BlackBerry | CYLANCE®

SOLUTION BRIEF

# What's New in CylancePROTECT® and CylanceOPTICS®

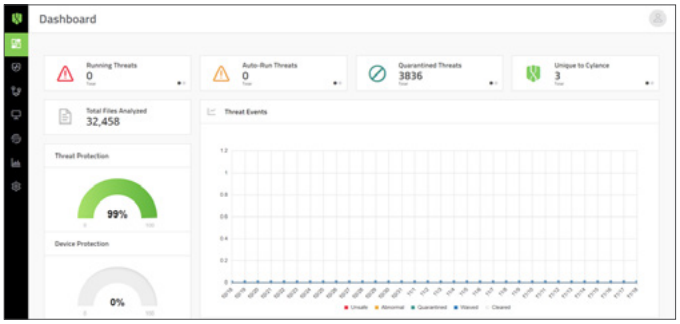
February 2020 Release

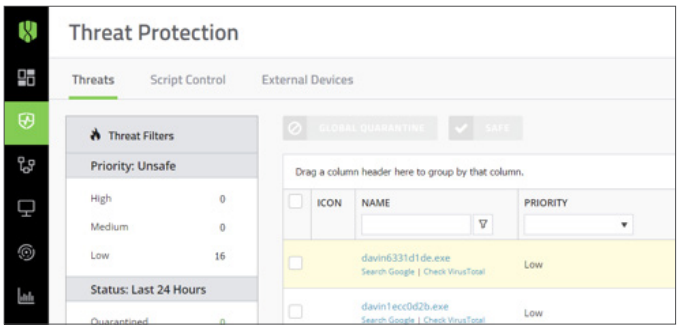
# What's New in CylancePROTECT

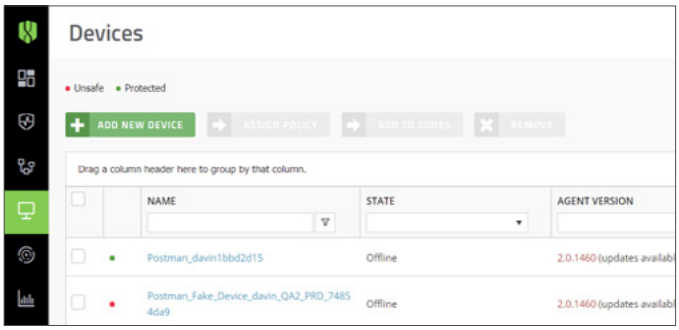
BlackBerry Cylance's February 2020 release includes a modernization of the user interface (UI), an expansion of role-based access controls (RBAC), and the release of the single agent.

## UI Modernization

Driven by customer demand, CylancePROTECT includes an updated look and feel for the UI. These updates include new colors, fonts, an updated login page, and a new left-side navigation bar.



