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F5 Networks 2010 Analyst / Investor Meeting New York ~ November 16, 2010



Forward-Looking Statements

Except for historical information, our presentation today contains forward-looking statements which include words such as "believe," "anticipate" and "expect."

These forward-looking statements involve risks and uncertainties that may cause the company's actual results to differ materially from those expressed or implied by these statements.

Factors that may affect F5's results are summarized in our quarterly release and described in detail in our SEC filings.

F5 has no obligation to update any information discussed in this presentation.



F5 Networks
2010 Analyst / Investor Meeting
New York ~ November 16, 2010

John McAdam President & CEO



Agenda

8:00	Welcome/Introduction	John McAdam, President & CEO
8:10	Business Model Overview / Financial Outlook	Andy Reinland, SVP & Chief Finance Officer
8:25	Market, Partners, Competitors	Dan Matte, SVP Marketing, Corporate Development & Business Development
8:55	Solving Customer Problems / Expanding Service Provider Opportunity	Erik Giesa, VP Product Management
9:25	Business Development <i>/</i> Strategic Partnerships	Jim Ritchings, VP Business Development
9:45	BREAK	
10:00	Sales Update	Mark Anderson, SVP Worldwide Sales
10:25	Services Update	Julian Eames, SVP Business Operations
10:45	Technology Update / Roadmap	Karl Triebes, SVP Product Development & Chief Technical Officer
11:20	Q&A	
12:00	ADJOURN	

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Andy Reinland SVP & Chief Finance Officer



F5: Fiscal 2010 Year-End Highlights

Continued Leadership in Application Delivery Networking

Revenue Growth	Solid profitability	Healthy balance sheet
 Total revenue up 35% year-over-year Product revenue up 38% year-over-year Sequential growth throughout the year Growth across all geographic regions 	 Margins improved steadily throughout the year Non-GAAP Gross margin: 81.3% in FY10, up from 79.1% in FY09 Non-GAAP Operating Margin: 37.8% in Q4, 34.1% for FY10 	 Zero debt Strong cash flow from operations: \$314 million in FY10 \$862 million in cash and investments Deferred revenue: \$259.4 million, up 41.6% year-over-year



FY 2009 vs FY 2010



Revenue Breakout



1Q08 2Q08 3Q08 4Q08 1Q09 2Q09 3Q09 4Q09 1Q10 2Q10 3Q10 4Q10









Revenue Trends: Product & Service

\$ Millions



G

9

Revenue Trends: Geography



\$ Millions

10

Revenue Trends: Industry Vertical





Business Model Trends







Balance Sheet Trends



Cash Flow from Operations













4Q10 Results / 1Q11 Targets

	Q4 Actual	Q1 Guidance
Revenue	\$254.3	\$265–270
Gross Margin (GAAP)	81.6%	81-82%
Operating Expenses (GAAP)	\$131.1	\$137–141
EPS (GAAP) EPS (non-GAAP)	\$0.59 \$0.79	\$0.62–0.64 \$0.80–0.82
DSO	40 days	Low 40s
Inventory	\$18.8	\$17–19
Cash Flow from Operations	\$86.4	> \$95

Dollar amounts in millions except EPS

15



FY11 Planning Assumptions

- Sequential revenue growth throughout fiscal 2011
- Gross margins in 81% to 82% range
- Non-GAAP operating margin between 36% and 38%
- Stock based compensation expense at Q1 levels until next annual grant in August.
- CapEx approximately \$4 8 million per quarter.
- Tax Rates
 - GAAP: 36.5%
 - NonGAAP: 35%



best practices blog browser	
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Soon saures Salimization	

Dan Matte SVP Marketing, Corporate Development & Business Development



Traffic Changes & Trends Favor F5

Platform Expands Market

Positioned for Cloud



More, More, More!

Internet Traffic (EB /month)











Physical or Virtual?



Source: Gartner. Percent of servers virtualized represents the portion of each year's (new) hardware which is running hypervisors.

I Want My HTTP





Strategic Points of Control

Drive New Services



Application Consumers Increasingly Mobile



Source: Morgan Stanley



Source: Morgan Stanley



F5 Center of Powerful Trends





F5 Center of Powerful Trends





F5 Center of Powerful Trends





A Complex World Needs

Strategic Points of Control

Each "user" has more and more access points

Each "application" has increasingly distributed components





Total Addressable Market Circa 2000





TMOS Drives ADC Evolution





Application Delivery Networking 2010





Trends Pulling ADN Into New Markets







TAM expands as ADN becomes a platform



F5 Customers Purchase More Over Time

Typical large F5 customer spending curve (Based on top 50 customer average) \$4,500,000 Large Financial Deal \$4,000,000 Bookings \$3,500,000 \$3,000,000 Average Yearly \$2,500,000 **Bookings** \$2,000,000 \$1,500,000 \$1,000,000 \$500,000 \$0 3 5 2 6 7 8 9 10 1 4

Year

Expanding F5's Reach

ADC	Lead Market	Shared Environments
vADC	F5 the choice for cloud environments	Complimentary to H/W
Emulator	Drive Trial	Penetrate App & Server Teams



