SSH
Capital Markets Day
October 28, 2020
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Nothing in this presentation constitutes investment advice and this presentation shall not constitute an offer to sell or the solicitation of an offer to buy any securities of SSH or otherwise to engage in any investment activity.
Today’s speakers

**Teemu Tunkelo**  
Chief Executive Officer  
at SSH since March 2020

- Ph.D. in Economics & M.Sc. (Tech) in Computer Science
- 25-year leadership experience from Voith, Siemens, ABB, Invensys, Compaq
- Previous CEO of Enfo & Board member at Nixu

**Niklas Nordström**  
Chief Financial Officer  
at SSH since 2018

- Master of Laws & Bachelor of Economics, Accounting and Finance
- Over 10-year financial management experience from various NASDAQ companies
- Previously worked as CFO for Biohit Oyj, a Helsinki based public biotech company

**Jussi Mononen**  
Chief Commercial Officer  
at SSH since 2016

- M.Sc. (Tech) in Industrial Management & Computer Science
- Long management experience from international technology-intensive businesses
- Ekahau, Nexit Ventures, Digia, Iedan, Portalify
Welcome to SSH’s Capital Markets Day

• SSH is turning a new page in its 20-year history as a listed company
• With a new lead owner, new BoD, new CEO and new management team, SSH is striving to deliver strong business results in an attractive market
• Today’s CMD will give you insights into our portfolio, customers, and short term strategy through 2022
• Covid-19 does provide new business opportunities for SSH as a global boutique cybersafety company
• We help our customers protect their valuable data in use, in motion and at rest by controlling superuser and 3rd party access to their valuable data
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   - Tectia
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   - PrivX
   - NQX
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What is SSH about
Not even the company CEO has access to all the rooms in the office. It’s the service personnel who have.

**Physical world**

- **Janitor**
  - Has **keys** to every room
  - Makes sure everything is under control
  - Can do anything in the building

**Digital world**

- **Superuser**
  - Has **invisible digital keys** to every system
  - Makes sure everything is under control
  - Can do anything in the system

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**How can I issue digital keys on demand?**

**How do I know where my digital master keys are?**

**How can I automate my various IT systems to share data securely?**

**What is the risk to my business if the access to key data is compromised?**

**How can I automate my various IT systems to share data securely?**
Rapid digitalization brings new risks in managing digital keys in systems with critical data

- **39 seconds**: Average time between attacks worldwide
- **$4M**: Average cost of a data breach
- **9 months**: Average time to detect a breach

Source: IBM, Cybersolutions, Forbes, Sphreco
Where is your valuable data, and do you know who can access it?

- **74%** of data breaches start with digital keys in the wrong hands.
- **83%** of organizations do not have robust processes to control their digital keys.
- **95%** of cloud breaches in 2020 are predicted to be due to customer vulnerabilities.

We protect digital keys and critical data in traditional and cloud environments.

Source: IBM, Gartner
We protect customers’ high value data in use, in motion, and at rest

PrivX – Cloud-native access management

NQX – Post-quantum ready encryption software for demanding environments

Tectia – Industry leader in SSH secure file transfer and remote communications

Universal Key Manager (UKM) – Digital key management and control

Our proven track record places us as thought leader in our segments

- 20+ years in Tectia
- 8+ years in UKM
- 2+ years in PrivX
- NQX Now
We have a 25-year history of innovation in cybersecurity

1995, Helsinki: SSH founded by Tatu Ylönen, the inventor of SSH (Secure Shell) protocol
1995: Tectia SSH client/server introduced

2000: IPO, Nasdaq Helsinki OMXH: SSH1V

2012: Universal Key Manager (UKM) launched

2018: PrivX launched

2020: New ownership and leadership to drive renewal and growth
2020: NQX commercially launched

Over 5M annual unique website visitors indicates SSH thought leadership is relevant and needed
Our team of experts delivers state-of-the-art solutions across the world

New organization to promote customer proximity and delivery

- **Product line**
  - CEO: Tectia & UKM
  - CFO: NQX
  - CCO: PrivX

- **Region**
  - APAC
  - EMEA
  - AMER

- **Function**
  - R&D & Technical product management
  - Finance
  - Sales & Marketing
  - HR & Admin
  - Customer services

- **Map**
  - Helsinki HQ
  - Boston
  - NY
  - Hong Kong

80+ passionate employees on three continents

More than **90 % of our revenue is international**
Customers, markets & competition
Our high-end solutions have growth potential

