F5 SLEDFest 2022

Securing and Hardening Your BIG-IP &
The importance of keeping your BIG-IP fleet up-to-date

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Device Security Best Practices

F5 Security Hardening Recommendations

F5 Device Security Best Practices

Control Plane touch points and device management access

- Management network access and isolation
- Self-IP port lockdown
- Console access
- SSH management access and banners
- HTTPS management access
    - appropriate ACLs -> WebGUI
- SNMP access, community strings, and versioning (v1 / v2c / **v3**)
- Syslog configuration
- NTP configuration
- DNS configuration
- FIPS / HSM configuration (if required)

Authentication and Authorization roles and mechanisms

- Setup an external authentication mechanism such a:
    - LDAP / AD
    - TACACS
    - RADIUS
- Sset up the user roles correctly in the external auth systems
- Local accounts
    - Password complexity strategies
    - Password expiry strategies
- Review auditing and alerting functions

Device Certificate Configuration

- Device certificates must be valid and must not be expired
- Device certificates must be maintained and renewed on each BIG-IP system

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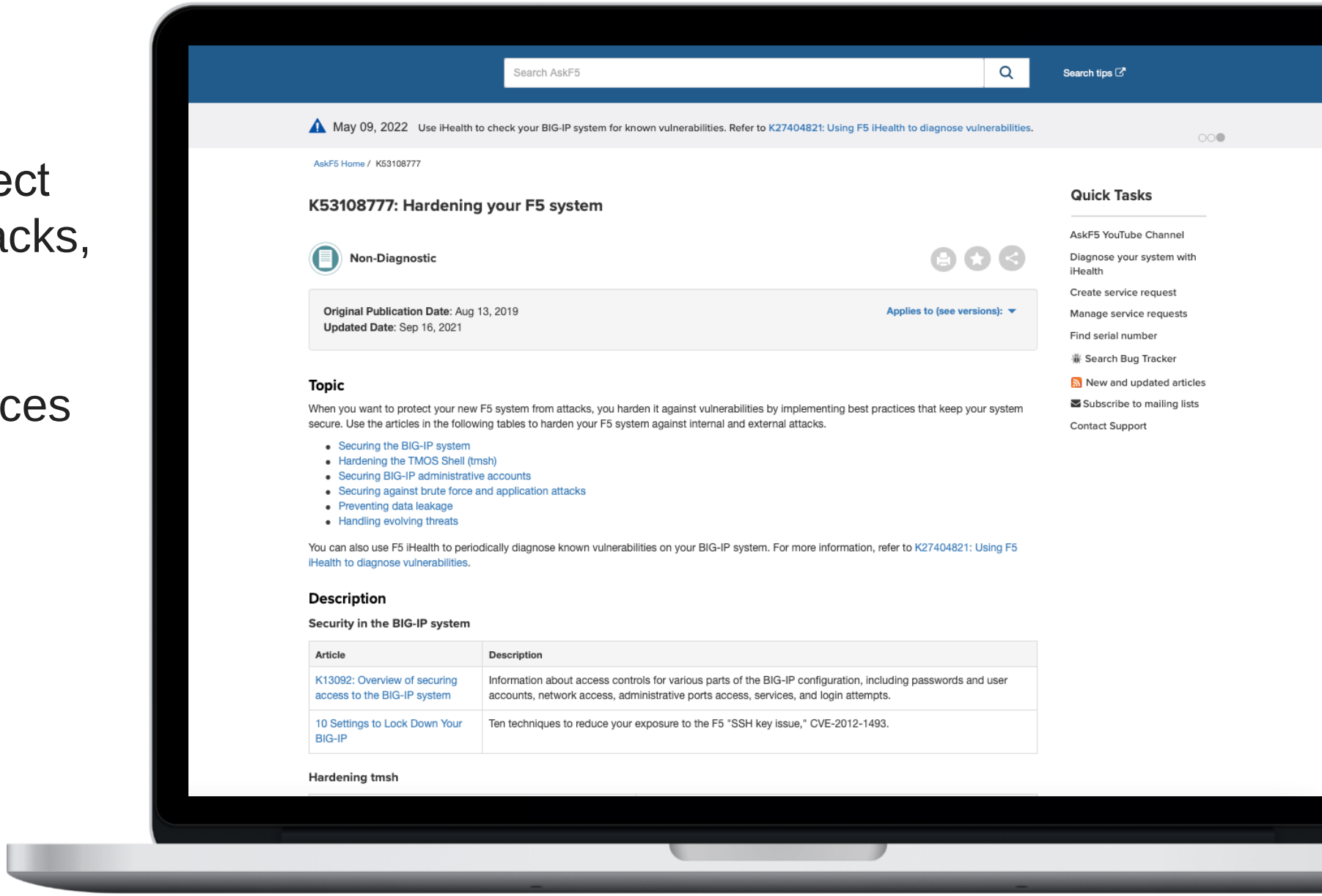
“ When you want to protect your F5 system from attacks, you harden it against vulnerabilities by implementing best practices that keep your system secure.”

