XPoint Network

# AppScaler Application Delivery Solutions

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**XPoint**

# What does AppScaler do

**AppScaler manages your applications, so you can manage your business.**

- **Guaranteed Zero Downtime for mission-critical business applications**
- **Application Optimization with purpose-built technologies**
- **Meet security compliance**

| Real Server | General Properties | HTTP(s) Properties |
| --- | --- | --- |

HTTP(s) Configuration [VIP Info:192.168.0.222:80 H

Option

WAN Optimization

X-Forwarded-For

Web Application Firewall

# AppScaler Advantages

- **High performance Software and Hardware Platform**
- **Simplicity with App Templates**
- **Application Visibility**
- **VNF (Virtual Network Function) ready**
- **Dual IPv4 and IPv6 stack and Automatic Conversion**
- **Comprehensive Single Sign On**
- **Open System with Full API**
- **All-in-One Application Delivery Solutions**

# High Performance Software and Hardware Platform

- **FastPacketModule is AppScaler proprietary Packet Module empowered by Intel DPDK, which is _10 times faster_ than regular Linux Kernel when it comes to packet processing.**

- **ASIC SSL Acceleration Card: _35K TPS (2K key)_**

- **Active-Active clustering can aggregate multiple AppScaler virtual/hardware appliances as one single unit to scale up to _600Gbps_ layer 7 throughput**
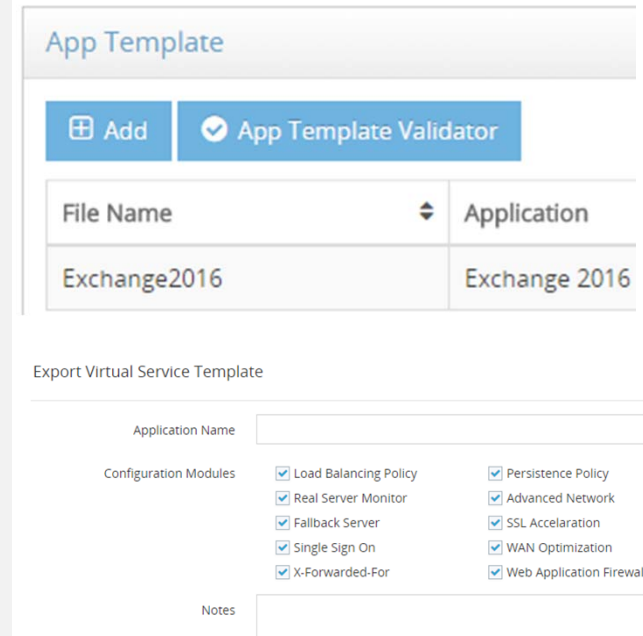
Cluster Node Management

⊞ Add    ⟳ Refresh

| ID | Unit IP Address | Status |
|----|-----------------|--------|
| 1 | 192.168.0.169 | Cluster Central Node |
| 2 | 192.168.0.150 | Node Running |
| 3 | 192.168.0.151 | Node Running |
| 4 | 192.168.0.152 | Node Running |

# Simplicity with App Templates

**Load balancing is complicated by nature because of the complexity of business applications, no matter load balancing is managed with CLIs, scripts or GUI.**

**AppScaler provides the configuration abstraction layer between business application and load balancer with App Template.**

- **XML format makes it easily import and export**
- **Ready-to-use AppTemplates like MS Exchange**
- **Build the load balancing in one click**
- **Flexibility of developing Custom AppTemplates for advanced users**

# Application Visibility

- **Application visibility is an critical component to monitor and diagnose the performance of the business applications.**

- **AppScaler gathers real time and historical statistics including connections, bandwidth, hits, application RTT (Round Trip Time), client latency and server processing latency to provide *end-to-end visibility across all the business applications*.**



VS Reports

| VIP Status | Name | IP Address:Port | Connections | RTT(ms) | Hits | BW | Graph |
|---|---|---|---|---|---|---|---|
| Up | VS001 | 192.168.0.200:80 | 40 | 0 | 1094 | 563.34KB | |
| Down | VS002 | 192.168.0.222:80 | 23 | 0 | 902 | 547.88KB | |

