Jobs' screen.

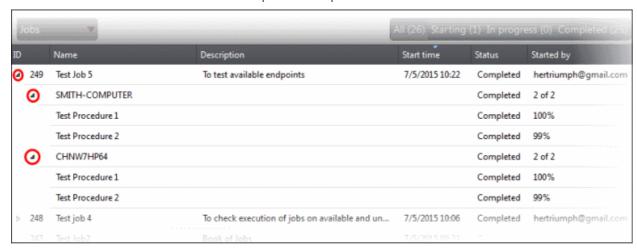
To open the 'Jobs' screen, click 'Jobs' from the drop-down at the top left





Jobs - Column Description	
Column Header	Description
ID	The ID number of the job
Name	Name of the job provided while creating. Procedures that are run from the 'Devices', 'Procedures' and 'Sessions' interfaces are also created as jobs and their names displayed on the 'Jobs' screen.
Description	Description of the job
Start time	Details of date and time when the job was executed
Status	Displays the status of the job whether it is 'Starting', 'In Progress' or 'Completed'
Started by	Displays the details of the admin who executed the job

Click the button beside a row to expand or collapse the Job details section



The expanded section for a Job ID displays the names of the endpoints and below them, the names of procedures



that were executed.

Filter and search options

The filter buttons at the top of the interface provide at-a-glance statuses of jobs executed.

All (26) Starting (1) In progress (0) Completed (25)

- Click on any of the item to display the filtered entries
- To search for a particular item, enter the details partly or fully in the search field on the right side.
- Click on a column header to sort the items in alphabetical/ascending/descending order

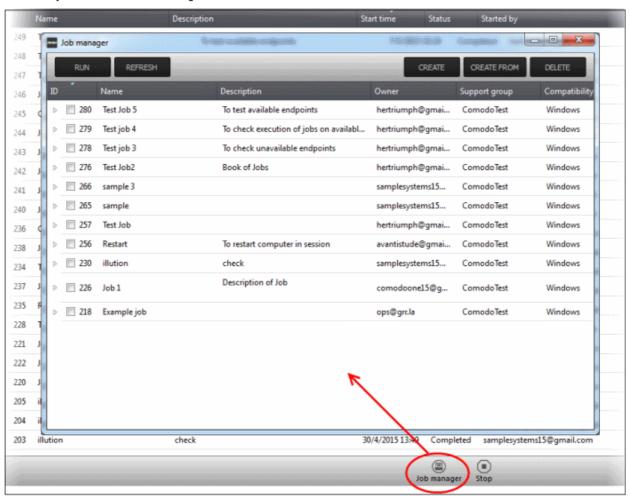
From the 'Jobs' interface an admin can:

- Manage Jobs
- Execute Jobs on Endpoints

7.1 Managing Jobs

The 'Jobs' interface allows admins to create new jobs that are to be executed on endpoints. A new job created cannot be edited but can be deleted from the list.

To create jobs, click the 'Job Manager' button at the bottom of the 'Jobs' interface





Job Manager - Column Description	
Column Header	Description
ID	The ID number of the job
Name	Name of the job provided while creating.
Description	Description of the job
Owner	Username of the admin who created the job
Support group	Displays the name of the customer account
Compatibility	Displays the name of OS for which the job can be executed

· Click on a column header to sort the items in alphabetical/ascending/descending order

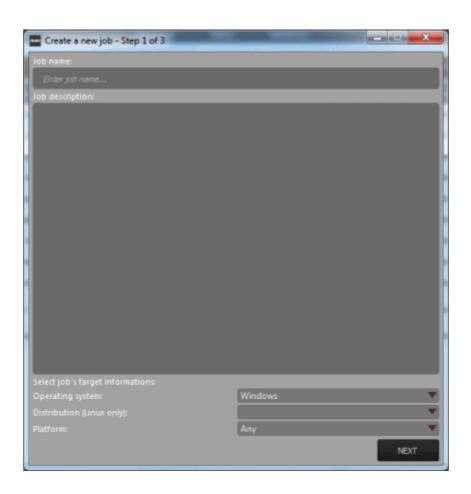
The 'Job Manager' screen allows an admin to:

- · Create a new job
- View details of a job
- · Delete a job
- · Execute a job on endpoints

To create a new job

Click the 'Create' button at the top of the interface

Step 1

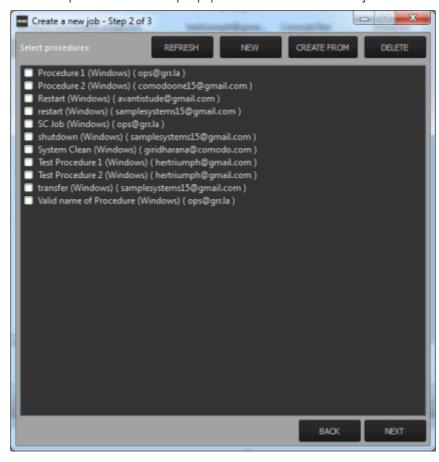




- Enter the name of the job in the 'Job name' field
- Enter an appropriate description for the job in the 'Job description' section
- Select the OS details of the endpoints for which the job should be executed below the 'Select job's target information' section at the bottom of the screen
- Click the 'Next' button

Step 2

The next step is to select the procedures that are pre populated in the screen for the job.