Cybersecurity market
112B€ / 12% CAGR

VPN
~20B€ / 15% CAGR

Managed File Transfer
2B€ / 15%

Tectia

NQX

UKM

SSH keys

PrivX

Identity and Access Management
~11B€ / 13% CAGR

Enterprise Key Management
1,6B€ / 19%

Privileged Access Management
2B€ / 20%

Source: PwC, IDC, Fortune Insights, Markets&Markets, Grandviewresearch, SSH Analysis

SSH products have different market logic:
Component: Tectia, NQX
System: UKM
Solution: PrivX
Our three regions compared

**Americas**
- Our largest market (>50% of revenues)
- Key products Tectia & UKM, PrivX starting to grow
- Revenue maintenance-driven
- Moved our Americas HQ to New York
- Mainly direct sales

**EMEA**
- Our second largest market with 25% of revenues
- PrivX showing fast growth
- Rebuilding our presence in Central Europe
- Mainly direct sales

**APAC**
- Roughly 20% of revenues
- Key product Tectia, room for growth for PrivX and UKM
- Planning to move our APAC HQ to Singapore and increase focus in South-East Asia
- Two-tier channel structure

Source: PwC, IDC, Fortune Insights, Grandviewresearch
We compete in selected markets where we have a competitive advantage against larger players

<table>
<thead>
<tr>
<th>Competitive advantage</th>
<th>PrivX</th>
<th>UKM</th>
<th>Tectia</th>
<th>NQX</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Modern, cloud-native scalable architecture</td>
<td>• Most comprehensive full lifecycle SSH key management solution</td>
<td>• Leading commercial SSH offering on the market</td>
<td>• Quantum-ready encryption software for connections between clouds and offices</td>
<td></td>
</tr>
<tr>
<td>• Fast rollout and ease of use</td>
<td>• Least disruptive deployment</td>
<td>• Superior performance</td>
<td>• Hardware-independent</td>
<td></td>
</tr>
<tr>
<td>• Superior ROI and low TCO</td>
<td>• Superior ROI and low TCO</td>
<td>• Premium 24/7 support</td>
<td>• Superior price-performance ratio</td>
<td></td>
</tr>
</tbody>
</table>

Selected competitors:

**PrivX**
- Thycotic
- Saviynt
- Okta
- CyberArk

**UKM**
- BeyondTrust
- AppViewX
- Centrify
- One Identity
- Venafi

**Tectia**
- Bitvise
- VanDyke
- OpenSSH
- Thales
- Forcepoint

**NQX**
- Insta
- Secunet
SSH focus is generally on large and medium enterprises, but Tectia also has small customers.

Company revenue

- **Large Enterprises**
  - 5 B€

- **Medium enterprises**
  - 100 M€

- **Small enterprises**
  - 10 M€
  - 0 M€

**UKM**
Large enterprises with complex infrastructures and numerous SSH keys in thousands of systems.

**PrivX**
Sweet spot from 100M€ - 5B€ companies.

**NQX**
Sweet spot large governmental organizations.

**Tectia**
Revenue mostly from large enterprises and many small enterprises.
World-class customers in each of our industry segments

- **Finance**: Société Générale, DBS, UBS, Citi, Maybank, ING, Aktia, OCBC Bank, BNP Paribas, Western Union WU, HSBC, Standard Chartered, ABN Amro

- **Retail**: Walmart, Staples, Ross, Home Depot, Best Buy, Stockmann, GAP

- **Industrial**: ANDRITZ, GM, Tata, Tamro, Metsä, Total, Airbus, Atria, ExxonMobil

- **Government**: NASA, IRS, United States Courts, United States Department of Defense, United Nations, European Commission
PrivX: Western Union

Western Union, the global leader in cross-border, cross-currency money movement, chose PrivX for its cloud access solution.

Rapid deployment, ease of use, and superior ROI were key reasons the customer chose PrivX over competing solutions.

The scalability of PrivX allows for a fast start with a small deployment and easy scaling with growing needs.

Tectia: Walmart

Walmart, the largest retail company in the world, uses the SSH Tectia® solution to enable secure remote access and secure end-to-end data file transfer throughout its extensive global computing network.

Because of the size and complexity of the global environment, it was important for Walmart to find a solution that could be used on all platforms.

