

Viceministerio de Administración Financiera  
**Dirección General de Gabinete**  
Unidad Coordinadora de Programas  
Proyecto "Mejoramiento de la Gestión del VAF"  
Convenio de Financiación de la Comunidad Europea – Fase III

Asunción, 12 de agosto de 2025

**NOTA U.C.P./M.G.VAF/C.U.O.C. N° 57/2025**

Señores

**NETLOGIC S.R.L.**

Bélgica N° 210 esq. Guido Spano - Asunción

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**Presente**

Tengo el agrado de dirigirme a usted, en relación a los requerimientos del Comité de Evaluación, conformado para analizar el proceso concursal identificado como **LICITACIÓN PÚBLICA NACIONAL N° 01/2025 "ACTUALIZACIÓN DE ADC, BALANCEADOR Y SSL OFFLOAD PARA DATACENTER DE LA DGIC" - ID N° 467.191**, a fin de solicitar aclaración respecto a las siguientes documentaciones:

Documentación remitida		Comentario
h) Planilla de Especificaciones Técnicas de los bienes ofertados completado y firmado, de conformidad con el formulario estándar N° 10 - Sección Formularios (**)	Ítem 12: Performance /Capacidad/ Rendimiento	El pliego de bases y condiciones (PBC - ID N° 467.191) exige que el equipo soporte "un mínimo de 2 hasta al menos 5 instancias y/o particiones" (MULTI-TENANCY). el modelo f5 r4600, evaluado previamente, soporta hasta 2 TENANTS de forma nativa según el DATASHEET de F5, lo que no cumple estrictamente con el requisito de al menos 5 instancias.  Indicar si la solución ofertada cumple el soporte de la virtualización completa de hasta 5 (cinco) instancias y no solo particiones administrativas  adjuntar documentación que la solución soporta de 2 hasta 5 instancias y/o particiones.
	Ítem 59: Optimización FRONT-END	Se solicita la aclaración sobre la inclusión de la licencia para BIG-IP WEBACCELERATOR en el modelo F5 R4600 para optimización feo en tiempo real (Ítem 59, especificaciones técnicas, página 33).  Favor indicar como la solución ofertada realizará la optimización FEO (FRONT-END OPTIMIZATION) en tiempo real
	Ítem 60: Licenciamiento	Favor indicar el nombre de la licencia o BUNDLE que incluye la solución  Adjuntar documentación que avale el cumplimiento.
	Ítem 62: Compatibilidad para integración con Controlador SDN	Favor indicar como la solución se integra al software del servidor SDN-APIC actualmente instalado en la DGIC. esta integración será en forma nativa o en caso de requerirse un desarrollo adicional como será realizado.  Adjuntar documentación que avale el cumplimiento.

Estos requerimientos deben ser presentados a más tardar a las **13:00 horas del día miércoles 13 de agosto** del corriente, para proseguir con la evaluación correspondiente.

Sin otro motivo particular me despido de usted, atentamente.



Firmado digitalmente por:  
**OMAR ARIEL ELENO CÁCERES SNEAD**  
Coordinador de la Unidad Operativa de Contrataciones  
UCP - Proyecto "Mejoramiento de la Gestión del VAF"  
Viceministerio de Administración Financiera (VAF)  
Ministerio de Economía y Finanzas



**De:** [Jose Ivan Villalba Parriego](#)  
**A:** [omar\\_caceres@mef.gov.py](mailto:omar_caceres@mef.gov.py)  
**Cc:** [viviana\\_aguilar@mef.gov.py](mailto:viviana_aguilar@mef.gov.py); "carolina lopez"; Cesar Augusto Duarte Larramendia  
**Asunto:** RE: Requerimientos del Comité de Evaluación - LPN N° 01/2025 "ACTUALIZACIÓN DE ADC, BALANCEADOR Y SSL OFFLOAD PARA DATACENTER DE LA DGIC" - ID N° 467.191 - NETLOGIC S.R.L.  
**Fecha:** martes, 12 de agosto de 2025 14:10:31  
**Archivos adjuntos:** [image003.png](#)  
[image004.png](#)  
[image005.png](#)

Buenas tardes Estimados,

Acuso recepcion de la solicitud.

Estaremos dando retorno en la brevedad posible.

Atte.



