FortiSandbox™

FortiSandbox 1000D, 3000E, 3500D, FortiSandbox-VM, and FortiSandbox Cloud

Fortinet's top-rated FortiSandbox is at the core of the Advanced Threat Protection (ATP) solution that integrates with Fortinet's Security Fabric to address the fast moving and more targeted threats across a broad attack surface. Specifically, it delivers real-time actionable intelligence through the automation of zero-day, advanced malware detection and mitigation.

Broad Coverage of the Attack Surface with Security Fabric

Effective defense against advanced targeted attacks through a cohesive and extensible architecture working to protect network, application layers and endpoint devices.

Automated Zero-day, Advanced Malware Detection and Mitigation

Native integration and open APIs automate the submission of objects from Fortinet and third-party vendor protection points, and the sharing of threat intelligence in real time for immediate threat response.

Certified and Top Rated

Constantly undergoes rigorous, real-world independent testing and consistently earns top marks.

Deployment Modes

Standalone
Integrated
Distributed

FortiGuard Security Services

www.fortiguard.com

FortiCare Worldwide 24/7 Support

support.fortinet.com

Third-Party Certifications

FEATURES

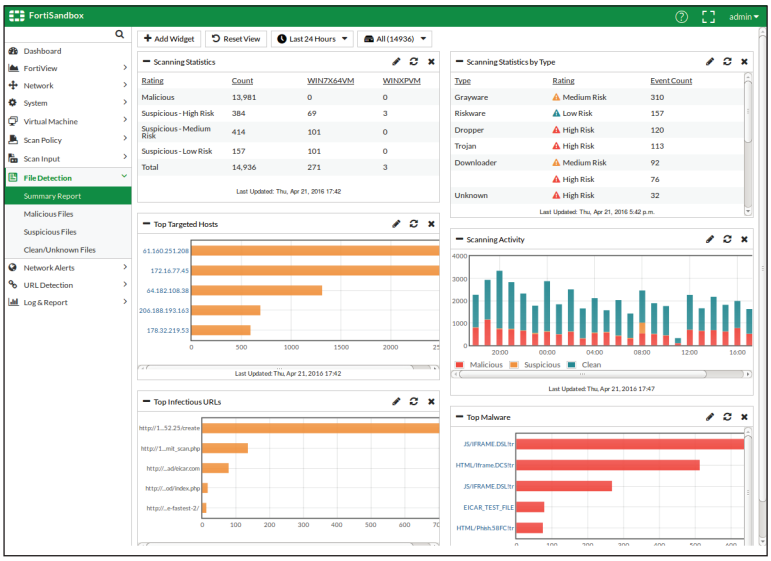


Figure 1: Widget-based real-time threat status dashboard

Sandbox Malware Analysis

Complement your established defenses with a two-step sandboxing approach. Suspicious and at-risk files are subjected to the first stage of analysis with Fortinet's award-winning AV engine, FortiGuard global intelligence query, and code emulation. Second stage analysis is done in a contained environment to uncover the full attack lifecycle using system activity and callback detection. Figure 1 depicts new threats discovered in real time.

In addition to supporting FortiGate, FortiMail, FortiWeb, and FortiClient (ATP Agent) file submission, third-party security vendor offerings are supported through a well-defined open API set.

