

Remote Access VPN

Helping enterprise businesses implement strong authentication for their remote workforce



NXTWORK 2017
JUNIPER CUSTOMER SUMMIT

Julian Weinberger | Director System Engineering, NCP Engineering Inc.

Vaishali Ghiya | Senior Director, Global Security Sales & Solutions, Juniper Networks

LEGAL DISCLAIMER

This statement of direction 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 in this presentation.

This presentation contains proprietary roadmap information and should not be discussed or shared without a signed non-disclosure agreement (NDA).



Security Sessions at NXNETWORK

**Dec 12th
Mainstage**

- *Make The Network Your New Security Platform* | Kevin Hutchins, SVP, Strategy and Product Line Management, Juniper Networks
- *Conversation*: Bob Worrall, SVP, CIO, Juniper Networks and Ed Glover, Vice President, Stroz Friedberg
- *Panel Discussion* | Anthony Belfiore SVP, CSO, Aon, John White, Vice President of Product Strategy, Expedient. Moderator: Mike Marcellin, CMO, Juniper Networks
- *Conversation* | Jeff Moss, President, DEF CON Communications and Mike Marcellin, Juniper Networks
- *Simulation of a Security Breach* | Christopher Crummey, Executive Director - IBM Security X-Force Evangelism & Outreach

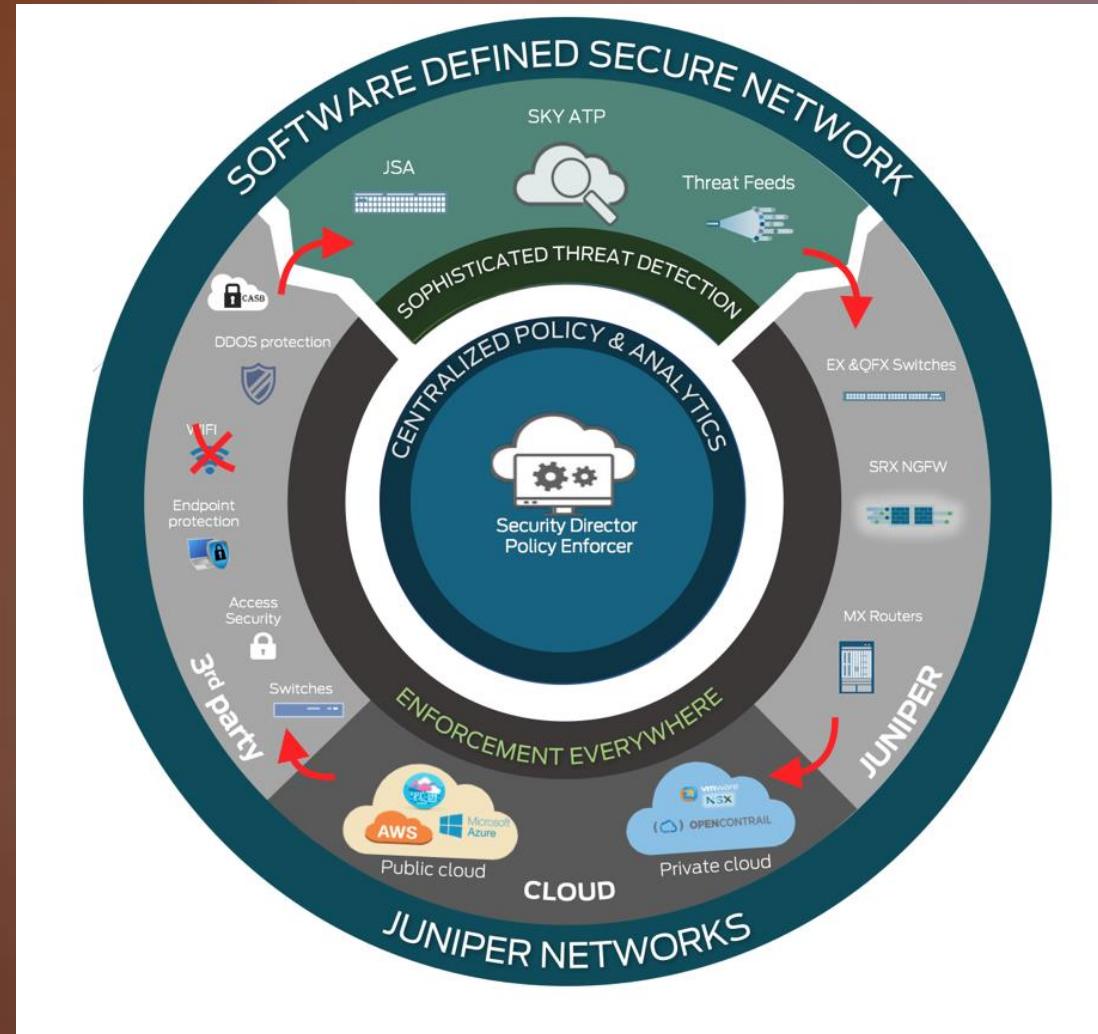
**Dec 12th
Salon 10-11**

- Remote Access VPN for Juniper SRX
- Zero Security Trust with SDSN Networks
- Securing Hybrid Cloud
- Deploying Enterprise Scale User Firewall
- Secure Enterprise Branch Solutions with NFX and Automation
- Contrail Security: Diminishing Risk to Applications in Any Cloud
- Deploying Enterprise Scale User Firewall and Device Identity

