INTELLIGENCE BRIEFING
Security Command Center
TLP:CLEAR
2026-03-29 18:34 UTC

TA446 Adopts DarkSword iOS Exploit Kit, GitHub Leak Threatens to Commoditize Nation-State Mobile Espionage

THREAT CAMPAIGN | **HIGH** | CVSS 9.5

SCC Item ID	SCC-CAM-2026-0118
Type	Threat Campaign
Severity	HIGH
CVSS Base Score	9.5
Affected Products	Apple iOS and iPadOS (all versions prior to latest patch update); iPhone and iPad devices
Published	2026-03-28
Discovery Source	Rss

Executive Summary

Russian FSB-linked threat actor TA446 (also tracked as COLDRIVER and Star Blizzard) has extended its espionage operations to Apple iOS devices using a leaked exploit kit called DarkSword, marking the group's first confirmed targeting of Apple mobile platforms. Government agencies, think tanks, academic institutions, financial organizations, and law firms are the primary targets, reached via spear-phishing emails impersonating the Atlantic Council. The public availability of DarkSword on GitHub elevates this beyond a single nation-state campaign: lower-sophistication actors can now access exploit capability previously limited to state-sponsored groups, materially increasing mobile enterprise risk for organizations in these sectors.

Technical Analysis

TA446 (COLDRIVER / Star Blizzard), attributed to Russia's FSB, has incorporated the leaked DarkSword iOS exploit kit into active spear-phishing operations. Confirmed payloads are GHOSTBLADE, a dataminer, and MAYBEROBOT, a backdoor. The spear-phishing lures spoof the Atlantic Council and deliver malicious links or attachments designed to trigger exploitation on Apple iOS and iPadOS devices. Underlying weakness classes include memory corruption (CWE-119: Improper Restriction of Operations within the Bounds of a Memory Buffer; CWE-787: Out-of-bounds Write) and type confusion (CWE-843: Access of Resource Using Incompatible Type), patterns consistent with iOS kernel or WebKit exploitation primitives. No specific CVE identifiers were confirmed at time of analysis; CVE assignment is pending or undisclosed. Attribution confidence is high based on existing COLDRIVER/Star Blizzard tracking; exploit kit specifics and GitHub leak details carry medium

confidence pending corroboration from authoritative feeds. MITRE ATT&CK techniques observed span initial access through spear-phishing links (T1566.001), drive-by compromise (T1189), and malicious user execution (T1204.001); persistence and collection via input capture (T1056), keylogging/credential access (T1417), and contact and location data harvesting (T1636, T1430); command-and-control over standard web protocols (T1071.001); and data exfiltration (T1041). The actor also employs obfuscation (T1027), sandbox evasion (T1497), and infrastructure acquisition via domains and web services (T1583.001, T1583.006). All iOS and iPadOS versions prior to the latest Apple security update are considered affected. Apple security release notes for iOS/iPadOS 26.2, 26.3, and 26.4 are listed in source data as reference material; however, specific CVE-to-patch mapping cannot be confirmed from available source data at medium confidence.