**José Villalba**  
Coordinador de  
Licitaciones  
Phone: +595-21-612227  
Mobile: +595-976-566391



**De:** omar\_caceres@mef.gov.py <omar\_caceres@mef.gov.py>

**Enviado el:** martes, 12 de agosto de 2025 12:44

**Para:** licitaciones <licitaciones@netlogic.com.py>

**CC:** viviana\_aguilar@mef.gov.py; 'carolina lopez' <carolina\_lopez@mef.gov.py>

**Asunto:** Requerimientos del Comité de Evaluación - LPN N° 01/2025 "ACTUALIZACIÓN DE ADC, BALANCEADOR Y SSL OFFLOAD PARA DATACENTER DE LA DGIC" - ID N° 467.191 - NETLOGIC S.R.L.

Buenas tardes NETLOGIC S.R.L.

Tengo el agrado de dirigirme a Usted, en relación a los requerimientos del Comité de Evaluación, conformado para analizar el proceso concursal identificado como **LICITACIÓN PÚBLICA NACIONAL N° 01/2025 "ACTUALIZACIÓN DE ADC, BALANCEADOR Y SSL OFFLOAD PARA DATACENTER DE LA DGIC" - ID N° 467.191**, a fin de solicitar la remisión de las documentaciones descriptas en la Nota UCP/MGVAF/CUOC N° 57/2025.

Estos requerimientos deben ser presentados en firma física **a más tardar a las 13:00 horas del día miércoles 13 de agosto del corriente.**

Sin otro motivo particular me despido de usted, atentamente.



Omar Cáceres Snead  
Coordinador de la Unidad Operativa de  
Contrataciones  
UCP - Proyecto "Mejoramiento de la  
Gestión del VAF"

Tel. 414 6732  
Interno 6732  
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Estrella N° 345 c/Chile  
Edificio City – Piso 2  
Asunción - Paraguay

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Asunción, 13 de agosto de 2025

**Señores**  
**Comité de Evaluación de Ofertas**  
**Ministerio de Economía y Finanzas (MEF)**  
**PRESENTE**

**REF.: LICITACIÓN PÚBLICA NACIONAL N° 01/2025 "ACTUALIZACIÓN DE ADC, BALANCEADOR Y SSL OFFLOAD PARA DATACENTER DE LA DGIC" - ID N° 467.191**

De nuestra consideración:

Nos dirigimos a Ustedes, y por su intermedio a quien corresponda, a los efectos de dar respuesta a la Nota U.C.P./M.G.V.A.F./C.U.O.C. N° 57/2025 enviado al email en fecha 12/08/2025, en la cual solicitan aclaración respecto a las documentaciones remitidas en el marco de la evaluación de ofertas de la licitación de referencia.

En ese sentido, dejamos constancia de la remisión de las siguientes documentaciones y/o aclaraciones relacionadas al punto h) Planilla de Especificaciones Técnicas de los bienes ofertados completado y firmado, de conformidad con el formulario estándar N° 10 - Sección Formularios:

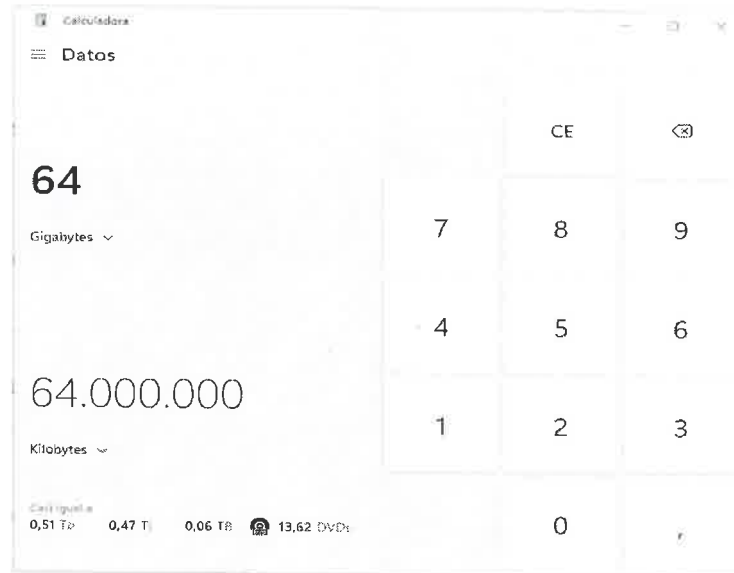
Ítem	Descripción Técnica	Comentario
Ítem 12: Performance /Capacidad/ Rendimiento	Debe soportar un mínimo de 2 hasta al menos 5 instancias <b>y/o</b> particiones.	El pliego de bases y condiciones (PBC - ID N° 467.191) exige que el equipo soporte "un mínimo de 2 hasta al menos 5 instancias y/o particiones" (MULTI-TENANCY). el modelo f5 r4600, evaluado previamente, soporta hasta 2 TENANTS de forma nativa según el DATASHEET de F5, lo que no cumple estrictamente con el requisito de al menos 5 instancias. Indicar si la solución ofertada cumple el soporte de la virtualización completa de hasta 5 (cinco) instancias y no solo particiones administrativas adjuntar documentación que la solución soporta de 2 hasta 5 instancias y/o particiones.