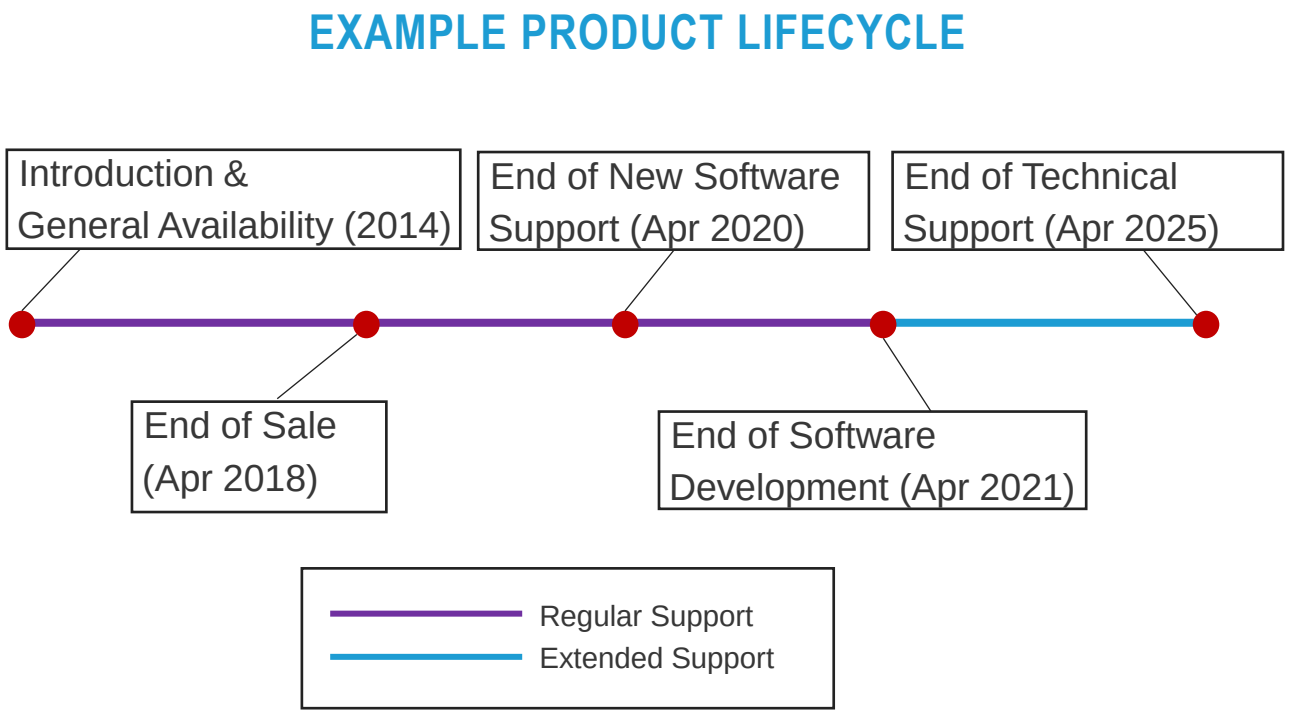
K53108777



BIG-IP Software Upgrade

Steps to a Successful BIG-IP Upgrade and why you should

BIG-IP Product / Software Lifecycle Overview



End of Sale (EoS)

- End of sale dates vary by platform; refer to AskF5 for more information.

End of New Software Support (EoNSS)

- New software versions produced after this EoNSS date will not run optimally on the platform due to hardware constraints or minimum system requirements. F5 stops testing whether new software versions produced after this EoNSS date will run properly on platforms designated EoNSS.

End of Software Development (EoSD)

- F5 ceases considering the repair/maintenance of confirmed software/firmware defects for the designated platform or software release. No security patches or code fixes.

