Remote Access VPN

Helping enterprise businesses implement strong authentication for their remote workforce

Julian Weinberger  |  Director System Engineering, NCP Engineering Inc.

Vaishali Ghiya  |  Senior Director, Global Security Sales & Solutions, Juniper Networks
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## Security Sessions at NXTWORK

### Dec 12th

**Mainstage**
- *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

Detection
- Machine Learning & AI – Malware Detection
- Intrusion Prevention, SIEM (JSA)
- Threat Feeds: Command & Control, GeoIP etc

Policy
- User intent based policy model
- Robust visibility and management

Enforcement
- Perimeter Firewalls
- Switches & Routers
- SDN Platforms (Vmware NSX, Contrail)
- Public Cloud (AWS etc)
SRX Product Line Evolution

New hardware platforms & software innovations
Security Services: Physical and Virtual SRX

Next Generation Firewall Services
- Application Control
- Intrusion Prevention
- User-based firewall

Unified Threat Management
- Anti-Malware
- Web/Content Filtering
- Anti-spam

Security Intelligence
- Command & control
- GeoIP feeds
- Custom feeds

SKY ATP
- Anti Malware
- SRX Integrated
- Deception Techniques

Junos SRX Foundation
- Firewall
- VPN
- NAT
- Routing
- Management
- Reporting
- Analytics
- Automation

Juniper Security Analytics & Integrated Logging and reporting
Next Generation Firewall Services

**Ingress**

- Heuristics for evasive and tunneled apps
- More application signatures
- Open signature language

**App Tracking**
- Understanding security risks
- Address new user behavior

**App Firewall**
- Block access to risky apps
- Allow user tailored policies

**App QoS**
- Prioritize important apps
- Rate-limit less important apps

**App Routing**
- Define packet forwarding for Apps
- Create custom app environment

**SSL Proxy**
- SSL packet inspection

**IPS**
- Prevent application borne security threats

**Egress**
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
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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

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

- **Something you KNOW**
- **Something you HAVE**
- **Something you ARE**
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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
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Methods of User Authentication

- Something You ARE
  - Fingerprint
  - Face recognition
  - Iris recognition
  - Keystroke dynamics
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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
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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.
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
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Challenges in a Remote Access VPN environment

- Costs
  - Additional hardware
    - Tokens
    - Smartcards
    - Card reader
    - Fingerprint Scanner
    - ...
  
  - Service/Software
    - Authentication Server
    - Service fee
    - ...

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Challenges in a Remote Access VPN environment

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

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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
    - ...

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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
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<tbody>
<tr>
<td>Fully integrated with VPN services</td>
<td>Not having to deal with two different vendors speeds up implementation and reduces helpdesk support costs</td>
</tr>
<tr>
<td>Easy to implement</td>
<td>Using existing hardware, such as phones, doesn’t introduce new admin challenges</td>
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<tr>
<td>Easy to maintain</td>
<td>Cumbersome authentication steps or specialized hardware add support headaches</td>
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<tr>
<td>Scalable</td>
<td>Central management, with automated updates, makes it easy to support your growing business needs</td>
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</tbody>
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Windows
macOS / OS X
Android
iOS
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One Click / Zero Click

WiFi Login
3G / 4G / LTE

VPN Client
Personal Firewall
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- 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
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- 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
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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
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- 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