S1 EP19 - MikroTik Tackles the Borderless Enterprise

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Reza Eltejaein, product line director in Marvell's Switch Business Unit and Edgars Paberzs, technical support engineer at MikroTik join the Marvell Essential Technology Podcast discussing an overview of networking solutions for the enterprise and their unique advantages as well as how Marvell has helped build MikroTik's portfolio with the Marvell® Prestera® family of switches. Edgars works closely with MikroTik customers, advising and resolving technical challenges along with testing and documenting new switching technologies for MikroTik. With a substantial knowledge of Marvell's Ethernet switch products, Edgars shares his insights on MikroTik's unique product range, supported capabilities, and future strategies with Marvell.

Speakers
Reza Eltejaein
Product Line Director at Marvell

Edgars Paberzs
Technical Support Engineer at MikroTik

Host
Christopher Banuelos
Senior Manager of
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C **Christopher Banuelos 00:04**
Welcome to the Marvell Essential Technology Podcast. I'm your host Chris Banuelos. On today's episode listening to a conversation with Reza Eltejaein, product line director in Marvell switch business unit and Edgars Paberzs Technical Support Engineer at MikroTik. On this episode Reza interviews Edgars, who works closely with Mikrotik customers to advise and resolve all kinds of technical questions, along with testing and documenting new switching technologies for Mikrotik. Edgars has gained a fairly substantial knowledge with Marvell's ethernet switch products. And is here to share some of his insights of Mikrotik's unique product range, supported capabilities and future strategies with Marvell. To keep up to date on the latest episodes, please be sure to subscribe to the Marvell Essential Technology podcast.

R **Reza Eltejaein 00:57**
Hello Edgars, welcome and glad to have you with us. So let's begin with your company. Tell us a little bit about Mikrotik who you are what you do.

E **Edgars Paberzs 01:05**
Hi Reza, It's good to be here. And thanks for having me. Well, I work at MikroTic customer supporting and yeah, ideally treat our customer reports and try to fix some of the issues we have. So I'm about the Microtech Well, Microtech is a European networking equipment manufacturer based in Riga, Latvia, right on the Baltic Sea. We started in 1996 to develop routers and wireless ISP systems and our key features routers software. It provides great stability controls and flexibility for all kinds of data interfaces like Ehternet wireless, mobile and VPNs that are Carrier Grade features and routing engines like BGP, OSPF and MPLS. And the nice thing about routers is that you can run it on all of our products from the small home router to high performance enterprise gear. Now, or philosophy is quite simple, every routers device gets all the same features as long as hardware can handle it. There are no paywalls or confusing subscriptions. And MikroTik now provides a full ecosystem of hardware and software for internet connectivity in most countries around the world.

R **Reza Eltejaein 02:13**
What about your customers? How do you reach them? And what value do you bring to them? Can you tell us about that?

E **Edgars Paberzs 02:20**
Sure. We started out by targeting the wireless ISP market that required low power and rich feature sets, right. And that engineering and manufacturing experience led us to expand our scope and build high performance switches for home small office, home office, and all the way up to high throughput enterprise class switches. And about the customers well before the pandemic, we had the massive Microtech user meetings around the globe. Basically, everywhere you go, there is a passionate community of engineers, sysadmins researchers and alike. So we bring them together to share ideas to show the newest products and listen to their feedback. However, after the pandemic, we needed to adapt and get creative. So we built our own media studio in Mikrotik main office. And if you check out our YouTube channel, you can find all kinds of content there. From product videos to routers, tutorials, but still our community was our biggest inspiration and strength. So we can't wait to bring back or events. Of course not everything is paused. We still have our marketing academic program in number of universities and high schools and advanced training programs like Mikrotik certified switching engineers for hundreds of trainers and consultants. Last you asked about the value proposition. We are all about the value. We offer a compelling combination of features and performance at prices well below those four competitors. In most cases, we are the price performance Leader.

R **Reza Eltejaein 03:48**
What makes your product unique?