**Respuesta:** Debido a que el pliego menciona explícitamente la opción de "**Instancias y/o particiones**", la solución ofertada cumple con el requerimiento de soportar más de 5 particiones. En este sentido, según la nota técnica <https://my.f5.com/manage/s/article/K7230> se detalla que a partir del BIG-IP 11.x el máximo de particiones administrativas esta dado en base a la memoria RAM disponible, con un uso de 5 a 22 Kilobytes de memoria RAM por partición. Teniendo en cuenta que el equipo F5 modelo R4600 ofertado, posee 64 Gigabytes RAM, esto al pasarlo a Kilobytes, nos da un total bruto de 64.000.000 Kilobytes. Por ende, cubrimos más de 5 particiones con el modelo ofertado.

Roles	Administrative constructs that, when assigned to users, enable permissions to operate on configuration objects
Permissions	Units of authorization of a user to operate on a configuration object

BIG-IP 11.x and later does not have a fixed maximum number of administrative partitions. The maximum number of partitions is a function of available memory resources.

**Note:** Creating new partitions may temporarily utilize 5 - 22 kilobytes of memory per new partition.



Por lo tanto, exigir que la solución ofertada cumpla el soporte de la virtualización completa de hasta 5 (cinco) instancias y no solo particiones administrativas, es un requerimiento que **no se ajusta a los criterios previamente establecidos en el pliego**, ya que la expresión **"y/o"** empleada implica que el cumplimiento del requisito puede acreditarse indistintamente a través de **instancias o particiones**, no siendo obligatorio que el equipo soporte ambas funcionalidades de forma concurrente.

Ítem	Descripción Técnica	Comentario
Ítem 59: Optimización FRONT-END	El servidor debe permitir la optimización en tiempo real de imágenes, hojas de estilo y JavaScript enviadas al cliente	Se solicita la aclaración sobre la inclusión de la licencia para BIG-IP WEBACCELERATOR en el modelo F5 R4600 para optimización feo en tiempo real (Ítem 59, especificaciones técnicas, página 33). Favor indicar como la solución ofertada realizará la optimización FEO (FRONT-END OPTIMIZATION) en tiempo real

**Respuesta:** desde la versión BIG-IP 11.x hasta la actual de 17.x, la solución de Web Acceleration profile ya está incluida en el Best Bundle (Incluido en el Ítem 60), como se puede comprobar en el siguiente link:

<https://my.f5.com/manage/s/article/K14903>

#### Topic

This article applies to BIG-IP 11.x through 17.x. For information about other versions, refer to the following articles:

- K13244: Overview of the RAM Cache feature (10.x)
- K13245: Overview of the RAM Cache feature (9.x)

The Web Acceleration profile provides settings to configure HTTP caching for the BIG-IP system. HTTP caching allows the BIG-IP system to store frequently requested web objects in memory for reuse by subsequent connections.

## Recommendations

When you configure the Web Acceleration profile for a virtual server, you should consider the following factors:

- Caching is useful for frequently requested content; for example, caching can be used if the site has periods of high demand. If the site is on a virtual server, the content server only has to serve the content to the BIG-IP system once per expiration period.
- Caching is useful if a site contains a large amount of static content such as CSS files, JavaScript files, or images.
- For compressible data, the cache feature can store data for clients that accept compressed data. When used with the cache feature, the system and the content servers.
- Exclusion is useful because some URI or file types might already be compressed. F5 recommends that you do not use compression for these types of data. Usually, compressing the data usually outweighs the benefits. Examples of regular expressions that you may want to specify for exclusion are:
- Query parameter caching can be configured and applied with regexp filters via policy. Be careful on enabling the cache feature. It can eat up significant amount of cache if the resource is using query params for other reasons.