15,000+ downloads

More products coming
ARX *the* Gateway to Cloud Storage

"Servers can get re-used, not storage" – Forrester



Source: IDC WW Storage in the Cloud Forecast

F5 Well Positioned as Broker to the Cloud





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Zonan course aptimization	

Erik Giesa VP Product Management & Product Marketing



F5 Service Provider Customers



THE IMPENDING MOBILE DATA TSUNAMI



THE IMPENDING MOBILE DATA TSUNAMI



Traditional Approach to Meeting the Data Tsunami

Increasing operational complexity, costs, & decreasing agility



Traditional Approach to Meeting the Data Tsunami

Increasing operational complexity, costs, & decreasing agility



The Unmanaged Data Tsunami

Business Destruction



Control the Tsunami: Strategic Points-of-Control



F5's Service Delivery Network (SDN) for Service Providers



Customer Problem #1: Scaling IPv6/IPv4 & NAT to Handle the Tsunami

Typical Network Address Translation Deployment



Problem

- Growth of IP enabled devices
- Depletion of IPv4 address space
- Current firewall solutions are expensive
- Scaling and high availability issues



Customer Solution #1: Scaling IPv6/IPv4 to Handle the Tsunami

Integrated Large Scale NAT and IPv6 Interworking Solution





Smart Phones & Laptop Dongles Non-Compressible Traffic WAP Enabled Phones Streaming Video
--























Customer Solution #2: Intelligent Traffic Steering and Controlling the Data Flow

Policy-based Service Delivery & Enforcement



Solution

- Subscriber, device, location and content aware
- Quickly provision policy-based premium services
- Lower OPEX through service unification

Increases Value-added Service Efficiency By 40%

Customer Problem #3: Scaling AAA Systems

Data Tsunami is causing AAA infrastructure to be overloaded



AAA Servers

Traditional Load Balancers

- Can't manage RADIUS/Diameter traffic
- Unable to intelligently distribute connection requests
- Lack of flexibility for special implementations
- Scaling and availability issues, overloading existing AAA servers



Customer Solution #3: Managing Tsunami Scale and high availability for AAA Infrastructure



Solution #4: Dynamic Personalized Ad Insertion



- Dynamically inserted content in multiple data streams while delivering content to users
- User Opt-In/Opt-Out Based on Policy

- Ability to target very specific users, devices, locations, and content
- No need to add single-point solutions for ad insertion

Hardware Designed for Service Providers

Scale, Performance and Certification for Service Delivery and Data Tsunami Management



NEBS Certified Solutions for Service Delivery Networking

- Industry's best performance up to 72 Gbps throughput
- Hot-Swappable Components; On-Demand Performance
- Flexible deployment options NEBS, DC power
- Always-on Management
- Hardware SSL offload



The F5 Service Delivery Network: Controlling the Tsunami

Dynamic & Unified Service Intelligence



F5 Controls the Data Tsunami

Controlling Costs While Managing Scale and New Services



Developing a Robust Partner Ecosystem



THE IMPENDING MOBILE DATA TSUNAMI



THE IMPENDING MOBILE DATA TSUNAMI

2009 Explosive Mobile Growth Number of mobile subscibes reache 4.7 billion people

DON'T FEAR THE MOBILE DATA TSUNARI:

Service delivery networking can help providers PROFIT from the good fortune of it

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Jim Ritchings VP Business Development



Strategic Partners Strategy



F5 and Microsoft

State of our Microsoft partnership

- F5 is reaping the rewards of years of strategic partnership investment
- Mature fast growing partnership
- F5 is a Globally Managed ISV Partner
- F5 Products all Microsoft Technology Centers Worldwide
- Multiple high growth opportunities, i.e. UC&C, virtualization

Key Solutions and Initiatives that Drive Business

- Application Ready Solutions
 - Exchange 2010
 - SharePoint 2010
 - Windows Server
- Field Engagement
- Training of Microsoft Consulting

- Global Marketing Plan:
 - TechEds , SharePoint Conferences, Connections, WW Partner Conference.
 - SharePoint User Groups, Microsoft Management Summit, TechReady



F5 and Microsoft

Microsoft Dynamic Data Center Alliance

Keys to growth in FY 2011 and beyond

- Ride the wave of Exchange 2010, SharePoint 2010
- Lync Server 2010
- MS Consulting Services (MCS) educated to position F5

- Microsoft virtualization
 - F5 Management Pack for MS System Center Operations Manager
 - Dynamic Datacenter integration
 - Enabling Agility, VM Density, Mobility, Business Continuity, Application Performance

"Customers looking to deploy Microsoft's on-premise cloud and virtualization solutions will find F5 solutions to be a powerful complement for the enhanced application delivery, infrastructure visibility, and automation capabilities they provide"

-Dai Vu, Director of Virtualization Solutions Marketing at Microsoft Corp.