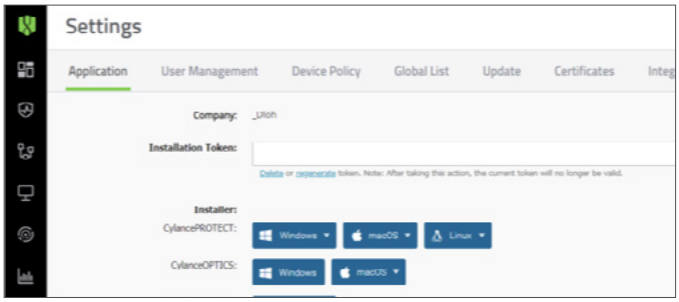



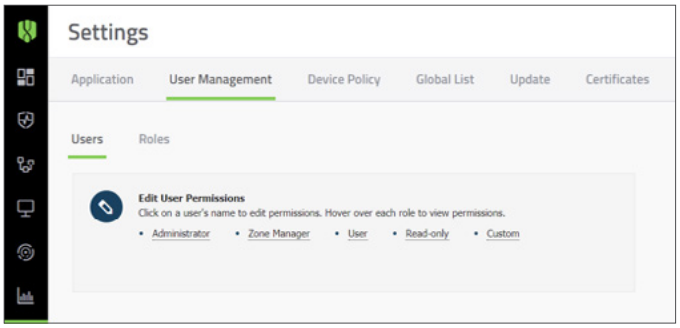

## Role-Based Access Controls (RBAC)

RBAC is an approach to restricting system access based on the roles of individual users within an enterprise. RBAC enables restriction of access rights to the information needed for product administrators/users to do their jobs and prevents them from accessing information that doesn't pertain to them. BlackBerry Cylance has made significant strides in the CylancePROTECT RBAC capabilities.

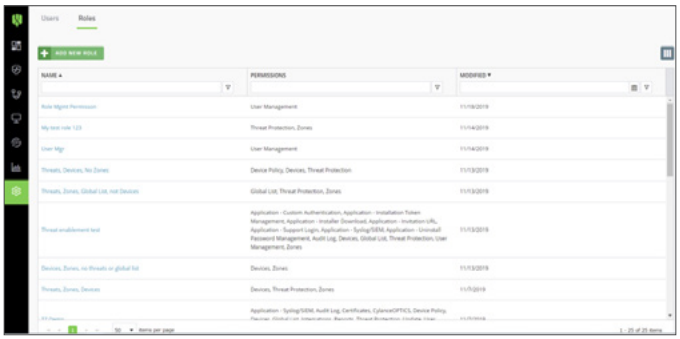
Go to the Navigation toolbar on the left side of the page and select the Settings gear icon.



Then, go to the toolbar across the top of the page and select User Management.




To add a new role, select Roles.

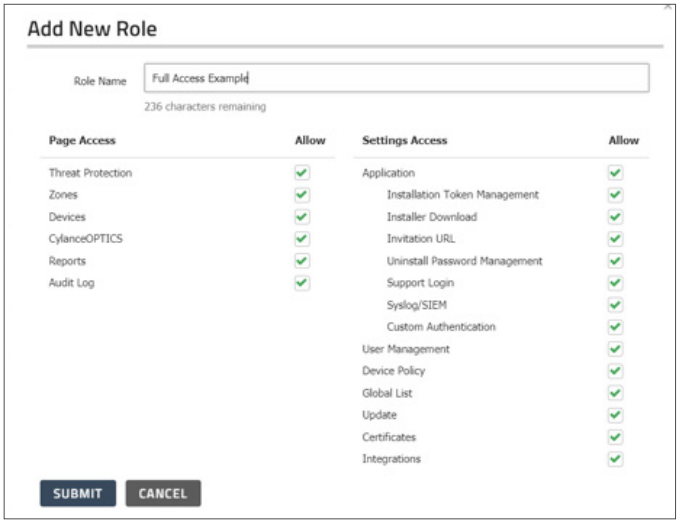


The easy-to-use Add New Role template allows administrators to give a new employee page access and settings access. The example below illustrates how to add a new role with full access. Full access would include Page Access to:

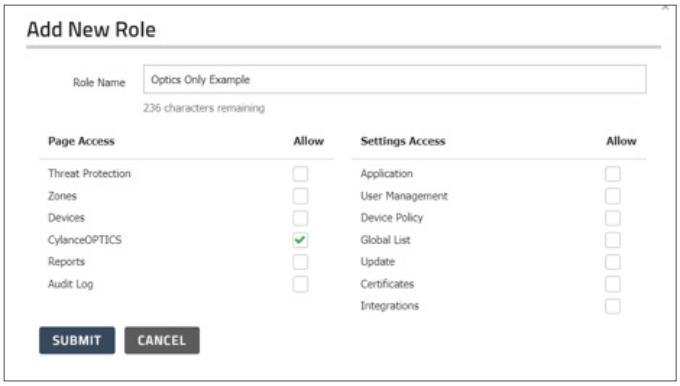
1. Threat Protection
2. Zones
3. Devices
4. CylanceOPTICS
5. Reports
6. Audit Logs

