Securing All Network Edges

Hello, everybody. Welcome to Fortinet Acclererate, 2021. This is John Madison, CMO and EVP of products. It'd be great to be in person, but unfortunate online, maybe next time, um, securing all network edges. Uh, I'm going to talk about a lot of things. End point security device network cloud application. But if I take one message away is that the network is still a very important, the security of the network.

And what's happening in the network are all these edges are forming that need to be secured. Next slide

Slide 2: Vision

Our vision as a company, making possible a digital world, you can always trust, one of the most recognizable symbols from Fortinet is the O in Fortinet. Sometimes it's called the grid. Sometimes the O um, that represents the trust. And how are we going to provide that trust?

Slide 3: Mission

Our mission is to secure people, devices.

And data everywhere. What we want to be able to do is make sure we protect that entire attack surface, which has been rapidly expanding due to digital innovation.

Slide 4: Fortinet is recognized as a Leader in 2 Gartner 2020 Magic Quadrant Reports

Now Patrice had this slide earlier on it's the Gartner magic quadrants or in a leadership spot for two magic quadrants. Uh, we're in four other magic quadrants were mentioned another too. But also we're in six. What we call market guides. Uh, these are precursors to magic quadrants, new development, marketplaces IPS, zero trust, email, operational technology, knack, and SOAR. And so Gartner really recognizes the full breadth of the Fortinet portfolio.

Slide 5: Recognize As a Leader for Network Firewalls and WAN Edge Infrastructure

Again, we're leaders in the network firewall, and WAN edge sometimes called the SD wan.

Often the leaders are very different companies. But even if they're the same company, they're completely different platforms. For Fortinet, it's the same product, the same OS, the same API, the same management product. So best of breed functionality, but on a single platform.



Slide 6: Training Investment

Now, before I get into some of the product stuff, I wanted to talk about training. We have a huge investment in training, I think by now with a number one cybersecurity training program out there.

Slide 7: NSE Certifications Passed 500,000

You can just see some of the numbers here. I think in fact, we're over 600,000. In fact, half of those certifications are been done in the last 12 months. As a partner, as a customer, you should be familiar with what we call the network security expert program.

It starts with foundational and solution orientated. These are all, uh, public already, all the way to our expert level NSE eight. Um, we provide a lot of this these materials and curriculum to top universities and colleges around the world.

Slide 8: A Technology and Learning Partner

Two important areas. One is what we call IT awareness.

That's now inside our NSE one it's free of charge. We have over 150 customers already using this anti-phishing for example. Uh, also for larger customers, we have our strategic partnerships where we export the entire curriculum into their programs. IBM, Accenture, salesforce.com. And by the way, we made our, all our training free of charge.

In 2020, it's always been free to our partners and we're going to expand that program into 2021 training is a very important investment.

Slide 9 Product Strategy - Organic Platform Strategy

Okay, let's switch gears now into product and product strategy. You heard Ken talk about our organic platform development. Now, and this is very important.

It's be very easy for us to go and acquire a lot of different pieces and try and bolt them together. We don't do that. We develop the platform organically.

Slide 10: Cybersecurity Evolution Towards a Platform

Now, if you cast your mind back and I can, uh, between 2000, 2010, really a lot of the data was at the end point. And so endpoint security back then, antivirus was really, really important.



Yes, there was a firewalling, but it was more around staple firewalling. Over the last 10 years. A lot of the data is moved into the data center and the network has become very important. Sure. The endpoint has progressed and there's people off the network. Uh, if you look at firewalling, it's progressed into next gen firewall that looks at content.

And of course the data center became very important. Over the last few years. And as we go forward over the next few years, of course, cloud has entered, the network has formed different edges and end points and devices will migrate toward a zero trust type architecture. What's really important though, is a platform.

And it's not just the platform at end point, a platform in the network, or a platform across the cloud is a platform across all three of those things that also includes identity and threat intelligence.

Slide 11: Networking Performance Continues to Increase

The networking industry is very different from the cybersecurity industry. It's actually consolidated and that's because although things have got much faster in terms of speeds and feeds, the functionality has remained the same.