F5 and Oracle

- 10 year global partnership with continuous engagement across product management, product development, sales, marketing, and support
- Oracle the Customer:
 - BIG-IP sits in front of 13,500 applications across 4 data centers worldwide
 - Oracle OnDemand has standardized on F5 for 700 managed and hosted customers.
- 70% of the Fortune 50 run Oracle with F5



F5 and Oracle

- Key Solutions and Initiatives that Drive Business
 - Fusion Middleware, such as Identity & Access Management, SOA, and Web2.0
 - Applications, such as E-Business Suite, PeopleSoft, Siebel
- Keys to growth in FY 2011 and beyond
 - Field engagement
 - Enterprise Solutions Group
 - Middleware Overlay Teams
 - WW Joint marketing activities
 - Solutions:
 - Access Policy Manager Oracle Access Manager solution
 - Oracle database



A New Revenue Opportunity F5 Solutions for Oracle Database

- BIG-IP LTM for Oracle Database and RAC
 - Connection management between the application and database tiers
 - Active-active database load balancing
- BIG-IP WAN Optimization Module with Oracle Database Data Guard, Streams, and Recovery Manager
 - Replication acceleration over the WAN
- F5 BIG-IP Application Security Manager and Oracle Database Firewall



F5 and VMware

Key Solutions and Initiatives that Drive Business

- Strong Solution Portfolio:
 - Agility, Disaster Avoidance Long Distance vMotion
 - Business Continuity Integration with Site Recovery Manager (SRM)
 - Cloud Computing Integration with vCloud Director
 - Desktop Virtualization

- Cooperative Demand Generation
 - WW Marketing Plan
- Customer confidence. F5 is the safe choice for VMware projects

Keys to FY11 Growth

- WW Field & Channel Engagement
- Leverage HP, Dell, IBM, NetApp

- Ongoing Solution Development
- Continue to educate the market.



vmware

TECHNOLOGY ALLIANCE

PARTNER
VMware Executive Support

"With F5's Application Ready Solution, organizations implementing VMware View[™] 4.5 benefit from <u>a high-performance desktop environment</u> that simplifies authentication and connectivity for users, while enabling rich management features to help drive down desktop management costs,"

Vittorio Viarengo, VP, End-User Computing Products, VMware

"The joint solution between F5 and VMware highlights the *importance of an agile Application Delivery Network* and illustrates the ability to deliver applications in a hybrid cloud built on the industry-leading virtualization and cloud platform,"

Dan Chu, VP, Cloud Infrastructure and Services, VMware.

"VMware VMotion[™] and Storage VMotion capabilities are significant differentiators for VMware vSphere[™]. *F5's technology complements VMware solutions*, making it possible to execute live workload migrations over greater distances. Combining VMware vSphere with BIG-IP[®] solutions expands the many use cases possible, and adds to the value we're able to offer customers."

Parag Patel, Vice President, Alliances at VMware

F5/VMware Customer Win: \$2.1 Million VMWare*

Customer	\$14B Global Asset Management Firm
Project	Firm grew dramatically through acquisitionBuilding 2 new data centers from the ground up
Competition	Customer is a Cisco global accountThey evaluated the F5, Cisco and Citrix
Challenges	 The ADC Vendor of choice will sit in front of 5,000 new blade servers Virtualizing many of the apps on VMware Seeking to improve VM density Also Seeking to automate VM provisioning with the network The data centers must accommodate future growth
Results	 The VIPRION PB200 gives a combination of greater 10G port density and resilient high throughput hardware not matched by our competition. F5 were the only vendor who could validate documented test results \$2.1 million order

F5 and Dell

Partnership Overview

- Partners for over 10 years
- F5 Team works out of Dell HQ
- Dell resells Entire F5 Product Portfolio

Dell has built a significant solution Portfolio with F5

Virtualization Projects w/ VMware

Key Solutions and Initiatives that Drive Business

- MS Exchange, MS OCS, SharePoint
- Oracle EBS, Oracle PeopleSoft

Keys to growth in FY 2011 and beyond

- Alignment with Dell Services' Global Infrastructure Consulting Services (GICS)
 - SharePoint, VMware, File Virtualization (ARX)
- Expansion of F5 strategy to all regions (EMEA, APAC, Japan)
- MS SharePoint 2010 and Exchange 2010
- VMware View 4.5

F5 and HP

Partnership Overview

HP Enterprise Services

• HP Networking

- HP Technology Services
 - Network Support Services (NSS) Global Resale

Key Solutions and Initiatives that Drive Business

- HP Enterprise Systems (EDS)
 - F5 is the standard for ADC
- HP Networking PoC's & Large customer end to end networking opportunities
- HP TS/NSS
 - Cisco Attack Program
 - UCC initiatives -OCS is a big driver for HP
 - Exchange 2010, OCS 2010

Keys to growth in FY 2011 and beyond

- HP TS/NSS
 - Virtualization Solutions with VMware and Microsoft
- HP Networking Expand POC initiative against Cisco
- HP Enterprise Services
 - HP ES Portfolio Expansion: VE, ASM, APM, Edge Gateway
 - Cisco Replacement
 - Continued F5 sales alignment leverage joint access in large clients



F5 and IBM

Partnership Overview

- IBM Global Services ICS
- IBM Software Division

Dynamic Infrastructure Alliance
 Partner

Key Solutions and Initiatives that Drive Business

- Application Network Performance
 Optimization (ANPO) Solution
- Data Center Consolidation Projects
- Data Center Networking
- Application Ready Solution for WebSphere

Keys to growth in FY 2011 and beyond

- Continued ANPO adoption across IBM teams
 - SAP, Telco, Fed, Outsourcing
- Solutions for iNotes and Tivoli

