

Riot Games is Revolutionizing Esports and Broadcast Media

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Riot Games was founded in 2006 to develop, publish, and support the most player-focused games in the world. In 2009, Riot released its debut title, League of Legends, to worldwide acclaim. League has become the most-played PC game in the world and a key driver of the explosive growth of esports. With League now in its second decade, Riot continues to evolve the game while delivering new experiences to players with Legends of Runeterra, VALORANT, Teamfight Tactics, League of Legends: Wild Rift, and multiple work-in-progress titles. For more information, visit www.riotgames.com.

Executive Summary

Customer Name: Riot Games

Industry: Media and entertainment

Location: Los Angeles, CA

Number of Employees: 3000+

Challenges	<ul style="list-style-type: none"> • Reinvent the esports viewing experience • Eliminate network and processing constraints • Simplify and streamline global IT operations
Solutions	<ul style="list-style-type: none"> • Cisco Unified Computing System (Cisco UCS) • Cisco Nexus 9000 Series Switches • Cisco Intersight • Cisco Meraki
Results	<ul style="list-style-type: none"> • Established groundbreaking production and broadcast facility that can transfer 3.2 petabytes of data in 28 minutes • Launched three new esports titles • Can now manage 140 devices around the world from a single, cloud-based console



Revolutionizing an industry

Riot Games standardized its globally distributed technology infrastructure in 2020 with Cisco UCS servers, Cisco Nexus 9000 Series switches, and Cisco Meraki solutions. In doing so, it laid the foundations for a

much more ambitious goal: Revolutionizing not only the gaming and esports markets, but the entire media and entertainment industry.

“We’re nearing the end of a massive three-year effort,” says Scott Adametz, director of technology for Riot Esports. “And now we can finally reveal what we’ve been building toward, and that’s Project Stryker.”

Before the details and anticipated impact of Project Stryker—representing three new, highly innovative production and broadcast facilities spread around the world—can be adequately explained, Adametz says it’s important to understand where the gaming pioneer started and how far it has come.

“All of our infrastructure was e-waste and all of our events were one-off fire drills just a few short years ago,” he says. “Now we have a standardized technology stack that is centrally managed and can be sent anywhere in the world, and our global operations and regional events are much more consistent and streamlined as a result. It’s a night and day difference.”

Riot uses the cloud-based Cisco Intersight to manage 140 devices, including game servers, media processing nodes, and a variety of endpoints.

“Intersight is my best friend,” Adametz says. “We use it daily, if not hourly, to manage globally distributed infrastructure and workloads. No more logs, no more spreadsheets.”

Eliminating constraints

In the past, Riot had to be selective with event locations due to resource limitations. They had to ship and assemble 220 subsystems for each esports competition. And those subsystems had to be offline because of network instability.

Today, Riot has a single rack of gear for its events, with six Cisco UCS C220 servers for games and virtual applications, Cisco Meraki solutions for local networking, and two Cisco Nexus 9000 switches to connect to the outside world.

“We’re no longer limited to physical spaces or onsite resources,” Adametz explains. “We can provide the highest level of competitive performance from a tent as long as it has a wired internet connection.”

That type of performance and network reliability made Project Stryker possible, with the first of three broadcast facilities—located in Dublin, Ireland—becoming operational in Summer 2022. The 50,000-square-foot space is now the working home for Riot’s European broadcast, production, engineering, event, sound, and graphic design teams.

“The facility’s network and compute infrastructure are entirely Cisco-powered,” Adametz says. “From the routers and switches that carry every packet of video to the servers that power hundreds of backend tools and applications, we rely on Cisco at every step of the production process.”

That process is anything but conventional. While traditional production methods have inherent limitations and bottlenecks that require complex workarounds—including baseband routers, video switchers, and SDI-based processing hardware—Riot is avoiding such limitations with a fully routed L3 network.

“With an advanced, software-defined layer sitting on top of our network core, all of our sources, destinations, and midstream processing are entirely routable,” Adametz says. “Cisco technologies have eliminated the constraints of the past.”

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Scott Adametz

Director of Technology, Riot Esports

Developing groundbreaking content

With network and processing shackles removed, Riot is fueling an explosion of esports competitions and content. The company introduced three new esports titles in a 12-month span, each with media production and viewership that rival prominent sports leagues. Riot can now produce six events simultaneously, representing the broadcast equivalent of the Super Bowl. And it has plans to develop unprecedented live and episodic content.

“We’re looking at rendering 64K video at 120 frames per second, and doing it live,” Adametz says. “That’s a massive amount of processing, all on the shoulders of Cisco UCS servers. What’s possible is mind blowing.”

Riot’s content will be supported and delivered by Cisco Nexus fabrics, including the 200G network core in Dublin and 400G network cores in the company’s forthcoming production facilities in Seattle and Asia Pacific.

“To put everything in perspective, our League of Legends Mid-Season Invitational, a month-long production with 114 matches, requires the transfer of about 3.2 petabytes of video, audio, and game traffic,” Adametz says. “We can transfer that amount of data from our Dublin facility in 28 minutes.”

These groundbreaking capabilities are enabling Riot to transform the way esports are delivered to and consumed by global audiences. Instead of content being produced and broadcast from each event site, the company now sends live competition feeds to its Project Stryker facilities, where the content is produced in real time, translated into multiple languages, and broadcast to millions of esports fans around the world.

“Some of the biggest sports and media entities are looking at what we’ve done and hoping to replicate it,” Adametz says. “We’re breaking traditional broadcast molds, our ambitions continue to grow, and Cisco deserves a lot of the credit.”

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