Solution overview

# WithSecure<sup>TM</sup> Elements Collaboration Protection

WithSecure<sup>™</sup> Elements - Reduce cyber risk, complexity and inefficiency.





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DISCLAIMER: This document gives a high-level overview of the key security components in WithSecure<sup>™</sup> Elements Collaboration Protection. Details are omitted in order to prevent targeted attacks against our solutions. WithSecure<sup>™</sup> is constantly improving its services. WithSecure<sup>™</sup> reserves the right to modify features or functionality of the Software in accordance to its product life cycle practices.

October 2021



### **Executive summary**

WithSecure™ Elements Collaboration Protection helps organizations to mitigate their business email risks by providing effective threat protection for Microsoft 365 against increasingly sophisticated phishing attacks and malicious content. Seamless cloud-to-cloud integration eliminates the need for middleware or expensive IT work, making Elements Collaboration Protection a cost-effective solution that is easy to manage.

## Flexibility to build resilient cyber security with WithSecure™ Elements

In today's agile business environment, the only constant is change. WithSecure™ Elements offers companies all-in-one security that adapts to changes in both the business and the threat landscape, growing along with the organization. It offers flexibility in licensing models and in its pick-and-choose security technologies. WithSecure™ Elements integrates a full range of cyber security components, including vulnerability management, patch management, endpoint protection, and detection and response, into a single lightweight software package that is managed in one unified, cloud-based management console. The solution is available as a fully managed subscription service through our certified partners or as a self-managed cloud solution. Customers can easily shift from self-managed to a fully managed service, so companies that struggle to find employees with cyber security skills can stay protected amid the ever-developing attack landscape.

WithSecure<sup>™</sup> Elements consists of four solutions that are all managed with the same console, WithSecure<sup>™</sup> Elements Security Center.

WithSecure™ Elements Endpoint Protection: WithSecure's multiple AV-TEST Best Protection winner, cloud-native, AI-powered endpoint protection can be deployed instantly from your browser and manage the security of all your endpoints, keeping your organization fenced in from attacks. WithSecure™ Elements Endpoint Protection covers mobiles, desktops, laptops and servers.

#### WithSecure™ Elements Endpoint Detection and

Response: Gain full visibility to advanced threats with our endpoint detection and response. With our unique Broad Context Detection, you can minimize alert noise and zero in on incidents, and with automated response you can effectively stop breaches around the clock. WithSecure™ Elements. Endpoint Detection and Response covers desktops, laptops and servers.



#### WithSecure<sup>™</sup> Elements Vulnerability Management:

Discover and manage critical vulnerabilities in your network and assets. By exposing, prioritizing and automatically patching vulnerabilities you can reduce your attack surface and minimize entry points for attackers.

#### WithSecure<sup>™</sup> Elements Collaboration Protection:

Complement the native security capabilities of Microsoft 365 by providing advanced security to prevent attacks via email, URL's and collaboration. Cloud-to-cloud integration makes the solution easy to deploy and manage.

WithSecure<sup>™</sup> Elements Endpoint Protection, Endpoint Detection and Response and Vulnerability Management are packed into a single automatically updated software packet, saving your time and money in software deployment and administration.

#### **Benefits of the integrated solutions**

The modular WithSecure<sup>™</sup> Elements solution adapts to your company changing needs. Unified cyber security means easier licensing, fewer security management tasks and more productivity without sacrificing your company's cyber security posture. The cloud-based console – WithSecure<sup>™</sup> Elements Security Center - provides centralized visibility, insights and management across all endpoints and cloud services. It is fully managed by one of our certified Managed Service Providers, or self-managed with on-demand support from WithSecure<sup>™</sup>

for tough cases. The Security Center provides a single view to the security status combining the Endpoint Protection, Endpoint Protection and Response, Vulnerability Management, and Collaboration Protection.

All the endpoint solutions (Elements Endpoint Protection, Endpoint Detection and Response, and Vulnerability Management) are using a single software component that is required to deploy only once. The add-on solutions can then later be activated with just adding a license key into the Security Center without having to deploy separate solutions. WithSecure<sup>™</sup> Elements Collaboration Protection is a cloud-based solution that does not require installations to company endpoints.

In addition to deployment and management benefits, WithSecure<sup>™</sup> Elements are designed to work together maximizing the security benefits for the company. One example is the automated response actions: when Elements Endpoint Detection and Response detects a security incident in some particular endpoint device, it can automatically initiate Endpoint Protection to run a full system scan on the device or to isolate the device by assigning special firewall rules with the Endpoint Protection.