**Dec 13th
Salon 10-11**

- Extending Enterprise Security to Hybrid and Public Cloud
- MX Edge Security Solution for Cloud, Mobility & Wireline Providers
- Security NOW: Stop Threats Faster

Software Defined Secure Network

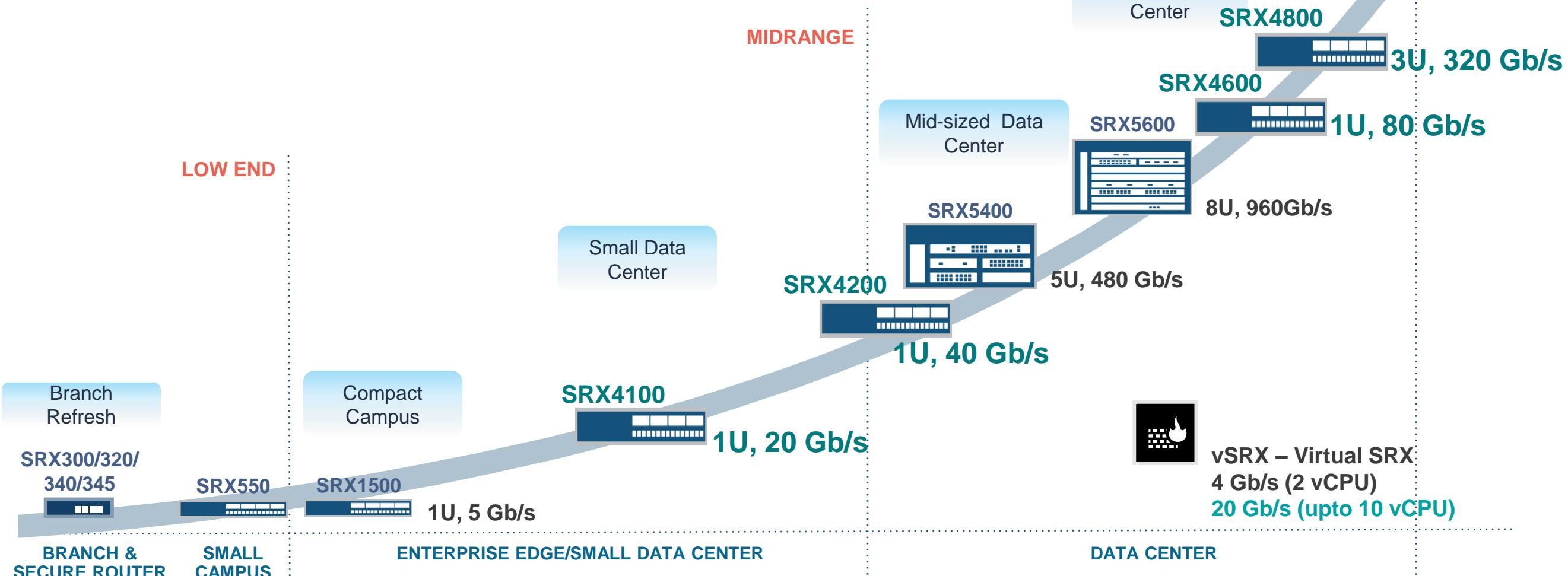


Network as a Security Enforcement System

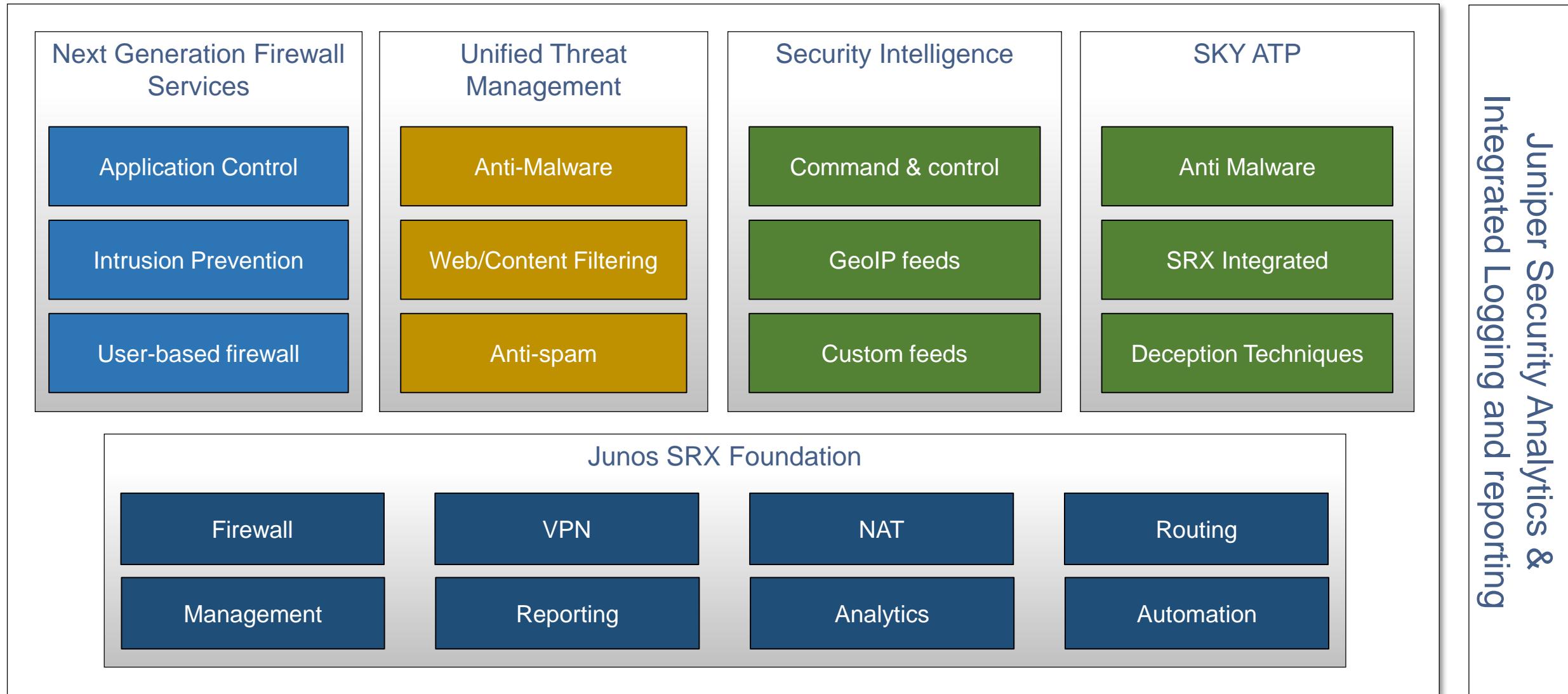


SRX Product Line Evolution

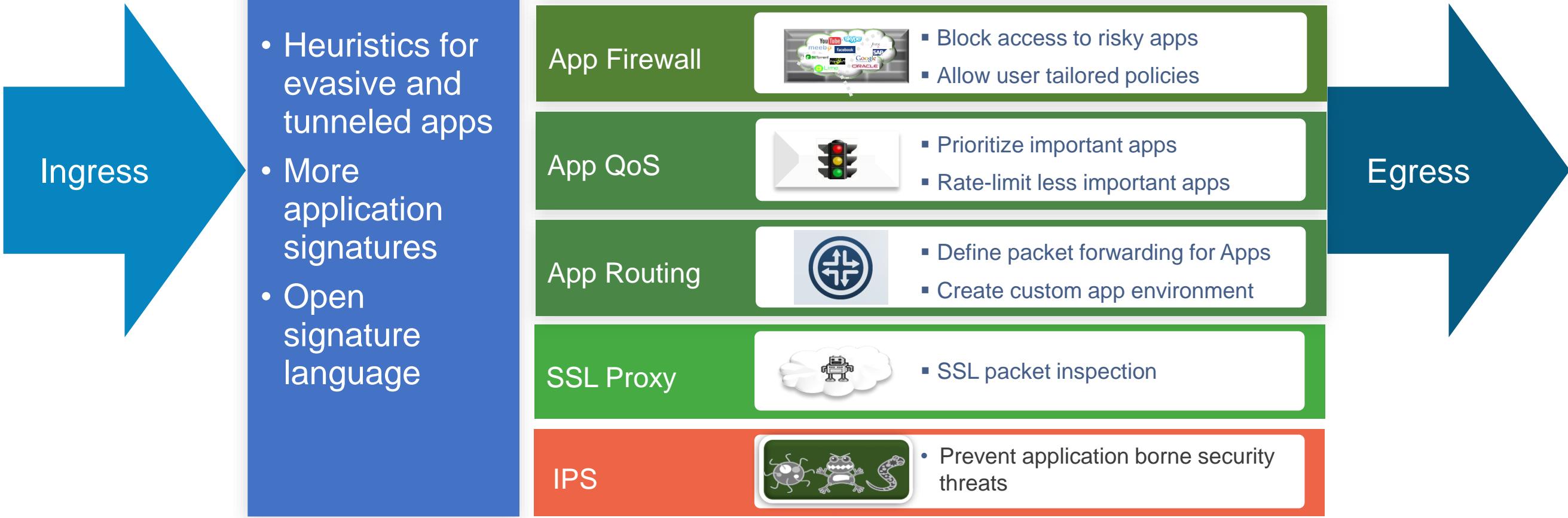
New hardware platforms & software innovations



Security Services: Physical and Virtual SRX



Next Generation Firewall Services



SRX Unified Threat Management (UTM)



Antivirus

- Sophos Live Protection against Trojans, Viruses, Phishing Attacks
- Reputation-enhanced capabilities

Antispam

- Multilayered spam protection from security experts
- Protection against APTs

Web Filtering

- Block malicious URLs
- Prevent lost productivity
- Websense TSC with more than 140 categories

Content Filtering

- Filter out extraneous or malicious content
- Maintain bandwidth for essential traffic