Showing 1 to 2 of 2 entries



VS Connection Real Time Graph
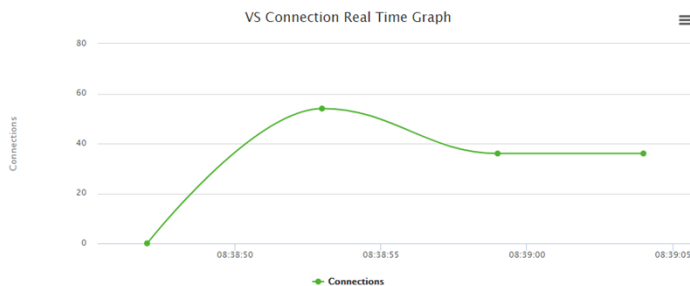
| VS Metrics (History) | | |
|---|---|---|
| Total Connections | 40 | |
| Total Bandwidth | 563.34KB | |
| Total Hits | 1094 | |
| Total RTT | 0ms | |
| Total Client Latency | 67ms | |
| Total Server Processing | 28ms | |

# Multi Tenant Virtual Network Function

- **Provision and manage AppScaler as Virtual Function centrally**
- **Multi-tenancy to improve operational efficiency and service agility as well as lowering total costs**
- **Support up to 64 isolated AppScaler instances on one single unit**
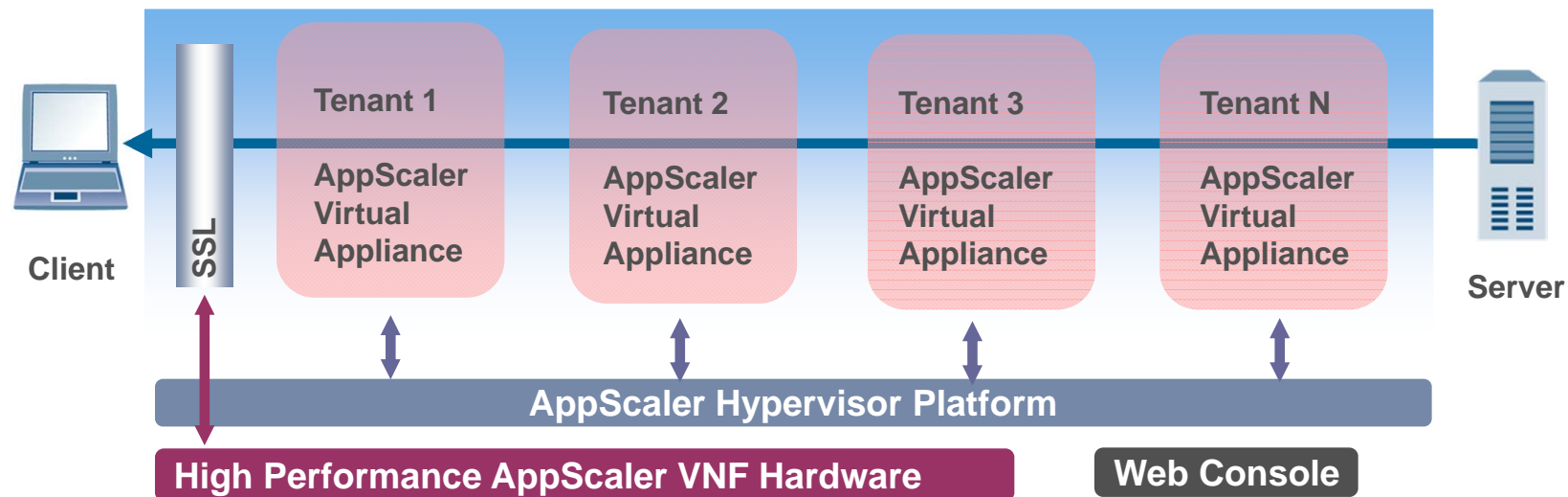
# Dual IPv4 and IPv6 Stack

- **Full support on Dual IPv4 and IPv6 Stack**
- **Automatic IPv4/IPv6 conversion makes IPv6 migration much easier**
- **Client(IPv4)->VS(IPv4)->RS(IPv4)**
- **Client(IPv6)->VS(IPv6)->RS(IPv6)**
- **Client(IPv4)->VS(IPv4)->RS(IPv6)**
- **Client(IPv6)->VS(IPv6)->RS(IPv4)**
- **Response rewrite to fix external links in IPv4 website**

