News in Short

– Module 2 is now finished by our sub-contractor Datacenter technologies AB. The inauguration will be later this spring.

– We have been featured in the news a couple of times lately. For example in Danish TV.

– The first deputy Speaker of the Swedish Riksdag (congress) visited us at SICS North in March.

– We demonstrated a breakthrough in Big Data on SICS ICE: 16X performance gains for Hadoop, delivering over 1.2 million operations per second on the SICS ICE Hadoop cluster.

– Jon Summers Leeds university visited us and presented his latest thoughts on Moore’s law. “My bet is that we run out of money before we run out of physics.”

– At the Data Centre World event in London we presented our experiment-as-a-service offering using the slogan “Take great ideas into proven innovations in the data center space”.
– We are active on twitter @SICS_ICE and with a Linkedin group SICS ICE.

SICS ICE overall plans
We are still having many visits and interest in what we do. The visitors are both from industry, society and academia. We are trying to find collaborations with many of our visitors and we try to understand what value we can bring to the table.

We are finalizing the recruitment of our research leader and we hope to announce it soon. Currently we are 11 active at the research institute and during the summer we will have at least two additional students.

The module 2 is now finished by our sub-contractor Datacenter technologies AB. The module 2 to the right in the picture is slightly bigger than module 1. It is more flexible and lab-like and will enable us to do more testing. We can either use the dell servers we have or the open compute hardware.

We can claim we are the leading data center research institute in the Nordics. We have a lot of interested stakeholders and partners. Currently we are awaiting news on more funding, we work on new ideas and will expand our office as well, as it is currently too crowded.

In the news
We were featured in Arctic Mirror, a business magazine in the north.

Arctic Mirror visited us to see what we are up to. They liked our drive to reach 17 MSEK in turn around in one year and that we are tripling
Danish TV had a short clip from SICS North in the 21 SöNDAG program. Danish TV made a visit to the north to see Facebook and talk to the local data center industry. As a part of the visit they also came to SICS North to see our work on energy efficiency and our research facility.

Read the article in Actic Mirror

Visit by Tobias Billström

On March 13 the first deputy speaker of the Riksdag Tobias Billström visited RISE SICS North, invited by the county Governor Sven-Erik Östergren, together with the Norrbotten county representatives.

Tobias Billström stressed the importance of research and is interested in looking into data centers as a new growing industry sector.

Photos by Pär Bäckström.

Norrbottenkuriren om besöket (in Swedish)

World record set on the SICS ICE Hadoop cluster!

Breakthrough in Big Data was demonstrated on SICS ICE: A 16X performance gain for Hadoop, delivering over 1.2 million operations per second was shown on the SICS ICE Hadoop cluster.

RISE SICS and KTH have presented a next-generation distribution of Apache Hadoop File System, called HopsFS, that delivers a quantum leap in both the cluster-size and throughput compared to Hadoop clusters.
Hadoop is the de facto open-source platform for Big Data. HopsFS delivers over 16 times the throughput of the Hadoop Filesystem (HDFS) for a real-world Hadoop workload from Spotify AB on the SICS ICE cluster. HopsFS' key innovation is a novel distributed architecture for managing Hadoop’s metadata in MySQL Cluster, Oracle’s open-source NewSQL database. The result is a more scalable, reliable, and more customizable drop-in replacement for Hadoop.

**Breakthrough in Big Data**

“My bet is that we run out of money before we run out of physics.”

Jon Summers, University of Leeds, visited RISE SICS North last week. He quoted Daniel Reed, a computer scientist and vice-president for research at the University of Iowa. He spoke about Moore's law and how valid it will be in the future. Jon referred to an article in Nature where this bet was made.

The conclusion is there will be a lot of challenges for the data center industry if Moore's law runs out of steam and the PUE limit is reached.

He also talked about the data center projects they have been running at Leeds University. The projects cover liquid cooling, airflow and leakage.

**The talk (video and sound will start within a minute)**

**Take great ideas into proven innovations in the datacenter space – a presentation at Data Centre World in London**

Tor Björn Minde was presenting at Data Center World March 15-16. The presentation focused on what we are doing to help industry with testing and experimentation of data center technologies.

One key section of the talk was the generations of data centers and how they develop.
Data collection on SICS ICE

To successfully develop new automation schemes, to measure performance, make testing easy and monitoring and analysis of data simple, a data collection chain and storage software has been implemented using mostly open-source tools. It enables real-time collection, sharing to different automation/control implementations, real-time analysis, off-line analysis using a hadoop cluster and uses a matlab interface.

Currently 30 000 measurement points are implemented for module 1 and the system collects 9 GB a day. With the module 2 added we will collect 20 GB a day. It is for example energy, temperature and humidity monitoring, network traffic data, IT loads, server sensors, cooling and power equipment etc.