Subscription Based Software Services for a Turnkey Fully Integrated Offering



SECURE COMMUNICATIONS





REMOTE ACCESS VPN FOR JUNIPER SRX

Joint Solution NCP & Juniper Networks



REMOTE ACCESS VPN FOR JUNIPER SRX

Joint Solution NCP & Juniper Networks

■ Secure – Cost Efficient – Ease of use - Mobile



IPsec and SSL VPN in one VPN client



One interface across all devices



One solution for Juniper SRX/vSRX Series



Strong authentication built in



Everything combined in one GUI



Automated Media Detection



Always On



Automatic Network Detection



High scalable



REMOTE ACCESS VPN FOR JUNIPER SRX

Helping enterprise businesses implement strong authentication
for their remote workforce

■ Julian Weinberger | +1 650 316 6273 | www.ncp-e.com





REMOTE ACCESS VPN FOR JUNIPER SRX

Julian Weinberger



Julian Weinberger

NCP Engineering Inc.
Director System Engineering

678 Georgia Ave.
Sunnyvale, CA 94085

Phone +1 650 316 6273
E-Mail julian.weinberger@ncp-e.com





REMOTE ACCESS VPN FOR JUNIPER SRX

User passwords are not enough

- Many recent breaches have one thing in common: compromised passwords
- If your network security relies solely on user passwords for access, you're putting your corporate data at risk
- Two-factor authentication adds a layer of security for clear identification of every user
- Added protection reduces the risk and enormous costs associated with a potential data breach



REMOTE ACCESS VPN FOR JUNIPER SRX

Why Two- or Multi-Factor Authentication?

- Many industries, network architectures and corporate policies demand that remote access VPN infrastructures are protected with two-factor authentication
 - Higher level of security
 - Regulatory industry compliance
 - Enterprise information security policies

- Other single factor authentication methods are
 - Don't provide necessary level of security
 - Too complex for administrator compared to level of security



REMOTE ACCESS VPN FOR JUNIPER SRX

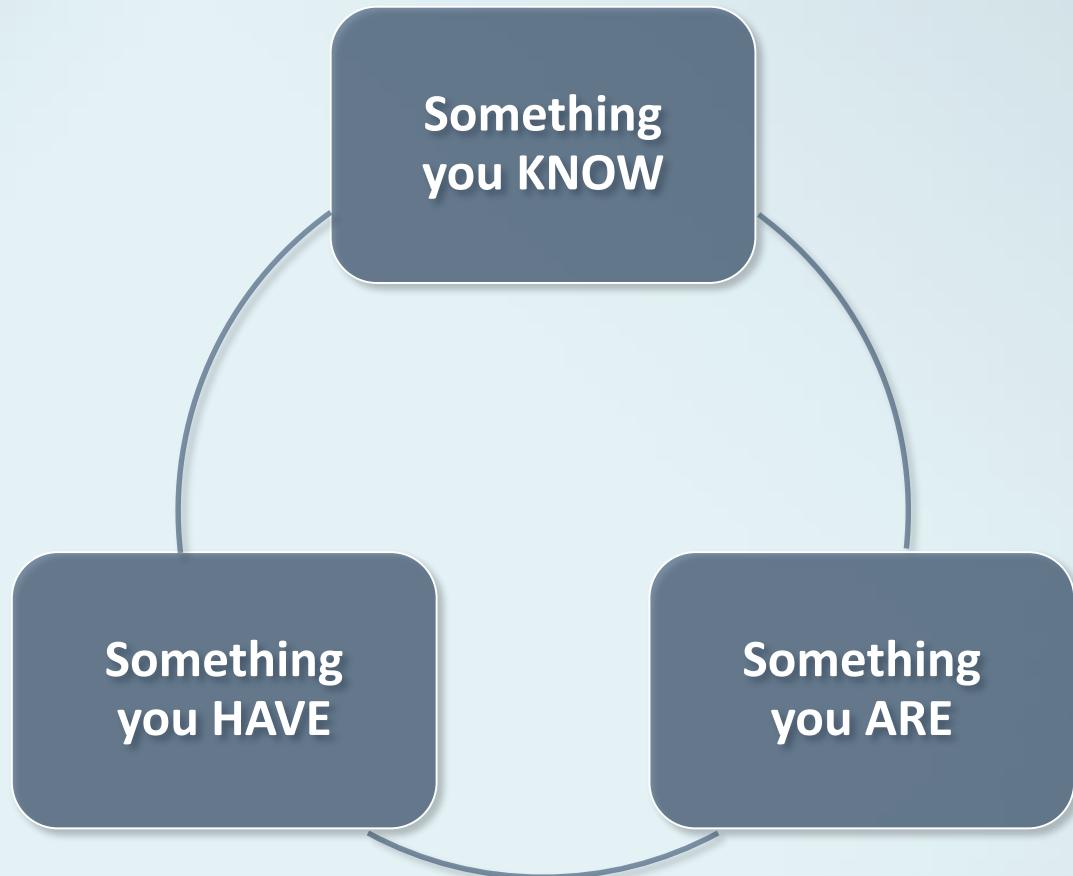
Session Agenda

- Methods of user authentication
- Putting two (or more) factors together
- Barriers to adoption
- Balancing security and simplicity
- Challenges for strong authentication in remote access environments
- Solution for Juniper SRX
- Q&A