#### WithSecure<sup>™</sup> Elements

	Endpoint Protection standard	Endpoint Protection premium	Detection and Response	Vulnerabilit Managemei
Advanced anti-malware and patch management				
Anti-ransomware with dataguard and application control		$\bigcirc$		
Advanced threat protection				
Vulnerability management and prioritization				
Advanced email and cloud collaboration application security				

\*Note: available features may vary by operating platform

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WithSecure<sup>™</sup> Elements Collaboration Protection is favored by businesses that want:

- To minimize business disruption by mitigating email and collaboration risks from harmful content undetected by standard Microsoft 365 protection
- A cost-effective solution to protect Microsoft 365 against phishing, ransomware, malicious files, internal and external email risks, malicious attachments and URLs
- Cloud-to-cloud integration with easy deployment and seamless administration to ensure uninterrupted and efficient email threat protection

WithSecure<sup>™</sup> Elements Collaboration Protection provides security features that mitigate the risks posed by files and URLs shared using Microsoft 365. Whenever an end-user receives or creates a Microsoft Outlook item, such as email, appointment, task, contact, or note in their mailbox, the solution analyzes all included attachments and links for harmful content, such as malware, Trojans, ransomware, or phishing. Similarly, whenever an end-user stores or otherwise modified a file stored on a SharePoint site the data is analyzed for harmful content. The solution also provides rich reporting, advanced security analytics, and system events to ensure faster response to the identified potential threats. WithSecure<sup>™</sup> Elements Collaboration Protection comprises a management portal for daily administration and a service backend that utilizes WithSecure's Security Cloud for analyzing the Microsoft 365 items for malicious files and URLs. In addition, the solution alarms if it detects that company email accounts has been compromised giving IT admins precious time to react before the stolen credentials becomes available for broader criminal audience.

You do not need to install any additional software or make any changes to your network configuration to start using the solution.

WithSecure<sup>™</sup> has demonstrated its consistency in independent tests by being the only vendor with 7 prestigious annual AV-TEST 'Best Protection' awards since its inception. AV-Test is making comparison tests continuously throughout the year so in order to reach this precious award one needs to consistency show good results in protection tests.

To meet these demanding standards, the solution utilizes a multi-layered approach to security and leverages various modern technologies, such as heuristic and behavioral threat analysis and real-time threat intelligence provided via WithSecure's Security Cloud.

This ensures that you're at the forefront of security.

WithSecure<sup>™</sup> Elements Collaboration Protection solution is also available as a fully managed service. WithSecure<sup>™</sup> certified service providers can use Partner Managed or SaaS version of the solution to leverage many unique service provider features, like multi-company dashboard, reporting and subscription management. The SaaS version of the solution allows service providers to utilize flexible business models, e.g. Usage Based Invoicing for all the WithSecure<sup>™</sup> Elements products.







### 1. Shared responsibility model

Some companies believe that when they purchase a cloud service, the cloud provider is responsible for the security as well. They are partly right, but with cloud services there is a model called the shared responsibility model, which states that cloud providers are responsible for the security OF the cloud, and customers using the cloud are responsible for security IN the cloud. In practice, this means that the cloud provider takes care of the physical security of data centers so that no-one can physically break into their facilities and undermine the security of the underlying platform. Cloud providers also take care of the authentication, identification, and user and admin controls. In GDPR terms, cloud providers are Data Processors.

Customers using the cloud services are responsible for the security of data stored in the cloud. This includes taking care that there is no malicious content or targeted attacks, internal data security risks, deception, or social engineering by offering security behavior training to their employees. This means that customers using the cloud services are responsible for the security of their email. They are the owners of the data.