En este sentido, la solución ofertada cumple con el ítem mencionado ya que permite habilitar funcionalidades avanzadas de **optimización de contenido web**, incluyendo técnicas de **Front-End Optimization (FEO)** en tiempo real.

Ítem	Descripción Técnica	Comentario
Ítem 60: Licenciamiento	El Oferente deberá proveer todas las licencias de necesarias para que el cluster se encuentre debidamente cubierto y pueda operar sin inconvenientes de cumplimiento con la marca.	Favor indicar el nombre de la licencia o BUNDLE que incluye la solución. Adjuntar documentación que avale el cumplimiento.

**Respuesta:** las licencias incluidas son:

- Best Bundle (F5-ADD- BIG-GBT- R48XX)
- IPI intelligence (F5-SBS- BIG-IPI-4-3YR)
- FIPS 140 Ready (F5-ADD- BIG-FB- R4XXX).

Se adjunta los documentos que avalan el cumplimiento de las licencias ofertadas para que el cluster se encuentre debidamente cubierto y pueda operar sin inconvenientes de cumplimiento con la marca.

Ítem	Descripción Técnica	Comentario
Ítem 62: Compatibilidad para integración con Controlador SDN	La solución deberá estar integrada con el software del servidor SDN-APIC, para proporcionar un único punto de administración para definir la red y los requisitos de balanceo de servicios de L4 a L7 utilizando perfiles centrados en políticas, desde el controlador SDN-APIC.	Favor indicar como la solución se integra al software del servidor SDN-APIC actualmente instalado en la DGIC. esta integración será en forma nativa o en caso de requerirse un desarrollo adicional como será realizado. Adjuntar documentación que avale el cumplimiento.

**Respuesta:** La solución de F5 se integra de forma Nativa al actual servidor SDN-APIC de Cisco. Se presentan links de integraciones con la guía y diseño de ambos fabricantes para garantizar la integración.

<https://dcappcenter.cisco.com/f5-aci-servicecenter.html>

## Introduction

F5 ACI ServiceCenter runs natively on Cisco APIC, providing administrators a unified way to manage both L2-L3 and L4-L7 infrastructure. The application offers enhanced ACI-to-BIG-IP visibility; L2-L3 network management capability; and L4-L7 application services to ACI workloads. F5 ACI ServiceCenter can also be driven as part of the ACI REST API model, which allows administrators to integrate the L2-L7 workflow into an organization's automation and orchestration model seamlessly.

[https://www-cisco-com.translate.google.com/en/us/solutions/collateral/data-center-virtualization/application-centric-infrastructure/white-paper-c11-743890.html?x\\_tr\\_sl=en&x\\_tr\\_tl=es&x\\_tr hl=es&x\\_tr\\_pto=tc](https://www-cisco-com.translate.google.com/en/us/solutions/collateral/data-center-virtualization/application-centric-infrastructure/white-paper-c11-743890.html?x_tr_sl=en&x_tr_tl=es&x_tr hl=es&x_tr_pto=tc)

[https://www.f5.com/es\\_es/partners/technology-alliances/cisco](https://www.f5.com/es_es/partners/technology-alliances/cisco)

Así también, Netlogic cuenta con técnicos certificados de CISCO para garantizar la integración efectiva con la solución ofertada.

Ante cualquier duda o necesidad adicional, quedamos a disposición.

Sin otro particular, les saludamos muy atentamente.

  
CESAR DUARTE LARRAMENDIA  
REPRESENTANTE LEGAL  
NETLOGIC SRL  






Omar Cáceres  
13/08/2025  
11:03 hs

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# Maximize the Value of Your Enterprise Application Delivery

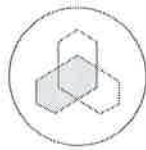
To make it easier and more affordable to get the capabilities your organization needs, F5 provides three offerings: Good, Better, Best.

**With the F5 Good, Better, Best options, you receive:**

- Flexibility—Choosing from available modules makes it easier to adopt advanced F5 functionality
- Simplicity—Having a standardized image and fewer configurations can help simplify operations
- Best Value—You can save up to 65% vs. buying as components.