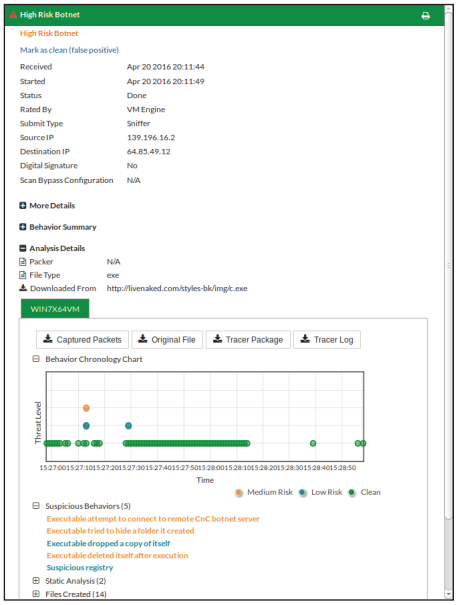


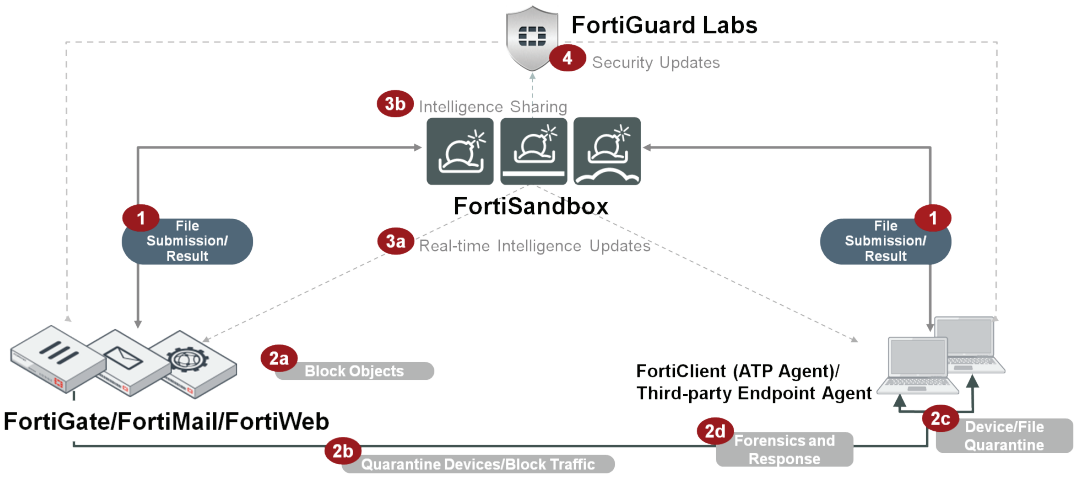
Figure 2: Detailed malware report with built-in tools

Reporting and Investigative Tools

Reports with captured packets, original file, tracer log, and screenshot provide rich threat intelligence and actionable insight after files are examined (see Figure 2). This is to speed up remediation.

Threat Mitigation

Fortinet's ability to uniquely integrate various products with FortiSandbox offers automatic protection with incredibly simple setup. Once a malicious code is identified, the FortiSandbox will return risk ratings and the local intelligence is shared in real time with Fortinet and third-party vendor-registered devices and clients to remediate and immunize against new advanced threats. The local intelligence can optionally be shared with Fortinet threat research team, FortiGuard Labs, to help protect organizations globally. Figure 3 steps through the flow on the automated mitigation process.



Query

1. File submission for analysis, results returned

Mitigate

- 2a Block objects held at mail gateway
- 2b Quarantine devices, block traffic by firewall
- 2c Quarantine file or device by endpoint protection
- 2d Further investigate and respond

Update

- 3a Share IoCs to integrated devices
- 3b Optionally share analysis with FortiGuard
- 4 Improve protections for all customers/devices

