INTELLIGENCE BRIEFING
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Ransomware Surge: 389% Victim Increase, Sub-48-Hour Time-to-Encryption Reported by FortiGuard Labs

SECURITY ANALYSIS | HIGH

SCC Item ID	SCC-STY-2026-0099
Type	Security Analysis
Severity	HIGH
Affected Products	General, organizations globally across multiple sectors
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Discovery Source	Gemini

Executive Summary

FortiGuard Labs reports a 389% year-over-year increase in confirmed ransomware victims, reaching 7,831 globally, while time-to-encryption has collapsed to under 48 hours, cutting the defender response window to near zero. Threat actors are now operating ransomware as a scalable, end-to-end criminal enterprise; emerging threat intelligence suggests agentic AI tooling is accelerating attack execution and pre-encryption data exfiltration, though widespread operational adoption remains under assessment. For boards and CISOs, this signals that traditional detection-and-respond timelines are structurally broken; prevention, segmentation, and rapid containment must replace them as the operational baseline. [Note: Statistics are sourced via FortiGuard Labs reporting pending verification against the primary research publication.]

Technical Analysis

The FortiGuard Labs report, sourced here via a Security Boulevard secondary article and not yet directly verified against the primary FortiGuard publication; all statistics should be treated as indicative pending that primary source verification, describes a ransomware ecosystem that has matured into a professionalized, scalable criminal supply chain. The 389% victim count increase (7,831 confirmed) likely reflects both genuine growth in operations and expanded victim-shaming site visibility, but either interpretation demands serious operational attention.

The most tactically significant finding is time-to-encryption under 48 hours. Historically, dwell times measured in weeks gave defenders meaningful detection windows. Sub-48-hour TTE eliminates most SIEM-and-analyst response cycles, particularly in organizations that batch their alert reviews or lack after-hours SOC coverage.

The attack chain compressed into this window typically follows a pattern mapped across MITRE ATT&CK: initial access via exploited public-facing applications (T1190) or valid account abuse (T1078), rapid internal reconnaissance, lateral movement, bulk data staging and exfiltration over command-and-control channels (T1041), and then encryption deployment (T1486). The use of acquired tools or capabilities (T1588.006) and financial extortion mechanisms (T1657) are layered into this model as service components, initial access brokers, ransomware-as-a-service kits, and negotiation specialists each operating in their own lane.

The agentic AI dimension adds an emerging layer. By agentic AI, we mean autonomous or semi-autonomous tooling that profiles targets, prioritizes data for exfiltration, and executes reconnaissance steps with minimal operator direction, effectively lowering the skill floor for large-scale ransomware deployment. Emerging threat intelligence suggests threat actors are using AI tooling to accelerate execution and expand data exfiltration scope before triggering encryption. This is consistent with broader threat intelligence trends: AI lowers the skill floor for reconnaissance and scripting, enables faster target profiling, and can automate exfiltration prioritization to identify high-value data (credentials, IP, regulated records) before the encryption clock starts. Defenders should treat this as an acceleration multiplier on existing TTPs, not a novel attack class. Note that widespread operational deployment of agentic AI in ransomware campaigns remains under assessment; this represents an emerging capability rather than a universal baseline.

Defensive gaps most commonly exploited in this model: insufficient network segmentation allowing lateral movement post-compromise; incomplete or inconsistently deployed EDR coverage creating blind spots; MFA gaps on internet-facing systems and privileged accounts enabling valid account abuse; and immature or untested backup architectures that fail under encryption pressure. Organizations without a tested incident response plan calibrated to sub-48-hour scenarios are operating with a structural deficit.

Action Checklist

1. Step 1: Assess exposure, audit internet-facing assets and identify any systems accessible via valid accounts without MFA; these are primary initial access vectors in the compressed TTE model described
2. Step 2: Review controls, verify EDR is deployed and actively monitored across all endpoints; confirm network segmentation limits lateral movement from any single compromised host; test backup restoration under simulated encryption scenario
3. Step 3: Update threat model, incorporate sub-48-hour TTE as a planning assumption; update incident response runbooks to reflect compressed detection-to-containment timelines; map ransomware kill chain to MITRE techniques T1486, T1078, T1190, T1041, T1657
4. Step 4: Obtain primary source, retrieve the original FortiGuard Labs report or press release directly (not via secondary outlets); verify the 389% statistic and 48-hour TTE claim against this primary source before briefing leadership or external stakeholders. This step must be completed before proceeding to Step 5.
5. Step 5: Communicate findings, brief leadership on the structural shift from dwell-time detection to prevention-first posture; use the FortiGuard Labs statistics as context for resourcing conversations, noting that these figures have been verified against the primary publication. Update incident response and cyber insurance terms to reflect 48-hour response window assumptions.