End of Technical Support (EoTS)

- F5 ceases to offer technical support for BIG-IP versions that have surpassed their EoTS date

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Is It Time For You To Upgrade?

	UPGRADE HIGHLY RECOMMENDED	UPGRADE RECOMMENDED	UPGRADE NOT YET NECESSARY
BIG-IP Versions	**v11 & v12**	**v13 & v14**	**v15 & v16**

Reasons to Upgrade	• Access to patches for software bugs or vulnerabilities has expired:
	  ○ v11 EoSD – May ‘21
	  ○ v12 EoSD – May ‘21
	• Access to technical support is expiring imminently:
	  ○ v11 EoTS – May ‘22
	  ○ v12 EoTS – May ‘22
	• Not leveraging cutting-edge BIG-IP security capabilities
	• Inability to use innovative new BIG-IP features (e.g. Automation Toolchain, Container Ingress Services)
	• Newer versions of code inherently more secure
		• Access to software patches for bugs or vulnerabilities expiring within 24 months:
		  ○ v13 EoSD – Dec ‘22 **(<1 year)**
		  ○ v14 EoSD – Dec ‘23
		• Access to technical support expiring within 24 months:
		  ○ v13 EoTS – Dec ‘23
		  ○ v14 EoTS – Dec ‘23
		• Not leveraging cutting-edge BIG-IP security capabilities
		• Newer versions of code inherently more secure
			• None - Great job!

*Specific versions may also be affected by known vulnerabilities as detailed on Askf5.com If you are running one of these versions it’s highly recommended that you upgrade

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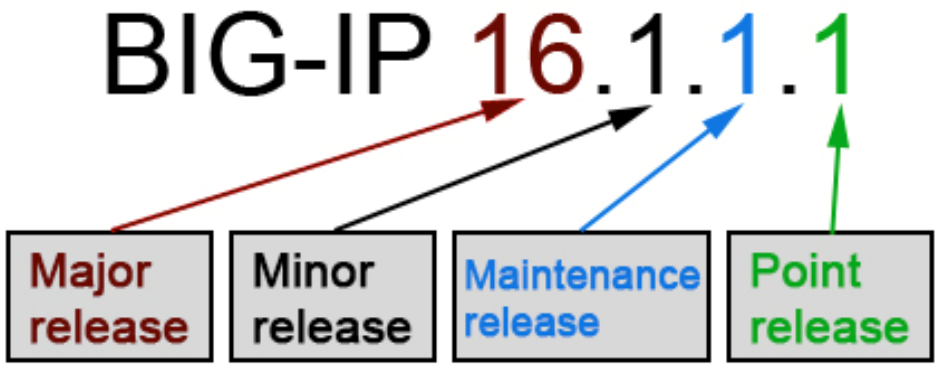
What is an Update vs. an Upgrade?

Version Schema Definitions



Major release

- Includes significant changes in behavior, added functionality, significant increases in performance, new hardware support, and/or significant architectural changes.

Minor release

- Includes added functionality, increase in performance, new hardware support, and addresses product defects.

Maintenance release

- Contains all previous point releases and addresses additional product defects and security fixes.
- May also contain new diagnostic, supportability improvements, minor functional improvements, and new hardware support; however, will not introduce a change in existing default behavior

Point release

- Is a full release that addresses product defects, including the hardening and refining of existing features and security fixes, and may contain minor functional improvements and new hardware support; however, will not introduce a change in existing default behavior.