Action Checklist

1. Step 1: Containment, Immediately enforce Mobile Device Management (MDM) policy requiring iOS and iPadOS devices to run the latest available release (iOS/iPadOS 26.4 per source data). Suspend corporate email access for any unpatched device. Block Atlantic Council domain spoofs at email gateway and DNS: flag any inbound email claiming to originate from atlanticcouncil.org that fails DMARC/SPF/DKIM validation. Isolate any device that has interacted with suspicious spear-phishing links in the last 30 days.
2. Step 2: Detection, Query MDM/UEM telemetry for devices below iOS/iPadOS 26.4. Review email gateway logs for inbound messages spoofing atlanticcouncil.org or related lures, particularly those containing links or attachments delivered to government, legal, finance, or research staff. On enrolled iOS devices, check for anomalous processes, unexpected profiles, or unknown configuration profiles via MDM. Monitor EDR/MTD (Mobile Threat Defense) alerts for GHOSTBLADE or MAYBEROBOT behavioral signatures if your MTD vendor has published indicators. Review network logs for outbound connections to newly registered or low-reputation domains consistent with C2 patterns (T1071.001, T1041). Note: specific IOC values (hashes, IPs, domains) were not confirmed in available source data at time of analysis.
3. Step 3: Eradication, Update all affected iOS and iPadOS devices to iOS/iPadOS 26.4 (or the latest available release per Apple's security advisories at https://support.apple.com). Remove any unknown or unauthorized configuration profiles from enrolled devices via MDM. If GHOSTBLADE or MAYBEROBOT infection is confirmed on a device, perform a full device wipe and restore from a pre-compromise backup (validate backup creation date predates suspected compromise window) after verifying backup integrity. If backup status cannot be verified, perform clean setup without backup restoration. Revoke and reissue credentials for any accounts accessed from a potentially compromised device.
4. Step 4: Recovery, Validate patch deployment completion via MDM compliance dashboard; confirm 100% of enrolled iOS/iPadOS devices report the target OS version. Re-enroll wiped devices under MDM before restoring corporate access. Monitor MTD and network telemetry for 30 days post-remediation for residual C2 activity or re-infection indicators. Verify that email gateway DMARC enforcement is active and that spoofed Atlantic Council messages are being quarantined or rejected.
5. Step 5: Post-Incident, This campaign exposes three specific control gaps: (1) mobile device patch latency, enforce zero-tolerance patch windows for iOS/iPadOS via MDM policy; (2) absence of Mobile Threat Defense, if MTD is not deployed on corporate and BYOD iOS devices, assess and prioritize deployment; (3) spear-phishing susceptibility targeting high-value staff in government, legal, and research roles, run targeted awareness exercises using think tank and policy organization lure themes. Additionally, the GitHub availability of DarkSword warrants a standing watch item: monitor threat intelligence feeds for DarkSword adoption by criminal or lower-sophistication actors beyond TA446.

IR / Forensic Enrichment

Triage Priority	IMMEDIATE
Escalation Criteria	Escalate to CISO and legal counsel immediately if any iOS device belonging to government liaisons, legal staff, or research personnel shows confirmed GHOSTBLADE or MAYBEROBOT indicators, as TA446/COLDRIVER's FSB attribution and targeting of policy and legal organizations creates potential counterintelligence, attorney-client privilege, and breach notification obligations under applicable data protection regulations.
Recovery Notes	Post-containment recovery must confirm that no unauthorized MDM configuration profiles or WebKit-exploiting payloads persist on any re-enrolled device, as DarkSword's iOS exploit delivery mechanism may install persistence via configuration profile or provisioning profile that survives a standard user data wipe without a full DFU restore. Monitor all re-enrolled iOS devices via MTD and network egress for 30 days, focusing on outbound TLS connections to low-reputation or newly registered domains from devices previously identified as exposed to the Atlantic Council spear-phishing lures. Given the public availability of DarkSword on GitHub, recovery monitoring should extend beyond TA446 TTPs and watch for behavioral signatures of the kit being repurposed by lower-sophistication actors who may retarget the same staff lists.
Forensic Artifacts	iOS Crash Reporter logs at /var/mobile/Library/Logs/CrashReporter/ — DarkSword's WebKit-based exploit delivery would likely produce crash reports for com.apple.WebKit.WebContent or com.apple.Safari processes immediately prior to payload execution; extract via iMazing or Apple Configurator syslog capture before device wipe. | MDM-visible configuration profile inventory including profile UUID, installation source, and timestamp — unauthorized profiles installed via DarkSword's exploit chain as a persistence or VPN-redirect mechanism would appear here; export via MDM API before eradication removes them. | Email gateway SMTP header logs for messages From/Reply-To atlanticcouncil.org lookalike domains — TA446's spear-phishing infrastructure impersonating the Atlantic Council would leave DMARC fail records, X-Originating-IP headers, and Message-ID patterns consistent with Russian-nexus phishing infrastructure. | DNS query logs from mobile device network segments — DarkSword C2 communication following successful iOS exploitation (MITRE T1071.001, T1041) would produce DNS lookups to newly registered, low-TTL domains from the compromised device's IP; correlate query timestamps with email delivery timestamps to establish infection chain. | Apple iTunes or Finder encrypted device backup with SHA-256 hash documented at acquisition time — serves as the forensic baseline for confirming pre-compromise iOS state and validating restore integrity; also enables offline analysis of app state databases (e.g., Safari history at HomeDomain/Library/Safari/History.db) for evidence of DarkSword exploit delivery URL interaction.