In the Settings Access section on the right-hand side of the page, select the functions the employee will be allowed to use:

1. Application
2. User Management
3. Device Policy
4. Global List
5. Update
6. Certificate
7. Integrations



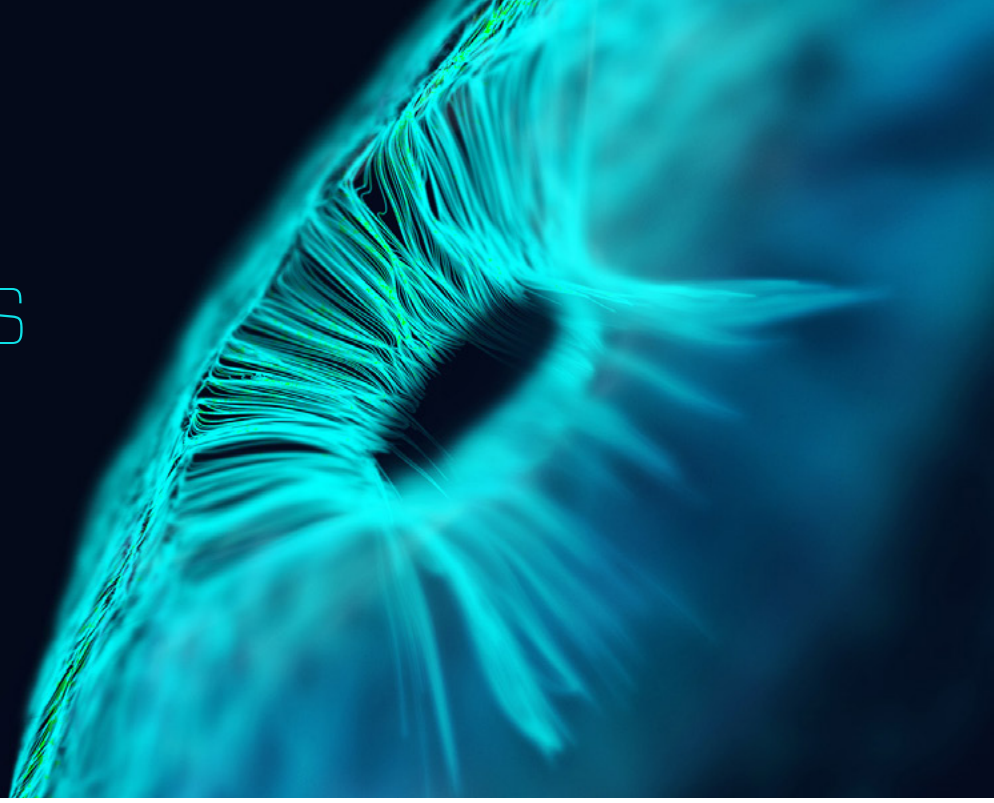

RBAC allows administrators to quickly add a new role and limit access to what employees need to access to do their jobs. The example below illustrates the hiring of a new CylanceOPTICS administrator. Go to Add New Role and only allow that employee to access CylanceOPTICS.




## The Single Agent

The February 2020 release also includes the unified agent that brings together a single agent and a single installer that is all managed in a single pane for both CylancePROTECT and CylanceOPTICS.

# What's New in CylanceOPTICS



CylanceOPTICS is an endpoint detection and response (EDR) solution that extends the threat prevention delivered by CylancePROTECT by using artificial intelligence (AI) to identify and prevent security incidents. CylanceOPTICS provides true AI incident prevention, root cause analysis, smart threat hunting, and automated detection and response capabilities.