E **Edgars Paberzs 03:51**
Well, I think the uniqueness comes within the within the products themselves because we now call models to fit every need. For example, popular home networking switch is built on Marvell Presetea DX Family. These are small form factor passively cooled units with four SFP+ ports and one gigabit as this tiny switch can fit in your pocket. It uses very little power, and it can do wire speed switching and routing. These are really great products for small clinical gigabit networks. We also have introduced 100 gigabit switches like a new four-port QSFP28 switch, indoor and under power supplies. And this one is also based on Marvell Prestera chip, and a little cool feature on both the home line and this enterprise class, which is that they are really power efficient, and you can power them by PoE if needed. This kind of gear was previously available only to big budget enterprises. Another line of Marvel based products is are other switches. These ones are built into tough rugged casing. These switches are designed for outdoor access networks operated by both the service providers and enterprises. With for example POA capabilities to power video cameras. The equipment is designed to work in harsh conditions from minus 40 up to plus 70 degrees Celsius under full load. And the little side story, you can find our other equipments in very remote locations, including Mount Everest at South base camp Nepal. So in summary, we have quite unique products for every category in which we compete, and we offer one of the best price performance ratio on the market.

R **Reza Eltejaein 05:26**
You talked about the Marvell Prestera switching products. How has Marvell helped you built this impressive portfolio?

E **Edgars Paberzs 05:34**
Well, Marvell Prestera Switch are packed in features and options. When it comes to routers. We have implemented all the main Marvell functionality for layer two switching like VLANs and Spanning Tree Protocol, as well as more advanced options like layer three (L3) hardware offloading, again, little backstory, before we started using Marvell, the router, a switch configuration can get quite complicated due to variability in packet handling across silicon vendors. I mean, when you have these low level configuration options into routers, and it differs from switch to switch, it kind of ruins the user experience, right? So after introducing Marvell switches across our lines, we were able to simplify and consolidate the routers configuration. So what we did with Marvell, we introduced hardware offloading on network bridges. So rather than using CPU, we used hardware offloading

in the switch to forward packets, and a lot of simple implementations and here, but you can go further you can manage VLANs gigantic packets, even configured Q and Q and tag stacking, so options are there if you need them for load balancing and failover Marvell enables us to support LACP static link aggregation and even MLAG this allows our customers to create physical redundancy for high availability setups. Next, using Marvell's switch multicast table, we were able to implement IGMP and MLD snooping these ones are most commonly used in all the on video network installations. Another new feature in our products is the layer three hardware offloaded routing. The module switch allows Microtech users to achieve nearby speed routing performance without the configuration overhead of classic software routing. And that's a real time saver for our customers even more impressive, by using model policy engine features, we are able to offer accelerated layer four stateful firewall. So with microtek Fast Track feature, we enable nearby speed routing performance while keeping the network safe. And what that means is that [the] Marvell chip does the heavy lifting for faster, freeing the router CPU resources for more complex tasks. All in all, Marvell allows us to create amazing high performance switch products in a wide range of features, which was simply impossible before.

R **Reza Eltejaein 07:49**
So of course, how do you see MikroTik relationship with Marvell developing in [the] future?

E **Edgars Paberzs 07:53**
There are countless other models which features that allows us to deliver value to our customers. It's true that not all features are available in routers today. But we are actively developing and improving or switch products, with Marvell to make them even more compelling.

R **Reza Eltejaein 08:07**
And finally, where do you see MikroTik growth coming from over the next five years?

E **Edgars Paberzs 08:12**
Right, with WiFi 6 and even WiFi 7 Access Point adoption we look forward to offering PoE capable switches with 2.5 and 10 gigabit interfaces. The high speed PoE ports are also important for video over IP. And of course, you've ever growing data consumption. We see demand for higher capacity switches in small and medium sized data centers. So we are preparing your speech products with one country and even 400 gigabit network interfaces as well as improving software capabilities. Last, there are also plans to create new switch products for industrial and IoT applications with time sensitive networking support over the years removed from offering networking products to providing a fully fledged networking ecosystem. We have seen new ISPs popping up in most challenging environments, creating new jobs and providing more opportunities for education, science and business where people needed the most powerful and affordable Network Solutions can sometimes help society by giving real tools to the people. And this has been our mission since day one. I'm very glad to have solid partner like Marvell on this journey. So big thanks to you guys from MikroTik team. And let's keep on building technology that truly serves humanity together.

R **Reza Eltejaein 09:26**
Thank you Edgars. It has been amazing talking with you wanted to say thank you for your participation and perspectives. I'm looking forward to having any further discussion with you in the future. Thank you Reza. It was my pleasure to be here and thanks for having me.

C **Christopher Banuelos 09:43**
Thank you for listening to the Marvell Essential Technology Podcast. As always, please feel free to visit our website to learn more. And we'll see you on the next episode.