



JUNOS DEVELOPER NETWORK

APAN 30, August 2010
Hanoi, Vietnam



LEGAL STATEMENT

This product roadmap sets forth Juniper Networks' current intention and is subject to change at any time without notice. No purchases are contingent upon Juniper Networks delivering any feature or functionality depicted on this roadmap.

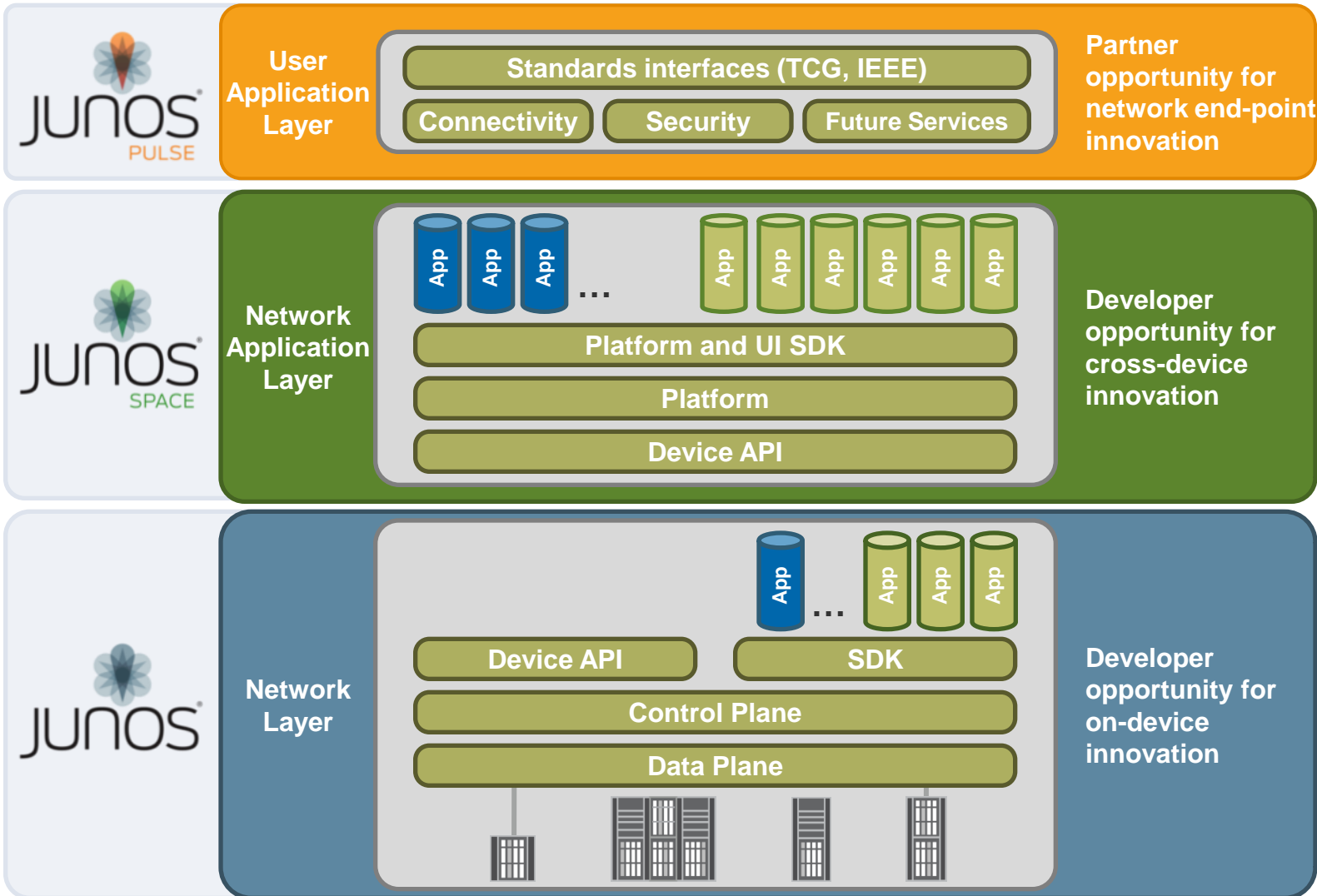
AGENDA

1. Innovation
2. Junos SDK
3. Academic Alliance



Innovation

Technology Vision

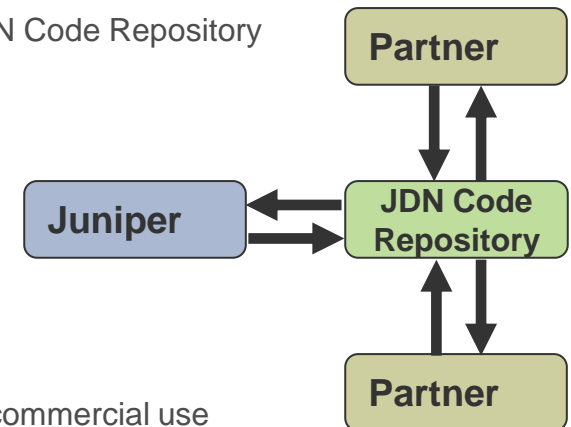


The Junos Developer Network

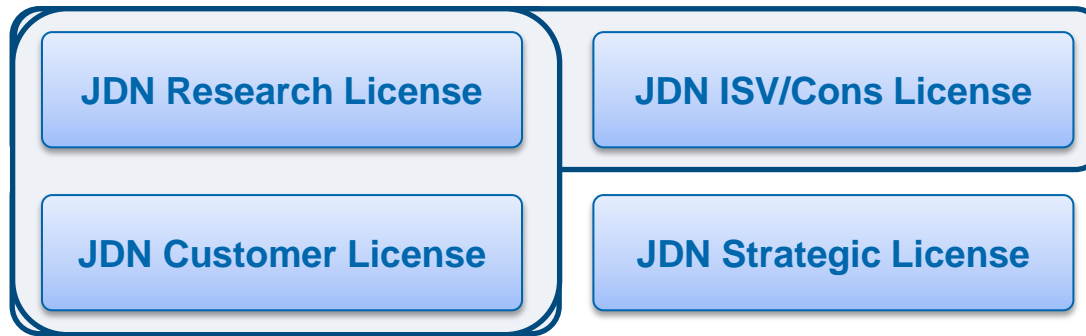
- What is the Junos Developer Network?
 - Your single entry point for developing on Junos!
- For customers, JDN offers:
 - the vehicle facilitating a rich innovation ecosystem of high value “apps”
 - an opportunity for you to build, license, and/or partner on unique/custom solutions
 - an assurance that Junos will continue to be the most functional, most open, and most rapidly evolving platform in the industry
- For developers, the Junos Developer Network is...
 - a simple and fast way to innovate on Juniper platforms
 - the vehicle to reach Juniper customers with high value “apps”
 - a way to conduct research / experiments on Junos
 - a way to share technology with Juniper and the larger ecosystem
 - an opportunity to build “competitive differentiators” on your network

JDN Partner Options: Open Research

- Availability:
 - Academics / Standards Organizations / Research Organizations
- Requirements:
 - Qualified institution
 - JDN Developer Support subscription purchase
 - Execution of JDN License Agreement: Open Research