It's just faster switching, faster routing, faster wifi. The only thing that's changed a lot, probably in the last two, three years is the application routing has taken over from enterprise IP routing. Uh, but still it's a feeds and speeds game. Yes. The some new technologies coming along, such as integrated security, AI ops, cloud networking. But the convergence of security and networking means you need to take high performance and high flexibility.

Slide 12: Need to Protect All Network Edges

The hub and spoke architecture of an enterprise has been here for probably 10 years. The idea was to get everybody onto the network as quickly as possible to the data center and out into the internet. And so what's changed? Well, what's changed are all these edges. You now have a WAN edge. You have the LAN edge, you have off network, the home edge.

Recently due to the pandemic. You've got now different types of cloud SaaS infrastructure. Um, we're seeing LTE and 5g as we go forward. Operational technology edges. And so all of these edges need to be protected. However, it's very complex to build a networking and then to build security on top. And so these edges will be protected by converged technology, security driven networking.



Slide 13: User/Endpoint/Access Evolution to ZTA

Same goes for the end point. If we look at the end point, as I said earlier, it's migrated from a signature based system into behavior. We just recently launched XDR, which is more of a platform. Network access started as VPN. You need to look at all the devices, how they get on the network. That's migrating into a zero trust network access.

And of course, identity is a very important part of security. And we've migrated from static passwords to multi-factor to even passwordless as we go forward. All three of these technologies will come together under zero trust access.

Slide 14: Cloud Security Adapts to the Application Location

And then of course, cloud. And cloud has gone from what we called a centralize to a distributed to a more centralized.

And again, right now it's going back to a more distributed. It's gone from mainframe to personal computer, to data center, to multi-cloud, to cross-cloud and now back to edge compute, uh, and Gartner actually saying by 2022 50% of enterprise generated data, it will be outside of the data center. What's important here is to look at the shared responsibility model for security. Whether it be the network, the platform, the applications, or the visibility. Depending on what type of cloud you're going to need that shared responsibility model and make sure you have the tools and controls for that particular cloud.

Slide 15: Cyber Threat Landscape

And let's turn our attention away from infrastructure back to the cyber threat landscape. I think everybody in cybersecurity is familiar with the kill chain. Um, the kill chain itself really hasn't changed a lot. There's some different models out there, but it really hasn't changed a lot over the last five to seven years, it starts with reconnaissance.

It looks at weaponization. Delivery, exploitation, installation, command and control, CC, action objectives. I think probably the most scariest thing we've seen over the last few years is state sponsored. More advanced ABTs. In actual fact that the kill chain hasn't changed too much in its own right. But there's been more focus on each part of the kill chain.

More sophistication, more speed, more complexity. You need to be able to look at across the entire attack surface. And be able to stop the kill chain at any one of these points.



Slide 16. Fortinet Security Fabric

Okay. This is the most important part of our strategy. It's called the fabric platform to some. The Fortinet security fabric. The first thing it does is look across the entire attack surface. Devices and users, applications, networks, IOT devices, 5G. It makes sure it can see, has broad visibility and protection of the entire digital attack surface to better manage that risk.

And it does that through these three pillars, the zero trust for devices and users, security driven networking for the network and adaptive cloud security for the cloud data center and applications. What's different about the security fabric is it's totally integrated, because we built it organically.

Each one of the components can talk to each other in a peer to peer way. It can exchange policy and threat information. It has a single fabric management center to provide network operations and security operations. FortiGuard threat intelligence can be applied to any part of the fabric, whether it be endpoint, network or cloud.

But we also understand you've made investments in other, in parts of the infrastructure. Whether it be cloud or infrastructure or data, end point. So it's an open ecosystem. We can integrate the fabric into the major orchestration systems on the major clouds. The end goal for the fabric is to allow automation. The ability to drive self-healing networks and AI response instantly to any attack on your data, on your infrastructure, on your users.

The end goal of the platform is automation.