CylanceOPTICS offers:

- AI-driven incident prevention
- Machine-learning-assisted threat detection
- On-demand root cause analysis
- Smart threat hunting
- Remote investigation capabilities

## CylanceOPTICS 2.4

The 2.4 release of CylanceOPTICS offers several enhancements to the InstaQuery, FocusView, and Context Analysis Engine (CAE) to provide greater visibility capabilities. These enhancement vectors include:

- Registry introspection enhancements
- DNS visibility
- Windows® logon event visibility
- RFC 1918 address space visibility
- Enhanced WMI introspection via Windows API
- Enhanced PowerShell introspection via Windows API

The 2.4 release of CylanceOPTICS brings several product enhancements to aid in both the breadth and depth of EDR search parameters. These enhancements are built on a foundation of AI and ML protection. Locally stored intelligence offers real-time confidence to investigate, triage, and remediate when a CAE rule trigger occurs. This gives EDR practitioners the ability to search and remediate at the speed of the threat landscape, and not be delayed by cloud query, protracted forensic analysis, and other time-wasting processes. The EDR team can understand all the artifacts that have occurred before and after the triggering event.

The results are:

- Increased search parameter flexibility within InstaQuery, FocusView, and CAE rules
- Faster incident response
- Alignment with the MITRE ATT&CK framework
- Expanded automated response via CAE rules

Identifying a potential security issue in any environment is important, however, to protect from the fallout of a widespread incident, businesses need the ability and agility to investigate and respond to an attack with speed and certainty. With CylanceOPTICS 2.4, businesses get several new product enhancements to accelerate incident investigation and response options that enable them to gather relevant information about an incident and act fast, either in automated or manual fashion.

## CylanceOPTICS 2.4 Feature/Benefit Matrix

| Feature | Benefit |
|---|---|
| Registry Introspection Enhancements — Provides increased visibility into common Windows Registry persistence points, including memory attacks via Focus View, InstaQuery, or CAE detection logic. | Enables the endpoint agent to sense, analyze, and record a PowerShell event (commonly used to rapidly automate tasks that manage operating systems and processes) via Focus View, InstaQuery, or CAE detection logic. |
| DNS Visibility — Enables the endpoint agent to sense and record what has instigated a DNS query, by which IP address and domain it was initiated, when it was initiated, and artifacts of the initiation via Focus View, InstaQuery, or CAE detection logic. | Gives standard names to Internet connections (if available). Providing visibility into DNS cache compromises, rogue DNS servers, DNS-based data exfiltration, and connections to web addresses rather than just IP addresses. |
| Windows Logon Event Visibility — Enables the endpoint agent to sense and record what has instigated a Windows Logon event, the user that logged on, by which IP address and domain it was initiated, when it was initiated, and artifacts of the initiation via Focus View, InstaQuery, or CAE detection logic. | Enables monitoring of a specific user if they access multiple systems and is helpful in detecting and mitigating potential insider threats. Further, provides visibility to observe where the attacker went and did when moving laterally through the network. |
| Private Address (RFC 1918 / RFC 4193) Space Visibility — Enables the endpoint agent to sense, analyze, and record an event originating from a private internet address on a TCP/IP network via Focus View, InstaQuery, or CAE detection logic. | Extremely valuable when looking for lateral movement attacks. Previous versions could only view movement through a private network space. |
| Enhanced WMI Introspection — Enables the endpoint agent to sense, analyze, and record a MS Windows Management Instrumentation event via Focus View, InstaQuery, or CAE detection logic. | Useful in monitoring for fileless attacks and lateral movement, living-off-the-land attacks, etc. |
| Enhanced PowerShell Introspection — Enables the endpoint agent to sense, analyze, and record a PowerShell event (commonly used to rapidly automate tasks that manage operating systems and processes) via Focus View, InstaQuery, or CAE detection logic. | Gives powerful granular insight into what scripts are launched and what individual commands were executed out of those scripts. This is useful in monitoring for fileless attacks, lateral movement, living-off-the-land attacks, etc. |

# What's Forthcoming in CylanceOPTICS?

## CylanceOPTICS for Linux

CylanceOPTICS will introduce enhanced functionality optimized for several popular Linux® operating system versions Including RHEL, Ubuntu, CentOS, and SUSE. With this entry into the Linux computing environment, CylanceOPTICS has extended the reach of AI-based EDR technology to cover a broader set of threats in both data centers and industrial environments.

