Overview RV

Remote Visualization (RV) describes the process of rendering images in real-time based on data, which is not stored locally on the system where you are observing the rendering with the possibility of interaction. To achieve this two different approaches are common, remote computation where the data is kept remotely but the rendering is performed locally and the actual remote visualization where data and rendering are performed remotely and the images are transmitted afterwards to the local system.

Requirements and Use Cases

No special requirements are needed on the local system, but accounts to the remote systems either Linux Cluster or SuperMUC are required. For some systems/work flows, a VNC client is required.

Typical use cases for RV comprise post-processing and handling of large data sets there where they were generated, such as on the LRZ HPC clusters. Using licensed software with no permit to install it on local machines, or having no local access to license servers.

Disclaimer

The network connection quality - also geographical distance - might affect the RV image quality. The RV system at the LRZ represents a limited resource shared by many users. Immediate availability cannot be granted.

Visualization Hardware

<table>
<thead>
<tr>
<th>System</th>
<th>RVS subsystem</th>
<th>OS</th>
<th>GPUs/Node</th>
<th>Cores/Node</th>
<th>Memory/Node</th>
<th>Submit RV job via</th>
<th>Submit Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linux Cluster</td>
<td>rvs1, ..., rvs7</td>
<td>SLES 12</td>
<td>NVidia</td>
<td>16 (SandyBridge)</td>
<td>128 GB</td>
<td>lxlogin5.lrz.de, ..., lxlogin10.lrz.de</td>
<td>module: rvsvnc</td>
</tr>
<tr>
<td>SuperMUC Phase 2</td>
<td>vis01, ..., vis03</td>
<td>SLES 11</td>
<td>NVidia Tesla K40m</td>
<td>28 (Haswell)</td>
<td>512 GB (480 GB)</td>
<td>hw.supermuc.lrz.de</td>
<td>rstartvnc</td>
</tr>
</tbody>
</table>

Depending on the Operating System (OS), different software stacks are present.
The 480 GB of memory in parentheses on SuperMUC Phase 2 are the effectively usable memory. The rest is reserved for the system.