



RMC XPress

Rocky Mountain Chapter

The leading knowledge exchange for those who design, build, use and maintain mission-critical enterprise information infrastructures, 7x24 Exchange's goal is to improve end-to-end reliability by promoting dialogue among these groups.

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2009 Winter Program

“How do we handle high density data center loads?”



Winter Program

Our winter program was held on March 3rd. The program was titled, “How do we handle high density data center loads?” The presentations looked at both the power and cooling sides of today’s data centers. Both presentations discussed how to design for high densities as well as increase efficiency. We were pleased to have Robert Strong, with Critical Facilities Technology, and Kevin Kuczek and Leonard Schamberger, with AC Systems, speak to us about this topic. Following the presentations Robert and Kevin participated in a Q&A session to answer questions related to the material.

The consensus from both presenters is that we must change the way we design, install, operate, manage, and maintain data centers. Rapid changes in IT technology, increasing power density and energy cost, uncertain long-term plans for capacity or density are putting real pressures on data centers. These factors affect where critical equipment, especially blades, can be located in a space without compromising the existing cooling/power design. For this reason, most new data centers are being designed around a kW per rack load versus the traditional watts per square foot.

There has been a move from room cooling to dynamic row/rack cooling to help increase cooling distribution as well as efficiency. By implementing a high density cooling solution you are increasing your watt density, upping your return temperature capacity calculations, and supplying air to the room at higher temperatures.



The other main issue to be tackled in high density data centers is improving efficiency. Over half the power and cooling losses in a data center are fixed and do not vary with the IT load, therefore, over sizing is a big problem. Additionally, virtualization and server power management are making this problem worse, especially when power and cooling are sized to peak IT loads that are not typical. So you can see that high efficiency servers are part of the solution and the problem. The solution comes with new power and cooling devices can scale in capacity, reducing fixed losses.

In closing, the advice from the panel is to identify the inefficiencies and correct them. Simple changes like raising supply air and chilled water settings temperatures can lead to remarkable improvements. Design new data centers and/or zones for high density. Use right-sized, high-efficiency power and cooling equipment.

Summer Program

The summer program will be held on July 14th and will feature a double-header!



In the morning the presentations will focus on standby power systems, including transfer switch (Russelectric) and engine – generator (Cummins) topics. After lunch there will be presentations from several individuals from local data centers. Further information will be sent out in the near future.

Fall Program - Commissioning

Our fall program, scheduled for September 15th, will focus on commissioning. The program will address both commissioning of new facilities as well as re-commissioning of existing facilities. We hope to learn a great deal about designing and constructing reliable and energy-efficient facilities, and operating them at peak performance over time.



A Note from the President

"A Year of Firsts"

2009 continues to be the year of firsts...

March 3rd: 1st breakfast meeting - "Handling High Density Loads of Today's Data Centers." What a great success.

April: I'm very excited about our 1st program in Colorado Springs - "Un-Planned Outages."

July: We are planning our 1st ever double header starting with a breakfast meeting and continuing after lunch with an afternoon program.

There is so much information out there regarding uptime, so the Rocky Mountain Chapter is doing everything we can to bring it to you. In these tough times everyone is looking for the edge to do better with less and hopefully we can help in the education arena. — **Bob Maas, President** – *Mountain Chapter*

Committee Members

As always, we have committee vacancies remaining so anyone with interest in getting involved, please contact a board member.



New Member Application

Our web-based membership application process is working very well. Look for us at www.7x24exchangerm.org. It is very easy to fill in the required application information and send it in. Please note that we can no longer give a discount for National members or accept credit cards.

7x24 Website

To obtain information on current events, future programs, joining the RMC (obtaining a user-friendly membership application), or contacting us with any questions, please visit our website at: www.7x24exchangerm.org.



The site includes: archived newsletters, board member contact information, membership application, PowerPoint presentations from previous seminars, attendee lists from previous seminars, and a link to the 7x24 Exchange National website.