## CylanceOPTICS for Linux Feature/Benefit Matrix

| Feature | Benefit |
|---|---|
| Feature Parity with Windows and Mac | Employ superior EDR across the entire environment |
| Driverless | No kernel level dependencies for enhanced security |
| CAE Rules for Linux | Automatedly detect malicious events on Linux-based machines |
| Refract for Linux | Automatedly remediate malicious events on Linux-based machines |
| Device Lockdown | Isolate infected Linux-based endpoints to stop malware infections |

## Typical Use Cases

Examples of this extended footprint include servers, point of sale (POS), automated teller machine (ATM) terminals, and Linux-based fixed-function devices. Use cases for each of these are described below.

## Linux Servers

In enterprise data centers utilizing X86-based servers, Linux is a widely utilized operating system for both bare-metal machines and virtual machines within hypervisors. This growth is being further accelerated by the movement within data centers to containers. While endpoints are often the initial target of malware attacks, the primary target is the data on the servers, whether in financial services, e-commerce, or other enterprise applications. There is a mindset within the IT community that if the operating system isn't Windows, malware is not a meaningful threat. An article by Alex Campbell in *PCWorld* dispels this notion and highlights the risks that malware poses for Linux-based systems[1]. Web servers running

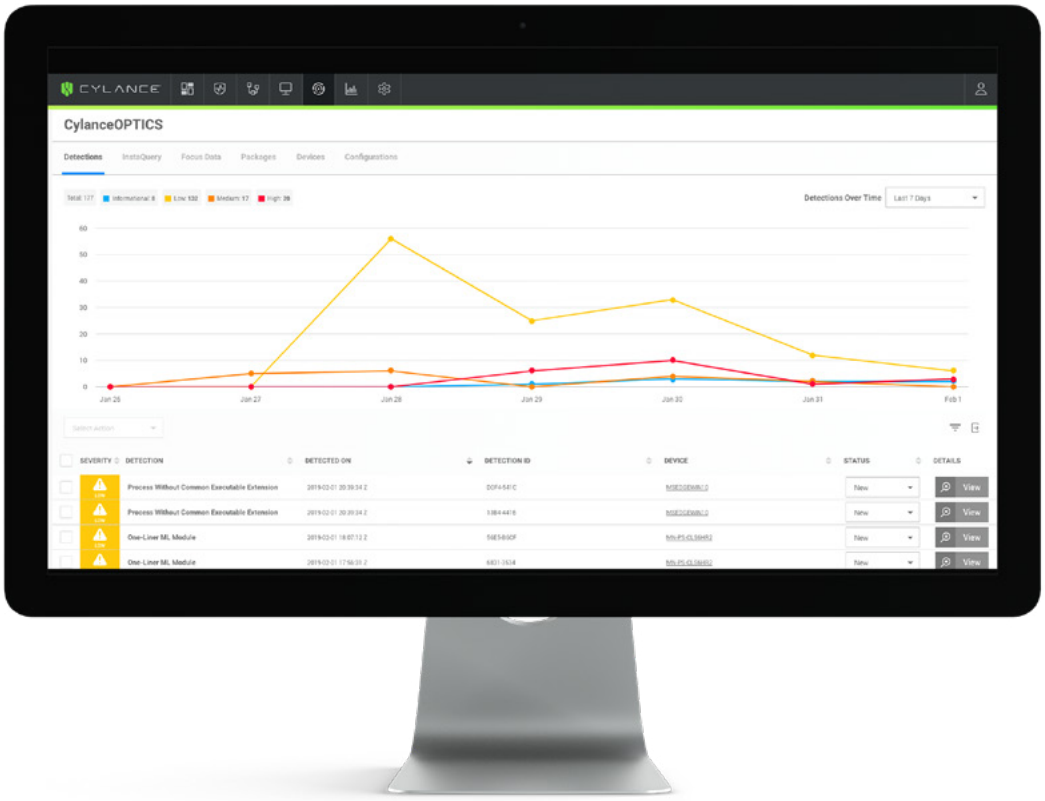
Linux are a particular target, given their direct presence on the Internet. Mumblehard is one example of a malware package that has been used to target Linux-based web servers. Ransomware such as KillDisk has been used to attack Linux-based servers and systems. Rootkits are also a significant concern, as their installation can provide full access to a Linux server and all of the storage to which the server has access.