 - Coordinated marketing support
- Supported Activity:
 - Partner may use all GA Juniper SDKs to build JDN Apps for internal, experimental, noncommercial use
 - Partner may publish papers on these Apps (not on the SDKs themselves)
 - Partner may publish App source code to the entire JDN community via JDN Code Repository
 - Any JDN partner can use such published code
 - Partner may not distribute App binaries under this license
- Developer Support
 - Dedicated JDN Developer Support available for purchase
- Notes
 - Other JDN partners may use published App source code for any purpose
 - Research partners may consider leveraging ISV / Consultant licenses for commercial use
 - Partners are encouraged to also engage on the Juniper Academic Alliances program
 - Terms may change as program evolves



JDN Partner Options



- Partners may have more than one type of license – this is encouraged!
- Each instance of an App must be under exactly one license type at a time
- Every time an App is digitally signed, the license type is included in the signature
- Example 1:
 - BigBrain University creates an App under Research license
 - BigBrain sends source code to Code Repository
 - BigBrain may then decide to license this App to others, and obtains an ISV License
 - BigBrain then sells App to BigCustomer
- Example 2:
 - BigCustomer may develop a (different) App for production use under Customer license
 - BigCustomer may decide that everyone should use this App, so obtains a Research license
 - BigCustomer may distribute App source code freely under Research license