REMOTE ACCESS VPN FOR JUNIPER SRX

Authenticating data types



Two-factor authentication makes use of (at least) two types, and at least one from **two different** categories

REMOTE ACCESS VPN FOR JUNIPER SRX

Methods of User Authentication

■ Something You KNOW

- Password/PIN
- OTP (one-time password)
- User certificates

■ Something You Have

- Token or calculator
- Phone
- Machine/Hardware certificate
- Smartcard
- TPM





REMOTE ACCESS VPN FOR JUNIPER SRX

Methods of User Authentication

■ Something You ARE

- Fingerprint
- Face recognition
- Iris recognition
- Keystroke dynamics



REMOTE ACCESS VPN FOR JUNIPER SRX

Putting two factors together

- Common examples of combining “something you KNOW” and “something you HAVE/ARE” to clearly validate user identity include:
 - OTP + phone
 - Certificate + smartcard
 - Certificate + TPM (virtual smartcard)
 - Password + fingerprint
 - Certificate + fingerprint
 - OTP + token
 - OTP + calculator





REMOTE ACCESS VPN FOR JUNIPER SRX

Going overboard

- Combining a super-secure authentication solution that includes, for example, a token, OTP, smartcard, and certificate isn't likely to be acceptable to an end user



REMOTE ACCESS VPN FOR JUNIPER SRX

Barriers to adoption

- If the need for two-factor authentication is understood, why is the adoption rate still low?
 - Another layer of security means another layer of work
 - Some VPN clients, operating systems, and application do not support it
 - An enterprise's user directory – using single sign on – may not support it
 - Most second factors require hardware, adding rollout and maintenance costs



REMOTE ACCESS VPN FOR JUNIPER SRX

Challenges in a Remote Access VPN environment

■ Costs

- Additional hardware
 - Tokens
 - Smartcards
 - Card reader
 - Fingerprint Scanner
 - ...

■ Service/Software

- Authentication Server
- Service fee
- ...



REMOTE ACCESS VPN FOR JUNIPER SRX

Challenges in a Remote Access VPN environment

■ Rollout

- How to get the second factor of authentication to the end user
 - Shipping
 - Administrative costs
 - ...



REMOTE ACCESS VPN FOR JUNIPER SRX

Challenges in a Remote Access VPN environment

■ Overhead

- For the user
 - Training
 - Actual usage of the second factor
- For the Enterprise
 - Helpdesk calls
 - Shipping and return of hardware
 - Hardware damage
 - Administration
 - ...



REMOTE ACCESS VPN FOR JUNIPER SRX

Where should you start?

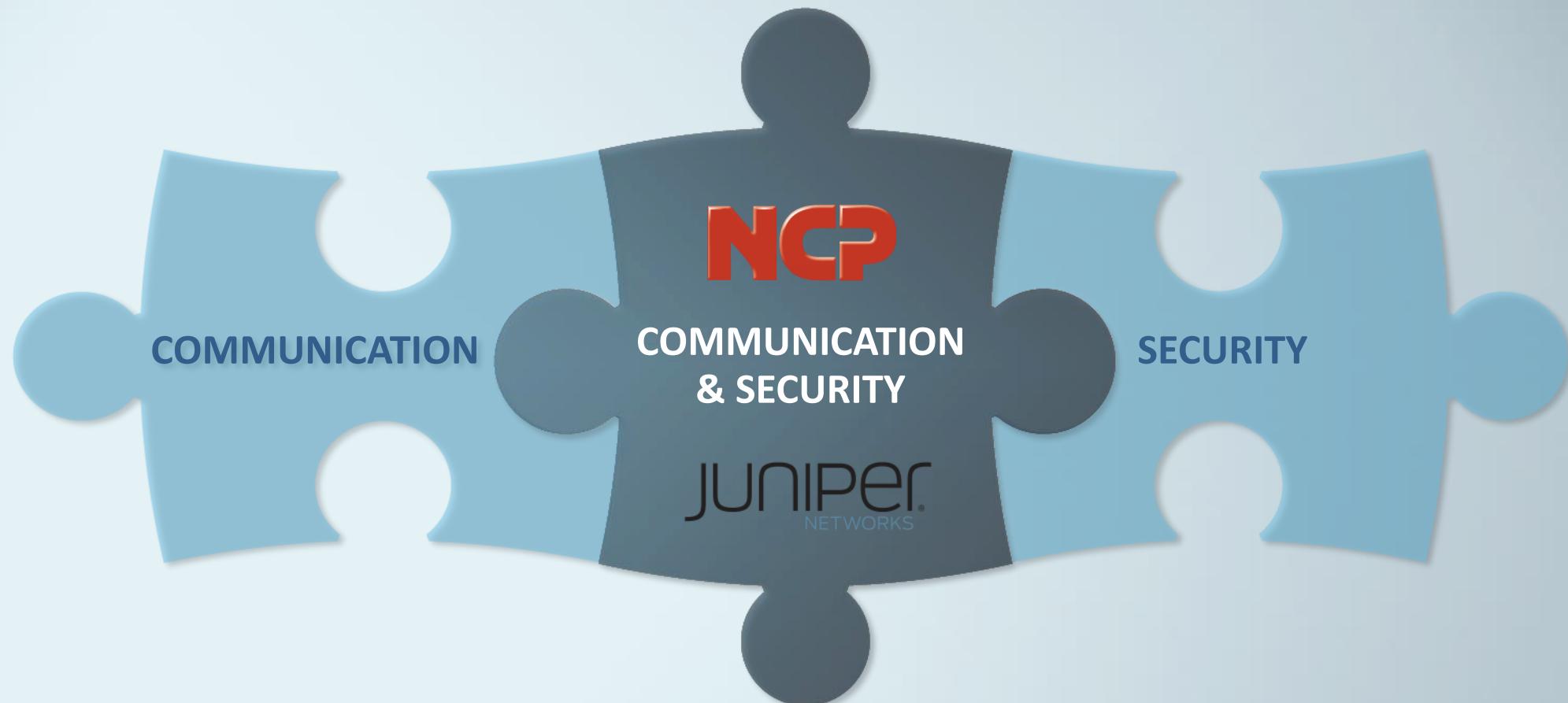
- Choose a two- or multi-factor authentication solution that meets these criteria:

Feature	Benefit
Fully integrated with VPN services	Not having to deal with two different vendors speeds up implementation and reduces helpdesk support costs
Easy to implement	Using existing hardware, such as phones, doesn't introduce new admin challenges
Easy to maintain	Cumbersome authentication steps or specialized hardware add support headaches
Scalable	Central management, with automated updates, makes it easy to support your growing business needs



REMOTE ACCESS VPN FOR JUNIPER SRX

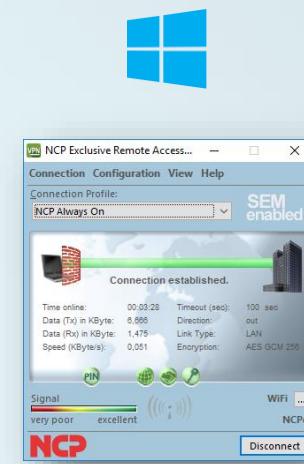
Joint Solution NCP & Juniper Networks





REMOTE ACCESS VPN FOR JUNIPER SRX

Joint Solution NCP & Juniper Networks



Windows



macOS / OS X



Android



iOS



REMOTE ACCESS VPN FOR JUNIPER SRX

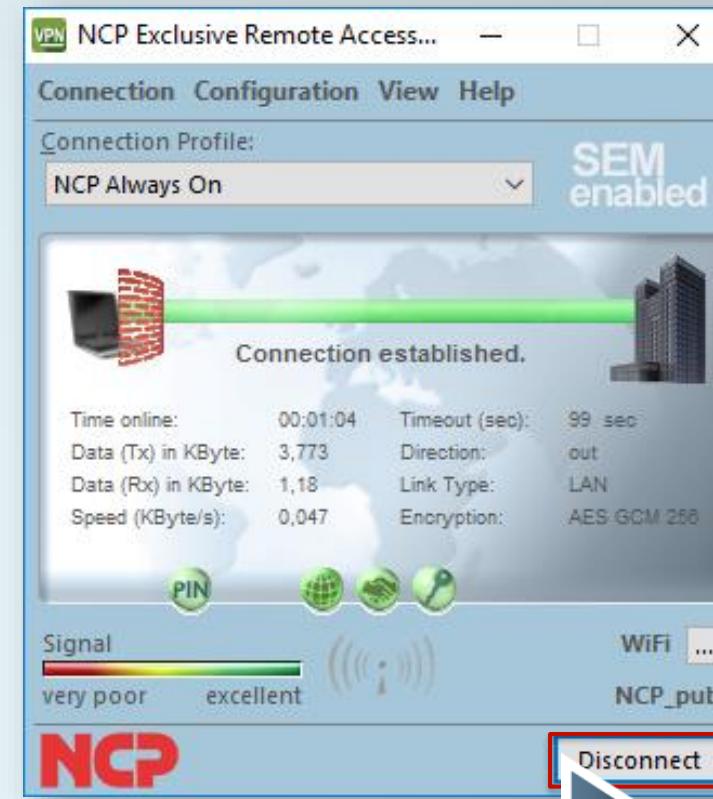
Joint Solution NCP & Juniper Networks