IR / Forensic Enrichment

Triage Priority	IMMEDIATE

Escalation Criteria	Escalate to CISO and legal counsel immediately if any retroactive log review (Step 5) surfaces prior C2 contact, anomalous data transfer volumes consistent with pre-encryption exfiltration (T1041), or evidence of valid account abuse (T1078) on systems holding PII, PHI, or financial data — these findings trigger breach notification assessment under GDPR, HIPAA, and state privacy statutes regardless of whether encryption was completed.
Recovery Notes	Given the sub-48-hour TTE, recovery planning must assume backup integrity is the primary restoration path — verify that backups are stored offline or in immutable storage and confirm the most recent restoration test date before any incident occurs. Post-containment, monitor for re-infection attempts for a minimum of 30 days: ransomware operators commonly maintain secondary persistence (scheduled tasks, modified startup items) that survives initial eradication, and agentic AI-assisted campaigns may re-execute automatically from a surviving foothold. Validate restored systems by comparing file hashes of critical binaries against known-good baselines before returning them to production.
Forensic Artifacts	Windows Security Event Log — Event ID 4624 (Successful Logon, Type 3 Network) and 4648 (Explicit Credential Logon) from internet-facing hosts and domain controllers: establishes timeline of T1078 (Valid Account) abuse used as initial access in ransomware campaigns operating within the sub-48-hour TTE window | Sysmon Event ID 11 (File Create) with target file extensions .tmp, .encrypted, or randomized extensions across multiple directories in rapid succession: primary forensic signature of T1486 (Data Encrypted for Impact) execution — mass file rename/create events within a compressed timeframe distinguish ransomware from legitimate file operations | Web server and reverse proxy access logs (IIS `%SystemDrive%\inetpub\logs\LogFiles\` or Apache `/var/log/apache2/access.log`) filtered for HTTP 4xx/5xx bursts against login pages, admin portals, or API endpoints: maps to T1190 (Exploit Public-Facing Application) and T1078 credential stuffing as initial access vectors | Network flow or firewall logs showing large outbound data transfers (>1GB) to non-business IPs or cloud storage endpoints (Mega.nz, Dropbox API, rclone destinations) in the hours preceding any encryption event: forensic evidence of T1041 exfiltration and T1657 data theft, which FortiGuard Labs identifies as occurring before encryption in modern ransomware operations | Windows Scheduled Tasks (`%SystemRoot%\System32\Tasks\`) and registry Run keys (`HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Run`) created within the attack window: ransomware operators using agentic AI-assisted tooling frequently install persistence mechanisms to survive reboot or partial remediation, making these artifacts critical for confirming full eradication before recovery is declared

Per-Action IR Details

Step 1: Assess exposure — audit internet-facing assets and identify any systems accessible via valid accounts without MFA; these are primary initial access vectors in the compressed TTE model described

NIST Phase: Preparation

Reference: NIST 800-61r3 §2 — Preparation: establishing IR capability and reducing attack surface before an incident occurs

Controls: NIST IA-2 (Identification and Authentication — Organizational Users): enforce MFA on all internet-facing authentication endpoints, NIST RA-5 (Vulnerability Monitoring and Scanning): enumerate and risk-rank externally reachable services, CIS 6.3 (Require MFA for Externally-Exposed Applications), CIS 6.4 (Require MFA for Remote Network Access), CIS 1.1 (Establish and Maintain Detailed Enterprise Asset Inventory)

Compensating: Run `shodan search 'org:"YourOrgName"'` via Shodan free tier to enumerate externally visible services. Use `nmap -sV -p 445,3389,22,8443,80,443 ` to identify RDP, SMB, and web services exposed without authentication gates. Cross-reference results against your asset inventory in a spreadsheet; flag any host reachable without MFA as Priority 1. For VPN/remote access, pull Active Directory sign-in logs with `Get-ADUser -Filter * -Properties LastLogonDate | Where {$_.LastLogonDate -lt (Get-Date).AddDays(-45)}` to identify dormant accounts that

could be abused via credential stuffing — a common ransomware initial access pattern.

Evidence: Before closing any exposure, document the pre-remediation attack surface: export Shodan or Censys results showing open ports/services per host; capture screenshots of any login portals lacking MFA prompts; pull Windows Security Event Log Event ID 4625 (Failed Logon) and 4648 (Explicit Credential Logon) from internet-facing hosts to establish a baseline of existing credential-guessing activity targeting those endpoints; export firewall/NAT rules showing inbound permit rules to establish a before/after remediation record.