Junos SDK

The Technology



Platform

- Juniper's network operating system
- Runs on Juniper systems
- May be licensed to partners
- Provides access to Junos Automation (Junos scripts)



- Juniper's network application, orchestration, and management platform (appliance or virtual machine)
- Manages Juniper systems; hosts network applications
- Provides access to APIs



- Juniper's network client platform remote access, access control, wan acceleration

SDK

- Junos SDK allows intelligence & functionality to be loaded directly onto a Juniper box
- Today: Control Plane / Routing Engine & Services Cards
- Future: More Platforms, Virtualization, and more
- Initial Release: May 2007

- Junos Space SDK allows network applications to be written directly for the Junos Space platform, taking advantage of both the platform intelligence & the other Apps.
- Planned Release: Q4 2010 GA, Q3 2010 Betas

- Identity and location aware software client
- Evolving into a mature unified client
- Idea still being fleshed out

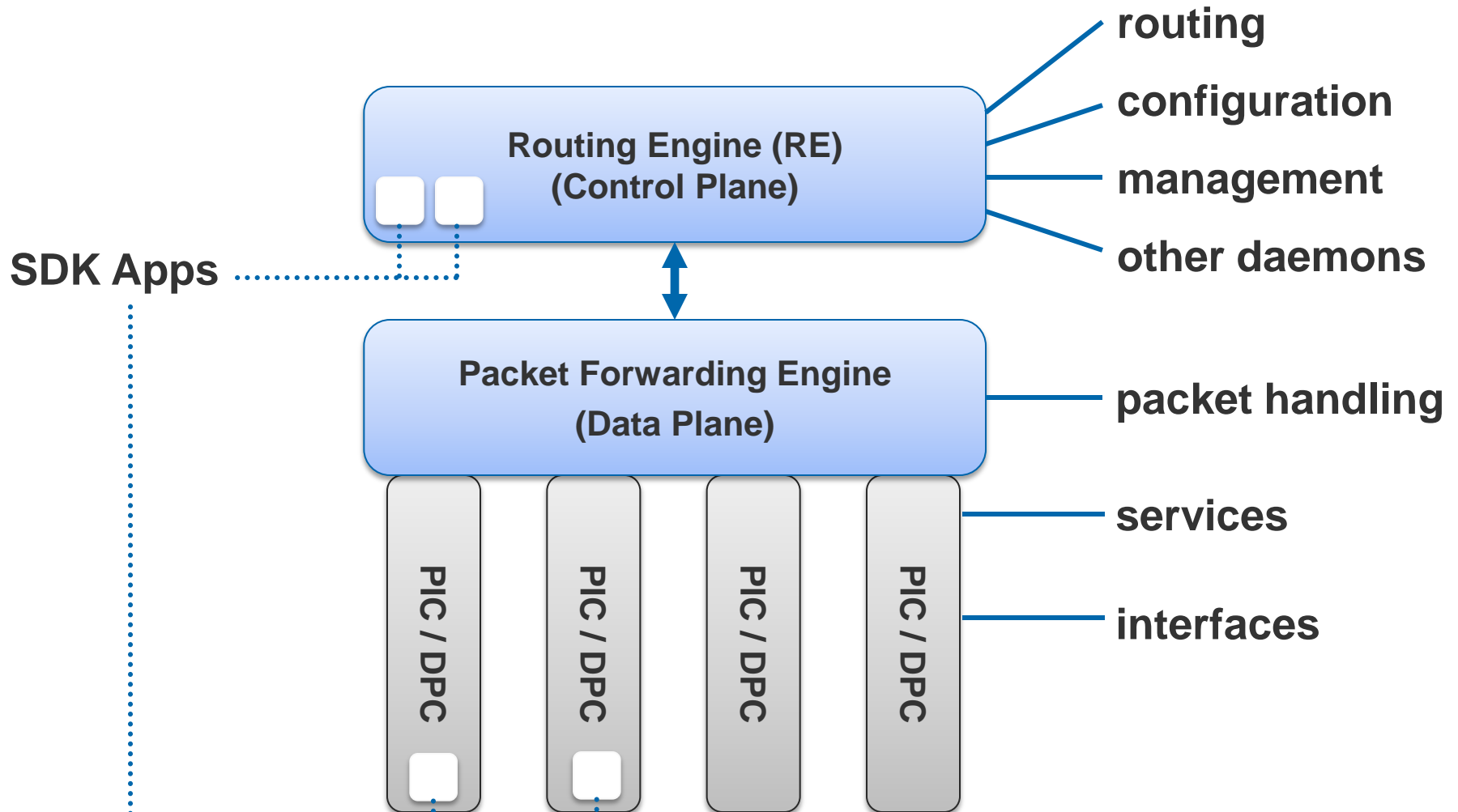
Solutions

- Example SDK Partners: Triveni, Telchemy, Harris Stratex, Feeva, Active Broadband Networks, Radware, AT&T, NTT, Lockheed Martin
- Example Platform Partners: BNT, Ankeena
- Juniper Developed w/SDK: DPI Service, more planned

- Example SDK Partners: tbd (pending SDK release)
- Example Platform Partners: Q1 Labs, Packet Design, Dhyana, OSCP Partners
- Juniper Developed & Related: Ethernet Activator, Route Insight Manager, Service Now, more planned

- SDK Partners: tbd (pending SDK release)
- Example Platform Partners: iPass, WebRoot
- Juniper Developed: Unified Client

JUNOS Architecture (Simplified)



Junos SDK: Apps on the Routing Engine

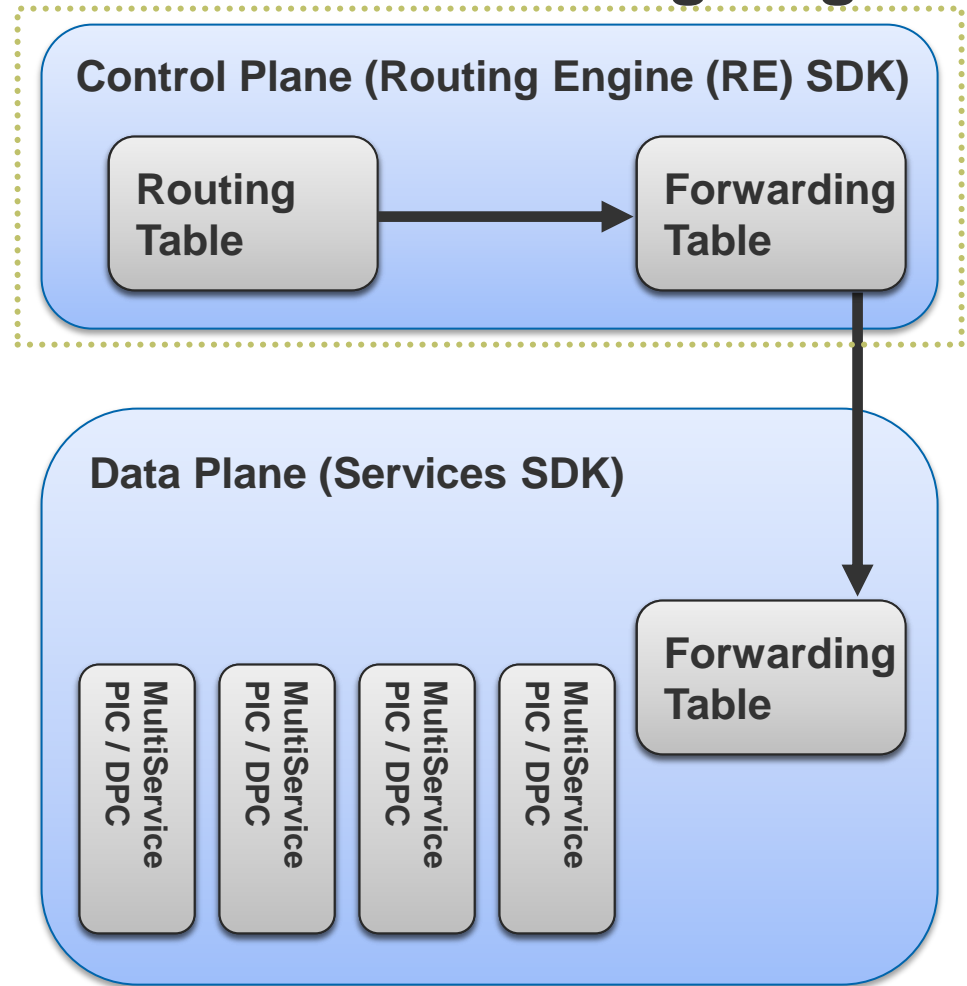
Control plane applications run on the Routing Engine

