Introduction to NTHU

Our School
Located in Hsinchu, Taiwan, National Tsing Hua University is a comprehensive research university offering a full range of degree programs in science, technology, engineering, humanities, social science, and management. It consistently ranks as one of the best universities in East Asia.

Our Team
We are an amazing team composed of five senior students Tiffany, Bruce, Daren, Johnny, Andy, and one junior student Bobby. All of our team members major in Computer Science. We are excited for having the opportunity to attend competitions as a team, and really interested in learning knowledge related to parallel programming, cluster environment setup, and HPC application optimization, etc. We all very look forward to SC15 and are ready to take on new challenges.

Hardware Configuration
Our server is supported by Quanta Computer, a Taiwan–based computer vendor. Our system is optimized for both energy and performance, and equipped with InfiniBand and PCIe SSD.

<table>
<thead>
<tr>
<th>Item</th>
<th>Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server</td>
<td>Quanta Grid D51BV-2U</td>
</tr>
<tr>
<td>CPU</td>
<td>Intel Xeon E5-2698 v3 x 2, 2.3Ghz, 16 cores (per node)</td>
</tr>
<tr>
<td>Memory</td>
<td>16G x 8, DDR4, 2133Mhz (per node)</td>
</tr>
<tr>
<td>Disk</td>
<td>SSD (per node), PCIe SSD x 2</td>
</tr>
<tr>
<td>Interconnect</td>
<td>Infiniband Mellanox ConnectX®-3 HCA card, FDR switch</td>
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Preparation to SC15

Self Study
Besides self-study, we search help and resources from experts and scientists around the country. We visited the professor in the department of physics for MILC, discussed with researchers in Central Weather Bureau for WRF, and learned from other graduate students about Trinity. We even practice Repast HPC by writing simulation for fishes and birds.

Weekly Meetings
A weekly meeting is scheduled for the past 6 months with our professors and coaches to discuss the things we learned and the problems we encountered. To improve our language skills, it is in “English” only. It is challenged, but fun!

Simulation Contest
Before coming to SC, our coaches arranged a simulation contest for us to test our study results and get familiar with the atmosphere of competition. So we can improve on our shortcomings in the last minute.

Visualization
Visualization is the best way to understand applications, so we install several visualization tools, and wrote our own visualization program for Repast HPC.

Why We Will Win?
Preparation is a long road. But we all love what we do! Passion is the strength for supporting us.

We sacrifice sleeping and leisure time in order to get a better performance!

Spirit & Faith
It is a Taiwanese snack named “be good” in Chinese. Its green color also matches the green light when server is stable. So by putting it on top of our servers, we believe it will keeps them in good condition! (If you want to have a taste for it, find us after the competition.)

He is a god in Taiwan. We bring him to all the competitions, and he brings us good luck!