Slide 17. Security Driven Networking

So let's zoom in to one of the pillars. We need to deliver enterprise protection and that user experience at any edge. We use security driven networking. What are the major technologies around security driven networking?

Slide 18: Security Driven Networking Technology Vision

Well, the first one is the ability to operate at any one of those edges. LAN edge, WAN edge. There's a lot of vendors who just work in the cloud or just work in their network or just work at endpoint. You need to be able to protect any one of those edges. In certain instances, you need to provide very high performance, especially if you're in the core of the network, or the core of the data center.



So performance is very important. Also things like SD WAN soon will be totally integrated inside the firewall itself. So now you have a secure SD-WAN, not only a next gen firewall, but an enterprise class SD WAN. The same goes for SD-Branch branch with wifi and switching access. As we go forward, the digital experience is going to be very important.

So monitoring it, measuring it, but also applying AI ops to the network end to end from users all the way into the applications and through the network so they can self-heal anything that happens inside that network. As I said, integrating everything as much as possible, integrated 5G, and then making sure you can apply certified security.

There's a lot of people just say they've got security. It has to be enterprise class certified security.

And what does that look like from a product portfolio, security fabric, security driven?

Slide 19. Security Driven Networking Product Portfolio

Well it's LAN edge, WAN edge, data center edge, cloud edge. Um, as some of you may know, our products have a very straightforward naming system, Forti, whatever it does.

So it was a FortiAP or FortiSwitch or FortiGate, FortiExtender, FortiProxy, FortiGate for SD-WAN and FortiSASE, which is new and, and FortiSolator.

So let's go back to that edge diagram I talked about earlier, you can see how we cover all those edges.

SLIDE 20: Need to Protect All Network Edges

We cover the WAN edge, the LAN edge. Uh, 5G, SASE edge, cloud edge, uh, data center and OT edge..

And so our product portfolio inside security driven network is able to protect all those edges across your network.

Now, if you, in the industry, you know, the acronym soup is always around. Um, the latest one I think is SASE. And I just wanted to go through what we think about SASE. What's our vision around SASE.



SLIDE 21: FortiSASE Vision

The first thing we want to make sure is that we have a flexible edge access. Whether it comes from a client, whether it comes from a thin edge, such as a 5G, connections through LTE, whether it comes to a more secure edge through SD wan, all those edges, feed back into what we call our FortiSASE, which is our certified enterprise security next gen firewall secure web gateway and integrated zero trust network access.

Then as we connect FortiSASE into the different clouds through our pairing systems or through our API, such as FortiCASB, we make sure we monitor that digital experience. Again, for most companies who are developing that digital innovation. The digital experience is going to be the most important thing to their users and their customers.

And let's not forget. There's still a lot of implementations of appliances and data centers and campuses in clouds. Fortinet continues to push the boundaries of performance for our data center firewall.

SLIDE 22: Industry's First Hyperscale Data Center Firewall

We rolling out our network processor seven on new, uh, SPU. Last year and this year and our content process.

So you can see some of the benefits here, some of the speed you get compared to CPU based systems. It's usually about 10 X, whether it be throughput, whether it be specific applications, uh, and actually very importantly, uh, it's green. It actually is the most energy efficient consumption from a firewall perspective you can get in fact.

One of our NP7s equals 10 of the high-end CPU's in terms of performance. Now imagine the savings in power and space. So we'll continue to invest in this area as we go. Yeah,

SLIDE 23: Zero Trust Access

Let's switch gears a bit here knowing and controlling everyone and everything on and off your network, users and devices. Zero trust access.

A lot of our customers are using our VPN technology. And in fact, during the pandemic, the start of the pandemic, they had to go from maybe 5% work from home to almost a hundred percent, a thousand users to 50,000 users.



SLIDE 24: Evolution from Traditional VPN to ZTNA

VPN technology allows you onto the network. It gives you access to the entire network.

It does a one-time trust check. And usually because of the scope as the generic rule set across all users. How a VPN needs to migrate forward. It needs to migrate forward to more of a zero trust architecture, both on and off the network, providing a continuous trust check for every session, application specific access and use a contextual rule sets.