## POS/ATM Terminals

Like many embedded systems, POS and ATM terminals generally utilize the Linux operating system. The attractiveness of these devices as malware targets would seem obvious, yet these systems (particularly POS terminals) have often not had robust protection against cyber attacks. Because of this, POS and ATM terminals have been used as conduits for attacks against both retail and financial services companies, resulting in the compromise of identity data for millions of consumers and significant liability events for the organizations. An article in *CSO Online* described how POS malware attacks are becoming more aggressive. The actual theft of customer data is usually the final act of an attack that has been built up over the years and often starts with the infiltration of the POS system by malware. New attacks are also targeting POS terminals at smaller retailers, which often do not have the SEIM tools utilized by large enterprises. Similar attacks are occurring against ATM machines (known as jackpotting) in a variety of geographies; a malware package known as Ploutus-D is just the latest example of these malware-based attacks on ATMs. The best strategy to stop these attacks is to understand the likely vulnerabilities of POS and ATM systems and ensure that malware doesn't use these vulnerabilities to penetrate these systems.

## Fixed-Function Devices

PC-based fixed-function devices are growing exponentially, with use cases as diverse as industrial automation systems, Internet of things (IoT) devices, medical equipment, facility management systems, and vending machines. These devices, which are often mission-critical assets in industries such as healthcare, manufacturing, utilities, and gaming, overwhelmingly run the Linux operating system. Fixed-function devices have historically been easy targets for cyber criminals to attack and penetrate, as they may not receive updated patches on a regular basis, and their default credentials are often not modified after these devices are installed. These vulnerabilities have been demonstrated in a DDOS attack which utilized Merai botnets executing on unprotected IoT devices. Preventing malware from being installed on these devices would have mitigated this attack.



## Partial Device Lockdown

Identifying a potential security issue in any environment is important, however, enterprises need to balance data and systems availability with the ability to respond to an attack. With CylanceOPTICS, businesses will get several built-in incident investigation and response options that enable fast remediation of an incident, either in automated or manual fashion, while maximizing user connectivity and uptime. Flexibility is of critical importance when taking action against a threat. CylanceOPTICS will offer the choice of either full lockdown or partial lockdown to suit the needs of the remediation team.

## Selective Device Communication

Partial device lockdown for CylanceOPTICS will allow users to quickly and easily limit a host's network connections to a set of trusted IP addresses or subnets. Partial device lockdown will allow the CylancePROTECT and CylanceOPTICS agents to communicate with BlackBerry Cylance's cloud services by default. By maintaining communication between BlackBerry Cylance's cloud services and endpoint agents, users can continue to use the products to their full potential. For example, a device's policy configuration can be changed to force a more strict set of controls from CylancePROTECT, or a user can initiate an InstaQuery or Focus View to interrogate a device and conduct an in-depth analysis without needing to worry about an infection spreading to other systems or an attacker moving laterally to other systems of interest. When an investigation has concluded or a threat has been eradicated, users can also issue an unlock command directly from BlackBerry Cylance's cloud services to restore previously configured network permissions.