WiFi LOGIN



3G / 4G / LTE



PERSONAL FIREWALL

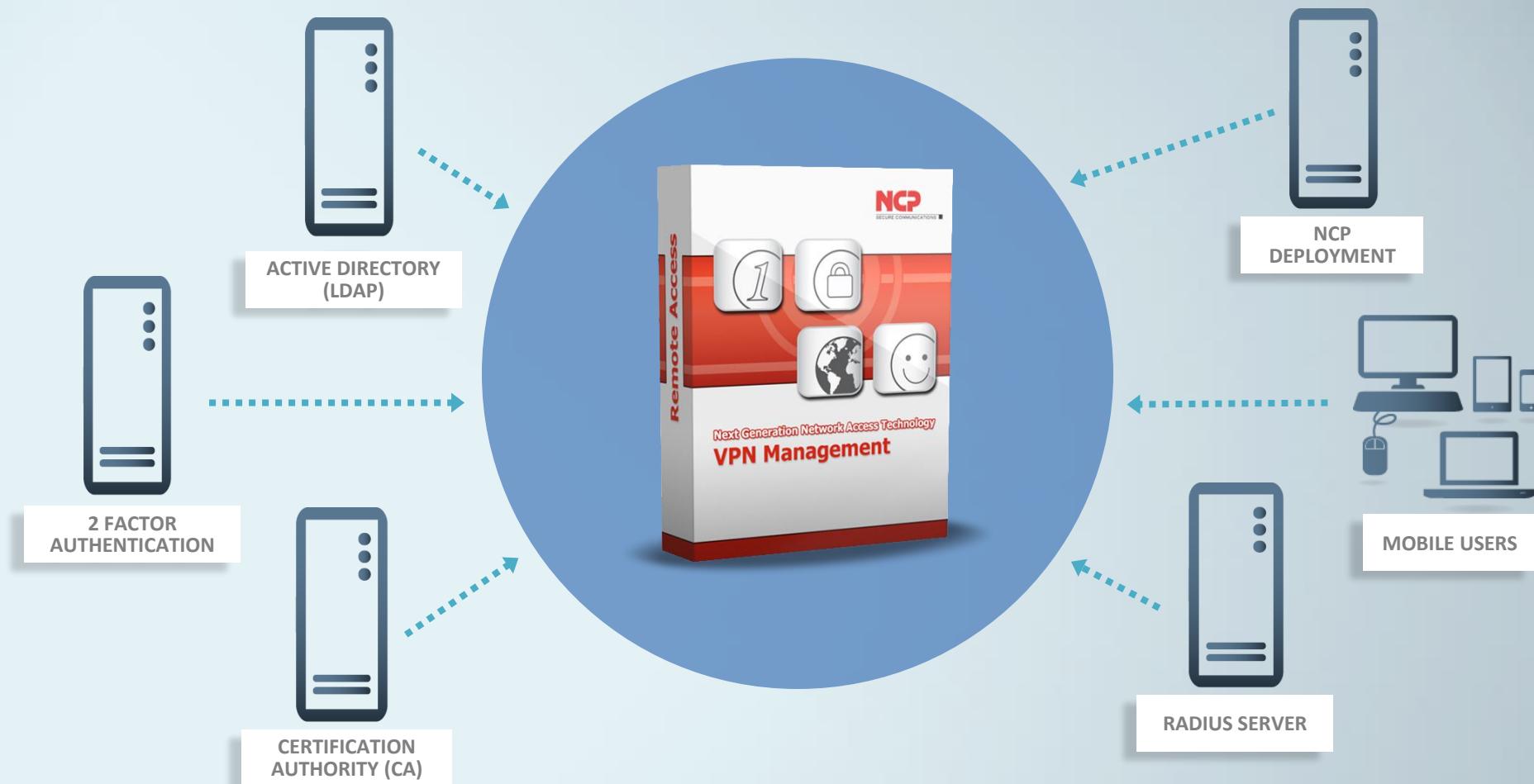


VPN CLIENT

ONE CLICK / ZERO CLICK

REMOTE ACCESS VPN FOR JUNIPER SRX

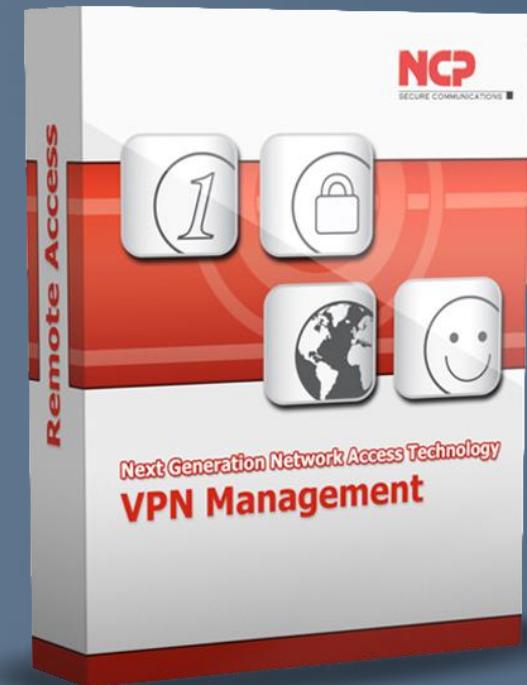
Joint Solution NCP & Juniper Networks



REMOTE ACCESS VPN FOR JUNIPER SRX

Joint Solution NCP & Juniper Networks

- Central Management System for VPN clients
- Automated configuration and software update
 - Configuration and software update
 - Mass rollouts
 - Create, renew and revoke certificates
- Multi-tenancy capability
- Manageability of all VPN clients
 - Full control of VPN clients
- Integration with any directory service (LDAP, AD, RADIUS, ...)
- Two- and multifactor authentication
 - Support of 3rd party solutions
 - Built-in two-factor authentication