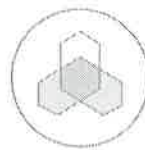
**Select your right fit**

Get advanced traffic management, optimization, and security services on one F5® BIG-IP® platform with the right offering for your organization.



**GOOD**

Provides intelligent local traffic management for increased operational efficiency and peak network performance of applications.



**BETTER**

All the benefits of "Good" plus advanced application delivery optimization.



**BEST**

"Better" plus advanced access management and application security. Delivers optimal security, performance, and availability for your applications and network.

**Choose the right platform for your organization**



Get flexible deployment options for virtual environments and the cloud.



Achieve high performance with specialized and dedicated hardware.



Combine virtual and physical editions for flexibility and performance.

00000006

Features and Capabilities	Good	Better	Best
<b>BIG-IP® Local Traffic Manager®</b>			
Load balancing and monitoring	●	●	●
Application visibility and monitoring	●	●	●
L7 intelligent traffic management	●	●	●
Core protocol optimization (HTTP, TCP, HTTP/2, SSL)	●	●	●
SSL proxy and services	●	●	●
IPv6 support	●	●	●
Programmability (iRules®, iCall®, iControl®, iApps®)	●	●	●
ScaleN™ (on-demand scaling of performance and capacity)	●	●	●
BIG-IP® APM® Lite (user authentication, SSL VPN for 10 concurrent users)	●	●	●
SYN flood DDoS protection	●	●	●
<b>Software Services</b>			
Advanced routing (BGP, RIP, OSPF, ISIS, BFD)	Optional	●	●
<b>BIG-IP® DNS</b>			
Global server load balancing		●	●
DNS services		●	●
Real-time DNSSEC solution		●	●
Global application high availability		●	●
Geolocation		●	●
DNS DDoS attack prevention		●	●
<b>BIG-IP® Advanced Firewall Manager®</b>			
High-performance ICSA firewall		●	●
Network DDoS protection		●	●
Application-centric firewall policies		●	●
Protocol anomaly detection		●	●
<b>BIG-IP® Application Security Manager®</b>			
PCI-compliant web application firewall			●
Web scraping prevention			●
Integrated XML firewall			●
Violation correlation and incident grouping			●
Application DDoS protection			●
<b>BIG-IP® Access Policy Manager®</b>			
500 concurrent user sessions; scalable up to 200,000			●
BYOD enablement			●
Full proxy for VDI (Citrix, VMware)			●
Single sign-on enhancements (identity federation with SAML 2.0)			●

SDN services are automatically included with all iSeries appliances. BIG-IP Application Acceleration Manager (AAM) is end-of-sale.

To learn more about F5 market-leading technologies, visit [f5.com](http://f5.com).

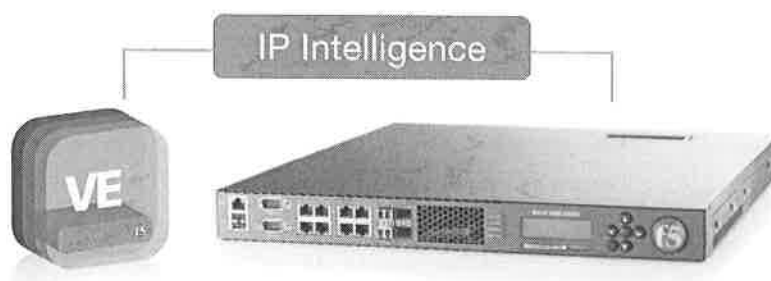


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## IP Intelligence Service

DATA SHEET



## What's Inside

- 2 Contextual Awareness and IP Threat Protection
- 2 Protection Categories
- 2 Granular Threat Reporting and Automated Blocking
- 2 Sophisticated Threat Detection and Analysis
- 3 Threat Expertise from an Evolving IP Intelligence Database
- 3 Real-Time Updates for Continuous Protection
- 4 BIG-IP Platforms for Flexible Deployment
- 4 VIPRION Platforms
- 4 F5 Services
- 4 More Information

## Defend Against Malicious Traffic

Organizations today are exposed to a variety of potentially malicious attacks from rapidly changing IP addresses. Inbound and outbound botnet traffic such as distributed denial-of-service (DDoS) and malware activity can penetrate security layers and consume valuable processing power.