- F5 Investment for Engagement in All F5 Regions
- Proactive sales engagement

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F5/IBM GTS Customer Win: \$2.2 million





Summary

- Revenue momentum remains strong with Strategic Partners
- New growth drivers for FY 2011
 - Consolidation
 - Virtualization
 - Application/Database Solutions
 - Service Provider
- Investments will continue in FY 2011

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Mark Anderson SVP Worldwide Sales



Agenda

Key market drivers

Go to market overview

- How we organize team to exploit opportunities
- Global coverage

Sales productivity

How we drive, measure

Expanding addressable opportunity

- Vertical markets focused attention
- Existing accounts sell bigger, more
- New account initiatives
- Investing into under-attended geographies

WW Channels Update

FY11 Sales Vision

IT Trends Vector to F5's Sweet Spot





Go to market model: High Touch Sales Teams manage the lifecycle of a sales opportunity

- Field Sales Engineers (1FSE:1 AM):
 - Evangelize technical design & architecture
 - own technical relationships
- Major Account Managers named account(s)
- Territory Account Managers geographic territory
 - Quarterback sales strategy
 - Deep planning, strategy culture, toolkit
 - Weekly Forecast "commit mentality"
- Inside Sales Reps (1 ISR: 2AM)



Supporting Cast:

District Sales Manager, Regional VP, Theater VP

- Value added role to Territory, Account Management
 - Planning, strategy debate
- Forecast, pipeline management
- Quarterly Business Reviews
- Reward, recognize
- Talent management hiring the best, culling the herd

WW Partner Organization

- Enabling partners to sell our solutions
 - Dedicated Channel Team sell, support key Partners
 - Market leading programs to sell bigger systems, more modules
 - World Class Partner Readiness deliverables

WW Sales Operations Team

- Delivering on world class sales tools
 - 10 years using sfdc
 - Real ROI calculators
- BIG focus in Sales Team and Partner enablement
 - Video on demand
 - F5 University
- Business analytics
 - Forecasting trends
 - Agility = productivity

F5 Global Coverage – FY04



F5 Regional Office



F5 Global Coverage – FY10



Competitive Win Rate (\$)

	2007	2008	2009	2010
ADC	88%	90%	89%	91%
Security			60%	63%
Access	52%	58%	60%	67%



Salesforce Productivity – Quarter 4, 2010





Deals Greater than a Million Dollars





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Deals Greater than \$200k





Fortune 500, EMEA FT500 & Global 500

	NA 2010 F500 Q310	EMEA 2009 FT500 Q310	Global 2010 G500 Q310
Total F5 Networks Customers	298	220	341
Penetration	60%	44%	68%
% with 50+ Installs	12%	7%	16%



F5 Government Penetration

F5 deployed in 14 of the top 15 executive branches of government

- Department of Agriculture
- Department of Justice
- Department of Commerce
- Department of Labor
- Department of Defense
- Department of State
- Department of Education

- Department of Transportation
- Department of Energy
- Department of Veteran Affairs
- Dept. of Health & Human Svcs.
- Department of the Interior
- Department of Homeland Security
- Department of the Treasury



New Account Penetration



New vs. Existing Accounts





Key Americas Win

Customer	Major Wireless Operator
Products	20 F5 VIPRION NEBS Chassis & 40 NEBS blades
Value	\$3.5M first order; Phase 1 of 7
Sales Cycle	First sales call in February 2009
Why we won	 Traffic steering and data optimization capabilities for all devices Compression = Save million\$\$\$ on bandwidth reduction costs Enabled key services: Parental Controls Video Optimization Advertising etc.



1 year later....

Customer	Major Wireless Operator
Products	 20 F5 VIPRION NEBS Chassis & 40 NEBS blades 60 NEBS Chassis, 120 Blades 20 6900 NEBS boxes
Value	\$3.5M first order; Phase 1 of 7 Cumulative spend: Total 2010 Bookings - \$15M
Sales Cycle	 First sales call in February 2009 3 MAMs, 3 FSEs \$1.5 sales to wireline/hosting side of business
Why we won	Customer challenges: meet the massive demands of smart phone traffic/ end user performance issues Services deployed: cost effective scale, traffic steering, video optimization and content filtering.

WW Channels

2010 Partners

- 1700 Partners
- 70 Distributors
- HP, Dell, IBM
- UNITY launched in NA, EMEA, Japan, ANZ
- Launched Embedded Program

2011 Strategy

- Recruiting 300 new producing partners
 UNITY Launch in
- UNITY Launch in APAC/LATAM
- Deeper SI involvement

SI Focus

- WW focus with Dell, HP and IBM
- Deeper WW engagement with Dimension Data
- Embedded, Cloud and MSP specific Programs





Vision – FY11

Expand leadership in Application Delivery & Data Mobility that exceeds our internal FY11 targets

- F5 is recognized as the key enabling technology in virtualization, consolidation and cloud computing
- Security and storage focus/leadership
- Strong, value-added channel eco-system
- World class, coordinated sales execution



Hot Customer Project Targets

- Data Center Consolidation
- Data Center to Data Center Optimization
- "Load Balancer" Consolidation
- Server Virtualization
- Service Provider Traffic Optimization and IPV4 to 6 Migration
- Data Mobility (migration, tiering and storage cloud)
- App Deployments Oracle, SAP, Microsoft
- DNSSEC & 2048 Encryption



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Julian Eames SVP Business Operations



Service Revenue



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Deferred Service Maintenance



Consulting, Installation and Training





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2010 Attach Rate Improvements by Year Product Shipped





Case Volume– Last 6 Quarters

Cases Opened





* Year over year growth rate was 19.6% (comparing FY09 to FY10)

Customer Satisfaction Survey Results







Q4 CS Regional Survey Results





Q4 Customer Satisfaction – Loyalty Questions

How would you compare F5 support to that provided by other vendors like F5 that you use?