Per-Action IR Details

Step 1: Containment — Immediately enforce Mobile Device Management (MDM) policy requiring iOS and iPadOS devices to run the latest available release (iOS/iPadOS 26.4 per source data). Suspend corporate email access for any unpatched device. Block Atlantic Council domain spoofs at email gateway and DNS: flag any inbound email claiming to originate from atlanticcouncil.org that fails DMARC/SPF/DKIM validation. Isolate any device that has interacted with suspicious spear-phishing links in the last 30 days.

NIST Phase: Containment

Reference: NIST 800-61r3 §3.3 — Containment Strategy

Controls: NIST IR-4 (Incident Handling), NIST SI-3 (Malicious Code Protection), NIST SC-7 (Boundary Protection), CIS 4.4 (Implement and Manage a Firewall on Servers), CIS 6.3 (Require MFA for Externally-Exposed Applications), CIS 7.1 (Establish and Maintain a Vulnerability Management Process)

Compensating: Without enterprise MDM, use Apple Configurator 2 (free) to enumerate and verify OS versions on managed devices via USB. Export device list and filter with a shell one-liner: `system_profiler SPUSBDataType | grep -A5 'iPhone\|iPad'`. For email gateway enforcement without a commercial SEG, configure Postfix or Exchange transport rules to reject or quarantine any message with From:/Reply-To: containing 'atlanticcouncil.org' that fails SPF/DKIM using the free MXToolbox DMARC validator for spot-checks. Publish a DMARC record at p=reject for your own domain immediately if not already present.

Evidence: Before isolating any device, capture MDM enrollment status and last check-in timestamp for each iOS/iPadOS device. Preserve email gateway logs (SMTP headers, envelope sender, DKIM/DMARC verdict fields) for all inbound messages from atlanticcouncil.org or typosquat variants (e.g., atlanticcounci1.org, atlantic-council.org) received in the prior 30 days. Screenshot or export any MDM-visible configuration profiles installed on potentially exposed devices before MDM policy enforcement overwrites the state. Preserve network DNS query logs for any resolution of atlanticcouncil.org lookalike domains from mobile device IP ranges.

Step 2: Detection — Query MDM/UEM telemetry for devices below iOS/iPadOS 26.4. Review email gateway logs for inbound messages spoofing atlanticcouncil.org or related lures, particularly those containing links or attachments delivered to government, legal, finance, or research staff. On enrolled iOS devices, check for anomalous processes, unexpected profiles, or unknown configuration profiles via MDM. Monitor EDR/MTD (Mobile Threat Defense) alerts for GHOSTBLADE or MAYBEROBOT behavioral signatures if your MTD vendor has published indicators. Review network logs for outbound connections to newly registered or low-reputation domains consistent with C2 patterns (T1071.001, T1041). Note: specific IOC values (hashes, IPs, domains) were not confirmed in available source data at time of analysis.

NIST Phase: Detection Analysis

Reference: NIST 800-61r3 §3.2 — Detection and Analysis

Controls: NIST SI-4 (System Monitoring), NIST AU-6 (Audit Record Review, Analysis, and Reporting), NIST AU-2 (Event Logging), NIST IR-5 (Incident Monitoring), CIS 8.2 (Collect Audit Logs), CIS 7.1 (Establish and Maintain a Vulnerability Management Process)

Compensating: Without MTD, use iMazing (free tier) connected via USB to enrolled iPhones/iPads to export iOS syslog and crash logs; look for unexpected process crashes or sandbox escape indicators in /var/mobile/Library/Logs/CrashReporter. Query your MDM (Jamf Free, Mosyle, or Apple Business Manager) compliance report for the 'OS Version' attribute against a threshold of iOS 26.4. For email log analysis without SIEM, use the open-source tool `mxtoolbox` or `maillog-grep` on your MTA logs filtering on `atlanticcouncil.org` in the From, Reply-To, and Return-Path headers. Write a Sigma rule targeting MITRE T1071.001 (Application Layer Protocol: Web) and T1041 (Exfiltration Over C2 Channel) against DNS and proxy logs using sigmac to convert to your log platform's query syntax.