F5® IP Intelligence incorporates external, intelligent services to enhance automated application delivery with better IP intelligence and stronger, context-based security. By identifying IP addresses and security categories associated with malicious activity, the IP Intelligence service can incorporate dynamic lists of threatening IP addresses into the F5 BIG-IP® platform, adding context to policy decisions. IP Intelligence service reduces risk and increases data center efficiency by eliminating the effort to process bad traffic.

## Key benefits

## Ensure IP threat protection

Deliver contextual awareness and analysis to block threats from a dynamic set of high-risk IP addresses.

## Improve visibility into threats from multiple sources

Detect malicious activity and IP addresses with help from a global threat-sensor network and IP intelligence database.

## Enable granular threat reporting and automated blocking

Reveal communication with malicious IP addresses to create more effective security policies.

## Optimize protection with real-time updates

Automatically refresh the threat database as often as every five minutes to keep the organization safe.

#### Deliver key contextual awareness

##### IP Intelligence:

- Updates the list of threatening IP addresses as frequently as every five minutes.
- Identifies and blocks the sources of known bad IP addresses.
- Identifies and blocks communications with new threatening IP addresses.

## Contextual Awareness and IP Threat Protection

Using a frequently updated list of threat sources and high-risk IP addresses, IP Intelligence delivers contextual awareness and analysis of IP requests to identify threats from multiple sources across the Internet. The service draws on the expertise of a global threat-sensor network to detect malicious activity and IP addresses. Even when the BIG-IP device is behind a content delivery network (CDN) or other proxies, the IP Intelligence service provides protection by looking at the real client IP addresses as logged within the X-Forwarded-For (XFF) header. You can easily configure alarms or block traffic from a CDN with threatening IP addresses.

## Protection Categories

The IP Intelligence service identifies and blocks IP addresses associated with a variety of threat sources, including:

**Windows exploits:** Includes active IP addresses offering or distributing malware, shell code, rootkits, worms, or viruses.

**Web attacks:** Includes cross-site scripting, iFrame injection, SQL injection, cross domain injection, or domain password brute force.

**Botnets:** Includes botnet command and control channels and infected zombie machines controlled by the botnet controller.

**Scanners:** Includes all reconnaissance, such as probes, host scan, domain scan, and password brute force.

**Denial of service:** Includes DoS, DDoS, anomalous SYN flood, and anomalous traffic detection.

**Reputation:** When enabled, denies access to IP addresses currently known to be infected with malware or to contact malware distribution points.

**Phishing:** Includes IP addresses hosting phishing sites or other kinds of fraud activities, such as click fraud or gaming fraud.

**Proxy:** Includes IP addresses providing proxy and anonymization services, as well as The Onion Router (TOR) anonymizer addresses.

## Granular Threat Reporting and Automated Blocking

Armed with the latest intelligence and predictive risk analyses, IP Intelligence reveals inbound and outbound communication with malicious IP addresses and enables granular threat reporting and automated blocking. This increased visibility can reveal IP-based threats such as phishing attacks, attackers using anonymous proxies, the TOR network for online attacker anonymity, and even outbound communication with botnet command and control channels, exposing malware residing within the enterprise. Once identified, these threats can be mitigated by automatically blocking traffic through selected IP categories.

## Sophisticated Threat Detection and Analysis

IP Intelligence incorporates a data set of threatening IP addresses and assigns threat categories. Network traffic and behavioral data from all IP addresses is also collected,

analyzed, and assigned to threat categories, providing visibility into threats based on IP addresses as they evolve.