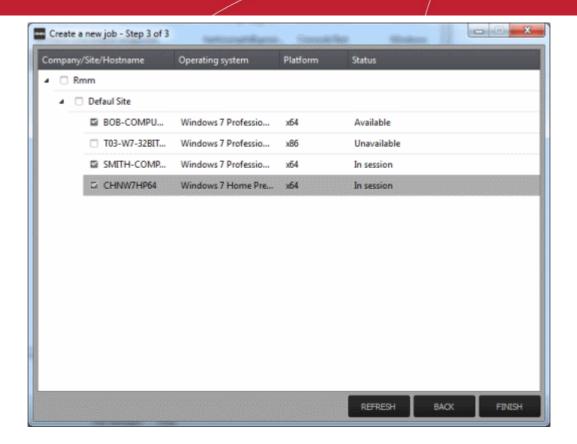
You can also create a new procedure afresh or from an existing procedure from the screen by clicking the 'New' or 'Create From' buttons. Refer to the section 'Managing Procedures' for more details about how to create procedures.

- Click the 'Refresh' button to update the procedures list in the screen
- Select the procedure(s) from the list that you want to add for the job
- · Click the 'Next' button

Step 3

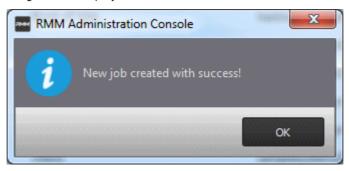
The next step is add the endpoints onto which the job should be executed.





· Select the endpoints from the list and click the 'Finish' button

A success confirmation message will be displayed.



· Click 'OK'

The new job will be created and be listed on the screen.

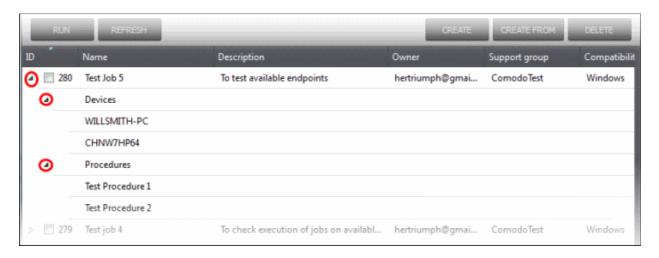
Tip: You can create new jobs using an existing job as a template. To create a new job, select an existing job and click the 'Create From' button. The 'Create a new job' dialog will open with the actions pertaining to the existing job preselected. You can edit the parameters and create a new job.

Now that a job is created you can run it anytime. Refer to the section 'Executing Jobs on Endpoints' for more details.

To view details of a job

Click the button beside a row to expand or collapse the Job details section

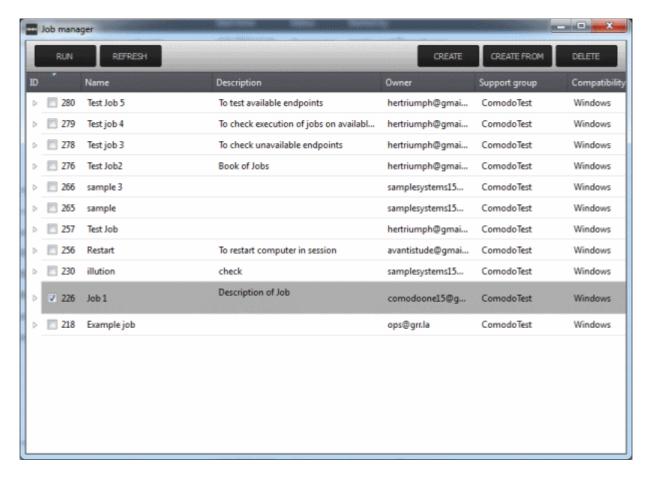




The expanded section for an Job ID displays the names of the endpoints below 'Devices' and below the names of procedures below 'Procedures'.

To delete a job

Select the job(s) from the list that you want to remove



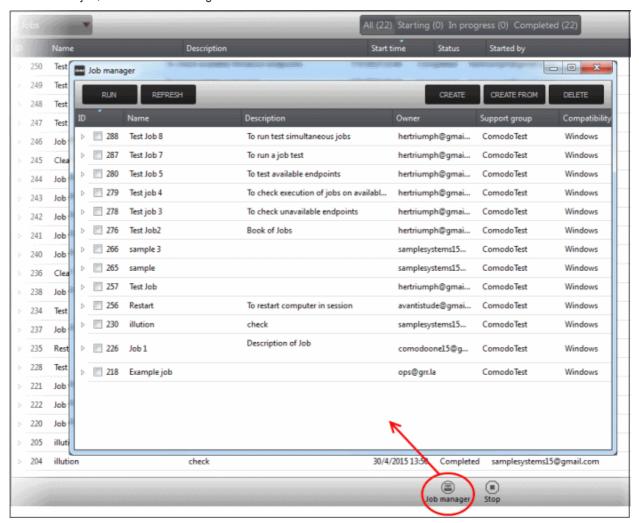
Click the 'Delete' button at the top right



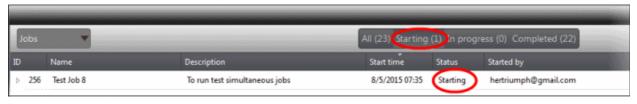
7.2 Executing Jobs on Endpoints

Jobs that are **created** can be run anytime from the 'Job Manager' interface. Please note that only one job can be executed at a time.