Step 2: Review controls — verify EDR is deployed and actively monitored across all endpoints; confirm network segmentation limits lateral movement from any single compromised host; test backup restoration under simulated encryption scenario

NIST Phase: Preparation

Reference: NIST 800-61r3 §2 — Preparation: ensuring detection tools, segmentation controls, and recovery capabilities are operational before the sub-48-hour TTE window closes

Controls: NIST IR-4 (Incident Handling): maintain capability spanning preparation through recovery, NIST SI-4 (System Monitoring): continuous endpoint and network monitoring to detect ransomware staging and lateral movement, NIST CP-9 (System Backup): verify backup integrity and restoration speed against a sub-48-hour recovery objective, NIST SC-7 (Boundary Protection): enforce segmentation to limit blast radius from a single compromised host, CIS 8.2 (Collect Audit Logs), CIS 4.4 (Implement and Manage a Firewall on Servers), CIS 7.1 (Establish and Maintain a Vulnerability Management Process)

Compensating: EDR gap: deploy Sysmon with SwiftOnSecurity config (`sysmon -accepteula -i sysmonconfig.xml`) on all Windows endpoints — Event IDs 1 (Process Create), 3 (Network Connect), 11 (File Create), 23 (File Delete) cover the core ransomware execution chain. For segmentation verification, run `traceroute` or `Test-NetConnection -ComputerName -Port 445` between VLANs to confirm SMB lateral movement is blocked. For backup restoration testing, restore a sample file set from your most recent backup to an isolated host and time the operation — if restoration exceeds 24 hours for critical systems, your RTO is incompatible with sub-48-hour TTE scenarios and must be escalated immediately.

Evidence: Before modifying any segmentation rules or EDR configs, capture the current state: export EDR coverage report showing enrolled vs. total endpoints (gap = unmonitored blast radius); run `netstat -an` on key servers to document current listening services and established connections; pull firewall rule tables for inter-VLAN ACLs and save as baseline; verify backup job logs for last successful completion date and restoration test date — absence of a recent restoration test is itself a critical finding requiring documentation.

Step 3: Update threat model — incorporate sub-48-hour TTE as a planning assumption; update incident response runbooks to reflect compressed detection-to-containment timelines; map ransomware kill chain to MITRE techniques T1486, T1078, T1190, T1041, T1657

NIST Phase: Preparation

Reference: NIST 800-61r3 §2 — Preparation: updating IR plans and detection logic to reflect current threat actor TTPs before an incident forces reactive adaptation

Controls: NIST IR-8 (Incident Response Plan): update plan to reflect sub-48-hour TTE as the operative planning assumption, replacing legacy dwell-time detection models, NIST IR-2 (Incident Response Training): retrain SOC staff on compressed timeline decision authorities — containment decisions cannot wait for management approval chains built around multi-day dwell times, NIST SI-5 (Security Alerts, Advisories, and Directives): integrate FortiGuard Labs TTP updates into detection rule sets, CIS 7.1 (Establish and Maintain a Vulnerability Management Process), CIS 7.2 (Establish and Maintain a Remediation Process)

Compensating: Map each MITRE technique to a concrete Sigma rule: T1486 (Data Encrypted for Impact) → Sigma rule `ransomware_file_encryption.yml` detecting mass file rename events via Sysmon Event ID 11; T1078 (Valid Accounts) → query Windows Security Event ID 4624 Logon Type 3 (Network) from unusual source IPs; T1190 (Exploit Public-Facing Application) → parse web server access logs for HTTP 500 responses and abnormal URI patterns indicating exploitation attempts; T1041 (Exfiltration Over C2 Channel) → Wireshark/tcpdump filter `host and port not in {80,443,53}` to catch non-standard exfil; T1657 (Financial Theft) → monitor for access to finance-adjacent file shares using osquery `SELECT * FROM file_events WHERE path LIKE '%finance%' OR path LIKE '%accounting%'`. Store all

rules in a version-controlled Git repository so runbook updates are auditable.

Evidence: Before finalizing the updated threat model, pull historical SIEM/log data (or Windows Event Log archives) to reconstruct any prior near-miss events: search for Event ID 4724 (Password Reset Attempt), 4728 (Member Added to Security-Enabled Global Group), and 7045 (New Service Installed) — all consistent with ransomware operator lateral movement and persistence staging. Document which of the five MITRE techniques (T1486, T1078, T1190, T1041, T1657) currently have zero detection coverage in your environment; those gaps become the prioritized detection engineering backlog.