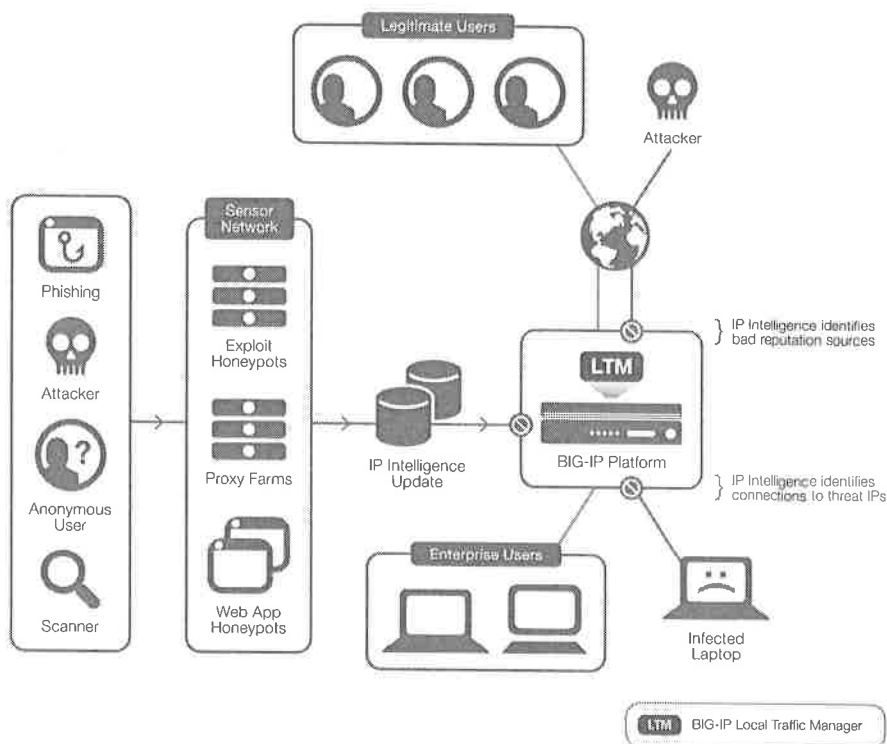


Figure 1: IP Intelligence identifies IP addresses, compares them to the global IP Intelligence database, and allows or blocks connections based on current known risks.

## Threat Expertise from an Evolving IP Intelligence Database

When deployed on the F5 BIG-IP system, IP Intelligence uses insight about the Internet's most threatening IP addresses to block connections to and from those addresses. This evolving database of addresses is refreshed from the cloud as frequently as every five minutes to keep threat data current, minimize the threat window, and protect the organization and its reputation.

By detecting and blocking undesirable traffic, IP Intelligence offloads a significant percentage of the server workload. Emerging threats are continuously captured and published, while IP addresses that are no longer a threat are removed from the threat data. IP Intelligence augments visibility for all BIG-IP platforms without compromising access to legitimate IP addresses.

## Real-Time Updates for Continuous Protection

Authenticated access to global threat data in the cloud enables IP Intelligence to update the BIG-IP system as frequently as every five minutes. BIG-IP products are easily configured to receive these real-time updates, delivering convenient security management while providing additional context during IP requests.

## BIG-IP Platforms for Flexible Deployment

IP Intelligence is a subscription-based service that may be configured with the BIG-IP® Application Security Manager™ (ASM) user interface or incorporated into any BIG-IP platform with the F5 iRules® scripting language. For instance, IP Intelligence can be deployed with BIG-IP® Local Traffic Manager™ (LTM) in front of an e-commerce or financial website to mitigate phishing attacks. Add IP Intelligence to BIG-IP ASM to increase contextual awareness of Internet sites and protect requested applications from IP addresses with known malware or viruses. See the [BIG-IP Platform Data Sheet](#) for hardware details.

## VIPRION Platforms

The IP Intelligence service is also available on the modular F5 VIPRION® system. The IP Intelligence service may be configured with the BIG-IP ASM user interface or incorporated with iRules into any BIG-IP product on the VIPRION platform. See the [VIPRION Data Sheet](#) for hardware details.

## F5 Services

F5 Services offers world-class support, training, and consulting to help you get the most from your F5 investment. Whether it's providing fast answers to questions, training internal teams, or handling entire implementations from design to deployment, F5 Services can help you achieve IT agility. For more information about F5 Services, contact [consulting@f5.com](mailto:consulting@f5.com) or visit [f5.com/services](http://f5.com/services).

## More Information

To learn more about IP Intelligence, use the search function on [f5.com](http://f5.com) to find this and other resources.

### Data sheets

[BIG-IP Platform](#)

[VIPRION](#)

### White paper

[IP Intelligence](#)

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Solutions for an application world.