#### WithSecure<sup>™</sup> Elements Collaboration Protection delivers:

- A cost-effective solution to protect Microsoft 365 against phishing, ransomware, malicious files, internal email risks, malicious attachments and URLs
- Combined with WithSecure's award-winning endpoint protection, as well as detection and response capabilities, the solution provides more comprehensive protection for your business than any email security solution alone
- **Cloud-to-cloud integration** with easy deployment and seamless administration to ensure uninterrupted and efficient email threat protection

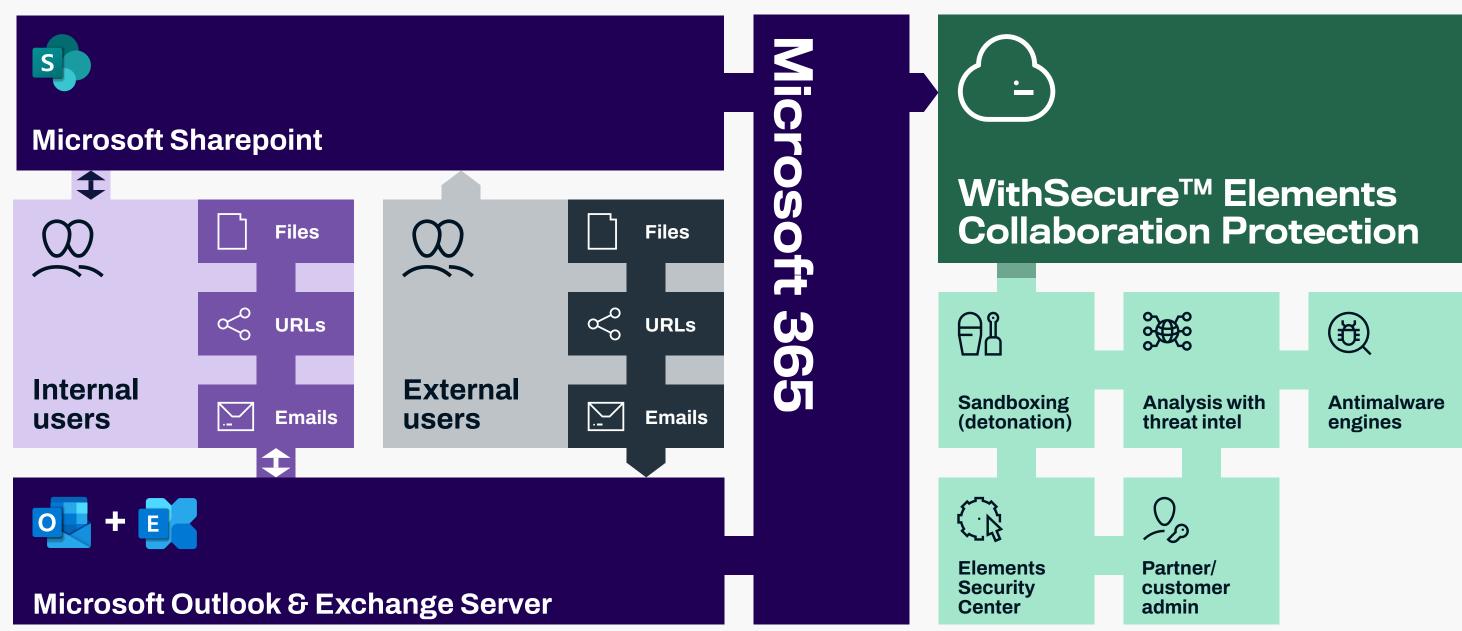


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### 2. Solution overview

WithSecure™ Elements Collaboration Protection is a cloudbased security service that is designed to mitigate business email and collaboration risks in organizations by providing effective threat protection for Exchange Online and SharePoint Online against phishing, ransomware, malicious files, internal email risks, malicious attachments and URLs. In addition to email messages, other Exchange items such as tasks, calendar appointments, contacts, and sticky notes are inspected for malicious content and URLs.

The diagram below gives you a high-level overview of the how the solution provides security for Microsoft 365.







#### Files, URLs, or emails

WithSecure<sup>™</sup> Elements Collaboration Protection processes data from Microsoft 365 user mailboxes and SharePoint to inspect and block malicious content. The analyzes cover file attachments and web links included in the body and headers of Exchange items such as email, calendar appointments, tasks, contacts, and sticky notes in inbound, outbound, and internal traffic. In SharePoint environments the analyzes covers the data stored on selected SharePoint sites.

### WithSecure<sup>™</sup> Security Cloud (sandboxing, reputation threat intelligence, antimalware engines)

WithSecure<sup>™</sup> Security Cloud employs multi-stage content analysis in a stepped process triggered by the risk profile of the content. Additionally, high-risk files are subjected to a deeper analysis with our cloud sandboxing technology, which is designed to prevent zero-day malware attacks and other advanced threats.