Step 4: Communicate findings — brief leadership on the structural shift from dwell-time detection to prevention-first posture; use the 389% victim increase as context for resourcing conversations, noting the statistic is sourced from a secondary article pending primary FortiGuard verification

NIST Phase: Post Incident

Reference: NIST 800-61r3 §4 — Post-Incident Activity: communicating threat intelligence findings and lessons learned to drive organizational posture improvements and resource allocation

Controls: NIST IR-6 (Incident Reporting): extend reporting to include threat intelligence briefings that inform executive risk decisions, not only active incident status, NIST IR-8 (Incident Response Plan): governance updates require executive sponsorship — this briefing is the formal trigger for plan revision authority, NIST RA-3 (Risk Assessment): the 389% victim increase and sub-48-hour TTE are quantitative inputs to a formal risk assessment update, CIS 7.1 (Establish and Maintain a Vulnerability Management Process)

Compensating: Produce a one-page executive brief with three columns: Current Posture (detection-centric, built on multi-day dwell time assumptions), Threat Reality (sub-48-hour TTE per FortiGuard Labs, pending primary source verification), and Gap (specific controls missing from Step 1 and Step 2 assessment). Use concrete cost anchors: average ransomware recovery cost from IBM Cost of a Data Breach Report (cite year and version used) vs. cost of MFA deployment and EDR gap closure. Flag clearly in the brief that the 389% figure is from a secondary source and link the request for primary FortiGuard report access to Step 5 — do not present the statistic as verified until the primary report is reviewed.

Evidence: Attach to the leadership brief: the asset exposure audit output from Step 1 (count of MFA gaps), EDR coverage gap from Step 2 (percentage of unmonitored endpoints), and detection coverage gap from Step 3 (number of MITRE techniques with zero detection rules). These are first-party evidence from your own environment and do not depend on external statistic verification — they make the risk tangible regardless of the 389% figure's final verification status.

Step 5: Monitor developments — obtain and review the primary FortiGuard Labs report directly to verify statistics and extract any published IOCs; track follow-up advisories from CISA and MITRE ATT&CK updates related to ransomware TTP evolution

NIST Phase: Detection Analysis

Reference: NIST 800-61r3 §3.2 — Detection and Analysis: integrating external cyber threat intelligence into ongoing monitoring and analysis to improve detection accuracy against evolving ransomware TTPs

Controls: NIST SI-5 (Security Alerts, Advisories, and Directives): establish a formal process to receive and act on FortiGuard, CISA, and MITRE ATT&CK updates within a defined SLA, NIST IR-5 (Incident Monitoring): incorporate published IOCs into active monitoring workflows, NIST AU-6 (Audit Record Review, Analysis, and Reporting): apply new IOCs and TTP indicators retroactively against existing log archives to identify past activity, CIS 7.1 (Establish and Maintain a Vulnerability Management Process), CIS 8.2 (Collect Audit Logs)

Compensating: Subscribe to CISA's free Known Exploited Vulnerabilities (KEV) RSS feed and MITRE ATT&CK STIX/TAXII feed for automated TTP updates. Once the primary FortiGuard report is obtained, extract any published IOCs (file hashes, C2 IPs, domains, URI patterns) and operationalize them immediately: add hashes to a local YARA rule, block IPs/domains at the perimeter firewall, and run a retroactive grep against web proxy logs (`grep -E '' /var/log/proxy/access.log`) to check for prior contact. For MITRE ATT&CK updates, subscribe to the ATT&CK Navigator layer for Enterprise ransomware groups and diff against your current detection coverage map from Step 3 quarterly.

Evidence: When the primary FortiGuard report is obtained, document its publication date, version, and the specific page/table from which statistics are drawn — this creates an auditable intelligence source record per NIST IR-5 requirements. Retroactively search DNS query logs and proxy logs for any FortiGuard-published C2 domains or IP ranges covering the 90 days prior to this review; absence of hits is itself a documented finding. Archive all CISA advisories and MITRE ATT&CK changelog entries related to ransomware TTPs reviewed during this monitoring cycle, timestamped, for post-incident review if an event occurs later.

Detection Guidance

Given sub-48-hour TTE, detection must shift left toward initial access and early lateral movement, post-encryption detections are operationally too late.

Log sources to prioritize: authentication logs for unusual valid account activity (off-hours logins, new geographies, service accounts making interactive logons); VPN and remote access logs for access from unexpected ASNs or using credentials not recently active; EDR telemetry for living-off-the-land binaries being executed in unusual process chains (wmic, vssadmin, bcdedit, particularly any command deleting volume shadow copies, a reliable pre-encryption indicator); network flow data for large internal data transfers to unusual destinations or unexpected egress volumes consistent with pre-encryption exfiltration (T1041).

