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Supercell's game development won't stop when the power goes out

The construction of the data center is preceded by careful and complex planning

The IT solutions at the video game company's main office follow the same uncompromising line as the rest of the building. Protected by ABB components, nothing is left to chance in the power supply.

As a wooden construction, Supercell's new main office stands out nicely in the cityscape. However, much of the building's beauty is within. The goal was to create the world's best working conditions for Supercell employees.

With the office building's new daycare and the upstairs café buzzing with cheerful conversation, that goal has been achieved. In contrast is the data center in the basement, which takes care of the video game developer's diverse information technology needs.

Mats Malmstén, Supercell's IT Lead, sits down on a couch in the café and opens the UPS system control panel view on his laptop. The system has two identical UPS cabinets, both of which house eight 20kW UPS modules. The UPS system protects the power supply to the data center, building automation, and the switches and WLAN base stations on all the floors.

"Even if we lose power in the entire building, communications and building automation will still work," says Mats Malmstén.

The work in the building will continue on personal laptops, even if the whole city around it loses power.

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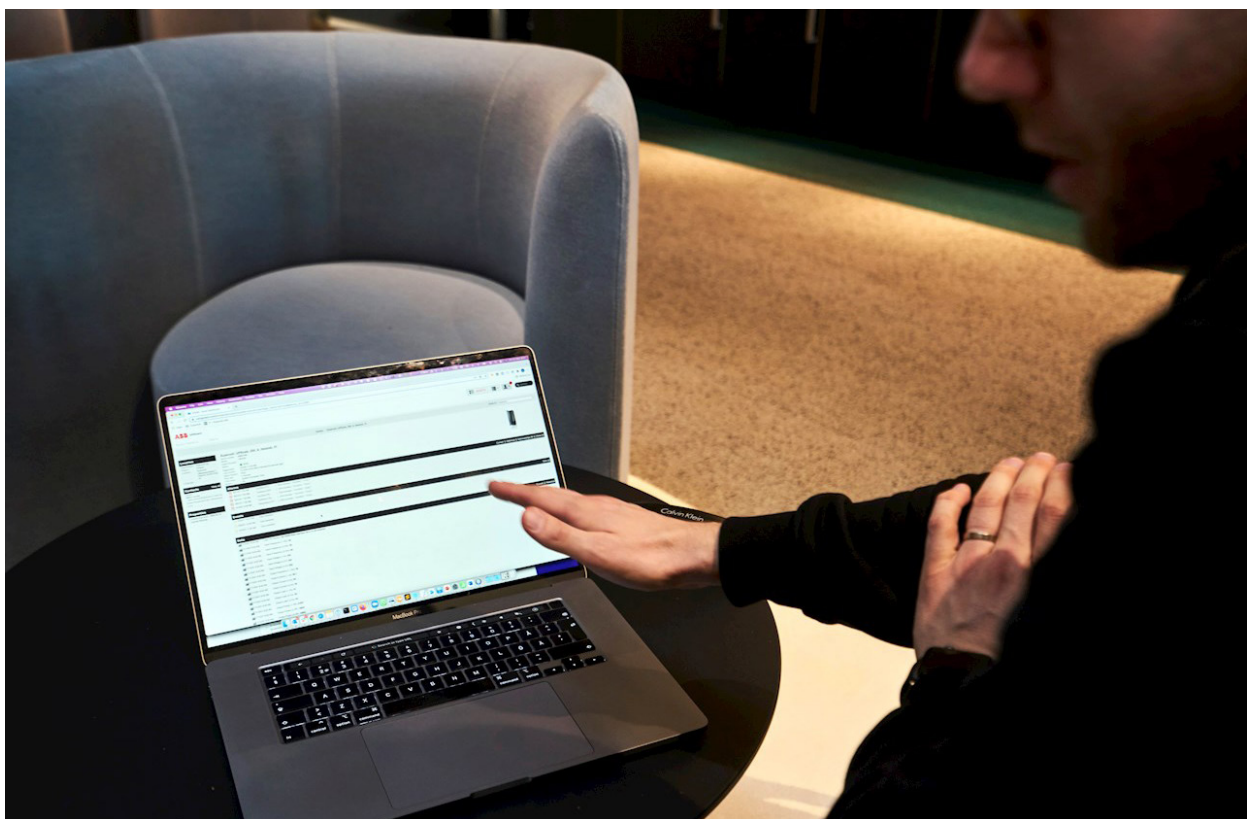
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Remote monitoring responds quickly

Mats Malmstén's screen displays the UPS system's recent events. The log shows even minor disruptions to AC power, which the UPS system filters to the server from the AC power supply. Severe problems with the batteries or UPS modules will alert Mats Malmstén's phone, but by that time it's likely that ABB's remote monitoring station has already reacted to the problem.

"We have ABB's round-the-clock emergency service with a four-hour response time."

Supercell has a reputation as a company with a high standard for publishing games. The same principle is also apparent in the design of the data center's power supply. To make sure that there are no concerns about the systems functioning in the future, a lot of effort has gone into the meticulous design.

"The less work we have to do on the IT systems in the future, the better," states Malmstén.

This principle has dictated the data center's design solutions. Power from two directions feeds the building's secondary substation, and both the UPS systems and the batteries are duplicated. In addition to these, in case of a total power outage, a further backup system was built in the building.

"We also have an exterior inlet box on the outside of the building."

Thus, in an emergency, the building's critical systems can be run by a generator outside by simply connecting one cable.

ABB's Total Care maintenance contract guarantees that the system stays in good shape. Acute problems are responded to immediately. Thorough preventive maintenance is performed annually, where the functioning of the equipment and batteries in a discharge situation is inspected.

Changes along the way

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01 Mats Malmstén,
Supercell's IT Lead
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02 The data center's
server racks are
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infrastructure that the
company's 250 game
developers require:
version control systems,
conference room AV
technology, IP speakers,
and display screens.
—
03 To ensure that there
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—
04 The UPS cabinets
will get new ABB
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Construction industry trade magazines featured Supercell in many articles for being an exceptional company in that it built its own office building. The future occupants were often on the jobsite during construction work, and many changes were made to the original plans.

Purchased as a turnkey contract, the data center with its servers and ABB's UPS systems also underwent many changes. The need for changes emerged as the construction progressed, and solutions were sought together with ABB's designers. The first survey already revealed the most important areas that could be improved.

The cleanliness of the basement-level data center resembles a hospital operating room. Above the UPS cabinets and batteries, the cable channels are run in careful order. Cabling and the placement of UPS devices was one of the changes made after ABB's survey.

The data center's server racks are responsible for the IT infrastructure that the company's 250 game developers require: version control systems, conference room AV technology, IP speakers, and display screens.

"A large portion of their data moves through the basement," says Mats Malmstén.

When the UPS system was given new tasks in the design phase, three 20kW modules were added to both UPS cabinets. The second significant change was related to the batteries. In the original plans, the batteries were split in half and connected so that only half the battery capacity would be in use if one of the UPS cabinets failed.

"Now we can use the whole battery capacity through one UPS."

That's a huge improvement, because now the system can tolerate power outages of over two hours.

ABB's experts quickly designed the changes.

"Our colleagues, too, speak highly of their expert crew."

The UPS cabinets will get new ABB network cards soon. The UPS remote monitoring view will also be updated soon, when ABB's new control room software is published.

Designing and building the data center has been a major project. Careful design and minor improvements can mitigate problems beforehand. Now, the power supply is secured in every possible way, and the devices are under continuous remote monitoring. Everything is aimed at minimizing IT labor in the future.

"That's when we've been successful and have done our jobs right," states Mats Malmstén.

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