

With Cirrato One, construction company NCC removed its 60 print servers and increased printing availability for their 18,000 employees.

NCC is the leading construction and property development company in Northern Europe. With a turnover of 57 billion, it has a market share of 5%. They have 18,000 employees spread over 550 offices.

Anders Eklind, who is in charge of computer communications nationally, previously held the position of IT co-ordinator. "In that role, I had to make sure all local site managers, as well as the corporate office managers, had fully functioning IT-gear, including output devices. At the IT-department we see those managers as customers whose needs shall be met. Under no circumstances can the construction process come to a stop."

"What can be difficult to understand is that printing is the hardest part of running an IT-department, or at least it used to be. There were drivers that constantly had to be updated, different systems from various printer manufacturers to handle the actual printout, computers that were connected to new printers in new places, disparate printout formats for CAD-, desktop- and word processing programs. On the whole it was a complex environment that often played tricks on us. And, on a personal level, it is difficult to deal with upset people who call in with printing problems. Furthermore, the people in charge of the printers are often the newest and least experienced staff members."

With 600 printers and 60 print spool servers, keeping printing up and running in all locations was difficult. "For instance, one driver update would cause glitches in CAD printouts, so we would create a one-off custom solution. In the end, these adaptions made it virtually impossible to obtain a system-wide overview."

"When Cirrato was introduced, it was the transparent overview that first got us interested. To update a driver, for instance, and have an immediate systemwide availability. That part was new to us. The ability to control all parameters remotely from one central location frees up a large number of resources in an operation as geographically spread like ours. We also noticed that the local managers, would get a more dependable system. They were happy, and so were we!"

"Andreas Poulsen, IT co-ordinator in the Southern region, and I decided to install Cirrato in Stockholm by first migrating his printers. Since we were still responsible for day-to-day operations during the migration, this took two months. But once we had learned the process, eliminating the 59 print spool servers and migrating the remaining 550 printers took place without users noticing anything, not even when we migrated their locally connected USB printers."

Facts & Figures

- 550 office locations
- 3,000 building sites (projects)
- 18,000 users
- 27 employees at the IT department
- 800 devices
- After implementing Cirrato, 60 print servers were removed
- Works with all printer brands and models
- Increased security and operational safety
- Migrating to Cirrato occurred without users noticing a change

"The ability to control all (printing) parameters remotely from one central location frees up a large number of resources in an operation as geographically spread like ours. We also noticed that the local managers, would get a more dependable system – they were happy, and so were we!" - Anders Eklind, NCC

Anders continues: "Before Cirrato, there were tremendous uncertainties every time a print server had to be changed. The modifications had to be accurately documented so they could be replicated on the other print servers. Today, all improvements are instantly spread across the network to benefit end-users. The system has also given us the opportunity to work pro-actively – all disruptions appear on one of our helpdesk screens which often enables us to correct the glitch before the users notice anything."



"My recommendation to companies who are about to install Cirrato is to not mention it to the staff. At NCC, we gave people notice because we were concerned about upcoming problems, but that only resulted in Cirrato being blamed for issues like empty toners or paper jams. In hindsight, I should have told the organzation after the fact, when everything was up and running."

Ingella Horrocks, who took over the IT co-ordinator position from Anders, went on maternity leave right before the Cirrato migration took place. She came back to a completely new environment. "My last words before I left were: don't let any consultants mess up our system. My experience was that it could take days, sometimes weeks, to get everything running 100% smoothly again. Instead, I came back to a fully set print environment and managing the printers is now a piece of cake! Cirrato functionalities are so easy to understand and the system is almost maintenance free."

Ingella comments: "In one region we had a large number of local printers and there was a lot of resistance against connecting them to a central server. People thought that would complicate things. Nothing could be further from the truth. And it is actually in dealing with a large number of USB and networked printers where we see the biggest gains with Cirrato." "Yet when talking about the value Cirrato brings, nothing comes close to being able to centrally handle printers anywhere on the network. If a bug is found in a driver or if a printer is changed, the user notices nothing while all the printers and routines are updated. With Cirrato we achieve what is most important to us – that the construction proceeds on our building sites!" Ingella concludes.

Göran Gerth is responsible for the environment at NCC. He comments: "At a construction company like NCC, the main environmental impact takes place at the building sites. Our focus is on environmentally sustainable construction, logistics and materials. Cirrato's greatest environmental contribution is the increased end-user awareness we get through its programmable functions, such as printing account limits and its subtle suggestion to print double-sided."

But how does the server elimination aspect result in increased sustainability? Göran comments: "The immediate environmental benefit of having one large print server instead of sixty is the reduced power consumption – by more than 90%. And, the system is more reliable. Where you can reach such effects? Furthermore, travel to the building sites by our IT-staff have nearly disappeared. In real numbers, NCC's largest environmental impact comes through green fuels for bulldozers and improved logistics in moving rocks and concrete, but the environmental mindset that Cirrato represents, seeps through the entire organization. Having NCC's IT department reduce the environmental impact with substantially increased operational efficiency has tremendous advantages.

Lars-Erik Åhlin is the IT Manager of Infrastructure. "Our number one job is construction. Computers make our way of building more effective. On the whole, the cost for computers and printers are negligible, as long as they work. The cost for any ITsystem disruption is reflected in salaries and shattered budgets. With Cirrato, printing always works, even when the server is offline or unreachable."

Different people within the NCC organization have experienced the Cirrato impact and they all agree that the value is irrefutable. Reliability, sustainability and efficiency are words used to describe the Cirrato solution. Benefits that NCC will keep seeing for many more years to come while it continues to renew their industry and provide superior sustainable solutions.

About NCC

NCC is one of the leading construction and property development companies in Northern Europe, with sales of SEK 57 billion and 18,000 employees. With the Nordic region as its home market, NCC is active throughout the value chain – developing and building residential and commercial properties, and constructing industrial facilities and public buildings, roads, civil engineering structures and other types of infrastructure. NCC also offers input materials used in construction and accounts for paving and road services. NCC creates future environments for working, living and communication based on responsible construction operations that result in sustainable interaction between people and the environment. More information is available at www.ncc.se.

Levi, Ray & Shoup, Inc. 2401 West Monroe Street Springfield, IL 62704 +1425 999 4500 www.cirrato.com

 ${\ensuremath{\mathbb C}}$ 2017 LRS is a registered trademark and Cirrato One is a trademark of Levi, Ray & Shoup, Inc.

All other brand and product names are trademarks or service marks of their respective holders.