Q4 Customer Satisfaction – Loyalty Questions

How likely would you be to recommend F5 to colleagues based on your support experiences?





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NA PS Consulting – 4Q FY 10 General Feedback





How does F5 Consulting Services compare to other contracted assistance you've used in the past?





How likely would you recommend F5 networks consulting services to your colleagues?



97.3% of our customers said they were Very likely or Likely to recommend us



Expedited RMA Services & Support Centers

North America Depots

- Europe 11 depots including Cologne Distribution Center.
- Opened Brussels & Amsterdam Q410
- Middle East 2 Depots Tel Aviv & Riyadh

North America Depots

- USA Using 72 of 110 depot network
- Canada Using 9 of 30 depot network

In Implementation and Testing

• Singapore and Mumbai RMA4



.

Depot Location Candidates:

APAC

- ANZ: Adelaide, Perth & Wellington
- North APAC: Seoul & Taiwan
- South APAC: Manila, Hanoi & Indonesia

EMEA

- Central Europe: Milan, Zurich & Berlin
- Eastern Europe: Prague, Warsaw & Moscow

APAC Depots

• 18 Depots

• Includes 4 in Japan

• Q410 Openings

BrisbaneCanberra

- Northern Europe: Edinburgh & Stockholm
- Africa: Johannesburg, South Africa
- Middle East: Istanbul, Turkey

In Planning

- Enable RMA4
- throughout APACRMA4 in EMEA
- RMA4 in NA

AskF5 Initiatives





What is the BIG-IP iHealth System?



Innovative Services Offering delivered as a web application

Included at no additional charge with Support Agreements worldwide



Calling this a "System" due to the inclusion of the Viewer and Diagnostics



An F5 exclusive / differentiator



Launched October 1st / Announcement end of October

Customer Benefits of BIG-IP iHealth



Consulting Services





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Summary

- Services growth in 2010 30%
- Deferred revenue growth reflects health for 2011
- Call volumes not growing as fast as revenue even with release V10 and additional module functionality
- Call avoidance system improving
 - Askf5
 - iHealth
- Further developments in Professional Services offerings as leverage to product sales
- Customer satisfaction for all services world class



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Karl Triebes SVP Product Development & Chief Technical Officer



Internet Traffic Distribution 1990-2010



By Chris Anderson and Michael Wolff, August 17, 2010, Wired http://www.wired.com/magazine/2010/08/ff_webrip/



Internet Traffic Distribution 1990-2010



By Chris Anderson and Michael Wolff, August 17, 2010, Wired http://www.wired.com/magazine/2010/08/ff_webrip/



Data Center Architectural Trends





Today's Data Center Architecture





Next Generation Data Center Architecture



VCMP + CMI: The Datacenter Control Plane



VCMP – Scaling Datacenter Intelligence



Virtual Clustering within Chassis

- Version Independence
- Network isolation
- Resource isolation
- Fault isolation
- Increased Utilization





standby



Multi-box Clusters

- Increased Utilization
- Possible with CMI's:
 - Ease of Management
 - Devices Groups and Granular Failover

Clustering with Hardware

 Disaggregation Hierarchies Scaling VIPS to Tb/s



Application Abstraction Layer

- Redefines application and network object management
- Configuration based on application semantics
- Pre-configured (Application Templates) or customer configured





Application Centric Management - iApp

Hostname: pierce-solstice.pdsea.f5net.com IP Address: 172.27.62.2	Date:Nov 12, 2010User:adminTime:4:14 PM (PST)Role:Administrator	Partition: Cor	nmon 🔽 Log out
Main Help About	iApp » Applications		
Overview	🗱 🚽 Application List		
іАрр	* Search		Create
Applications 💮	Name	Partition	Template
Application Templates	Corporate_IIS_WebSite	Common	f5.microsoft_iis
â	Corporate_Intranet_Sharepoint	Common	f5.microsoft_sharepoint_2010
Wizards	Corporate_Presentation_Server_Cluster	Common	f5.citrix_presentation_server
Local Traffic	Corporate_Virtual_Desktop_Cluster	Common	f5.vmware_view
	Oracle_Financials	Common	f5.oracle_ebs
Network	SAP_Enterprise_Portal	Common	f5.sap_enterprise_portal
System	Delete		