Are you on and off the network? What time, what applications are you accessing? This architecture from Fortinet is more of a migration than a rip and replace. You migrate your client forward. You migrate your FortiGate and FortiOS forward to give you the zero trust network architecture.

SLIDE 25: Zero Trust Access Product Portfolio

What are the products inside this portfolio?

FortiClient, FortiNAC, FortiToken, FortiAuthenticator. And I was like, go through all these products. You'll be interested to know that most of them have different form factors, agents, appliances, virtual machine, cloud native, SaaS. But again, let's come back to this zero trust vision, zero trust architecture vision.

SLIDE 26: Zero Trust Access (ZTA) Vision

What it's saying is that all users have application specific access. You can provide session segmentation. They go through a flexible proxy FortiOS that proxy can be in your data center. It can be in our cloud. It can be on your campus. That gives you great flexibility. You'll apply device and user identity through our systems or through additional or external systems that you already have.

And then very importantly, you provide this continuous contextual based trust, uh, through our EMS system per application access.

From a product portfolio, or in fact, there's two main products here. FortiClient, FortiEDR, migrating FortiXDR.



SLIDE 27: Endpoint Security Product Positioning

So there's two migrations going here at endpoint. One is the VPN migration to zero trust. Encryption on network, on and off network, network visibility. And the migration point, I think longer term is that proxy sits in a SASE environment.

The same is happening on end point is it's migrating from EPP to EDR. Eventually XDR. If you look at both of our products, FortiClient and FortiEDR. You can see there's a bit of overlap for maybe mid-sized customers who just want antivirus or web filtering. Long-term we're going to try and bring these agents together in a single zero trust architecture.

SLIDE 28: Adaptive Cloud Security

All right. Third pillar. Secure any application on any cloud. Cloud security, adaptive cloud security. You know I talked about the migration of applications from data centers to public cloud, to SASE as we go forward onto the edge. So it's very important that any security or cloud security is available in a hybrid and cross cloud environment. Then you break it down.

You've got to get to the cloud. Cloud on-ramp, virtual networking. Micro-segmentation. You got to protect the platform. It may be the different clouds and maybe the data center through workload protection. Container security, native security. And then you've got to protect the application: mail, web, ADC.

SLIDE 29: Adaptive Cloud Security - DevOps

And then the third component of this is where are you inside the dev ops? Are you shifting left to protect more of that development environment? Or are you shifting right?

SLIDE 30: Adaptive Cloud Security – Hybrid and Cross Cloud

This all comes together in our adaptive cloud security portfolio, hybrid and cross cloud. Consists of network components, FortiGate VM, cloud networking, DDoS, micro-segmentation. Our platform FortiCASB or FortiCWP. One of the fastest growing areas are a set of rule sets that sits on top of native cloud security, such as IPS rules on firewalls or WAF rules on top of WAF firewalls. And then of course, application protection, FortiWeb, FortiMail, FortiADC.



SLIDE 31: Cloud Native Integrations

And I'm not going to go through this side in a lot of detail. It just shows you the amount of coverage you need inside these clouds scaling from threat intelligence to the security centers. I talked about these rule sets sitting on top of native cloud security.

So cloud security is very fragmented. You could use the existing cloud vendor. You can use our solution. You can use both, but we have individual roadmaps with every one of the major clouds out there.

SLIDE 32: Fabric Management Center

Okay, bringing everything together through our fabric management center, starting with it's SOC automate security operations across the security fabric.

SLIDE 33: Traditional vs eXtended Detection and Response (XDR)

Traditional types of SOC security are very isolated. You put in systems such as threat hunting, malware analysis. You put in situational awareness inside a risk EPP EDR. Long-term, this is going to migrate to what we call an extended detection and response system. A platform approach, where everything is integrated, everything can share intelligence and everything can use a cloud to make decisions very quickly.

SLIDE 34: Adaptive Cloud Security Portfolio

What does our portfolio look like for fabric management center? Consists of endpoint, breach incident response.