To execute a job, click the 'Job Manager' button at the bottom of 'Jobs' interface



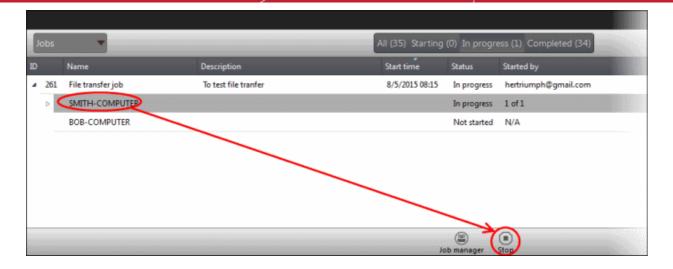
• From the 'Job Manager' screen, select the job that you want to execute and click the 'Run' button at the top The selected job will start and its stages of execution will be displayed in the 'Jobs' screen.



The stages of a job execution are, 'Starting', 'In progress' and 'Completed'

To stop a job midway, click the button beside a row, select the device below 'Devices' and click the 'Stop' button.



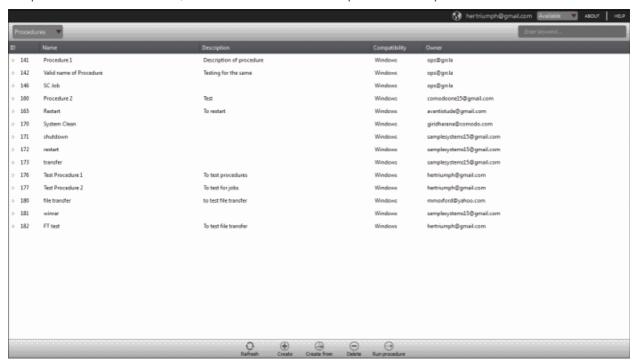


The job execution will be canceled.

8 The Procedures Interface

A 'Procedure' is a set of actions to be run on endpoints. CRMM is shipped with a set of predefined actions such as 'Application Installer', 'Power Manager', 'System Restore' and you can define parameters for each of the action. The configured actions in a procedure are performed in sequence while executing it. A procedure can be run ad-hoc on any endpoint and can also be used while creating a job to be executed on specific endpoint(s).

To open the 'Procedures' screen, click 'Procedures' from the drop-down at the top left.

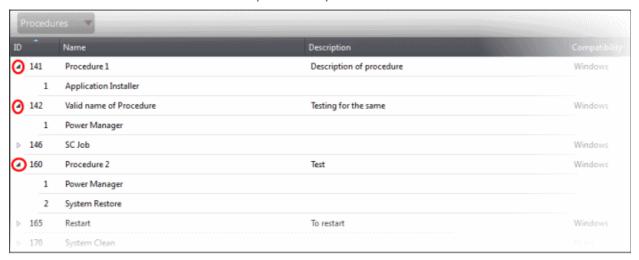


Procedures - Column Description	
Column Header	Description
ID	The ID number of the procedure
Name	Name of the procedure provided while creating



Description	Description of the procedure
Compatibility	Displays on which operating system the procedure can be run
Owner	The user name of the admin who created the procedure

Click the button beside a row to expand or collapse the 'Procedure' details section



The expanded section of a 'Procedure' displays the names of the configured actions in sequence below the name of a procedure.

Sort and search options

- To search for a particular item, enter the details partly or fully in the search field on the right side.
- Click on a column header to sort the items in alphabetical/ascending/descending order

From the 'Procedures' interface an admin can:

- Manage Procedures
- Run Procedures on Endpoints

8.1 Managing Procedures

The 'Procedures' interface allows admins to create new procedures that are to be executed on endpoints. A new procedure created cannot be edited but can be deleted from the list.

The 'Procedures' screen allows an admin to:

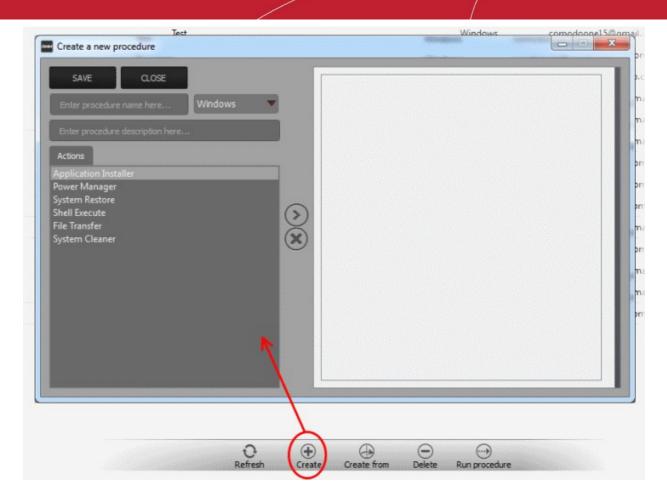
- Create a new procedure
- Delete a procedure
- Run a procedure on endpoints