UKM: ING-DiBa

ING-DiBA AG, the third largest retail bank in Germany, selected SSH.COM to deliver Universal SSH Key Manager (UKM) for centralized SSH key management and access control for its business-critical infrastructure.

UKM locates existing SSH keys, their owners and ownerless keys to ensure that all digital keys remain visible and their owners are known.
Current data use and protection trends strengthen our market position

Consumption trends
- Software-as-a-Service (SaaS)
- Increasing regulation
- Multivendor cloud

Technology trends
- Cloud transformation
- Infrastructure automation
- On-demand access
SSH helps customers manage their master keys

- Increasing amount of external superusers
- Increasing need to monitor and control digital key use
- More applications with superuser access rights
- Changing IT infrastructure and work practices

Future of data security
Our performance
Financial performance has been weak since 2016

SSH stock price development (€)

Sales development (M€)

- Patent licencing
- Software sales

+14%  -7%

0 1 2 3 4 5 6 7


8.8 9.1 8.1 11.9 13.3 16.2 18.9 15.2 16.2 2.1 2.7 14.4

Large companies generate most of our revenues, with financial services the largest industry segment.

**Sales distribution**

**By company revenue size**
- Large (>1B€): 79%
- Medium (10M€-1B€): 8%
- Small (<10M€): 13%

**By industry**
- Government: 10%
- Retail: 12%
- Industry & Other: 24%
- Financial services: 54%

**By region**
- EMEA: 25%
- APAC: 20%
- AMER: 54%
We have strong core assets and we will monetize them

We have strong products and deliver to many demanding customers

- Strong products
- Demanding customers
- Strong and recognized brand in cybersecurity industry
- Highly skilled technical workforce

We will be more effective in commercializing the products

- Significant room for improvement in sales execution
- Tectia & UKM have unrealised growth potential
- Transform R&D to be more customer-driven
- Create a growth-focused mindset
Growth Strategy
SSH strategy 2022 aims to kick start growth

We will focus on launching growth for the next 2 years

What has changed?

- New growth-oriented owners and leadership team
- Short-term growth targets can be reached with organic growth
  - Medium to long-term strategy could include acquisitions
- COVID-19 is a long-term opportunity due to remote working and changing IT landscape
We protect our customers’ high value data in use, in motion, and at rest

**PrivX** – Secure management of superusers and 3rd party administrators in clouds

**Tectia** – Industry leader in SSH secure file transfer and remote communications

**NQX** – Post-quantum ready encryption software for demanding environments

**Universal Key Manager (UKM)** – Digital key management and control
**Key elements of Strategy 2022** include revitalizing Tectia and UKM sales, while growing PrivX and NQX

### Main elements of Strategy 2022

**Revitalize and nurture Tectia and UKM** by investing in sales, support and R&D

**Continue strong PrivX growth** by investing in direct sales and partnerships supported by own professional services

**Initiate commercial deployments for NQX**, grow in Nordic governmental sector, strengthen post-quantum leadership and professional services

### Implementation actions

- Focus on **lighthouse customers**
- Improve the process from receiving **customer needs** to delivering **customer value**
- Enhance our **online presence**
- Emphasize **product synergies**
- Continue shift to **subscription model**
- Grow **professional services**
Increased focus on the customer-to-customer loop

- Shortening the time between receiving customer requirements to delivering solutions
- Improving customer satisfaction with appropriate products and services
- Co-developing solutions together with our customers and partners
Increasing online access to data changes buying patterns

70%
Buyers define their needs independently before engaging with a seller

44%
Experts identify specific solutions before reaching out to a seller

13
B2B buyers typically examine 13 content sources before deciding on a vendor

Source: martechtoday.com, themarketingblender.com
Digital Face
Improve our online presence and brand image

Improve and unify digital engagement with us

Help decision-makers in their buying process

Enable self-service access to technical data
Business changes drive reporting changes for greater transparency

<table>
<thead>
<tr>
<th>How we currently report our revenue</th>
<th>How we will report moving forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Software fees</td>
<td>● Subscription sales</td>
</tr>
<tr>
<td>● Recurring revenues</td>
<td>● License sales</td>
</tr>
<tr>
<td>● Professional services &amp; others</td>
<td>● Maintenance sales</td>
</tr>
<tr>
<td></td>
<td>● Professional services &amp; others</td>
</tr>
</tbody>
</table>
Professional services increase value for our customers