New!! Application Visibility & Reporting (AVR) Module Control and Visibility





TPS for all applications – last day

Hostname: 3600.lab.asm.f5net.com Dat IP Address: 172.30.0.20 Tim	:: Oct 18, 2010 User: admin :: 12.20 PM (PDT) Role: Administrator	Partition: Common 🗸 Log out
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Overview	🚓 🗸 TPS Latency 👻 Throughput 👻 Counters Sessions 👻	
iAnn		
	Application Virtual Server Pool Member URL Country Client IP	Time Period: Last Day 💌 View: Basic 💌
1 Wizards	chart hu am ^c harts com	am ^c harts com
Local Traffic	TPS per Application over time (tps)	monana.com
Application Security	500 -	
Overview		
Classes	400-	
Web Applications		
Policies List (+)	300 -	
Policy		
Tree View	200 -	
File Types		
URLs	100-	
Parameters		
Flows		
Methods (+)	v/17/2010 13:00:00 10/17/2010 18:00:00 10/17/2010 23:00:00 10/18/2010 04:00:00 10/18/2010 09:0	
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Attack Signatures	Details	
Content Profiles	Image: Weight of the second se	Average TPS (tps)
Data Guard	✓ 1 ■ oracle.f5.com	166.56 tps
CSRF Protection	2 owa2010.f5.com	166.51 tps
Anomaly Detection	3 sharepoint/5.com	83.28 tps
Manual Policy Building	Others	
Automatic Policy Building		
Reporting		
Options		
Visibility and Reporting		

TPS for all applications – last week

Hostname: 3600.lab.asm.f5net.com Dat IP Address: 172.30.0.20 Tim	Coct 18, 2010 User admin : 12:20 PM (PDT) Role: Administrator	Partition: Common 🥪 Log out
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16		
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Overview		
Classes 📀		
Web Applications		
Policies List 🛞	300 -	
Policy		
Tree View		
File Types		
URLs	100 -	
Parameters		
Flows		
Methods 📀	1/14/2010 00:00:00 10/15/2010 02:00:00 10/16/2010 04:00:00 10/17/2010 06:00:00 10/18/2010 0	
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Attack Signatures	Details	
Content Profiles	V # Application Average TPS (tps)	
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CSRF Protection	2 owa2010.f5.com 164.04 tps	
Anomaly Detection	☑ 3 sharepoint/5.com 82.09 tps	
Manual Policy Building	Others	
Automatic Policy Building		
Reporting		
Options		
Visibility and Reporting		

TPS per pool member – for Oracle

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Main Help About	Application Security » Visibility and Reporting : Charts	
Overview	🗱 🗸 TPS Latency 🔹 Throughput 👻 Counters Sessions	•
	Application: oracle 15 com w Vidual Server: perf. vs5 w Pool Member	
iApp		
🔨 Wizards	Pool Member URL Country Client IP	Time Period: Last Hour 💌 View: Basic 💌
Local Traffic	chart by amCharts.com TPS per Pool Member over time (tps)	chart by amCharts.com
O Application Security	100 -	
Overview		
Classes 📀	80 -	
Web Applications		15-1
Policies List 🕘	60 -	
Policy		
Tree View		
File Types >		
URLs		5
Parameters >	20 -	
Flows		
Methods (+)		
Headers		
Attack Signatures	Display method: Stacked 💌	Measurement to display. Average IPS
Content Profiles >	Image: Second	Maximum TPS (tps)
Data Guard	✓ 1 ■ 11.11.0.21:80 20.00 tps	22.00 tps
CSRF Protection	🗹 2 📕 11.11.0.22:80 20.00 tps	22.00 tps
Anomaly Detection >	🛛 3 📕 11.11.0.23:80 20.00 tps	22.00 tps
Manual Policy Building	V 4 11.11.0.24:80 20.00 tps	22.00 tps
Automatic Policy Building		22.00 tps
Reporting		
Options >		
Visibility and Reporting		

TPS per URL for Oracle application

ostname: 3600 lab.asm.f5net.com Date Address: 172.30.0.20 Time	: Oct 18, 2010 User: admin :: 12:23 PM (PDT) Role: Administrator			Partition: Common 🗸 Log out
Unit: ACTIVE				
Main Help About	Application Security » Visibility and Reporting	: Charts		
Overview	🚓 🗸 TPS Latency 👻	Throughput - Counters Sessions	*	
	Application: practo f5 com Virtual Sonor. porf. 1	c5 - Real Mamber 11 11 0 21/20 - UDI		
iApp	Application, oracle.is.com s virtual Server, per_	55% F 001 methoer, 11.11.0.21.00% UKL		
Wizards				Time Period: Last Hour 💌 View: Basic
) Local Tool To	chart by amCharts.com		chart by amCharts.com	
	TPS per URL o	ver time (tps)	4.50 -	
Application Security	20 -	1.19	4.00	
Overview				
Classes (+)			3.50 -	
Web Applications	15_		3.00 -	
Policies List			2.50 -	
Policy		104		
Tree View	10 -	201	2.00 -	
File Types		672	1.50 -	
URLs	5-	0.52	1.00 -	
Parameters			0.50	
Flows			ester	
Methods 💿		40/40/2010 10/49/2010 12/00/00 40/40/2010 12/4		3 4 5
Headers	10/18/2010 11:25:00 10/18/2010 11:40:00	10/18/2010 12:00:00 10/18/2010 12:1	0.00 , 2	
Attack Signatures	Disp	ay method: Stacked 💌	Measur	ement to display: Average TPS
Content Profiles	V # URL	Average TPS (tps)	Maximum 1	TPS (tps)
Data Guard	1 index1.php	4.47 tps	10.30 tps	
CSRF Protection	🗹 2 📕 /index2.php	4.22 tps	8.10 tps	
Anomaly Detection	🗹 3 📕 /index4.php	4.04 tps	10.00 tps	
Manual Policy Building	🗹 4 🛄 /index3.php	3.75 tps	10.00 tps	
Automatic Policy Building	🔽 5 🛄 /index0.php	3.51 tps	15.20 tps	
Reporting				
Options				
Visibility and Reporting				

