



**FOUNDRY**  
NETWORKS

## CASE STUDY: RTL ONLINE

### RTL Online Manages Growth Surge and Traffic Storms with Foundry Networks



#### SUMMARY

For today's commercial broadcasters, producing an exciting and informative television program is not enough. Television viewers want to watch shows—and find out more about programs from videotext and the Internet. Audiences also want to take part in competitions and surveys, chat about their favorite programs in online communities, and enjoy films on demand.

As the market leader in commercial broadcasting in Germany, RTL constantly strives to expand its audience by offering media through multiple channels. The company's Web group, RTL Online, was an early entrant in online media, and it has built a thriving business that gives TV viewers and consumers fun and interesting avenues to actively interact and engage with their entertainment choices.

Every day, RTL Online distributes broadcasting schedules, celebrity gossip, and industry news via videotext and the Internet to millions of television viewers. To support these services, as well as create innovative new ones, the business unit at RTL Interactive must continually enhance its technology and introduce superior bandwidth solutions. RTL added Foundry Networks' high-performance routers and intelligent load balancers during its most recent technology upgrade to help guarantee that customers have reliable access to high quality content.

#### OBJECTIVE

RTL is well known for offering customers a wide range of popular entertainment options. With so much rich content available, RTL subscribers download a tremendous amount of online videos and TV on demand. This content was initially stored at the Coloneum media center in Cologne.

"At the beginning, we used the load balancers provided by our ISP NetCologne to handle Internet queries," says André Knecht, head of IT and infrastructure at RTL Online. "But as traffic increased, we noticed that these systems were beginning to reach their limits."

RTL realized that to continue providing its customers with excellent quality of service, it needed a scalable solution that could exponentially increase future bandwidth on demand. After searching for a high-performance, scalable solution, the Dortmund-based software and systems house Comco AG delivered and installed two high-performance ServerIron® load balancers from Foundry Networks.

"We recommend these systems because we had very good experiences with them in other projects," notes Guido Ruhnau, project manager at Comco AG. "We agreed with Comco's suggestion straight away," adds Knecht, "because Comco had been looking after us well since 1999 and because we'd heard positive reports from RTL Netherlands, which had already installed a BigIron® router from Foundry Networks."

When RTL decided to add bandwidth to the network, it turned to Foundry Networks again.

[WWW.RTL-INTERACTIVE.DE/](http://WWW.RTL-INTERACTIVE.DE/)  
(GERMAN ONLY)

#### INDUSTRY

Content Delivery

#### COMPANY DESCRIPTION

Under the RTL interactive GmbH umbrella, RTL Television combines all its interactive and transaction-based businesses going beyond traditional, free TV financed by advertising. RTL Online, a business unit of RTL interactive GmbH, manages and produces Internet offerings, Websites, and the creation of RTL teletext offerings.

#### OBJECTIVE

- Add network bandwidth to support increasing downloads of online videos and TV on demand
- Balance traffic consistently and reliably across server farms in Frankfurt and Cologne
- Design entirely redundant, highly available network infrastructure
- Deploy scalable solution that will easily support future network needs

#### SOLUTION

- Two ServerIron GT E load balancers located at the Cologne server farm
- Two NetIron MLX-4 Internet routers and two ServerIron GT C load balancers at Frankfurt server farm
- ServerIron load balancing switches run in active/active mode and each functions as a backup for the other, while the NetIron routers monitor each other using the Virtual Redundant Router Protocol (VRRP)
- Videos are streamed directly via the high-performance NetIron routers
- Modular construction and different chassis sizes support scalability across more than 3,000 server connections

#### RESULTS

- RTL Online delivers reliable, high quality content to customers, addressing millions of Internet requests each day
- ServerIron load balancers distribute traffic across the servers reliably and error-free
- Foundry networking solutions support current traffic demand and future bandwidth increases

## SOLUTION

Based on the success of the ServerIron load balancing switches in Cologne, RTL deployed a similar solution in Frankfurt. RTL added two NetIron® MLX-4 Internet routers and two ServerIron GT C load balancers into the Frankfurt data center.

The two ServerIron traffic controllers balance traffic loads across the servers and run in active/active mode. Each functions as a backup for the other. The NetIron routers monitor each other using the Virtual Redundant Router Protocol (VRRP). The bandwidth between the routers and to the providers totals 4 x 10 Gbps, and the load balancers are integrated via two Gbps connections each. Because the video servers are connected directly to the NetIron routers, they can use direct server return functionality to stream videos directly onto the Internet via the high-performance NetIron routers.

## RESULTS

Today, RTL Online manages and produces a variety of Websites. “Taken together, these sites generate a pretty high volume of traffic,” says Knecht. “In particular, the video community clipfish and the new ‘just-missed’ portal RTLnow, an on-demand service that lets viewers watch programs they might have missed on TV, have generated a huge increase in viewer numbers.”

Due to its rapidly growing catalog of online videos and on-demand TV, RTL needed more bandwidth capacity—fast. Within four months, the online content provider added 50 servers and a second data center in Frankfurt.

The Foundry solutions ensure that customers have reliable access to content. The network is fault tolerant with redundancy built into everything from the servers to the Internet connection. With Foundry solutions in the network RTL was assured that it offered consistent quality services and always available content.

“We’re currently pouring up to 600 terabytes of data into the Internet,” says Knecht. “And we’re expecting the bandwidth requirement to continue growing in the future.” RTL Group’s Internet offerings continue to expand, and users’ DSL connections are faster than ever and being used more. These data volumes are no problem for the ServerIron load balancers. During the peak times between 8 p.m. and 10 p.m., the ServerIron switches analyze up to 6 Gigabits per second and route queries to the right servers—with plenty of performance in reserve.

“The systems are really stable. We haven’t had any failures, and the load balancers provide us with so many options and functions,” explains Knecht.

Comco’s Ruhnau adds that the entire configuration remains stable, even when individual components are shut down. The team can manage software upgrades while the switches are running without affecting performance.

Foundry solutions provide so much headroom that RTL Online expects that it can handle the increasing traffic loads for the next two years, and it has plenty of reserves for the future. The ServerIron load balancers are operating error free, providing highly reliable service while processing millions of Internet requests per day. The modular switches have different chassis sizes and are scalable across more than 3,000 server connections. Now RTL Online can focus on its progressive business strategies and continue to offer its customers the best services possible.

Knecht, who is planning to lease more server racks in Frankfurt, is relaxed when he looks to the future.

“We know that Foundry Networks’ product range won’t restrict our growth. That’s why we’re going to stick with Foundry Networks in the future as a supplier of powerful load balancers. And we’ve recommended the systems to other companies.”

**“ WE KNOW THAT FOUNDRY NETWORKS’ PRODUCT RANGE WON’T RESTRICT OUR GROWTH. THAT’S WHY WE’RE GOING TO STICK WITH FOUNDRY NETWORKS IN THE FUTURE AS A SUPPLIER OF POWERFUL LOAD BALANCERS. ”**

– André Knecht  
Head of IT and Infrastructure  
RTL Online

## FOUNDRY NETWORKS

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