To serve our customers better we will revitalize our professional services

Professional services bring many benefits

- Accelerate customer time to value
- Improve customer satisfaction
- Increase our customer understanding and intimacy
- Increase upsell opportunities and customer loyalty
- Bring additional revenue
Our updated values: all hands on deck

Updated values

- Growth
- Accountability
- Teamwork
- Customer orientation
- Speed & Agility

Initiatives for cultural change:

- Process development
- Incentives alignment
- Simplify and clarify organization
- Increase accountability and agility
Strategy implementation requires concrete changes

So far, we have

- Updated **management team**
- Updated **Board of Directors**
- Flattened **organizational structure**

We will also

- **Relocate** US office to NY & APAC to Singapore
- **Grow & strengthen** our sales, moving team closer to our customers
- **Strengthen** our partner network for the cloud era
Our strategy roadmap has three stages

1. Renew and realign
   H2/2020

2. From point to full solution
   2021

3. Expand and harvest
   2022

Preparation and aligning resources and processes for growth
Implementing growth projects & ramping up sales
Scaling the company
PrivX and NQX are the key growth drivers
Tectia strategy
Tectia® – more than an SSH client

- Remote access
- File transfer
- Post-quantum protection
Key use case: secure file transfer

An essential component of managed file transfer (MFT) systems

Replacing insecure FTP connections with secure SFTP connections

Available for PC’s, servers and mainframes (IBM z/OS)
Tectia is the leading solution in the market

Technology adoption life cycle

Majority of our focus customers are using SSH client/server solutions
We will revitalize Tectia through investments

**Increasing sales resources**
- **Expanding** in mainframes and automated file transfer
- **Further targeting** governments and highly regulated segments

**Increasing competitiveness**
- **Increased resources** in maintenance and development, with a sharpened roadmap
- **Expanding main use-case** by adding managed file transfer features
UKM strategy
UKM is the most complete SSH key manager in the market

UKM helps large enterprises to take control of their keys in their critical environments

- Clear visibility into the key realm through intelligent discovery
- Full life-cycle solution that is non-disruptive and easy to use
- Ensures key management best practices and regulatory compliance
SSH keys need professional management

<table>
<thead>
<tr>
<th>Type of key</th>
<th>Percentage of experts viewing it difficult to manage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keys for external cloud</td>
<td>59%</td>
</tr>
<tr>
<td>SSH Keys</td>
<td>57%</td>
</tr>
<tr>
<td>Signing key (code signings, digital signature)</td>
<td>52%</td>
</tr>
<tr>
<td>Keys associated with SSL/TLS</td>
<td>42%</td>
</tr>
<tr>
<td>End user encryption keys (email, full disk encryption)</td>
<td>44%</td>
</tr>
<tr>
<td>Payments related keys (ATM, POS etc.)</td>
<td>35%</td>
</tr>
</tbody>
</table>

Industry experts* perceived SSH keys to be one of the most difficult keys to manage.1

Source: 2020 Ponemon Global Encryption Trends
Note: * 500 industry experts surveyed around 17 countries
UKM has significant growth potential

Growing within existing customers

Expanding from SSH keys

- Expanding to management of other types of keys and certificates
- Further penetration into the mid-market
PrivX
strategy
## IT professionals recognize clear need for PrivX

### SSH polled 600+ IT professionals

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>60%</td>
<td>Use a hybrid cloud infrastructure</td>
</tr>
<tr>
<td>90%</td>
<td>Believe all operations can be run from the cloud</td>
</tr>
<tr>
<td>80%</td>
<td>Breaches involve breached or stolen credentials</td>
</tr>
<tr>
<td>90%</td>
<td>Share account credentials</td>
</tr>
<tr>
<td>30%</td>
<td>Give 3rd parties permanent credentials</td>
</tr>
<tr>
<td>70%</td>
<td>Outsourced workers would share passwords with colleagues</td>
</tr>
<tr>
<td>60%</td>
<td>Ex-employees still have access to IT-systems</td>
</tr>
<tr>
<td>50%</td>
<td>Consider bypassing security controls to meet deadlines</td>
</tr>
<tr>
<td>70%</td>
<td>Experience issues with cloud access slowing down their work</td>
</tr>
</tbody>
</table>

### Customer requirements

- **Cloud native solution**
- **Password-less solution**
- **Remote access solution**
- **Zero Trust solution**
- **Simplicity, efficiency and speed**

PrivX fulfills all these requirements.
PrivX: the lean cloud-native Privileged Access Management solution