To create a new procedure

· Click 'Create' from the bottom

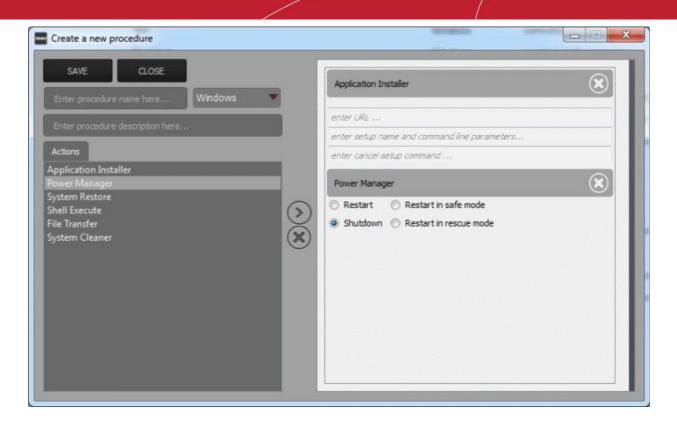
The 'Crete a new procedure' dialog will displayed.





- Enter a name and a short description in the respective fields and choose the operating system from the drop-down at the left.
- Choose an action from the 'Action' list at the left and click the button to add the action to the list at the right
- Repeat the process to add more actions





- To remove an action from the right side, click the button at the top right of the respective action
- To remove all the actions from the right side, click the button on the center
- · Select the options and/or set the parameters for the action.

Action	Parameters Required
Application Installer	 Enter the following parameters: Download URL for the application Name of the setup file and command line parameters Command for canceling installation for failsafe reasons
Power Manager	Choose the power control operation from: Restart Restart in safe mode Shutdown Restart in rescue mode
System Restore	Choose whether to create a restore point or to restore the system to a previous state. • Enter the name of the restore point
Shell Execute	Enter the execution command for the process Enter the parameters to be passed to the process Advanced



Action	Parameters Required
	Enter the working directory for the process
	Choose the execution options:
	 Wait for process to finish - Completes the process before termination Hide Window - Executes the process at the background
File Transfer	Enter the path of the source file to be copied from the host computer at which the technician console is installed. The file will be copied to the folder c:\lps-temp\file-transfer at the endpoint.
System Cleaner	Select the cleaner modules to be applied:
	Disk Cleaner
	Registry Cleaner

 Click the 'Save' to save the procedure. Upon running the procedure, the actions will be executed sequentially.

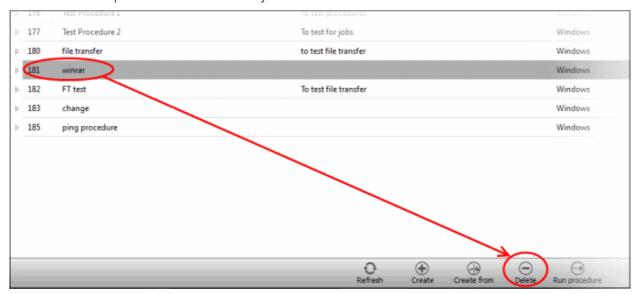
The 'Procedure' will be added to the list and will be available for inclusion in a **job created** for a specific endpoint. The procedure can also be run ad-hoc on any desired endpoint. Refer to the section 'Running Procedures on Endpoints' for more details.

Repeat the process to add more procedures as required.

Tip: You can create new procedures using an existing procedure as a template. To create a new procedure, select an existing procedure and click 'Create From' from the bottom. The 'Create a new procedure' dialog will open with the actions pertaining to the existing procedure preselected. You can edit the parameters and create the new procedure.

To delete a procedure

• Select the procedure from the list that you want to remove



Click the 'Delete' button at the bottom

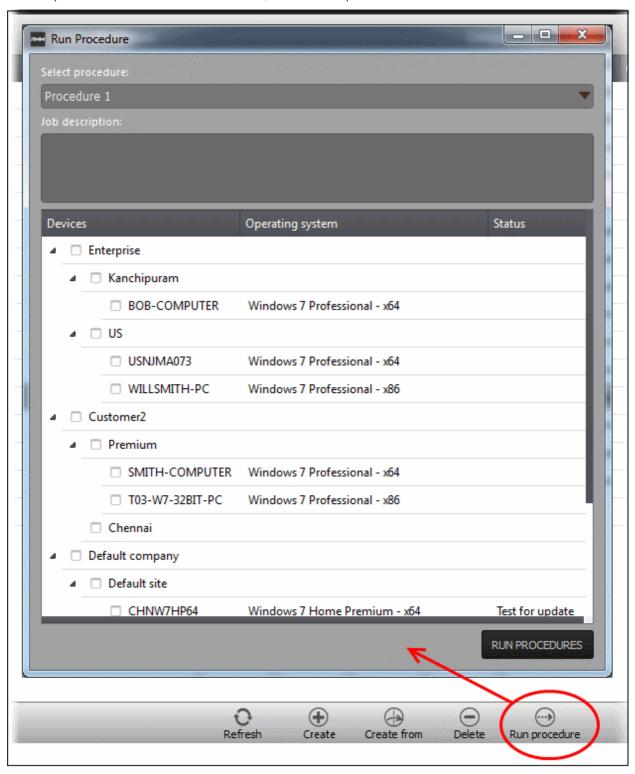
8.2 Running Procedures on Endpoints

Procedures that are created can be run anytime from multiple interfaces - The 'Procedures' interface, the 'Devices'



interface and the 'Sessions' interface.