#### WithSecure™ Elements Security Center

WithSecure<sup>™</sup> Elements Security Center is the management portal for administrators to manage the service in protecting Microsoft 365 content. The management portal consists of advanced analytics and system events functionality to help administrators prioritize the threats based on the provided information in the portal and mitigate the related security risks in time. The portal also provides dashboard and reporting capabilities to check and report on the status of the system at all times. The reports can be downloaded for easy sharing among stakeholders.

#### Partner/customer administrator

WithSecure<sup>™</sup> Elements Collaboration Protection service relies on partner/customer administrators to work on the security detections and email notifications as a result of the malicious content found by analyzing the Microsoft 365 user mailboxes and files stored on SharePoint and to take action based on the severity of the alert and threat category of the content.

#### Management roles

The WithSecure<sup>™</sup> Elements Collaboration Protection administrator can be assigned a role based on the management needs in the portal. The service allows Admin, Quarantine Manager and Read-only roles. Each role defines permissions that makes the portal management functionality accessible to the user. A user with the Admin role can add or remove users of different user roles using the web-based WithSecure<sup>™</sup> Business portal for user management. The same user account can be used to access other WithSecure<sup>™</sup> products and management portals by adding access to the respective solution using the WithSecure<sup>™</sup> Business portal.

#### Users

Internal and/or external users are the entities that use the WithSecure™ Elements Collaboration Protection service while exchanging the items such as emails, calendar appointments, tasks, contacts, sticky notes, etc. in their mailboxes. The internal user's mailbox is scanned for harmful contents in Exchange items in inbound, outbound, and internal traffic.

### 2.1. File protection

WithSecure™ Elements Collaboration Protection scans harmful contents in file attachments found in Exchange items and SharePoint files to protect against viruses, trojans, ransomware, and other advanced malware. It offers far superior protection compared to traditional technologies by leveraging real-time threat intelligence gathered from tens of millions of security clients, providing faster and better protection against new and emerging threats.

#### 2.1.1. Initial analysis

A call is made to the WithSecure<sup>™</sup> backend with the checksum (SHA1) of the file attachments found in the Microsoft 365 Exchange items (email, calendar, appointments, sticky notes, etc.), and SharePoint files. The checksum is compared to those saved in the existing threat detection cache in the backend to see if the file has been analyzed before. If analysis results are available from the cache, they are automatically used, and no further analysis is done. Existing threat detection results are periodically updated, and expired results cleared automatically in order to ensure up-to-date protection.



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#### 2.1.2. Threat intelligence check

If no results are found in the cache, a threat intelligence check is made via WithSecure's Security Cloud using the SHA-256 checksum. The service returns the file's safety reputation, prevalence, and possible threats detected. Depending on the policy settings, the system either removes the file attachment from the Exchange item, quarantines the whole item, deletes the whole item, and/or sends a notification to the user and administrator. In SharePoint environments the files are placed to quarantine based on the Security Cloud's verdict.

#### 2.1.3. Multi-engine antimalware

If the file reputation is unknown, the contents of the file are sent to WithSecure's Security Cloud for further threat analysis. The file is subjected to deeper analysis by multiple complementary antimalware engines in order to find malware, zeroday exploits, and patterns of advanced threats. At this stage, the analysis process utilizes the full extent of the threat intelligence data and capabilities collected by WithSecure<sup>™</sup> Labs.

#### 2.1.4. Advanced threat analysis (sandbox)

Based on the threat analysis results, the system uses finetuned machine-learning techniques to decide whether to send the file to the cloud sandbox for deeper analysis. If it has suspicious risk indicators, a file is sent to the sandbox, where it is run in several virtual environments to analyze behavior. By focusing analysis on malicious behavior rather than static identifiers, the cloud sandbox can identify and block even the most sophisticated zero-day malware and exploits.

#### 2.1.5. Analysis results

Based on the final verdict, the file attachment is categorized as either harmful or clean. Depending on the specified settings, the file is removed from the Exchange item or SharePoint if it is harmful or suspicious and/or the user and administrators are notified about the incident. If no security threats are found, the file is accessible in its original location Exchange item. The final verdict, file reputation, and other threat analysis details are stored in the threat detection cache for future use in the service backend.

#### 2.2. URL protection

URL protection is a key security function that proactively prevents Microsoft 365 users from accessing malicious or unwanted content through web links added to Exchange items such as emails, calendar appointments, tasks, contacts, and sticky notes. This makes it a particularly effective security service, as early intervention greatly reduces overall exposure to malicious content, and thus attacks. For example, it will prevent users from being tricked into accessing seemingly legitimate phishing sites and malicious sites.