Technical differences

1. Passwordless just-in-time access
2. Modern microservices architecture
3. Fast deployment & easy-to-use

Customer benefits

1. Improved security & productivity
2. Scalability & future-proofing
3. Excellent ROI & low TCO
PrivX: triple digit CAGR, scalable subscription business model

Annual Recurring Revenue (ARR)

- Q4/18
- Q4/19
- Q3/20

188% CAGR

Hosts Under Management

- Q4/18
- Q4/19
- Q3/20

182% CAGR
PrivX is entering the scaling phase

<table>
<thead>
<tr>
<th>Audience</th>
<th>Early adopters</th>
<th>Leaders</th>
<th>Mainstream</th>
<th>Late majority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market</td>
<td>Medium</td>
<td>Expanding</td>
<td>Large</td>
<td>Saturated</td>
</tr>
<tr>
<td>Price</td>
<td>Introductory</td>
<td>High Value</td>
<td>Premium</td>
<td>High Value</td>
</tr>
<tr>
<td>Sales</td>
<td>Low</td>
<td>Rapid Growth</td>
<td>Growth</td>
<td>Moderate Growth</td>
</tr>
<tr>
<td>Competition</td>
<td>Fragmented</td>
<td>Increasing</td>
<td>Usual</td>
<td>Usual</td>
</tr>
<tr>
<td>Business Focus</td>
<td>Awareness</td>
<td>Scaling</td>
<td>Market share</td>
<td>Retention</td>
</tr>
</tbody>
</table>
PrivX strategy recognizes regional market differences

<table>
<thead>
<tr>
<th></th>
<th>EMEA</th>
<th>APAC</th>
<th>AMERICAS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Segments</strong></td>
<td>Industrial Finance IT &amp; Internet services Government</td>
<td>Finance Government</td>
<td>Finance Industrial Retail</td>
</tr>
<tr>
<td><strong>Business Model</strong></td>
<td>Subscription (ARR)</td>
<td>Perpetual license and subscription</td>
<td>Subscription</td>
</tr>
<tr>
<td><strong>Deployment Model</strong></td>
<td>On-premise Self-managed cloud Managed cloud (SaaS)</td>
<td>On-premise Self-managed cloud</td>
<td>On-premise Self-managed cloud Managed cloud (SaaS)</td>
</tr>
<tr>
<td><strong>Sales Model</strong></td>
<td>Direct and one-tier channel, gradually also digital</td>
<td>Primarily two-tier channel</td>
<td>Direct and one-tier channel, gradually also digital</td>
</tr>
</tbody>
</table>
NQX strategy
Efficient encryption software creates secure gateways between networks

**NQX** is the real-world **Stargate**

- An extremely **efficient** and **fast** encryption software
- **Scalable** and **flexible** for customer infrastructure
- Future proof with **post-quantum capabilities**
- **Certified** for high security use
NQX is an important growth driver

Increased need of **certified connections**

Promising early signs from **early adopters**, creating exciting growth potential

We are **well-positioned** to grow

- Externally **acknowledged** innovations
- **Crucial for Finland's** post-quantum era preparation
- **Certified** for high security government use
Post-quantum cryptography is becoming increasingly important – we are ready

The draft standards for post-quantum encryption algorithms are expected in 2022.

<1 day
for a quantum computer to break encryption that is today unbreakable.

~10 years
Powerful quantum computers become available.

To keep their current and future data secret, governments and large organizations need to start preparing for the post-quantum era.

SSH is ready to implement them.
The post-quantum threat

Visa, JPMorgan Are Already Preparing for Potential Quantum Cyberattacks
A powerful quantum computer could be capable of breaking the internet's most commonly used cryptography

Threats
Quantum computing could undermine personal data security, Euro believes
AUGUST 12, 2020

“Anyone that wants to make sure that their data is protected for longer than 10 years should move to alternate forms of encryption now,” warned Arvind Krishna, director of IBM Research, in a ZDNet article.
Summary
Our markets are growing, we have a stable installed base, and we will leverage our investments in PrivX and NQX.

Growing markets
Fast growing markets provide us with compelling growth opportunities

Balanced product portfolio
We have both stable cash generators and rising stars in our portfolio

Relentless emphasis on customers & sales
We are transforming into a customer and sales-minded organization

Significant growth by 2022
Systematic, determined execution
Targeted investments into sustainable growth
Q&A
Closing words