TPS for SharePoint – Per Country





SharePoint Server Latency – per virtual server







New session for all applications

Hostname: 3600.lab.asm.f5net.com Date IP Address: 172.30.0.20 Time	Oct 18, 2010 User: admin 12:23 PM (PDT) Role: Administrator	Parition. Common - Log out
Main Help About	Application Security » Visibility and Reporting : Charts	
Overview	★ TPS Latency ▼ Throughput ▼ Counters Sessions ▼	
iApp	Application Virtual Server Country	Time Period: Last Hour 💌 View: Basic 💌
Wizards		
Local Traffic	chart by amCharts.com New Sessions per Application over time (sess/s)	chart by amCharts.com
Application Security	500 -	
Overview		
Classes (+)	400 -	
Web Applications		
Policies List 💿	300 -	
Policy >		
Tree View	200 -	
File Types >		
URLs	100 -	
Parameters >		
Flows		
Methods 📀	V18/2010 11:25:00 10/18/2010 11:40:00 10/18/2010 11:55:00 10/18/2010 12:10:00	
Headers >	Display method: Stacked 💌	
Attack Signatures	Details	
Content Profiles	Image: Weight and Comparison of Com	sions (sess/s)
Data Guard	✓ 1 ■ oracle.f5.com 199.96 sess/s	
CSRF Protection		
Anomaly Detection	Image: Sharepoint.f5.com 99.98 sess/s	
Manual Policy Building		
Automatic Policy Building		
Reporting		
Options >		
Visibility and Reporting		

Concurrent sessions for all applications

Hostname: 3600 lab.asm.f5net.com Date IP Address: 172.30.0.20 Time	Oct 18, 2010 User: admin 12:18 PH (PDT) Role: Administrator	Partition. Common 🗸 Log out
I Unit: ACTIVE		
1		
Main Help About	Application Security » Visibility and Reporting : Charts	
Overview	🚓 + TPS Latency + Throughput + Counters Sessions	•
iApp	Application Virtual Server Country	Time Period: Last Hour 💌 View: Basic 💌
1 Wizards		
Local Traffic	chart by amCharts.com 160.0 Concurrent Sessions per Application over time (sessions) 00 20.000	chart by amCharts.com
Application Security	140,0	
Overview	00	
Classes 🕞	00	
Web Applications	100,0	
Policies List	80,00	
Policy		
Tree View	61,988	
File Types >	40,00	
URLs >		
Parameters >		
Flows		
Methods 📀	i/18/2010 11:20:00 10/18/2010 11:35:00 10/18/2010 11:50:00 10/18/2010 12:05:00	
Headers	Display method: Stacked 💌	
Attack Signatures	Details	
Content Profiles >	# Application Average Concurren	Sessions (sessions)
Data Guard	1 oracle.f5.com 61820.00 sessions	
CSRF Protection	2 owa2010.f5.com 61818.25 sessions	
Anomaly Detection >	30909.83 sessions	
Manual Policy Building		
Automatic Policy Building		
Reporting		
Options >		
Visibility and Reporting		

SharePoint – Client latency Per Country

Application Security » Visibility and Reporting : Charts	
💠 🗸 TPS Latency 👻 Throughput 👻 Counters Ses	ssions 🔹
Application: sharepoint.f5.com » Country	
Virtual Server Pool Member URL Country Client IP	Time Period: Last Hour 💌 View: Basic 💌
chart by amCharts.com Client Latency per Country over time (ms) 2,000 –	chart by amCharts.com 1,000 –
1,500 —	800 -
1,000 -	600 – 400 –
500 -	200 -
10/22/2010 15:05:00 Display method: Stacked 💌	10/22/2011
Details	
V # Country	Average Client Latency (ms)
🗹 1 📕 Cuba	1075.60 ms
🗹 2 📕 China	651.72 ms
3 Unrecognized	N/A





Application Security Manager



F5's BIG-IP Application Security Manager Winner of the SC Magazine Reader Trust Award Best Web Application Security Solution 2010



- Centrally managed
- Scalability and performance
- Ease of deployment, automatic policy building and detecting application changes
- Virtualized Edition available in FY'11
- Full integration with LTM
- Advanced security features and services



BIG-IP Driving Data Center Operations & Orchestration Frameworks

- Control plane connects data center services with 3rd party orchestration and management systems
- Seamless integration with iControl API
- BIG-IP as DCO and Network Middleware



Secured Accelerated Access

WOM, WAM, APM and Edge Gateway



BIG-IP Access Policy Manager (APM)