URL protection was created to deal efficiently with the billions of sites available on the internet and their constantly fluctuating security status. It is based on real-time lookup queries to WithSecure's Security Cloud. All queries go through several layers of anonymization to ensure the utmost business confidentiality.

The query fetches the latest reputation of the websites and their files, based on various data points, including IP addresses, URL keywords, site patterns, extracted website metadata like iframes and file types, and website behavior like exploit attempts, malicious redirects, or scripts.



#### 2.2.1. URL security check

The solution scans the body of the Exchange items and queries the reputation of included URLs from WithSecure's Security Cloud. If the link is deemed malicious based on the information received from the query, the access to the URL is either blocked or allowed, depending on the policy settings. The administrator can configure the policy to allow access to the URL by alerting the user in the subject of the Exchange item about the reputation of the URL. The administrator can also configure the policy to block access by quarantining the item or deleting the item if the URL is found to be malicious or suspicious.

#### 2.3. Compromised account detection

Email is one of the biggest threat vectors for companies of all sizes. Access to user email accounts often grants access to a wide range of other company services and gives attackers an opportunity to steal company and customer data. A breached account is an easy way for the attacker to get into an organization. The attacks done using a breached account, such as phishing campaigns or impersonation, are hard to detect because they use a legitimate company user account. The Compromised account detection feature detects compromised accounts as soon as information about the breach is available. It informs users and administrators to take action to remediate the accounts by changing the password or by taking other security measures, such as turning on the multi-factor authentication to avoid further exploitation of the breached data.

#### 2.4. Inbox rule scanning

Inbox rules in Outlook work as a trigger to perform specific actions on incoming emails automatically. After gaining access to a mailbox, an attacker creates inbox rules to carry out different types of attacks, such as auto-forwarding and auto-deleting of emails. The scanning feature analyzes all the inbox rules in a mailbox. This analysis helps to detect any suspicious rules that may indicate a compromise of the account. It also notifies the owner of the mailbox and the administrators to take action.



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#### 2.5. Management portal

The WithSecure<sup>™</sup> Elements Collaboration Protection service provides a management portal for administrators to manage the Microsoft 365 Exchange and SharePoint environments.

Thanks to rich reporting, flexible alerting, advanced security analytics, and system events, responding to threats is easy for system administrators, and full, 360-degree visibility makes sure that you know your Microsoft 365 usage patterns. This is helpful when responding to an attack taking place through MS 365, investigating an attack coming from an unknown source, or in verifying whether MS 365 was part of an incident.

#### 2.5.1. Deployment

WithSecure<sup>™</sup> Elements Collaboration Protection supports cloud-to-cloud integration without needing to install additional software or making changes on the server or clients. The protection is totally platform-agnostic and capable of detecting threats regardless of which device or application is used to access the Exchange mailbox and SharePoint items. Administrators can configure the service for scanning the Microsoft 365 and provide comprehensive protection in just few minutes.

#### 2.5.2. Dashboard

WithSecure<sup>™</sup> Elements Collaboration Protection management portal provides an easy-to-use dashboard for quick access to the most recent security detections of malicious content found in the managed environments, the top affected mailboxes with the highest number of security detections, and constantly up-to-date data about the items scanned and the type of action taken to protect against malicious content.

The dashboard also shows the coverage of the environment in terms of number of mailboxes and SharePoint sites protected and that are not protected by the security service. This lets you know at all times if there are any security gaps in the environment due to unprotected mailboxes and SharePoint sites.

#### 2.5.3. Security detections

The security detections widget provides quick and easy access to the most recent security detections for an organization, sorted by the severity of the alert. The sorted list helps administrator to prioritize high-risk alerts immediately with detailed information about the found malicious content.

#### 2.5.4. Mailbox status

The mailbox status widget on the dashboard provides a count of protected vs unprotected mailboxes in Microsoft 365 tenants for the organization. This helps the administrator to understand at all times if there are any security gaps present due to those unprotected mailboxes.

#### 2.5.5. Top targeted mailboxes

The top targeted mailboxes widget in the dashboard lists the top 5 user mailboxes with the most security detections in an organization. The widget helps the administrator in checking if there is a sudden rise in the number of security detections for certain mailboxes, which could be related to a possible security incident in the organization.

#### 2.5.6. Protection status

The protection status widget shows the total amount of scanned and unsafe items. The widget also shows the type of actions taken to protect against the malicious content, such as quarantine or delete.