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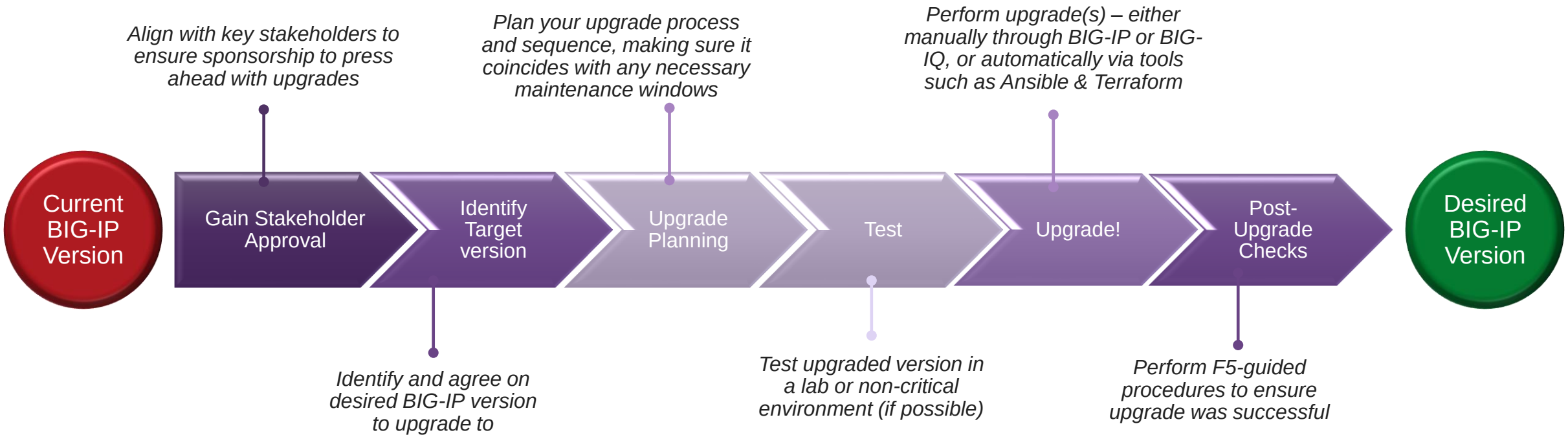
Steps to a Successful BIG-IP Upgrade



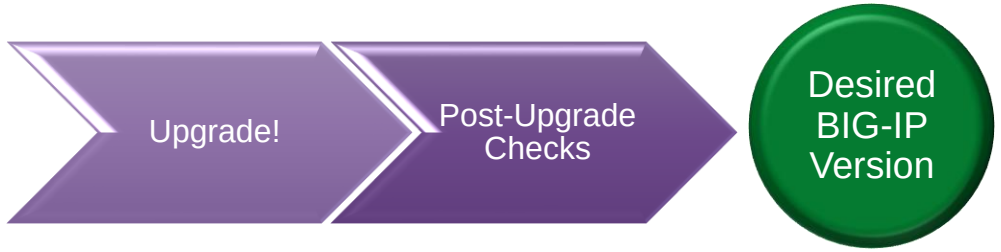
High-level update/upgrade process

Tips while preparing for your update/upgrade

- Change management
- Sync configs for HA pairs
- Proactive Service Request with F5 Support (K16022)
- QKView on ihealth.f5.com (K12878)
- UCS backup and locally download
- Determine the software version/point release you are going to, make sure you download the updated software and upload the iSO to your BIG-IP platform by using the configuration utility prior to the update window
- Check license activation and reactive your license if you need to
- Verify access to BIG-IP/BIG-IQ
- Baseline service inventory – status of apps
- Grab the master key (f5mku)
- FIPS: Pull your Sys Crypto FIPS file to compare after the update/upgrade
- Do as much testing as possible prior to the update, to ensure full application functionality. If something is not working, do not proceed!

