



# HP Open SDN Ecosystem and SDN Applications

April 2014

## HP Open SDN Ecosystem

### **Q: What are the main components of the HP Open SDN Ecosystem?**

A: The HP Open SDN Ecosystem includes an HP SDN Developer Kit and an HP SDN App Store with HP and 3rd party developed SDN Applications and services to provide enterprise-ready SDN solutions for the data center, campus, and branch.

Additional components to aid in the success of both our partners and customers include:

- The HP Virtual Application Network (VAN) SDN Controller
- SDN-ready infrastructure with over 50 OpenFlow enabled switches and 10 routers
- Complete line of SDN services for assessment, design, implementation, integration, optimization, and support
- Community forums for collaboration and support
- New ExpertOne training and certification to support Developing SDN Applications, with plans for SDN administration and implementation training and certification mid-2014
- The HP AllianceOne Networking Specialization program that embraces technology or service alliance partners who innovate with networking, including developing SDN applications, and wish to assure their offerings are enterprise ready through collaboration with HP Networking technologies and go-to-market, such as via the HP SDN App Store

### **Q: How can one participate in the Open SDN Ecosystem?**

A: To Develop SDN Applications, all interested parties can visit [sdndevcenter.hp.com](http://sdndevcenter.hp.com) to find out how to start developing SDN applications. HP SDN Dev Center is open to anyone—from large organizations looking to develop custom, in-house applications, to alliance partners developing commercial applications, to individual developers.

To become an HP AllianceOne Networking Specialization alliance partner to receive additional benefits, you can access the program via [sdndevcenter.hp.com](http://sdndevcenter.hp.com) or visit the program home page at [hp.com/go/hpn\\_specialization](http://hp.com/go/hpn_specialization).

We also encourage our customers to engage with your direct HP contacts, visit us at [hp.com/sdn](http://hp.com/sdn), or [sdndevcenter.hp.com](http://sdndevcenter.hp.com) as it suits your needs best to begin exploring and collaborating with HP on your SDN journey to create more simplified, agile and automated networks.

### **Q: What benefits will existing AllianceOne Networking Specialization partners receive by engaging with the Open SDN Ecosystem?**

A: They will have the opportunity to align with the leading vendor supporting an open SDN network—that extends from the branch through campus and wireless to the data center. The partners will also have the opportunity to expose their product to a wider audience and increase sales. Moreover, their products gain differentiation through SDN innovation.

They will also receive access to tools such as the SDN Remote Lab, equipment discounts, and the option to sell their applications through the SDN App Store.

## HP SDN App Store

### **Q: What is the SDN App Store?**

A: The SDN App Store will be an enterprise-ready marketplace for SDN applications, including commercially available and community developed applications. Developers can submit applications for distribution to customers.

### **Q: What are the key features of the SDN App Store?**

A: Applications. The SDN App Store allows customers to browse and install SDN applications either directly onto their HP VAN SDN Controllers for an integrated GUI experience, or the appropriate application server for external communications with the HP VAN SDN Controller. You can explore applications based on their main solution type, or category, such as: optimization, security, and orchestration. You will also be able to filter applications based on vendor, application tier and support model of the application as explained below.

- Apps will be offered in tiers with different levels of HP validation. You will have the opportunity to further filter your search for applications based on each of these scenarios to suit your needs best:
- HP developed, and tested to HP's usual standards.
- A selected set of apps developed by an HP AllianceOne Networking partner, jointly validated with HP.
- A wide range of apps developed by an HP AllianceOne Networking partner, self-validated by the partner with results reviewed by HP.
- Community apps that are developed by the Open SDN Ecosystem community, with support provided through the HP SDN forum, or directly from the developer.

Services. HP intends to offer a selection of support options for each application, to give customers the choice to align support benefits and costs with their needs. HP SDN consulting, application, or integration services will also be available to explore on the SDN App Store. AllianceOne partners (ISVs, SIs and selected channel partners) will also be invited to showcase their services within the store.

### **Q: What are the benefits to customers?**

A: The SDN App Store provides customers a centralized location to easily explore and obtain both SDN applications and enterprise level services that will address business and IT needs.

### **Q: What are the benefits to developers?**

A: With the SDN App Store, developers have a robust marketplace to share their SDN innovations. Never before has there been a platform to enable distribution of this kind of innovation in the networking industry.

The HP SDN App Store allows developers to monetize their innovations and retain a majority of the revenue. HP will provide the front and back-end infrastructure and platform in return for a portion of sales on the SDN App Store.

### **Q: Will HP sell, support, and promote alliance partner and community applications?**

A: HP will provide opportunities for partners—who are part of the HP AllianceOne Networking Specialization program—to promote their applications through joint marketing content on the SDN App Store and communication outreach to the HP sales channel. HP will also invite eligible partners to participate at HP events, such as Discover.

While some of these activities will require a fee to participate, some will be offered free to select/strategic partners contributing apps that create the most value for our clients. SDN application support will vary is up to negotiation for each application, some of which is explained below. Community applications will be promoted through placement in the SDN App Store and will have community level or developer provided support only.