To run a procedure from the 'Procedures' screen, click the 'Run procedure' button at the bottom of the interface.



- Select the procedure that you want to run from the 'Select procedure' drop-down at the top. Refer to the section 'Managing Procedures' for more details about how to create and manage procedures.
- Enter the name of the job in the 'Job description' field
- Select the endpoints from the 'Devices' list that you want to run the procedure
- · Click the 'Run Procedures' button at the bottom

The procedure will be run on the selected endpoints and it will be created as a job and displayed in the 'Jobs'



interface with its status whether 'Starting', 'In-progress' or 'Completed'. Refer to the section 'The Jobs Interface' for more details.

9 The Policies Interface

Policies help MSPs/organizations/departments to monitor endpoints effectively and efficiently. RMM allows administrators to create policies based on predefined system parameters such as RAM monitor, traffic monitor, disk health monitor and so on. You can configure settings for each monitored item while creating a policy then deploy it to endpoints.

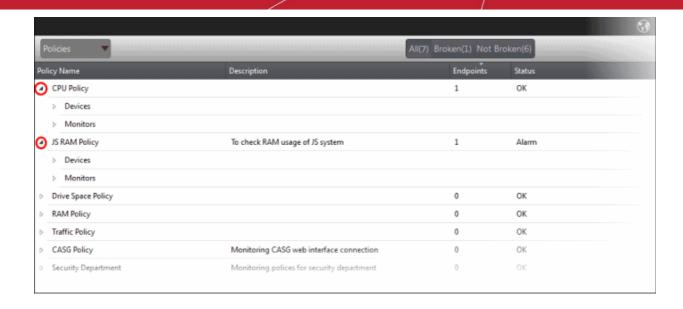
To open the 'Policies' screen, click 'Policies' from the drop-down at the top left.



Policies - Column Description	
Column Header	Description
Policy Name	Displays the name of the monitoring policies
Description	The description provided for the policy while creating it
Endpoints	Indicates the number of endpoints a policy is applied
Status	 Indicates whether the applied policy is violated or not OK - Policy is not violated Alarm - Policy is breached. A service desk ticket is also automatically created in the Service Desk module.

Click the ▷ button beside an applied policy to expand or collapse the section





The monitor details of the policy and endpoints that are applied the policy will be displayed below it. Refer to the section 'View details of a policy' for more details.

Filter and search options

The filter buttons at the top of the interface provide at-a-glance statuses of the policies.

All(7) Broken(1) Not Broken(6)

- Click on any of the item to display the filtered entries
- To search for a particular item, enter the details partly or fully in the search field on the right side.
- Click the 'Refresh' button to update the interface
- Click on a column header to sort the items in alphabetical/ascending/descending order

The buttons at the bottom of the 'Policies' interface allows admins to create policies, deploy them on endpoints, stop the applied policies and delete policies. Refer to the section 'Managing Policies' for more details.

9.1 Managing Policies

The 'Policies' interface allows admins to create new policies and apply them onto endpoints as per an organization's requirement. For example you can create a policy by including multiple monitoring modules such as 'Traffic Monitor', 'RAM Monitor', 'Disk health Monitor' and so on in order to meet the specific needs of an organization/department and apply the policy to endpoints.

If a policy is violated by an endpoint, a service desk ticket will also be created in the Service Desk module. A new policy created cannot be edited but can be deleted from the list.

To manage policies, open the 'Policies' screen, by clicking 'Policies' from the drop-down at the top left





The interface displays all the created policies.

From the 'Policies' screen an admin can:

- · Create a new policy
- · View details of a policy
- · Delete a policy
- Apply policy to an endpoint
- · Stop an applied policy

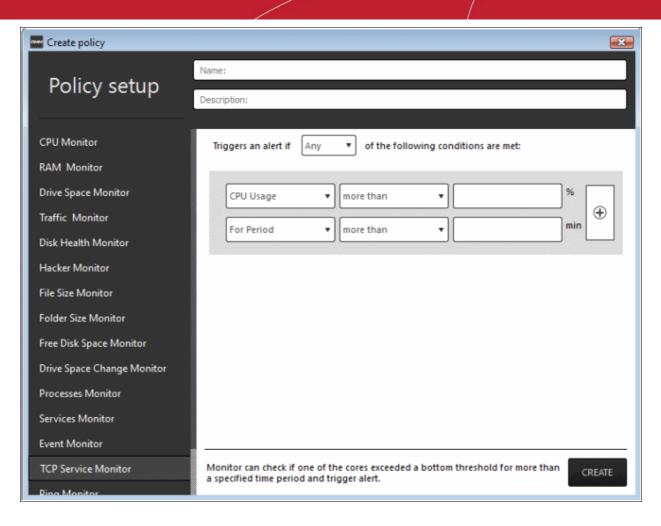
To create a new policy

· Click the 'Create' button at the bottom of the interface



The 'Create Policy' dialog will be displayed:





The monitoring modules are displayed on the left side of the screen and on the right side, you can configure the parameters for a selected a module. The table below provides the details of the monitoring modules.