So endpoint you got FortiEDR, XDR, which just recently announced. Oh, sandboxing or Deceptor or FortiAI, and then incident response systems, analyzers, SIEM, SOAR, and some new service offering.

Depending on the maturity of your organization. This can be very straightforward, such as sandboxing or analyzer.

SLIDE 35: AI-Powered Threat Detection and Repsonse

As you get more sophisticated, more mature, you can make sure you can apply additional capabilities, whether that be deception or XDR or more sophisticated automation, such as SOAR. We put our systems together, such that a small business, a medium business, or a very large



business, or some of our MSSP partners can scale the capabilities of their SOC, uh, to match their maturity.

SLIDE 36: Fabric Management Center

So what's new with the fabric management center, SOC uh, with 7.0, uh, you know, the core of the security operations. Uh, we have a single pane for the software. We have an extensive ecosystem, and then we have AI powered threat detection and response, uh, from sandboxing, to EDR. On the analyzer side, seven.zero, we have this new service SOC as a service, a new best practices capability, and a FortiGuard outbreak alert offering. And then on the SOAR side, an incident war room, a mobile app and some new AI based recommendations.

The other part, a fabric management center is the network operations.

SLIDE 37: Fabric Management Center – Simplify Network Operations Across the Security Fabric

Simplify network operations across the security fabric. Obviously management's very important and a single management console across all the products inside the fabric is very important, but we started to add some additional capabilities.

SLIDE 38: NOC: Fabric Management Center

We started to add orchestration for things like SD wan. We started to add monitoring for the digital experience. So the fabric management center NOC again, can scale from a small business using something like FortiCloud, which provides a SaaS delivery of a lot of this functionality all the way into a full blown FortiManager that provides policy management, orchestration, and monitoring.

SLIDE 39: Fabric Management Center (NOC)

One of the most important areas of a fabric is the management center. Fabric management center. Uh, two elements, as we said, one is the SOC one is the NOC. Uh, you really need to try and simplify network operations across the security fabric. Three areas inside the fabric management center, obviously policy and management, configuration is very important, will always be very important, but we're starting to add orchestration inside there. Orchestration, for example, of SD-WAN, orchestration of SASE, and then monitoring, making sure you can look at that digital experience.

And then coming together across everything will be some form of AI ops, which provides that self-healing. So from a fabric management center, we have FortiManager. We also have



FortiCloud by the way, which is a SaaS delivered cloud management system. A lot of the features and functionality of FortiManager, but more in a SaaS implementation and then FortiMonitor, which is a recent acquisition.

Now, similar to the SOC, you have this level of maturity. So again for smaller customers, you may want to just use the SaaS management and configuration and policy management. As you go forward for larger customers, you may want to look at the monitoring capabilities. So you're measuring that digital user experience.

And then for larger customers, you definitely want to look at the orchestration. You want to make sure you're orchestrating across all these capabilities, across all those edges, both networking functionality, as well as the security itself.

SLIDE 39: Fabric Management Center (NOC)

Where is the fabric management center going long term? Is going towards self-healing network operations.

SLIDE 40: Fabric Management Center – Self-Healing Operations

The ability to heal and monitor and configure the LAN, the WAN, the data center and the cloud edges. What's new in 7.0? FortiMonitor Panopta acquisition, a zero touch provisioning for SD branch, policy optimizer, a best practice services. And now includes management to FortiProxy.

Now just mentioned a new product, FortiMonitor.

SLIDE 41: FortiMonitor

This is a SaaS-based digital experience monitoring. Also a network performance monitoring, uh, system. It's SaaS-based. It measures endpoint, LAN, WAN, data center. It's actually has a lot of capabilities in the cloud. Uh, you know, as most customers, uh, drive towards that digital innovation, digital experience, this is going to be a very important part of the reporting structure to maintain that.

SLIDE 42: FortiGuard Security Services

So once you have the platform in place, it's very important to provide that threat intelligence to the platform. Uh, we refer to that as FortiGuard security services.