High-level update/upgrade process

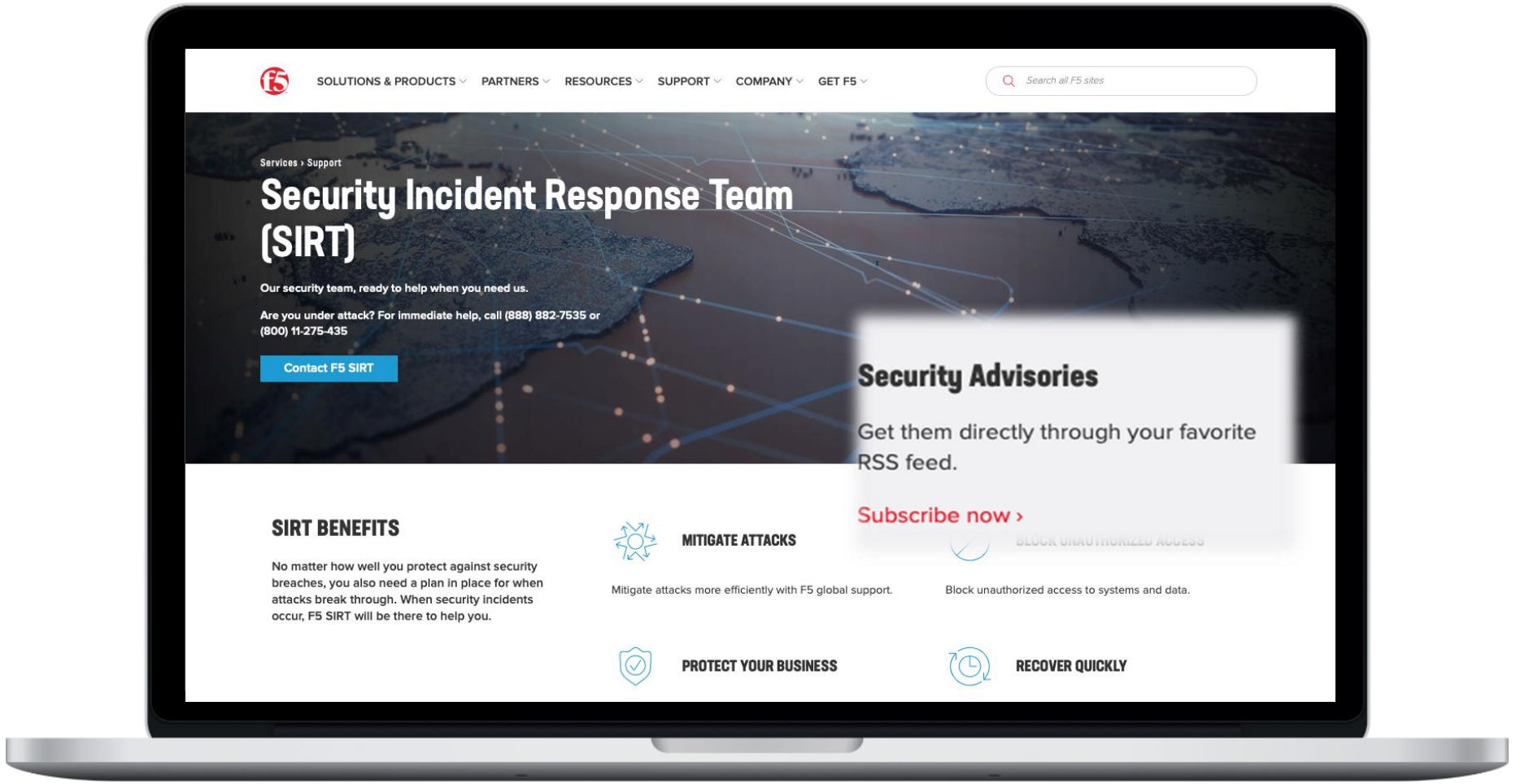
Tips while performing your update/upgrade



- You can use the "Guide to updating and upgrading BIG-IP"
- K84554955 – Overview of BIG-IP system software upgrades
- Upgrade standby first
- Change your standby to offline to prevent becoming active during reboot
- Reboot to updated version
- Verify status of apps
- Make the updated BIG-IP active
- Repeat for the previously active BIG-IP
- Wrap-up:
  - Verify status of apps and logs
  - QKView to iHealth to check health
  - UCS backup for both BIG-IP