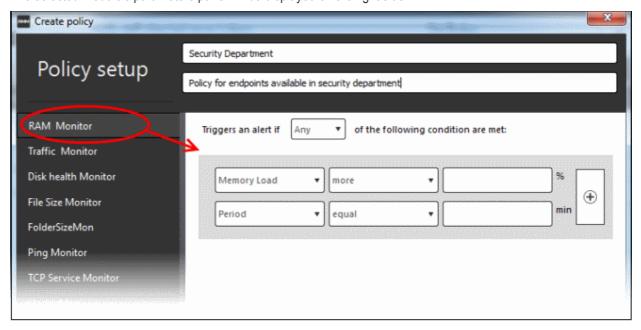
Monitoring Modules					
Name	Description				
RAM Monitor	Checks if RAM memory usage exceeds a bottom threshold for more than a specified time and generates a service desk ticket.				
Traffic Monitor	Checks if network traffic exceeds a bottom threshold for more than a specified time and generates a service desk ticket.				
Disk Health Monitor	Uses 'Windows Management Instrumentation' (WMI) to check if any 'Self-Monitoring, Analysis and Reporting Technology' (SMART) disks are reporting errors to the OS. A servidesk ticket is generated if any errors are reported.				
File Size Monitor	Checks the disk space used by a file on target computers and generates a service desk ticket when a specific file exceeds the maximum size specified.				
Folder Size Monitor	Checks the disk space used by a directory/folder on target computers and generates a service desk ticket when a specific folder exceeds the maximum specified size.				
Ping Monitor	Pings a device using its hostname, fully qualified domain name or an IP Address and generates a service desk ticket if no response is recieived.				
TCP Service Monitor	Checks periodically attempts to connect to a specified domain/IP:port. This allows to check for services that should be running and generates a service desk ticket when ports that should be closed become open.				



Hacker Monitor	Keeps track of unsuccessful login attempts on the monitored device for the past 24 hours and generates a service desk ticket if the total number of attempts exceeds the specified number.		
CPU Monitor	Checks if one of the cores exceeds a bottom threshold for more than a specified time and generates a service desk ticket		
Free Disk Space Monitor	Checks for free disk space and generates a service desk ticket whenever the hard disk free space fall below the specified value.		
Process Monitor	Checks if a set of processes are running and generates a service desk ticket. if any them is stopped.		
Services Monitor	Checks periodically if the specified services are matching the required status, for example, running, stopped, not started.		
Web Monitor	Checks periodically a web page identified by URL:port and passes the test as long as it responds with the entered text.		
Drive Space Monitor	Keeps track of free space on OS drive partition and generates a service desk ticket if the specified value is exceeded. This monitor also checks if the data on the drive has changed by more than the set threshold and creates a service desk ticket.		
Drive Space Change Monitor	Keeps track of the rate of data change on the drive and generates a service desk ticket if the data on the drive is changed more within the configured period.		
Event Monitor	Checks Windows Event logs on endpoints. Service desk tickets are generated when a Windows event with the specified Event Sources, Event IDs or Even level occurs.		

- Enter a name and a short description for the policy in the respective fields
- Choose the monitoring module from the left.

The selected module's parameters pane will be displayed on the right side.



• Specify the conditions and thresholds of the rule in the right pane. Your rules are automatically saved as you go along, so you can freely select other modules on the left if you wish to add more rules to the policy.

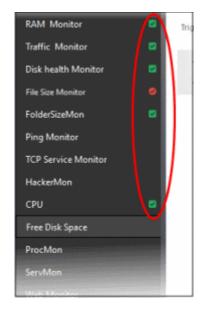
You can add any number of conditions for a particular rule by clicking the \oplus button at the right. To remove a



condition, click the soutton to the right.

• Add more monitoring modules if required for the policy by selecting them on the left.

A check-mark is shown next to modules which are included in the current policy.



A check-mark in green background indicates parameters are correctly configured and a check-mark in red background indicates it is wrong configured.

Click 'Create' to save your policy.

The policy will be added to the list in the 'Policy Manager' interface and will be available for deployment to desired endpoints at any time. Refer to the section 'Apply policy to an endpoint' for more details.

Tip: You can create new policies using an existing policy as a template. To create a new policy, select an existing policy and click the 'Create From' button. The 'Create policy' dialog will open with the monitoring modules pertaining to the existing policy preselected. You can edit the parameters to create a new policy.



To view details of a policy

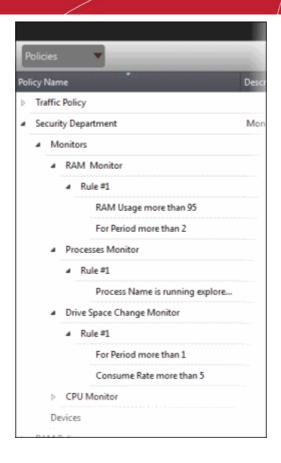
Click the button beside a policy to expand the section

The monitoring modules added for a policy and endpoints that are applied the policy are displayed below the name of the policy.