Virtual Server
IPv4 or IPv6

IPv4 and IPv6
Auto Conversion

Real Server
IPv4 or IPv6
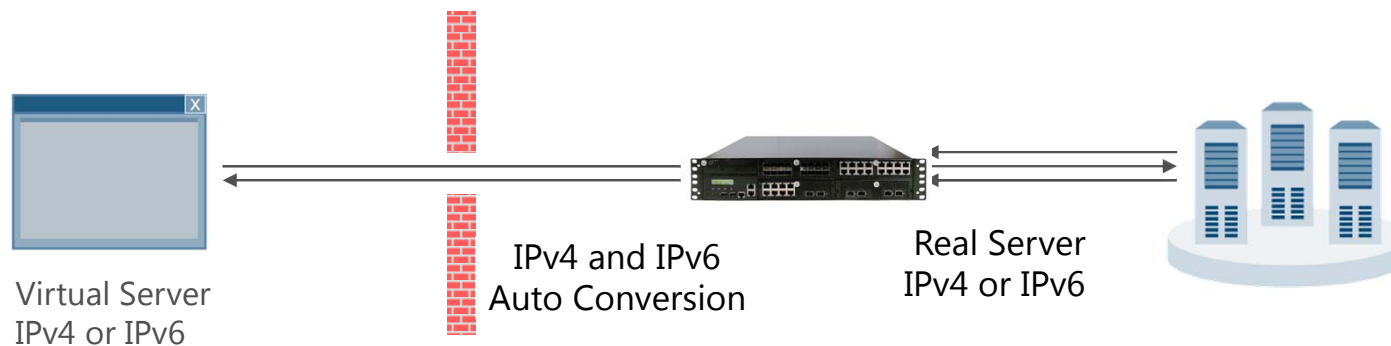
# Comprehensive Single Sign On (1)

- **AppScaler provides centralized and flexible application access authentication to consolidate identity access management infrastructure and realize enhanced security at a reduced operational cost.**



**Client**

**SSO**

**Application 1**

Same SSO Ident

**Application 2**

Same SSO Ident

**Integration**

Auto login integration with original application login

**Server**

**AppScaler SSO Cache Proxy**

**3rd party identity infrastructure
LADP/Radius/Kerberos/RSA SecurID/NTLM/SAML
1FA/2FA/Basic Authentication/Token
Real time user login information**

**Custom Post Form
AppScaler SSO API
Custom Integration**

# Comprehensive Single Sign On (2)

**Typical SSO Workflow:**

- **User accessing the SSO enabled virtual service on AppScaler**
- **AppScaler launching Pre-authentication Login Form (Either 1FA or 2FA)**
- **User inputting the credential in Login Form**
- **AppScaler passing credential to be authenticated with 3rd identify system**
- **If authenticated, user can access this virtual service**
- **The same user with the same connection can access all the SSO enabled virtual services with the SAME SSO Profile in Access Policy**

# Comprehensive Single Sign On (3)

**Integration with applications for automatic login:**

- **All the applications have its own set of login mechanism**
- **AppScaler provides pre-authentication but without the integration with application the re-login of applications required.**
- **AppScaler provides 3 toolsets/services for integration purpose to achieve automatic login with applications**
1. **AppScaler capturing credential in login form and post to the applications by custom and flexible POST form**
2. **AppScaler providing SSO API for applications to retrieve the user login information**
3. **AppScaler providing custom integration service with application on SSO**

# Open System with Full API

**AppScaler provides comprehensive APIs for automation and orchestration, which makes software development team stage, deploy and update business application quickly and safely without the concern of disrupting ongoing business processes.**

- **HTTP(s) based**
- **XML and Json support in runtime**
- **370+ APIs**

```
{
    "vs": {
        "1": {
            "id": "2",
            "vsname": "VS008",
            "vstype": "1",
            "vslayer": "7",
            "apptype": "http",
            "ip_address": "192.168.0.222",
            "port": "80",
            "forward": "1",
            "notes": "",
            "enabled": "y",
            "stats": "n",
            "status": "Up"
        }
    },
    "state": 200,
    "code": "ok"
}
```

# All-in-One Application Delivery Solutions

**Turnkey Application Delivery Solution:**

- **Server Load Balancing**
- **Global Server Load Balancing**
- **SSL Offloading**
- **Single Sign On**
- **Web Application Firewall**
- **Hardware Security Module**
- **Active-Active Clustering**