- Centralized application access control
- Consolidated access policy enforcement
- Advanced authentication and endpoint security
- Credentials caching/proxy (SSO) for web based applications
- Identity based load balancing and traffic management
- VPE Rules iRules style interface for custom access policies

	Access Policy		
0	Access Profiles		
	AAA Servers >	RADIUS	(\cdot)
	ACLs >	LDAP	(\cdot)
	SSO Configurations 💮	Active Directory	(\cdot)
	Secure Connectivity	SecurID	(\cdot)
	Network Access	HTTP	(\cdot)
	Portal Access	Oracle Access	(\div)
	Application Access	Manager	0
	Webtops 💮	OCSP Responder	0
	Reports	CRLDP	(\cdot)
	Dashboard =	TACACS+	÷

	Help Close
Access Policy: corp_access Edit Endings (Endings: Allow, Deny [default])	
Start Successful + Successful + IP Geolocation Country code is US + Logon Page fallback + AD Antivirus Check fallback + fallback + fallback + fallback +	X Successful + Allow Auth fallback + Deny Deny

Bringing Identity, Authentication, and Access Control to BIG-IP

BIG-IP WAN Optimization Module

- Best of Breed DC to DC Performance (>10 Gbits/sec)
- Exclusive TDR2 for de-duplication and compression
- Integrated caching with LTM and WAM



- TCP Optimizations
- Secure Tunnels (iSessions)
- Deduplication (TDR II)
- Max SSL & Max Compression (Hardware based for performance)

- CIFS Optimization
 - Read-ahead
 - Write-behind
 - Metadata caching
- MAPI Optimization
 - Enables de-duplication of MAPI data
 - Improves MAPI compression ratios

15x Better Optimizing SQL Bulk Copy

Benefits

- Increased Performance Improve RPO's & RTO's by reducing data replication time.
- Increase efficiency Maximize bandwidth utilization.
- Cost Savings Reduce WAN costs, Offload CPU-intensive processes from servers.
- Improve Security Encrypt SQL transactions over the WAN.

Top Challenges

Business Challenge	Technical Challenge	F5 Solution
Distance between data centers	Latency	TCP Express – Industry leading high speed TCP optimization
Increasing volume of data to replicate	Increased time to replicate data between data centers	Symmetric Adaptive Compression – Network and data aware compression algorithms to get maximum performance
Increased regulatory requirements for data protection and privacy	Securing data transfer over the WAN without increasing latency	Encrypt replication traffic over the WAN

1.3 GB of SQL Transactions over a 45 Mbps WAN link with 100 ms latency and 1% packet loss.

	Transfer time (mins)	Effective Throughput (Mbps)
Without BIG-IP	215	6
With BIG-IP	14	92
Improvement	15x	


<u>17x</u> Better Optimizing NetApp[®] SnapMirror[®]

Benefits

- Increase Performance Reduce data replication time.
- Increase efficiency Maximize bandwidth utilization.
- Improve Security Encrypt replication traffic sent over the WAN.
- Extend the distance to your DR site Mitigate latency & optimize replication traffic.

Top Challenges

Business Challenge	Technical Challenge	F5 Solution
Distance between client and server	Latency	TCP Express – Industry leading high speed TCP optimization
Increasing file size to transfer	Increased time to replicate data between data centers	Symmetric Adaptive Compression – Network and data aware compression algorithms to get maximum performance
Increased regulatory requirements for data protection and privacy	Securing data transfer over the WAN without increasing latency	Encrypt replication traffic over the WAN

1.5 GB volume replicated over a 45 Mbps WAN link with 100 ms latency and 1% packet loss.

	Transfer time (mins)	Effective Throughput (Mbps)
Without BIG-IP	216	0.92
With BIG-IP	13	15
Improvement	17x	



Unified Remote Access to the Data Center BIG-IP Edge Gateway





BIG-IP Edge Gateway: A Complete Solution

Combining symmetric, asymmetric, and client based acceleration



Asymmetric Acceleration
Full WAMSymmetric Acceleration
Full WOMClient Acceleration
Full APM

iPhone/iPad F5 Edge Portal









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Internet Traffic Distribution 1990-2010



By Chris Anderson and Michael Wolff, August 17, 2010, Wired http://www.wired.com/magazine/2010/08/ff_webrip/



Live Video Caching/WAN Optimization Demo

Mobile Service Delivery Controller





ARX Strategy and Platform Roadmap





ARX Moves to Modern Multicore Platforms



Let everyone experience the power of ARX first hand... Enable partner solutions where consolidation matters...

Delivers 4-6x better price/performance than current ARX appliances...

Optimized On-Demand Video Storage





BIG-IP Platform Roadmap





F5 Platforms: Purpose Built Hardware

Superior Performance, Scalability, Availability and Quality





F5's Virtual Processing Fabric



- Clustered Multi Processing (CMP)
- TMOS scaling CMP scaling of TMM kernel (core processing task)
- Dissaggregator (DAG): Custom hardware for distributing traffic flows between independent TMM instances.
- High Speed Bridge (HSB) : non-blocking, lossless communications between TMM instances and other hardware subsystems

F5 Layer 4 Acceleration







High Performance Platforms