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## F5 FIPS-Certified Software-Based Application Delivery Services

### CHALLENGES

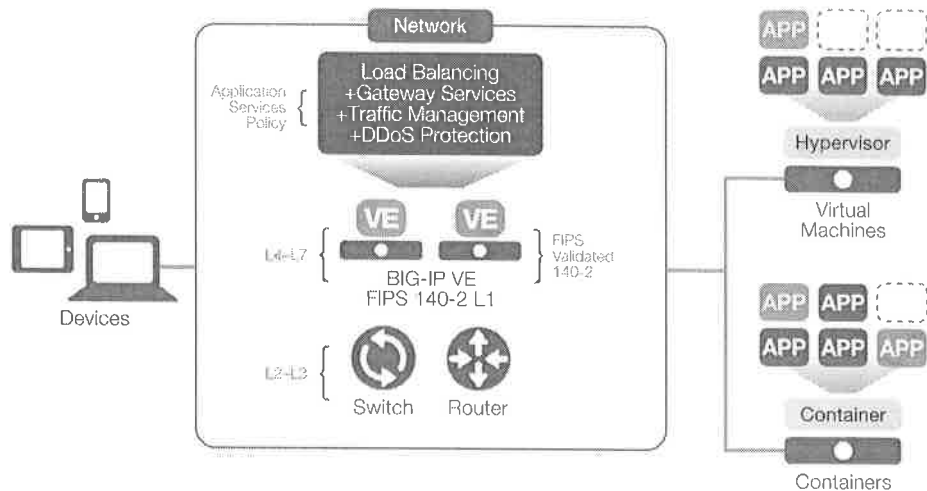
- Increase in US Government FIPS 140-2 requirements
- DoD contractors and subcontractors must safeguard Controlled Unclassified Information(CUI) with NIST SP 800-171 controls by December 2017
- Financial customers face rigid PCI DSS 3.0 requirements
- Adopting virtualized, SDN, or cloud data centers can require a software application delivery solution

F5 application and security services help customers in regulated industries achieve compliance while ensuring their applications are available, optimized, and protected. F5 FIPS-Certified BIG-IP Virtual Edition (VE) is an advanced software application delivery solution that incorporates a FIPS 140-2 Level 1 validated cryptographic module. Organizations can now extend compliance in virtual, SDN, and cloud environments, simply and cost-effectively.

FIPS 140-2 is the mandatory security standard for hardware, software, and firmware solutions in systems that use cryptography to encrypt sensitive but unclassified information. In U.S. government procurement, all solutions that use cryptography must complete FIPS 140-2 validation. There are levels associated with achieving compliance with FIPS 140-2, and all require the use of a NIST-certified cryptographic module. FIPS 140-2 Level 1 can be achieved by incorporating a software-based certified module; no specific physical security mechanisms are required. FIPS 104-2 Level 2 adds the requirement that the module must include features that would show evidence of tampering or locks, and can typically be achieved by using a hardware security module (HSM). F5 provides Level 2 compliant solutions with BIG-IP FIPS hardware appliance models that integrate a Level 2 certified HSM. For more information, please see the F5 certification page, <https://f5.com/about-us/certifications>.

## KEY BENEFITS

- Unified platform—BIG-IP can consolidate a FIPS-certified cryptographic module with application delivery solution that has SSL key and certificate management on a single device
- High-performance SSL with industry-recommended standards
- Secure resources—F5 solutions safeguard the integrity of businesses by keeping corporate resources safe and protecting corporate brands
- Low-cost software and FIPS-certified solution in VMware, AWS, and Azure environments



F5 FIPS-Certified BIG-IP VE is available as standalone LTM, AFM, or as part of Better or Best licensing.

## BIG-IP Virtual Edition Features

- Software application delivery platform that provides L7 traffic management and redirection, SSL/TLS offload and visibility, load balancing, and DDoS protection
- Complies with NIST Special Publications 140-2, 800-171, and 800-53r4 in the protection of confidential, unclassified information (CUI)
- High-performance version supports up to 40G throughput
- Certified on VMware ESXi, Microsoft Hyper-V, Amazon Web Services (AWS) and Microsoft Azure
- Integrates with VMware vRO/vRA and NSX

## Resources

### NIST References:

- [Cryptographic Module for BIG-IP® Module FIPS 140-2 Non-Proprietary Security Policy](#)
- [NIST Certificate](#)

### AskF5 Support:

- [Overview of the FIPS 140-2 Level 1 compliant mode for BIG-IP VE](#)

For more information, please contact your F5 representative:  
[f5.com/products/how-to-buy](https://f5.com/products/how-to-buy) or (888) 88BIGIP.