The item types tab in the widget provides more detailed information about the malicious content found per item type (emails, calendar appointments, tasks, sticky notes, contacts, groups, and others) in the user mailbox.



#### 2.5.7. Protection trend

The protection trend widget shows the percentage of unsafe content during the current time period compared to the organization's average and previous period. The trend information helps administrators in knowing at all times if the organization security status is at the same level or if there is a sudden increase in unsafe content, which might be related to a possible security incident in the organization.

#### 2.5.8. Analytics

WithSecure<sup>™</sup> Elements Collaboration Protection gives full, 360-degree visibility into Microsoft 365 usage. All security detections for malicious or suspicious content found in the user mailboxes are accessible in the portal in a convenient table view. The table is easily searchable and sortable based on different columns and criteria.

Many IT departments do not know what kind of content their users are sending or receiving via Microsoft 365 Exchange items. That knowledge is often helpful, as IT administrators may, for example, find malicious files or URLs that should not be shared via Microsoft 365.

Furthermore, a better understanding of internal customer needs and use cases helps administrators to serve their organization more effectively. With powerful search functionality, solution administrators and IT security departments can investigate content-based attacks very quickly.

#### 2.5.9. Policy administration

WithSecure<sup>™</sup> Elements Collaboration Protection provides policies to define the security settings for the analyzed contents in Microsoft 365 items. A policy is the set of settings and rules defining how the service protects user mailboxes and which actions are taken when a security threat is detected.

Administrators can use the WithSecure<sup>™</sup> default policy to provide maximum protection from the get-go when configuring the tenants, or they can copy the default policy to modify the security settings according to the organization security requirements and make that the default policy, which is then assigned by default whenever a tenant is configured for protection.

#### 2.5.10. Quarantine management

WithSecure<sup>™</sup> Elements Collaboration Protection allows administrators to quarantine Exchange and SharePoint items based on the harmfulness of the file(s) or URL(s) found in the item. The quarantine view in the management portal allows administrators to view, release, or delete quarantined items as needed. The administrator can also use various sorting and searching criteria to fine-tune the view while handling the list of quarantined items for the managed environments.

#### 2.5.11. Detections Management

Any alert generating system is usable only if it provides a good workflow for the administrators managing the alerts. With WithSecure™ Elements Collaboration Protection the administrators can manage the detections by filtering, changing alert lifecycle status, and by adding comments. Detections management is especially useful when working on multi-admin organization where the work needs to be distributed and tracked.

#### 2.5.12. Reporting

WithSecure™ Elements Collaboration Protection provides rich reporting capabilities for administrators to report on the security status of the protected environment at any time in an easily sharable format. The administrator can define the content and schedule (daily, weekly, monthly) reports to be automatically generated, and have the reports readily available in the portal for downloading. In addition, administrators can add a summary of the security status of the environment as a message that is added to the beginning of the generated report.



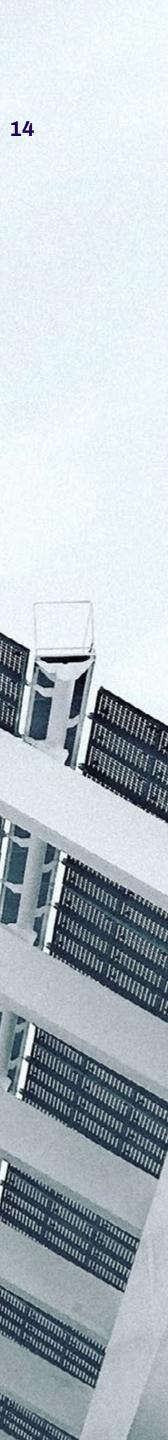
## 3. WithSecure™ Security Cloud

WithSecure's Security Cloud is a cloud-based digital threat analysis system operated by WithSecure<sup>™</sup>. It consists of a constantly growing and evolving knowledge base of digital threats fed by client system data and automated threat analysis services. The infrastructure for Security Cloud is hosted on servers in multiple Amazon Web Services data centers around the world. Security Cloud is a high-volume system that receives over 8 billion queries every day.

We collect only the minimum amount of client data necessary to provide our services. Every transferred bit must be justifiable from a threat prevention perspective, and data is never collected for presumed future needs. With the default settings, Security Cloud does not collect IP addresses, files, or other private information. Customers can give WithSecure™ permission to store suspicious executable files and/or suspicious non-executables files.