REMOTE ACCESS VPN FOR JUNIPER SRX

Joint Solution NCP & Juniper Networks

■ Built-in two-factor authentication

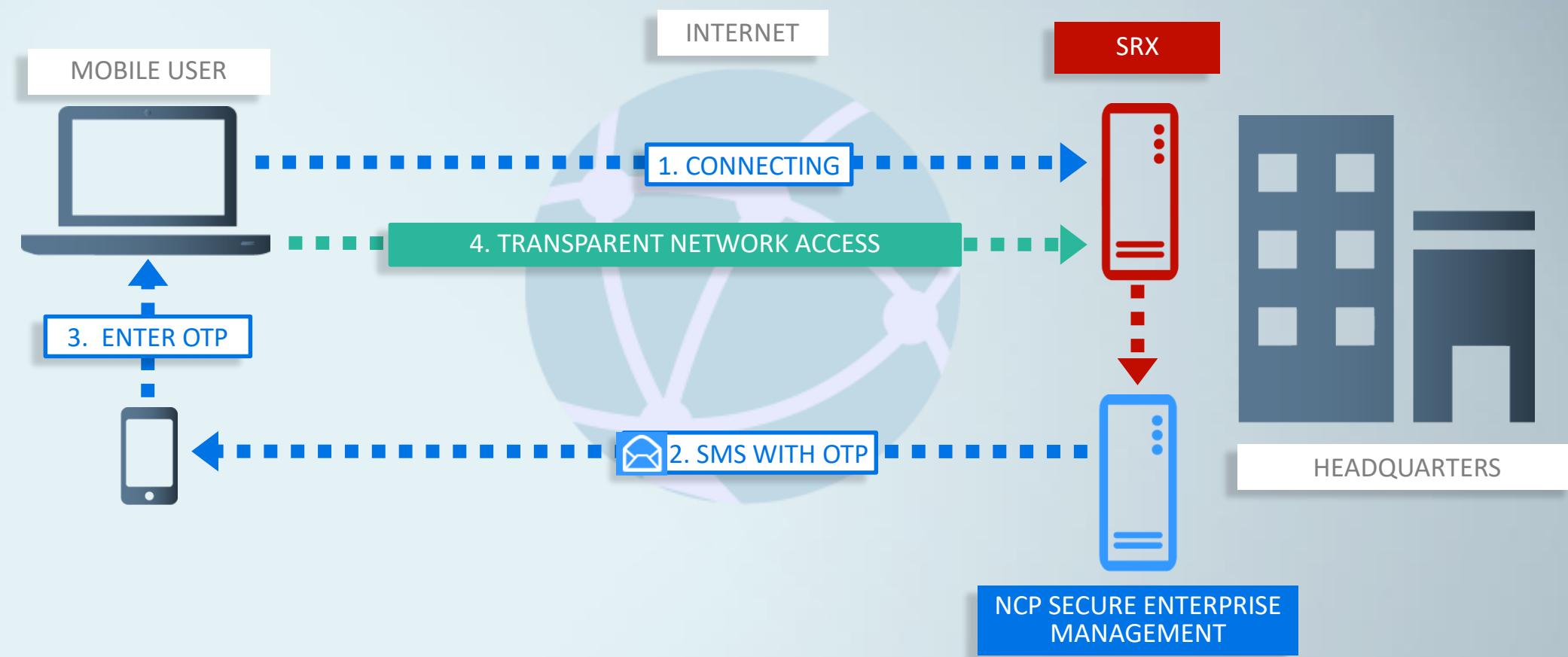
- NCP & Juniper Networks provide a built-in two-factor authentication for Juniper SRX
 - Based on OTP
 - Uses text messages to deliver the OTP to user's phone
 - Interface to text message provider
 - Interface to mobile broadband cards
 - Easy and scalable





REMOTE ACCESS VPN FOR JUNIPER SRX

Joint Solution NCP & Juniper Networks



REMOTE ACCESS VPN FOR JUNIPER SRX

Summary

- Depending solely on user passwords for VPN access puts corporate secrets at risk
- Two-factor authentication adds a layer of security to identify users clearly
- Authenticating data is based on something you KNOW, HAVE and/or ARE
- Overcome barriers to adoption with solutions that are:
 - Integrated with VPN services and user directory
 - Easy to implement and maintain
 - Scalable
- NCP & Juniper Networks provide you with sophisticated two-factor authentication solutions for your Juniper SRX



REMOTE ACCESS VPN FOR JUNIPER SRX

Joint Solution NCP & Juniper Networks

- Sign up at www.ncp-e.com to get access to
 - Free 30 days trial versions of the software
 - Pricelist
 - Sales presentation
 - Data sheets
 - Step-by-step configuration guides

- Visit our booth
 - Booth #7
 - Get a demo by a System Engineer
 - Receive further information about the solution
 - Or just say “Hi”





THANK YOU FOR YOUR ATTENTION

PLEASE FEEL FREE TO ASK ANY QUESTIONS

■ Julian Weinberger | julian.weinberger@ncp-e.com | +1 650 316 6273 | www.ncp-e.com