Figure 3: FortiSandbox threat mitigation workflow

DEPLOYMENT OPTIONS

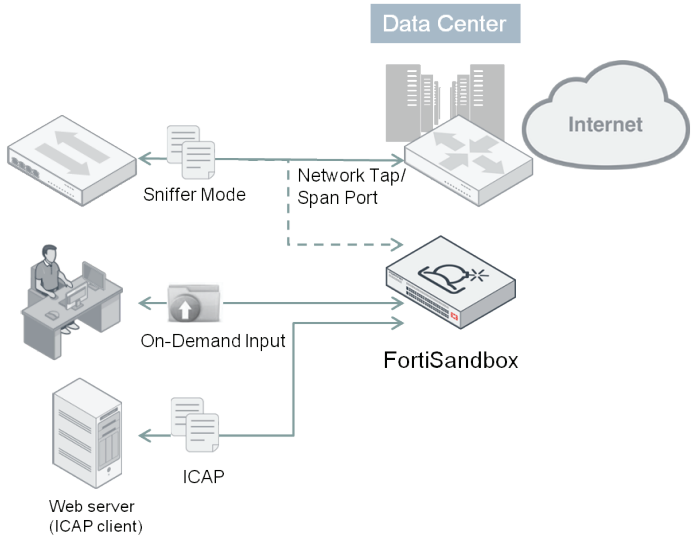
Easy Deployment

FortiSandbox supports inspection of many protocols in one unified solution, thus simplifies network infrastructure and operations. Further, it integrates within the Security Fabric adding a layer of advanced threat protection to your existing security architecture.

The FortiSandbox is the most flexible threat analysis appliance in the market as it offers various deployment options for customers' unique configurations and requirements. Organizations can choose to combine these deployment options.

Standalone

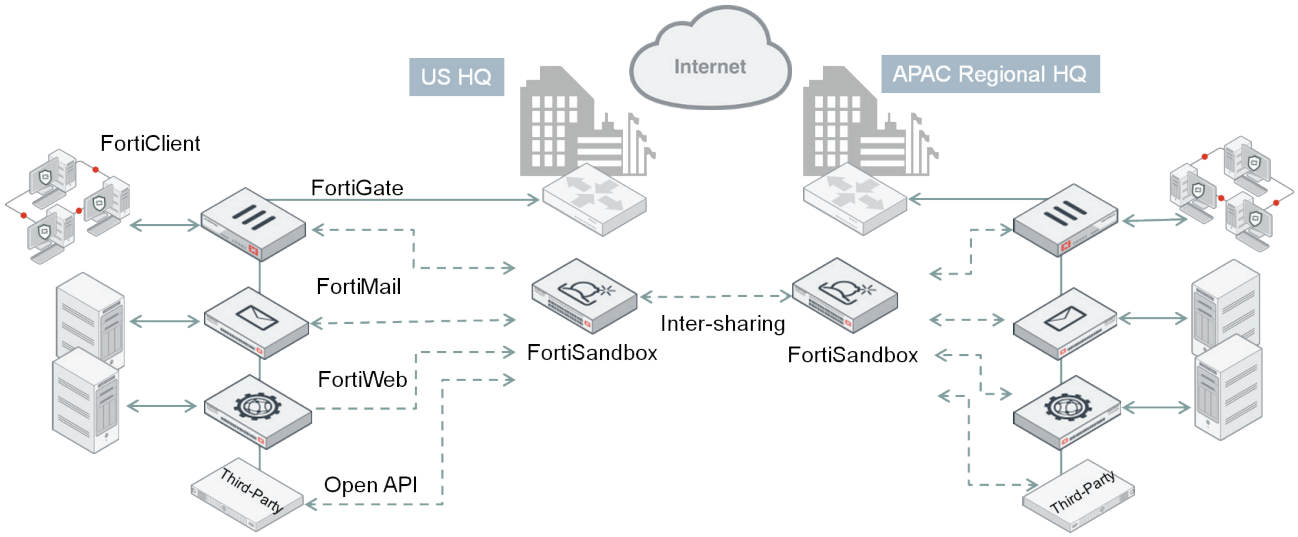
This FortiSandbox deployment mode accepts inputs as an ICAP server or from spanned switch ports or network taps. It may also include administrators' on-demand file uploads using the GUI. It is the most suitable infrastructure for adding protection capabilities to existing threat protection systems from various vendors.



Integrated

Fortinet products, such as FortiGate, FortiMail, FortiWeb, FortiClient (ATP Agent) and third-party security vendors can intercept and submit suspicious content to FortiSandbox when they are configured to interact with FortiSandbox. The integration will also provide timely remediation and reporting capabilities to those devices.