Behavioral hunts to consider: enumerate any process executing vssadmin delete shadows or bcdedit /set recoveryenabled no, both are near-universal ransomware preparation steps; hunt for rapid file renaming events across network shares; identify anomalous use of legitimate admin tools (PSExec, RDP, WMI) initiated from non-admin workstations.

AI-accelerated exfiltration hunting: look for staging directories containing compressed archives created outside normal business workflows; monitor DLP alerts for bulk document access in compressed timeframes. Note that agentic AI-assisted exfiltration may produce different behavioral signatures (e.g., more selective targeting of high-value data, faster staging) than human-operated campaigns; update detection logic to flag unusual data selection patterns alongside volume-based alerts.

Policy gaps to audit: confirm MFA is enforced on all internet-facing authentication, including legacy protocols (SMTP, IMAP, legacy VPN endpoints) that are commonly bypassed; verify backup systems are isolated from domain credentials so ransomware cannot encrypt them via the same valid account access used for the primary attack.

Indicators of Compromise

Type	Value	Context	Confidence
TOOL	`vssadmin.exe`	vssadmin leveraged during ransomware pre-encryption phase to delete volume shadow copies, eliminating local recovery options before payload deployment	MEDIUM
TOOL	`bcdedit.exe`	bcdedit leveraged to disable Windows recovery environment, preventing OS-level rollback after encryption	MEDIUM

Type	Value	Context	Confidence
TOOL	`Pending — refer to FortiGuard Labs primary report for published indicators`	FortiGuard Labs report likely contains campaign-specific C2 infrastructure, payload hashes, and tooling IOCs; the source article referenced here is a secondary summary and does not publish specific indicator values	LOW

Framework Mappings

MITRE-ATTACK

- **T1588.006** — Vulnerabilities
- **T1486** — Data Encrypted for Impact
- **T1078** — Valid Accounts
- **T1657** — Financial Theft
- **T1190** — Exploit Public-Facing Application
- **T1041** — Exfiltration Over C2 Channel

NIST-800-53R5

- **CP-9** — System Backup
- **CP-10** — System Recovery and Reconstitution
- **AC-2** — Account Management
- **AC-6** — Least Privilege
- **IA-2** — Identification and Authentication (Organizational Users)
- **IA-5** — Authenticator Management
- **CA-8** — Penetration Testing
- **RA-5** — Vulnerability Monitoring and Scanning
- **SC-7** — Boundary Protection
- **SI-2** — Flaw Remediation
- **SI-7** — Software, Firmware, and Information Integrity
- **CA-7** — Continuous Monitoring
- **SI-4** — System Monitoring
- **IR-4** — Incident Handling
- **SC-13** — Cryptographic Protection

NIST-CSF-2

- **RS.MI-01** — Incidents are contained

HIPAA-SECURITY

- **164.308(a)(7)(ii)(A)** — Data Backup Plan
- **164.308(a)(6)(ii)** — Response and Reporting

- **164.312(e)(1)** — Transmission Security

ISO-27001-2022

- **A.5.29** — Information security during disruption
- **A.5.34** — Privacy and protection of personal information
- **A.8.24** — Use of cryptography

SOC2-TSC

- **CC7.4** — Responds to identified security incidents

MITRE ATT&CK Mapping

Technique ID	Technique Name	Tactic
T1588.006	Vulnerabilities	Resource-Development
T1486	Data Encrypted for Impact	Impact
T1078	Valid Accounts	Defense-Evasion
T1657	Financial Theft	Impact
T1190	Exploit Public-Facing Application	Initial-Access
T1041	Exfiltration Over C2 Channel	Exfiltration

Sources

Source	URL	Tier
gemini	https://securityboulevard.com/2026/04/ransomware-victims-up-389-tte...	T3
The 6 Industries Most Affected by Security Breaches - Cobalt	https://www.cobalt.io/blog/industries-most-affected-by-security-bre...	T3
The Impact of Data Breaches on Different Industries - Wire	https://wire.com/en/blog/the-impact-of-data-breaches-on-industries	T3
Cybersecurity Statistics 2025: Rising Threats and Industry Impact	https://www.fortinet.com/resources/cyberglossary/cybersecurity-stat...	T3
5 Ways Data Breaches Affect Organizations - SecurityScorecard	https://securityscorecard.com/blog/5-ways-data-breaches-affect-orga...	T3

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