## Lockdown Exceptions

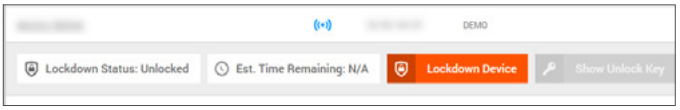
When initiating a partial device lockdown, users will also be able to provide a list of IP addresses and subnets (internal RFC1918 addresses as well as publicly accessible external addresses) that they wish to allow communications to and from. These lockdown exceptions allow users to continue to utilize other tools in their environment to manage their endpoints, conduct additional remediation steps, or introduce new configurations to impacted systems. For example, the IP address of an IT administrator's system could be added as an exception to allow that administrator to remotely log in to the locked down system to conduct actions. Similarly, an incident response subnet could be added to the exception list to allow the system of interest to communicate with storage servers or other analysis tools. This would allow a user to interact with the package deploy or package playbooks features to execute a set of packages on a system and allow the data to be transmitted to a remote system for analysis, all without needing to remove the system from a locked-down state.

## Total Endpoint Lockdown

If an endpoint is determined to be the source of an outbreak or has been identified as harmful to the environment for some reason, aggressive containment will be able to be taken to move and lock down the endpoint, eliminating its ability to connect to the network. With this flexibility, potential security issues can be remediated quickly and the necessary steps can be taken to stem the attack, protect sensitive data, and keep the business secure.

## Technical Details

With CylanceOPTICS, administrators will be able to quickly isolate an infected or potentially infected device to stop command and control (C2) activity, exfiltration of data, or lateral movement of malware. The lockdown feature will give administrators time to investigate the device or physically remove the device from the network. This action will only be available to administrators in the BlackBerry Cylance Console. Lockdown will disable the network capabilities of the device (LAN and Wi-Fi) for a period of time, from five minutes to 96 hours. If desired, the device can be unlocked prior to the selected lockdown end-time using the unlock key.





## Additional Details

- When an endpoint lockdown time has expired, it can take up to two minutes for that device to appear as connected on the Devices page in CylanceOPTICS.
- CylancePROTECT Agent 1440 and above will display a message on the endpoint (via a notification) when it has been placed into a lockdown
- Once a device has been locked down, the status column will show a red icon in the CylanceOPTICS column to indicate a device is in lockdown

A lockdown will also be able to be initiated from any InstaQuery result, which will re-direct to the devices page filtered to the device associated with the artifact.

## Remote Response

CylanceOPTICS Remote Response streamlines all available system information from within the BlackBerry Cylance Console. By providing an interface for users to intuitively and interactively execute scripts and run traditional or native commands on systems, users will be able to quickly triage a system and see the results of those commands in near-real-time in the BlackBerry Cylance Console without ever needing to navigate away to view returned data. The objectives of remote response and packages are similar in that the workflows offer a mechanism for users to collect information about a system, run scripts, execute applications, or otherwise investigate a system of interest, however, the experience between remote response and packages is the primary difference.

| Feature | Benefit |
|---|---|
| Terminal Interface | Easily investigate and manage remotely |
| Command Line Access | Execute scripts, commands, and applications within the system with future-enhanced functionality accommodation |
| Logging Capability | Benefit from a complete audit trail for review |

1 https://www.scribd.com/article/372099367/Why-Linux-Users-Should-Worry-About-Malware-And-What-They-Can-Do-About-It

## About BlackBerry Cylance

BlackBerry Cylance develops artificial intelligence to deliver prevention-first, predictive security products and smart, simple, secure solutions that change how organizations approach endpoint security. BlackBerry Cylance provides full-spectrum predictive threat prevention and visibility across the enterprise to combat the most notorious and advanced cybersecurity attacks, fortifying endpoints to promote security hygiene in the security operations center, throughout global networks, and even on employees' home networks. With AI-based malware prevention, threat hunting, automated detection and response, and expert security services, BlackBerry Cylance protects the endpoint without increasing staff workload or costs.

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