This integration extends to other FortiSandboxes to allow instantaneous sharing of real-time intelligence. This benefits large enterprises that deploy multiple FortiSandboxes in different geo-locations. This zero-touch automated model is ideal for holistic protection across different borders and time zones.



FEATURES SUMMARY

ADMINISTRATION

- Supports WebUI and CLI configurations
- Multiple administrator account creation
- Configuration file backup and restore
- Notification email when malicious file is detected
- Weekly report to global email list and FortiGate administrators
- Centralized search page which allows administrators to build customized search conditions
- Frequent signature auto-updates
- Automatic check and download new VM images
- VM status monitoring
- Radius Authentication for administrators

NETWORKING/DEPLOYMENT

- Static Routing Support
- File Input: Offline/sniffer mode, On-demand file upload, file submission from integrated device(s)
- Option to create simulated network for scanned file to access in a closed network environment
- High-Availability Clustering support
- Port monitoring for fail-over in a cluster

SYSTEMS INTEGRATION

- File Submission input: FortiGate, FortiClient (ATP agent), FortiMail, FortiWeb
- File Status Feedback and Report: FortiGate, FortiClient, FortiMail, FortiWeb
- Dynamic Threat DB update: FortiGate, FortiClient, FortiMail
  – Periodically push dynamic DB to registered entities
  – File checksum and malicious URL DB
- Update Database proxy: FortiManager
- Remote Logging: FortiAnalyzer, syslog server
- JSON API to automate the process of uploading samples and downloading actionable malware indicators to remediate
- Certified third-party integration: CarbonBlack, Ziften
- Inter-sharing of IOCs between FortiSandboxes

ADVANCED THREAT PROTECTION

- Virtual OS Sandbox:
  – Concurrent instances
  – OS type supported: Windows XP*, Windows 7, Windows 8.1, Windows 10 and Android
  – Anti-evasion techniques: sleep calls, process, and registry queries
  – Callback Detection: malicious URL visit, botnet C&C communication, and attacker traffic from activated malware
  – Download Capture packets, Original File, Tracer log, and Screenshot

* Supported in a custom VM

- File type support: .7z, .ace, .apk, .arj, .bat, .bz2, .cab, .cmd, .dll, .doc, .docm, .docx, .dot, .dotm, .dotx, .exe, .gz, .htm, html, .jar, .js, .kgb, .lnk, .lzh, .msi, .pdf, .pot, .potm, .potx, .ppam, .pps, .ppsm, .ppsx, .ppt, .pptm, .pptx, .ps1, .rar, .rtf, .sldm, .sldx, .swf, .tar, .tgz, .upx, url, .vbs, WEBLink, .wsf, .xlam, .xls, .xlsb, .xlsm, .xlsx, .xlt, .xltm, .xltx, .xz, .z, .zip
- Protocols/applications supported:
  – Sniffer mode: HTTP, FTP, POP3, IMAP, SMTP, SMB
  – Integrated mode with FortiGate: HTTP, SMTP, POP3, IMAP, MAPI, FTP, IM and their equivalent SSL-encrypted versions
  – Integrated mode with FortiMail: SMTP, POP3, IMAP
  – Integrated mode with FortiWeb: HTTP
  – Integrated mode with ICAP Client: HTTP
- Customize VMs for supporting various file types
- Isolate VM image traffic from system traffic
- Network threat detection in Sniffer Mode: Identify Botnet activities and network attacks, malicious URL visit
- Scan SMB/NFS network share and quarantine suspicious files. Scan can be scheduled
- Scan embedded URLs inside document files
- Integrate option for third-party Yara rules
- Option to auto-submit suspicious files to cloud service for manual analysis and signature creation
- Option to forward files to a network share for further third-party scanning
- Files checksum whitelist and blacklist option
- URLs submission for scan and query from emails and files