Evidence: Collect MDM compliance reports showing OS version, last check-in, and installed configuration profile list for all iOS/iPadOS devices before querying live device state. Export email gateway message trace logs including full SMTP headers for all messages to high-value staff (government liaisons, legal counsel, research analysts) for the prior 30 days, filtering on atlanticcouncil.org and any registered lookalike domains. If an MTD agent (e.g., Zimperium, Lookout, Microsoft Defender for Endpoint on iOS) is deployed, export all behavioral alerts tagged with process injection, suspicious URL launch, or WebKit exploitation for the same 30-day window. Capture DNS resolver logs for mobile device subnets showing lookups to newly registered domains (WHOIS age < 90 days) immediately preceding or following spear-phishing link delivery timestamps.

Step 3: Eradication — Update all affected iOS and iPadOS devices to iOS/iPadOS 26.4 (or the latest available release per Apple's security advisories at https://support.apple.com). Remove any unknown or unauthorized configuration profiles from enrolled devices via MDM. If GHOSTBLADE or MAYBEROBOT infection is confirmed on a device, perform a full device wipe and restore from a pre-compromise backup after verifying backup integrity. Revoke and reissue credentials for any accounts accessed from a potentially compromised

device.

NIST Phase: Eradication

Reference: NIST 800-61r3 §3.4 — Eradication

Controls: NIST SI-2 (Flaw Remediation), NIST SI-7 (Software, Firmware, and Information Integrity), NIST IR-4 (Incident Handling), NIST IA-5 (Authenticator Management), CIS 7.3 (Perform Automated Operating System Patch Management), CIS 7.4 (Perform Automated Application Patch Management), CIS 5.3 (Disable Dormant Accounts)

Compensating: Without enterprise MDM for forced OTA updates, prepare a supervised update workflow using Apple Configurator 2: connect device via USB, use 'Update All' under Actions to push the target iOS version. Verify profile removal by navigating Settings > General > VPN & Device Management on each device and documenting the state before and after remediation. For credential revocation without a PAM tool, use your identity provider's admin console (Azure AD, Okta, Google Workspace) to immediately expire all active sessions and force password reset for accounts confirmed on compromised devices. Verify iCloud backup timestamps against the estimated compromise window using iMazing's backup browser to select a pre-compromise restore point.

Evidence: Before wiping any confirmed GHOSTBLADE/MAYBEROBOT-infected device, acquire a full iTunes/Finder encrypted backup and document the backup hash (SHA-256 via `shasum -a 256` on the backup folder) to preserve forensic state. Export the full MDM-visible configuration profile list including profile UUID, installation date, and issuing organization for any unauthorized profiles found. For any device with confirmed credential access post-compromise, pull authentication logs from your IdP (Azure AD Sign-In Logs, Okta System Log) for the accounts in question, filtering on device_id or user_agent strings matching iOS Safari/WebKit to establish the access timeline before revoking tokens.

Step 4: Recovery — Validate patch deployment completion via MDM compliance dashboard; confirm 100% of enrolled iOS/iPadOS devices report the target OS version. Re-enroll wiped devices under MDM before restoring corporate access. Monitor MTD and network telemetry for 30 days post-remediation for residual C2 activity or re-infection indicators. Verify that email gateway DMARC enforcement is active and that spoofed Atlantic Council messages are being quarantined or rejected.

NIST Phase: Recovery

Reference: NIST 800-61r3 §3.5 — Recovery

Controls: NIST IR-4 (Incident Handling), NIST SI-2 (Flaw Remediation), NIST SI-4 (System Monitoring), NIST AU-6 (Audit Record Review, Analysis, and Reporting), CIS 7.3 (Perform Automated Operating System Patch Management), CIS 8.2 (Collect Audit Logs)

Compensating: Without a commercial MTD, configure Zeek (free, open-source) on your network egress point to log all TLS SNI values and flag connections to domains registered within the past 90 days using a threat intel enrichment script against the Cisco Umbrella 1M free list. Use Apple Business Manager's device assignment view combined with your MDM compliance export (CSV) to confirm 100% patch coverage; sort by 'OS Version' column and flag any device below iOS 26.4. For DMARC verification, send a test message impersonating atlanticcouncil.org from an external mail relay and confirm your gateway delivers a DMARC failure disposition (quarantine or reject) by reviewing the MTA delivery log.