### **Q: When will the SDN App Store be live and available for app downloads?**

A: The SDN App Store is expected to first be available mid 2014

## SDN Applications

### **Q: What types of SDN applications are available for use with the HP VAN SDN Controller?**

A: The SDN App Store will host a variety of types of commercially available and community developed SDN applications that will be available for use with the HP VAN SDN Controller as described in the SDN App Store key features answer above.

**Q: What types of AllianceOne Networking Specialization partner applications are available for use with the HP VAN SDN Controller?**

A: We have a rapidly growing community of alliance partners who are engaging with us at different levels to develop SDN Applications. Dozens of application concepts are already being pursued by our alliance partners. As of April 2014, we have five alliance partners with new SDN Applications ready for Proof of Concept (POC) deployment.

You can learn more about these applications at [hp.com/networking/sdnapps](http://hp.com/networking/sdnapps)

These alliance partner SDN Applications are:

Bluecat, DNS Director—DNS security, globally delivered

Ecode, evolve™—Dynamic design to deployment

GuardiCore, Defense Suite Active Honeypot—Data center security redefined

Radware, DefenseFlow—Real-time DDoS protection

Real-status, Hyperglance—Interactive 3D visibility and control

We also have numerous other SDN applications that will be ready for POCs over the next few months from alliance partners such as: F5, Riverbed, Kemp Technologies, and many more.

**Q: When will these alliance partner SDN applications be generally available?**

A: The goal is to have these applications generally available with the SDN App Store availability. Today, we are interested in working collaboratively with our alliance partners to engage with you, our customers, should you wish to try any of the SDN applications we currently have ready for POCs.

**Q: How will these alliance partner SDN applications be supported?**

A: HP intends to offer a selection of support options both from HP and from the AllianceOne partner for each application, to give customers the choice to align support benefits and costs with their needs.

Currently the support structure is still being negotiated and will be provided in the SDN App Store application profile information. The support structure will vary by application type and application partner. Support method can also be negotiated to meet customer needs at time of customer sale. Until those negotiations are complete, the alliance partner is ultimately responsible for providing and supporting their SDN application.

**Q: What types of SDN applications has HP developed?**

A: HP currently has two HP developed and supported SDN applications that are also ready for POCs. These applications are:

HP Network Optimizer for Microsoft Lync which enables automated provisioning of network policy and Quality of Service (QoS) to provide an enhanced user experience.

HP Network Protector (previously known as Sentinel) enables automated network posture assessment and real-time security to enhance security for BYOD users.

HP also has a number of application concepts\* that are being considered, such as:

- “Bigtop”—an application that accelerates Hadoop processing by using SDN to dynamically enforce job priority in network flows
- “BYON”—provides a unified view of networks in the SDN domain
- “Infrastructure Guard”—provides automatic, password-less protection of the network via distinguishing infrastructure ports from edge ports

\*These are only concepts are not fully developed applications yet. Naming, functions, and if they are to become commercially available applications are still in development and subject to change.

**Q: When will the two SDN applications from HP be generally available?**

A: Both Network Optimizer and Network Protector are available as of March 31, 2014.

## HP Virtual Application Networks (VAN) SDN Controller

### Q: What is the VAN SDN Controller?

A: The VAN SDN Controller is the central building block of an HP SDN solution. The controller operating in an OpenFlow-enabled network provides simplified management, provisioning, and orchestration in the SDN architecture.

Networking applications for all types of network environments—including service provider and enterprise environments, as well as data center, campus, and branch focused applications—can be implemented with the controller. The VAN SDN Controller Software provides a unified control point.

### Q: What are the key features for the VAN SDN Controller?

A: Some of the key features of the controller include:

- Centralized automation for your SDN-enabled network
- Compliant with OpenFlow 1.0 and 1.3 protocols
- Support for over 50 OpenFlow-enabled HP switch and router models
- Open APIs that enable third-party SDN application development
- Extensible, scalable, and resilient controller architecture

### Q: Can the controller work with third-party equipment?

A: Yes. We interoperate with devices supporting the OpenFlow 1.0 standard. We are working with the OpenFlow community to ensure interoperability among devices supporting OpenFlow 1.3.

### Q: How will the controller be made available?

A: The controller will be offered as a licensable software.

### Q: How is the controller managed?

A: The controller will be managed by the HP Intelligent Management center (IMC) and the VAN SDN Manager, along with its own GUI.

### Q: What open standards does the controller leverage?

A: OpenFlow 1.0 and 1.3.

### Q: When will the HP VAN SDN Controller be available?

A: The HP VAN SDN Controller, version 2.0, is available today. On March 31, 2014, we released version 2.2 of the VAN SDN Controller with support for Hybrid Networks and Application Licensing.

### Q: What are the different types of licenses that are available for the controller and the pricing?

Table 1:

Product code	Description	NTE pricing
J9863AAE	HP VAN SDN base software w/50-node E-LTU	\$495 USD
J9864AAE	HP VAN SDN Controller 50-node E-LTU	\$4,990 USD
J9865AAE	HP VAN SDN Controller HA E-LTU	\$9,990 USD

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