By evaluating the combined metadata with information drawn from in-house databases and various other sources, the automated analysis systems provide a fully-informed, up-to-date risk assessment for the threat, immediately blocking those that have been seen previously by any other service or device connected to Security Cloud.

Security Cloud also allows WithSecure<sup>™</sup> Labs analysts to provide critical human intelligence and judgment to complement automated systems and on-host scanning technology. In addition to creating and maintaining the rules that underpin the databases and automated analysis systems, analysts actively monitor the latest threats and study malware characteristics and behavior patterns to find the most effective ways to identify malicious programs.



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## The following table documents our privacy principles in full detail:

Minimize upstream of technical data	WithSecure's Security Cloud employs multi-stage content analysis. File data is not sent to Security Cloud unless it is essential for providing protection and the customer has allowed it.	Secure by design	A system is never secure unless it has been designed to be secure. Security cannot be added as a project afterthought. This is something that was put into practice when developing Security Cloud and its related systems.
Do not send personal data upstream	No information on who posts or accesses the analyzed files or URLs, or from where, is sent to WithSecure's Security Cloud.	Encrypted network traffic	Data is never transferred in plain text over the internet. In addition, encryption is used to ensure the integrity of various objects. WithSecure™ utilizes a mixture of generally available cryptographic libraries and protocols and customized cryptographic code.
Do not trust the network	All metadata, files, and other content are transferred to Security Cloud securely either over HTTPS or separately encrypted and signed over HTTP.	Separated malware environment	We have over 20 years of experience in meeting the challenges of storing and testing malicious software. All malware handling is performed in networks isolated from the internet and other WithSecure™ networks. Storage and testing networks are isolated from each other, and files are transferred using strictly controlled methods.
		<b>Professional monitoring</b>	All critical Security Cloud systems are monitored by WithSecure™ personnel. All systems storing or testing malware are hosted by WithSecure™ Corporation.
		Controlled access	Only a limited number of WithSecure™ employees have access to Security Cloud's critical systems. Such access is granted, revoked, and documented according to a documented and controlled process.
	ecure's Security Cloud in our <u>Security Cloud</u> e™ Elements Collaboration Protection Privacy Policy.	Controlled access	The most fundamental principle in all security work is having an open and humble attitude. We have put a lot of effort into securing Security Cloud, but the work is never finished. A secure system can only be maintained by promoting an open attitude, in which system problems are reported, analyzed, and fixed promptly. This attitude includes public openness, should we encounter incidents that put customer security in jeopardy.

### Security Cloud principles:



#### **3.1.** Threat intelligence service

By leveraging real-time threat intelligence gathered from tens of millions of sensors, we can identify new and emerging threats within minutes of inception, ensuring exceptional security against the constantly evolving threat landscape. Our threat intelligence service enables WithSecure™ Elements Collaboration Protection to query the reputation of objects such as files and URLs. Files are verified by calculating the object's cryptographic hash SHA-1 and sending it to the reputation service.

#### **3.2. Multi-engine antivirus**

Multi-engine antivirus uses multiple security layers to detect exploits and unknown malware used in targeted attacks. The system combines behavioral analysis and heuristic and machine learning detection capabilities, which allow it to identify specific malware, families of malware with similar features, and broad ranges of malicious physical features and patterns. The results of this analysis may cause the file to be flagged as suspicious and sent on to the cloud sandbox for further processing.

### 3.3. Cloud sandbox

The cloud sandbox runs detected files in several virtual environments and analyzes the file behavior. If the file behavior is determined to be suspicious, information is sent to the multi-engine antivirus and threat intelligence service, where the next threat detection query will block the threat.



# Who We Are

WithSecure<sup>™</sup> is cyber security's reliable partner. IT service providers, MSSPs and businesses along with the largest financial institutions, manufacturers, and thousands of the world's most advanced communications and technology providers trust us for outcome-based cyber security that protects and enables their operations. Our Aldriven protection secures endpoints and cloud collaboration, and our intelligent detection & response is powered by experts who identify business risks by proactively hunting for threats and confronting live attacks. Our consultants partner with enterprises and tech challengers to build resilience through evidence-based security advice. With more than 30 years of experience in building technology that meets business objectives, we've built our portfolio to grow with our partners through flexible commercial models.

WithSecure<sup>™</sup> is part of F-Secure Corporation, founded in 1988, and listed on the NASDAQ OMX Helsinki Ltd.