MONITORING AND REPORT

- Real-Time Monitoring Widgets (viewable by source and time period options): Scanning result statistics, scanning activities (over time), top targeted hosts, top malware, top infectious urls, top callback domains
- Drilldown Event Viewer: Dynamic table with content of actions, malware name, rating, type, source, destination, detection time, and download path
- Logging — GUI, download RAW log file
- Report generation for malicious files: Detailed reports on file characteristics and behaviors – file modification, process behaviors, registry behaviors, network behaviors, vm snapshot, behavior chronology chart
- Further Analysis: Downloadable files — sample file, sandbox tracer logs, PCAP capture and indicators in STIX format

SPECIFICATIONS

	FSA-1000D	FSA-3000E	FSA-3500D
Hardware			
Form Factor	2 RU	2 RU	3 RU (with default 5 nodes, up to 8 maximium)
Total Network Interfaces	6x GE RJ45 ports, 2x GE SFP slots	4x GE RJ45 ports, 2x 10 GE SFP+ slots	20x GE RJ45 ports, 10x 10 GE SFP+ slots (4x GE RJ45 ports, 2x 10 GE SFP+ slots per node)
Storage Capacity	4 TB (max. 8 TB)	8 TB HDD (max. 24 TB)	10 TB (2 TB per node) HDD
Power Supplies	2x Redundant PSU	2x Redundant PSU	2x Redundant PSU
System			
VM Sandboxing (Files/Hour)	160	1,120	720* (Upgradable** to 1,200) (160 per node)
AV Scanning (Files/Hour)	6,000	15,000	30,000* (Upgradable** to 48,000) (6,000 per node)
Number of VMs	8	56***	36* (Upgradable** to 60) (8 per node)
Dimensions			
Height x Width x Length (inches)	3.5 x 17.2 x 14.5	3.5 x 17.2 x 25.5	5.2 x 17.5 x 29.5
Height x Width x Length (mm)	89 x 437 x 368	89 x 437 x 647	133 x 445 x 749
Weight	27.60 lbs (12.52 kg)	43 lbs (19.52 kg)	88 lbs (39.92 kg)
Environment			
Power Consumption (Average / Maximum)	115 / 138 W	538.6 / 549.6 W	625 / 735.6 W
Maximum Current	100V/5A, 240V/3A	100–240V / 9.8–5A	12A@100V, 8A@240V
Heat Dissipation	471 BTU/h	1,943.82 BTU/h	2,728.9 BTU/h
Power Source	100–240V AC, 60–50 Hz	100–240V AC, 60–50 Hz	100–240V AC, 60–50 Hz
Humidity	5–95% non-condensing	8–90% (non-condensing)	8–90% (non-condensing)
Operation Temperature Range	32–104°F (0–40°C)	50–95°F (10– 35°C	50–95°F (10– 35°C)
Storage Temperature Range	-13–158°F (-25–70°C)	-40 –158°F (-40–70°C	-40 –158°F (-40–70°C)
Compliance			
Certifications	FCC Part 15 Class A, C-Tick, VCCI, CE, BSMI, KC, UL/cUL, CB, GOST		

* Based on the assumption that 1 blade will be used as master in HA-cluster mode.
** By adding 3 more SAM-3500D nodes to the same chassis.
*** 8 Windows VM licenses included with hardware, remaining 48 sold as an upgrade license.

FortiSandbox 1000D

FortiSandbox 3000E

FortiSandbox 3500D

	FORTISANDBOX-VM	FORTISANDBOX CLOUD
Hardware Requirements		
Hypervisor Support	FortiHypervisor 1.0.2 or later, VMware ESXi version 5.1 or later, Citrix XenServer 6.2 or later, Linux KVM CentOS 7.2 or later	N.A
Virtual CPUs (Minimum / Maximum)	4 / Unlimited (Fortinet recommends that the number of vCPUs match the number of Windows VM +4.)	N.A
Memory Support (Minimum / Maximum)	8 GB / Unlimited	N.A
Virtual Storage (Minimum / Maximum)	30 GB / 16 TB	N.A
Total Virtual Network Interfaces (Minimum)	6	N.A
System		
VM Sandboxing (Files/Hour)	Hardware dependent	*
AV Scanning (Files/Hour)	Hardware dependent	*
Number of VMs	1 to 54 (Upgrade via appropriate licenses)	*