RE SDK Functionality

- Routing table manipulation
- Create CLI commands
- UNIX APIs
- Configuration
- Data Store

Application examples

- Specialized signaling protocols
- Performance Mgmt
- Intelligent Agents



Junos SDK: Apps on the Services PIC / DPC

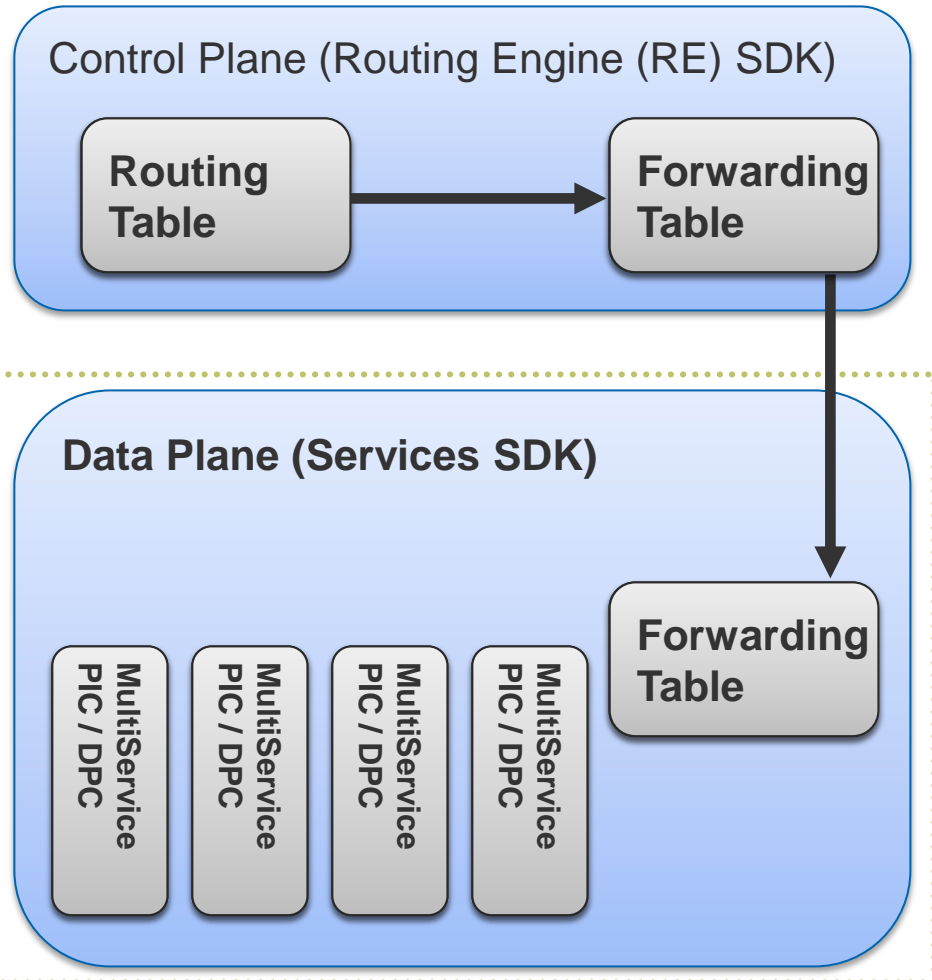
Data plane applications run on the Services PIC/DPC

Services SDK Functionality

- Raw packet processing framework
- Very efficient and scalable environment
- Most RE-SDK features

Application examples

- Deep Packet Inspection
- Encryption
- Control Plane Scalability
- SLA Monitoring
- SLA Mitigation



Academic Alliance

Juniper Academic Alliance Program

The Juniper Networks Academic Program is a comprehensive program designed specifically for the academic community.

The program:

- Enables academic institutions to be technically self –sufficient;
- Gives academic users easy access to cutting-edge technology and resources;
- Permits technical thought leaders of tomorrow to excel in their field through access to the best-in-class development environment today.

JUNIPER
NETWORKS

PARTNER

ACADEMIC ALLIANCE

Advanced Developer Track (University Program)

Learn how to do it: guided training and exercises



Developing
Research
Opportunities

**Application Developers – SDK
interfaces and API sets.**

**Team projects with Juniper
sponsored prizes and awards**

**Research and Development –
Sandbox, internships and projects**

Contact Information

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everywhere