Evidence: Retain MDM compliance snapshots (timestamped exports) from before and after patch enforcement as documented proof of remediation scope. Archive DMARC aggregate reports (rua) for the 30-day monitoring window to evidence that spoofed Atlantic Council messages are being acted on correctly. Preserve network flow logs and DNS query logs from the 30-day post-remediation monitoring window, specifically any iOS device making outbound HTTPS connections to domains matching DarkSword C2 behavioral patterns (low-TTL, newly registered, non-categorical), as this would indicate re-infection or persistence that survived the wipe-and-restore cycle.

Step 5: Post-Incident — This campaign exposes three specific control gaps: (1) mobile device patch latency — enforce zero-tolerance patch windows for iOS/iPadOS via MDM policy; (2) absence of Mobile Threat Defense — if MTD is not deployed on corporate and BYOD iOS devices, assess and prioritize deployment; (3) spear-phishing susceptibility targeting high-value staff in government, legal, and research roles — run targeted awareness exercises using think tank and policy organization lure themes. Additionally, the GitHub

availability of DarkSword warrants a standing watch item: monitor threat intelligence feeds for DarkSword adoption by criminal or lower-sophistication actors beyond TA446.

NIST Phase: Post Incident

Reference: NIST 800-61r3 §4 — Post-Incident Activity

Controls: NIST IR-4 (Incident Handling), NIST IR-8 (Incident Response Plan), NIST IR-2 (Incident Response Training), NIST SI-5 (Security Alerts, Advisories, and Directives), NIST RA-3 (Risk Assessment), CIS 7.1 (Establish and Maintain a Vulnerability Management Process), CIS 7.2 (Establish and Maintain a Remediation Process)

Compensating: Without a commercial threat intel platform, create a free GitHub search alert using the GitHub API or a cron job with `curl` querying `https://api.github.com/search/repositories?q=DarkSword+ios` daily to detect new forks or derivative repositories of the leaked DarkSword kit. For spear-phishing simulation targeting think tank lures, use GoPhish (free, open-source) with a templated Atlantic Council impersonation email to measure click rates among research, legal, and government liaison staff specifically. Document the three identified control gaps (patch latency, MTD absence, phishing susceptibility) in a formal lessons-learned report mapped to NIST IR-8 Incident Response Plan update requirements and track closure milestones at 30/60/90 days.

Evidence: Compile the full incident timeline from first phishing delivery to confirmed eradication, sourced from: email gateway message trace logs, MDM check-in timestamps, IdP authentication logs, and any MTD or network alerts. Archive all collected forensic artifacts (encrypted iTunes backups, MDM profile exports, email header captures, DNS logs) per your retention policy under NIST AU-11 (Audit Record Retention) to support any future regulatory inquiry or law enforcement referral given TA446's FSB nexus. Document the DarkSword GitHub repository URL and commit history as a threat intelligence artifact in your IR ticketing system for ongoing tracking of downstream adoption by criminal actors.

Detection Guidance

Primary detection surfaces are MDM/UEM compliance telemetry, email gateway logs, and Mobile Threat Defense (MTD) alerts. Query MDM for devices running iOS/iPadOS below version 26.4. In email gateway logs, filter for inbound messages where the From or Reply-To header references atlanticcouncil.org but fails SPF, DKIM, or DMARC validation, this is the confirmed lure pattern. In network logs, look for outbound HTTP/HTTPS connections from mobile device IP ranges to recently registered domains or domains with low reputation scores, which would be consistent with GHOSTBLADE or MAYBEROBOT C2 behavior (T1071.001). On MTD-enrolled devices, flag alerts for anomalous process execution, unauthorized profile installation, or unexpected outbound data transfers (T1041, T1417). Behavioral indicators consistent with MITRE techniques in this campaign include contact list and location data access outside normal app patterns (T1636, T1430), keylogging-consistent input monitoring (T1056), and sandbox evasion behaviors (T1497). Specific file hashes, IP addresses, and C2 domains for GHOSTBLADE and MAYBEROBOT were not confirmed in available source data at time of analysis; check your threat intelligence platform and MTD vendor for updated indicators as this campaign is actively tracked. Confidence in exploit kit specifics remains medium pending corroboration from CISA, MITRE, or Microsoft MSTIC advisories.

