The International Committee of the Red Cross (ICRC) is an independent and neutral organization providing aid and humanitarian protection worldwide to people affected by conflict and other forms of violence. Headquartered in Geneva, Switzerland, the organization employs more than 19,000 people in over 80 countries. In collaboration with the Red Cross and Red Crescent Movement, the ICRC has the mission to reduce human suffering and work for the protection of human dignity. The ICRC is funded mainly by voluntary contributions from governments/private sector, the national societies and others.

The Challenge

Founded in 1863, the work of the International Committee of the Red Cross includes monitoring compliance with international humanitarian law and caring for the wounded and prisoners of war. The ICRC’s work also focuses on family reunification, searching for missing persons, protecting and caring for civilian populations and restoring basic utilities such as water, sanitation and electricity.

IT and technology play a decisive role in all these tasks and confront the ICRC with major challenges: The digital transformation does not stop at NGOs and aid organizations. Those in need of help have also changed their communication behaviour and are increasingly relying on social networks and mobile telephones, which offers both new opportunities and new risks for aid organizations. In addition, the ICRC is committed to providing aid in all armed conflicts worldwide and to support the restoration of infrastructure. This led the ICRC to a steady growth as well as a massive increase in the data collected. A digitization strategy was therefore urgently needed and is currently being implemented.

Other major challenges include connecting ICRC staff around the world to IT and enabling secure, global data traffic. All of them need to be connected to the headquarters in Geneva for communication purposes and require
INFORMATION SECURITY IS SAVING LIVES AT THE INTERNATIONAL COMMITTEE OF THE RED CROSS

“The data we collect about individuals can save lives - or endanger lives if we fail to fulfil our obligation to store it safely.”
CHARLOTTE LINDSEY-CURTET
DIRECTOR OF DIGITAL TRANSFORMATION AND DATA
ICRC

VMWARE FOOTPRINT
• VMware NSX Data Center
• VMware vCenter
• vRealize Network Insight
• vRealize Suite
• VMware vSAN
• VMware vSphere
• VMware Workstation Pro

appropriate IT equipment. "We are represented all over the world, from Syria to the Fiji Islands," says Daniel Curty, CTO and Co-Head of ICT Division at the ICRC. "It is a challenge to connect all employees with each other. Speed and agility are key to successful communication.” Furthermore, communication - especially in war zones - must always function to guarantee the safety of employees.

The organization collects as much data as possible about people affected in crisis areas. This enables the ICRC to gain a better overview of the situation and needs of the affected local population, especially if the situation is too dangerous to send staff there. This data collection enables family reunification or helps to locate missing persons. It is obvious that this type of data must be 100% secure and treated with maximum caution to prevent misuse by people with bad intentions. "Personal data collected by the ICRC about individuals can save lives - or endanger lives if we fail to fulfil our obligation to store it safely,” says Charlotte Lindsey-Curtet, Director of Digital Transformation and Data at the ICRC.

The solution
Collaboration between ICRC and VMware began in 2006 with virtualizing the data center in Geneva, which was fully occupied with 100 servers, while the organization was growing continuously. Starting with VMware vSphere version 2.5, they successfully reached 100% data center virtualization, with over 1,500 virtual machines now. Today, the ICRC works with VMware vSphere 6 and is able to easily and quickly deploy new services around the world to meet the complexity of its own infrastructure, having branches and camps in many different countries. Data center virtualization also includes a security aspect. This is the reason why they are using VMware NSX, allowing them to micro-segment the critical data farms in their Data Centers.

In 2017, VMware NSX Data Center, the network virtualization platform for the software-defined data center (SDDC), was implemented to secure the data center by segmenting it at the virtual level. Thanks to many years of collaboration with VMware and the successful data center virtualization, the NSX Data Center implementation process was smooth - processes, procedures and administration were familiar to the IT team, so they didn’t come across any major problems. After a successful proof of concept by VMware specialists, the implementation was completed within a short time.

The result
The ICRC benefits above all from the virtualization of the data center in terms of space, reports Daniel Curty: "We could never physically place all machines that we now operate virtually in the data center.” In addition, the introduction of vSphere has also led to a tenfold increase in efficiency. Today’s highly virtualized ICRC infrastructure forms the basis for the organization’s digital transformation. The ICRC’s employees can better perform their demanding and difficult daily work in crisis areas worldwide thanks to a high-performing, reliable, highly available and efficient IT infrastructure.

Due to the VMware NSX network virtualization platform, the ICRC knows that sensitive data from crisis areas is safe, which benefits the organization on several levels. “As a humanitarian organization we have a great responsibility. We only collect data for humanitarian and non-profit purposes, a data leak would seriously place people at risk and damage the reputation of the Red Cross,” says Charlotte Lindsey-Curtet. After all, the ICRC relies on donations to
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CTO AND DEPUTY HEAD OF ICT DIVISION
ICRC

fund its operations, and an undoubtedly positive image and donor confidence in the organization’s principles are essential to being able to continue providing aid where it is needed. Information security is also of utmost importance in the actual work with those in need. “If the affected population no longer trusts us, we cannot do our work,” says Daniel Curty. “Trust is the essential foundation of our operations.”

Thanks to the VMware products in use at the ICRC, the organization can focus on its missions and provide people in crisis areas with the help they need. Employees are immediately reachable in crisis situations and can get help - a 100% reliable connection is essential for the ICRC to ensure the safety of all involved. In addition, no resources are bundled unnecessarily in order to connect subsidiaries to IT or solve network problems in a tedious and time-consuming manner. “VMware is a strong and important supplier in our mission,” says Lindsey-Curtet. “Technology is a real game changer for the International Committee of the Red Cross.”

Looking to the future
With its digital roadmap 2018-2022, the ICRC still has a few more steps to take, but is well positioned with its current technological basis and 100% virtualization. The ICRC is deploying VMware Workspace ONE, the intelligence-driven digital workspace platform, to enable employees around the world to work remotely and seamlessly on all types of digital devices. In addition, the Internet of Things (IoT) offers organizations such as the ICRC, whose employees travel in dangerous regions, a new way to gather information about the whereabouts of people. For example, the ICRC’s well-known white Land Rovers could be tracked in order to locate passengers or prevent theft. This function is currently managed via GPS, but Daniel Curty sees the future in the IoT area: “Our Land Rovers are literally the T in IoT. We need to use all available technologies to guarantee the safety of our colleagues.”

Today the ICRC uses technology to provide people in war and crisis situations with the help they need in a faster and better way, thus continuing their important mission in the world.