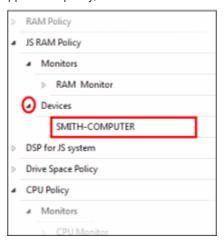


The modules and endpoints are displayed below the labels 'Monitors' and 'Devices', respectively. To view the details of conditions for the rules configured for each monitoring module, click the button beside the respective module and rule.





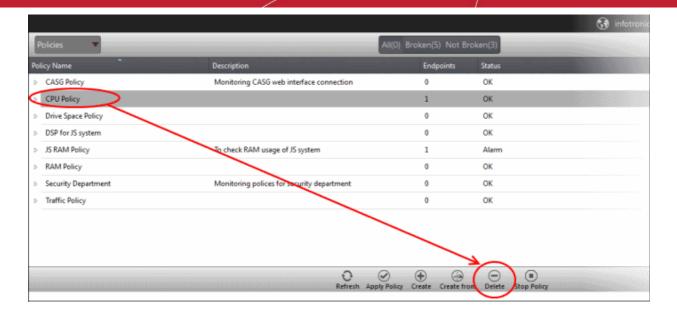
To view the details of endpoint that is applied the policy, click the button beside 'Devices'



To delete a policy

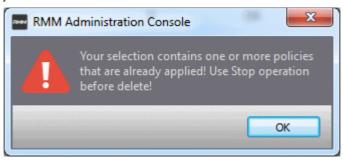
Select the policy from the list that you want to remove





The selected policy will be deleted.

Note: Make sure the policy that you want to delete is not in force on endpoints. A warning will be displayed if you are trying to delete a policy that is in force.



Refer to the section 'To stop a policy' for more details.

To apply a policy to an endpoint

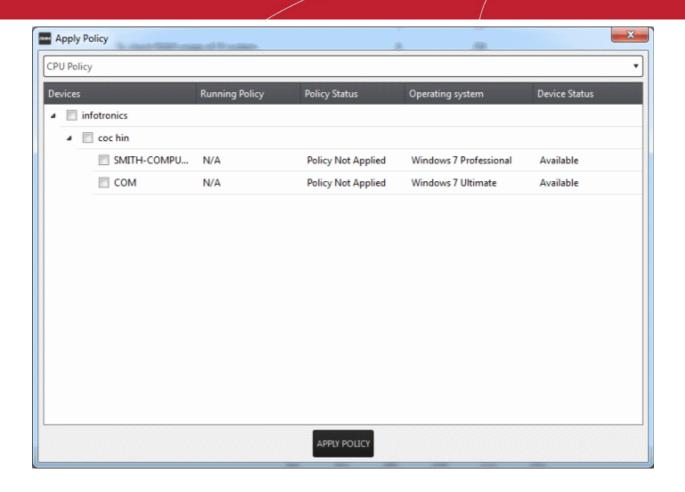
Note:

- You can apply only one policy to an endpoint
- An endpoint that is taken remotely cannot be applied a policy.
- You can apply a policy from the 'Devices' interface also. Refer to the section 'Applying Policies' for more details.
- Click the 'Apply Policy' button at the bottom of the 'Policies' interface



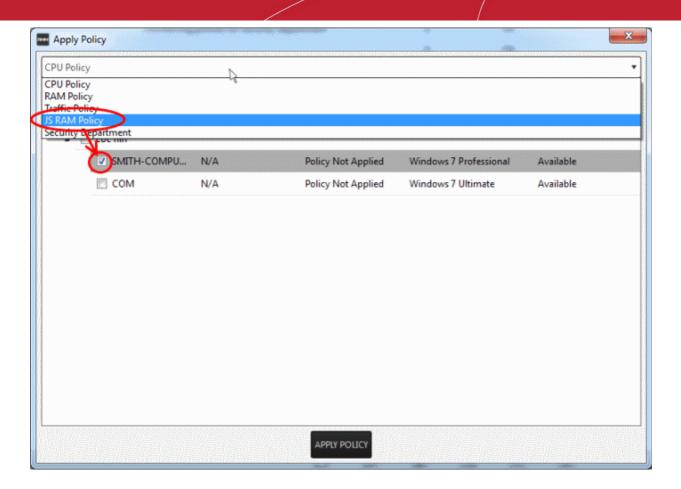
The 'Apply Policy' dialog will be displayed.





• Select the endpoint(s) from the list



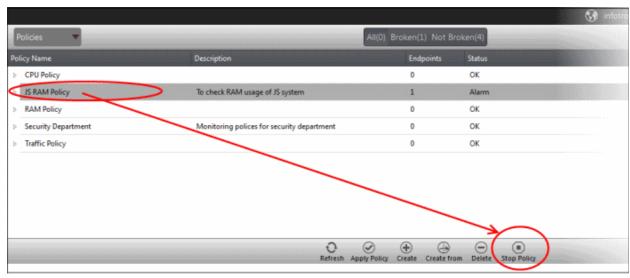


- Select the policy that you wish to apply to the selected endpoint from the drop-down at the top
- Click the 'Apply Policy' button

The policy will be deployed on the selected endpoints and will be listed in the main 'Policies' interface.