Indicators of Compromise

Type	Value	Context	Confidence
DOMAIN	`atlanticcouncil.org-spoofed-lures`	Spear-phishing emails impersonate the Atlantic Council; exact spoofed domains not confirmed in source data — monitor for DMARC/SPF failures referencing this organization	MEDIUM
HASH	`GHOSTBLADE-payload`	GHOSTBLADE dataminer confirmed as payload in TA446 iOS campaign; specific file hash not available in source data at time of analysis	LOW
HASH	`MAYBEROBOT-backdoor`	MAYBEROBOT backdoor confirmed as payload in TA446 iOS campaign; specific file hash not available in source data at time of analysis	LOW

Framework Mappings

MITRE-ATTACK

- **T1430** — Location Tracking
- **T1583.001** — Domains
- **T1078** — Valid Accounts
- **T1417** — Input Capture
- **T1056** — Input Capture
- **T1071.001** — Web Protocols
- **T1636** — Protected User Data
- **T1566.001** — Spearphishing Attachment
- **T1583.006** — Web Services
- **T1041** — Exfiltration Over C2 Channel
- **T1189** — Drive-by Compromise
- **T1587.001** — Malware
- **T1497** — Virtualization/Sandbox Evasion
- **T1204.001** — Malicious Link
- **T1027** — Obfuscated Files or Information

NIST-800-53R5

- **AC-2** — Account Management
- **AC-6** — Least Privilege
- **IA-2** — Identification and Authentication (Organizational Users)
- **IA-5** — Authenticator Management
- **AT-2** — Literacy Training and Awareness
- **SC-7** — Boundary Protection

- **SI-3** — Malicious Code Protection
- **SI-4** — System Monitoring
- **SI-8** — Spam Protection
- **CA-7** — Continuous Monitoring
- **SI-16** — Memory Protection
- **SI-10** — Information Input Validation

OWASP-TOP10-2021

- **A03:2021** — Injection

CIS-V8

- **16.10**
- **14.2** — Train Workforce Members to Recognize Social Engineering Attacks

HIPAA-SECURITY

- **164.308(a)(5)(i)** — Security Awareness and Training

ISO-27001-2022

- **A.5.34** — Privacy and protection of personal information

MITRE ATT&CK Mapping

Technique ID	Technique Name	Tactic
T1430	Location Tracking	Collection
T1583.001	Domains	Resource-Development
T1078	Valid Accounts	Defense-Evasion
T1417	Input Capture	Collection
T1056	Input Capture	Collection
T1071.001	Web Protocols	Command-And-Control
T1636	Protected User Data	Collection
T1566.001	Spearphishing Attachment	Initial-Access
T1583.006	Web Services	Resource-Development
T1041	Exfiltration Over C2 Channel	Exfiltration
T1189	Drive-by Compromise	Initial-Access
T1587.001	Malware	Resource-Development
T1497	Virtualization/Sandbox Evasion	Defense-Evasion

Technique ID	Technique Name	Tactic
T1204.001	Malicious Link	Execution
T1027	Obfuscated Files or Information	Defense-Evasion

Sources

Source	URL	Tier
Security News	https://thehackernews.com/2026/03/ta446-deploys-leaked-darksword-io...	T3
About the security content of iOS 26.4 and iPadOS 26.4	https://support.apple.com/en-us/126792	T3
About the security content of iOS 26.3 and iPadOS 26.3	https://support.apple.com/en-us/126346	T3
About the security content of iOS 26.2 and iPadOS 26.2	https://support.apple.com/en-us/125884	T3
Apple patches zero-day flaw that could let attackers take control of ...	https://www.malwarebytes.com/blog/news/2026/02/apple-patches-zero-d...	T3

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