SLIDE 43: FortiGuard Vision

Now there's quite a few of these individual services range from AV signatures to IPS, to IOT detection, uh, to management, security as a service.

It can be applied to the end point, the network or the cloud, and to any one of the form factors, hardware, software as a service, an API.

SLIDE 44: FortiGuard Security Services Portfolio

We put these into these, these buckets of security. The first one is content security, looking at the content, uh, providing security. There, there is the web security, then obviously user security and device security.

And then as we go forward, more advanced SOC and NOC. Uh, also available, uh, or what we call bundles. These bundles bring together some of these packages starting from ATP, advanced threat protection to a unified threat protection to enterprise protection. Uh, the most advanced bundle is the 360, which includes everything.

We just added SOC as a service inside there as well. Um, and by the way, if you, if you are a larger customer, I want to say, you know, a larger customer would, may be a 20, 30 devices that you should look at our enterprise license agreement. Which gives you a lot of flexibility and operational savings.

As I said earlier, although we have a very extensive portfolio, 30 plus products covering the entire attack surface. We also have, a very large ecosystem.

SLIDE 45: Fabric Ready Ecosystem – Extensive Ecosystem of 400+ Integrations

400 plus Integrations, 200 plus ecosystem partners. Uh, and this is very important that you're able to put the fabric and connect the fabric supplied that automation outside of the fabric.

SLIDE 46: Open Fabric Ecosystem

Now with a fabric integration, we have different types. One is what we called a fabric connector where we build into a major orchestration system on a major cloud. Uh, we have our own API with fabric API. Uh, a lot of companies from different areas have built into that API. We have a thriving fabric, DevOps community across cloud, and then we have an extended ecosystem, not only sharing of threat intelligence, but some of our systems can extend well beyond like SIEM



for example, and that can extend well beyond our, our fabric ecosystem, uh, to provide that coverage.

It also breaks down into the different pillars.

SLIDE 47: Open Fabric Ecosystem

So you've got a number of vendors are really focused on the networking side. Uh, we got, obviously there's quite a few vendors on the cloud side, uh, on the, uh, security operation side, on the zero trust side.

Some of these vendors may be competitors of ours, but we want to make sure that if you've made a decision around a specific cybersecurity vendor or networking vendor, we can provide that integration.

SLIDE 48: M&A Strategy Accelerates Specific Developments

Now again, we don't do a lot of huge acquisitions, but we do do acquisitions. And these acquisitions are really focused on specific technologies that we want to accelerate inside the fabric. Tthe goal is to bring them in and integrate them into the fabric as quickly as possible. Uh, these are the, these are, these are acquisitions over the last, uh, few years.

You can see it ranges from security operations. Uh, FortiEDR enSilo, SIEM, accelops, ZoneFox around Insight and UEBA and SOAR. uh, the most recent acquisitions, uh, FortiSASE, which is OPaQ and FortiMonitor Panopta a lot ago. We also acquired some, a NAC and some FortiAP, uh, again, the ones which we acquire three or four years ago, a lot of that technology has already been integrated inside the fabric.

SLIDE 49: Products summary

So I can't go through every product in a lot of detail in 30 minutes, uh, this summarizes what I've just talked about in terms of the product portfolio across, uh, both the security driven networking, the adaptive clouds, zero trust, FortiGuard security services. Again, a very extensive portfolio, as well as being very open.



SLIDE 50: FOS 7 – 300+ New Features Across the Fabric

Now, we announced a few weeks ago, uh, FortiOS 7, uh, with 300 plus new features across the fabric, uh, that will be available, uh, at the end of this month. Uh, again, the features range across the network, across zero trust. Across the cloud, management, NOC, advanced services, et cetera. Do take a look at that.

I think we're in beta three already, so you can download and take a look at some of the new features inside there. So I'm going to finish up, thank you for listening in, as I said, right at the beginning, my main message here is that most customers are driving towards a platform, but a platform that takes into account the network, the end points and devices and the cloud and applications. End to end versus just one of those. Thank you.