To stop a policy

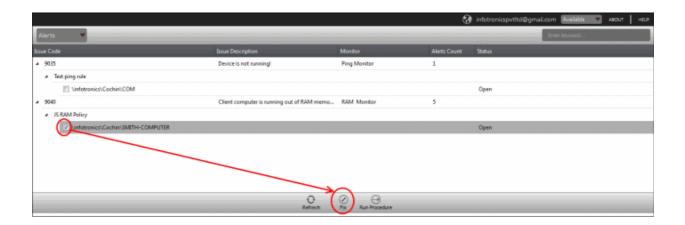
· Select the policy from the list



Click the 'Stop Policy' button.

The policy will no longer be applied for the endpoint(s). Now, if required, you can delete the policy. Refer to the section 'To delete a policy' for more details.







Appendix - Issue Codes for Monitors

	Issue Codes for Monitors, Description and Recommended Procedures							
Monitor	Issue Code & Name	Description	Advice	Procedure (if any)				
RAM Monitor	9040 - Client computer is running out of RAM memory!	The RAM threshold has been reached	Check the list of running programs / services to see which is using more RAM, maybe there is a memory leak	Stop that program / service				
Traffic Monitor	9038 - Network traffic exceeded the threshold value	The traffic limit imposed by the policy has been exceeded	Check the list of running programs / services to see which is using more bandwidth	Stop that program / service				
Disk Health Monitor	9037 - Disk error detected!	A disk error was detected during check operation	Make sure the disk isn't damage and backup the data before it fails completely	Scan and attempt to fix the disk errors				
File Size Monitor	9029 - File size exceeds the limit allowed	The selected file has exceeded the size imposed by the policy	Check for reasons why the file size is exceeding in application logs and in system events	None				
Folder Size Monitor	9030 - Folder size exceeds the limit allowed	The selected folder has exceeded the size imposed by the policy	Check for reasons why the folder size is exceeding in application logs and in system events	None				
Ping Monitor	9035 - Device is not running	The specified device is offline or it could not be reached	Check if the device is ON and if the connection is ok	You can try to reboot the device				
TCP Service Monitor	9034 - TCP service is running!	The specified TCP service is running	Check why the service started running	Stop that service				
Hacker Monitor	9033 - Too many failed login attempts!	The limit of failed login attempts has been reached	Check if someone is trying to brute-force access into the system	You can disable the brute-forced account				
CPU Monitor	9026 - High CPU Load	The CPU on the endpoint has been running at greater capacity and time than the entered values	High CPU levels for prolonged periods could indicate the need for a hardware upgrade or that too many processes are running concurrently.	None				
			If the service desk ticket is generated repeatedly on the same endpoints then investigation may be					



			· · · · · · · · · · · · · · · · · · ·	
			required.	
Free Disk Space Monitor	9032 - PC is running out of free disk space	The disk quota specified by the policy was exceeded	Check for reasons why the disk space was exceeded	Cleanup the disk space (temporary files, cookies, etc)
Process Monitor	9027 - Process not running	The selected process was not in the list of running processes.	Check the logs and system events to see why the process stopped	Start the process again
Services Monitor	9028 - Service not running	The selected service was not in the list of running services.	Check the logs and system events to see why the service stopped	Start the service again
Drive Space Monitor	9045 - OS drive is running out of free disk space	The operating system drive is running out of space	Check the logs, temporary files and user installed apps to see which one consumes more space	Clean unnecessary files
Drive Space Change Monitor	9046 - Drive space is consumed at a rapid rate	The drive space is being consumed with a rate higher than the selected threshold	Check the logs, temporary files and user installed apps to see which one consumes more space	You can get a bigger hard drive or you can reconfigure / uninstall that app
Web Monitor	9048 - Web page is up	Web page contains the specified data	Please check the machine to see why the web service is started. The service was supposed to be stopped.	None
Event Monitor	9031 - Windows Event Triggered	An event was triggered in windows events which matches the policy parameters	Please check the windows events log for details	None



About Comodo

The Comodo organization is a global innovator and developer of cyber security solutions, founded on the belief that every single digital transaction deserves and requires a unique layer of trust and security. Building on its deep history in SSL certificates, antivirus and endpoint security leadership, and true containment technology, individuals and enterprises rely on Comodo's proven solutions to authenticate, validate and secure their most critical information.

With data protection covering endpoint, network and mobile security, plus identity and access management, Comodo's proprietary technologies help solve the malware and cyber-attack challenges of today. Securing online transactions for thousands of businesses, and with more than 85 million desktop security software installations, Comodo is Creating Trust Online®. With United States headquarters in Clifton, New Jersey, the Comodo organization has offices in China, India, the Philippines, Romania, Turkey, Ukraine and the United Kingdom.

Comodo Security Solutions, Inc.

1255 Broad Street Clifton, NJ, 07013 United States

Email: EnterpriseSolutions@Comodo.com

Comodo CA Limited

3rd Floor, 26 Office Village, Exchange Quay, Trafford Road, Salford, Greater Manchester M5 3EQ,

United Kingdom.

Tel: +44 (0) 161 874 7070 Fax: +44 (0) 161 877 1767

For additional information on Comodo - visit http://www.comodo.com.