* Please refer to FortiCloud Sandbox Service Description

INTEGRATION MATRIX

		FORTIGATE	FORTICLIENT	FORTIMAIL	FORTIWEB
FSA Appliance and VM	File Submission	*FortiOS V5.0.4+	FortiClient for Windows OS V5.4+	FortiMail OS V5.1+	FortiWeb OS V5.4+
	File Status Feedback	*FortiOS V5.0.4+	FortiClient for Windows OS V5.4+	FortiMail OS V5.1+	FortiWeb OS V5.4+
	File Detailed Report	*FortiOS V5.4+	FortiClient for Windows OS V5.4+	FortiMail OS V5.1+	–
	Dynamic Threat DB Update	*FortiOS V5.4+	FortiClient for Windows OS V5.4+	FortiMail OS V5.3+	FortiWeb OS V5.4+
FortiSandbox Cloud	File Submission	*FortiOS V5.2.3+	–	FortiMail OS V5.3+	FortiWeb OS 5.5.3+
	File Status Feedback	*FortiOS V5.2.3+	–	FortiMail OS V5.3+	FortiWeb OS 5.5.3+
	File Detailed Report	*FortiOS V5.2.3+	–	–	–
	Dynamic Threat DB Update	*FortiOS V5.4+	–	FortiMail OS V5.3+	FortiWeb OS 5.5.3+

*some models may require CLI configuration

ORDER INFORMATION

Product	SKU	Description
FortiSandbox 1000D	FSA-1000D	Advanced Threat Protection System — 6x GE RJ45, 2x GE SFP slots, redundant PSU, 8 VMs with Win7 and (1) MS Office license included.
FortiSandbox 3000E	FSA-3000E	Advanced Threat Protection System — 4x GE RJ45, 2x 10 GE SFP+ slots, redundant PSU, 8 VMs with Win7, Win8, Win10 and (1) MS Office license included. Upgradable to a maximum of 56 licensed VMs.
FortiSandbox 3500D	FSA-3500D	Advanced Threat Protection System — 3U 8-slot chassis with redundant PSU, 5x SAM-3500D blades with 20x GE RJ45, 10x 10 GE SFP+ slots, 36 VMs with Win7, Win8, Win10 and (5) MS Office licenses included. Upgradable to a maximum of 60 licensed VMs.
SandboxModule 3500D	SAM-3500D	Advanced Threat Protection Blade: 4x GE RJ45, 2x 10 GE SFP+ slots, 8 VMs with Win7, Win8, Win10 and (1) MS Office license included.
FortiSandbox-VM	FSA-VM-00	FortiSandbox-VM virtual appliance with 0 VMs included and maximum expansion limited to 8 total VMs.
	FSA-VM-Base	Base license for stackable FortiSandbox-VM. Includes 4 VMs with WinXP, Win7 and (1) MS Office license. FSA-VM maximum expansion limited to 54 total VMs.
FortiSandbox Cloud Service	FC-10-XXXXX-123-02-12	FortiSandbox Cloud Service Subscription (SKU varied by FortiGate/FortiMail/FortiWeb models).
Optional Accessories		
1 GE SFP SX Transceiver Module	FG-TRAN-SX	1 GE SFP SX transceiver module for all systems with SFP and SFP/SFP+ slots.
1 GE SFP LX Transceiver Module	FG-TRAN-LX	1 GE SFP LX transceiver module for all systems with SFP and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, Short Range	FG-TRAN-SFP+SR	10 GE SFP+ transceiver module, short range for all systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, Long Range	FG-TRAN-SFP+LR	10 GE SFP+ transceiver module, long range for all systems with SFP+ and SFP/SFP+ slots.

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