F5 SIRT

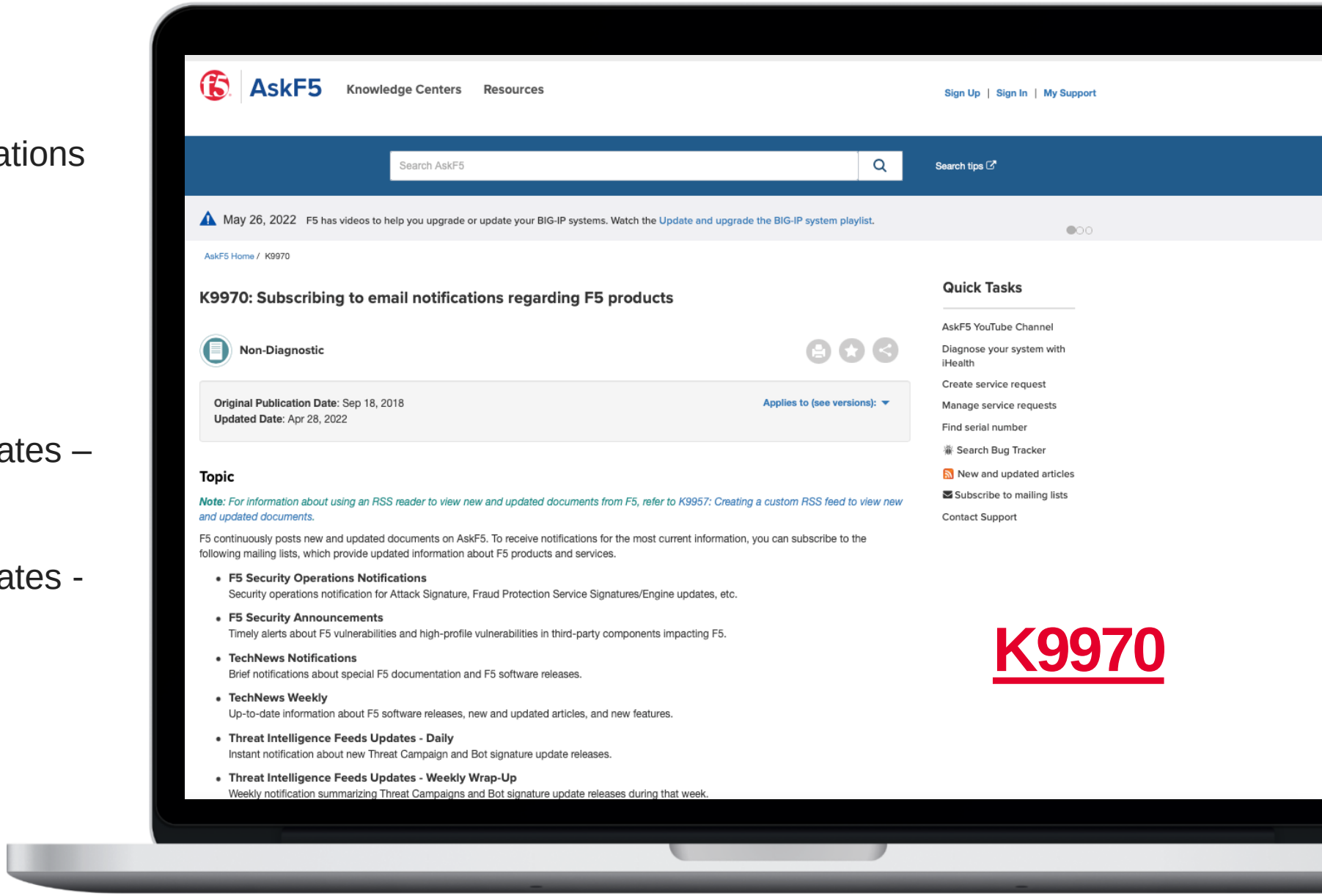
How to get notified automatically for security updates



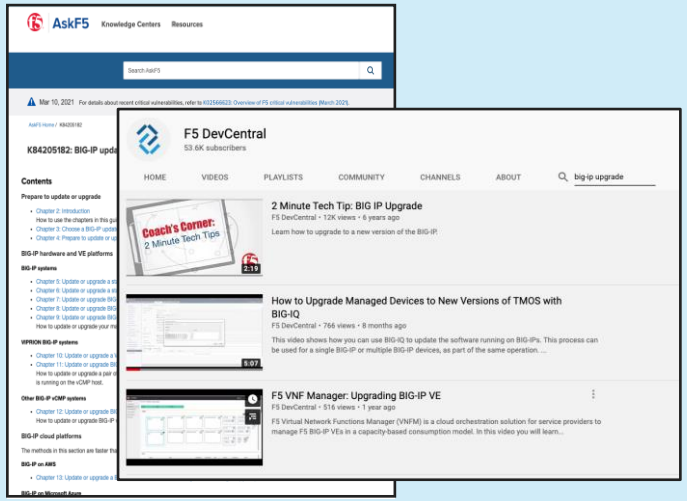
https://www.f5.com/services/support/security-incident-response-team-sirt

Subscribing to email notifications

- F5 Security Operations Notifications
- F5 Security Announcements TechNews Notifications
- TechNews Weekly
- Threat Intelligence Feeds Updates – Daily
- Threat Intelligence Feeds Updates - Weekly Wrap-Up



Wealth of Resources Available to Support You!



Professional Services

AskF5 or DevCentral Website or YouTube

Step-by-step upgrade
Documentation and walkthrough

F5 Support Services

Fast & reliable assistance

F5 Professional Services

Services that you need when and how you need them!

DistiPSSales@F5.com

Thank You!