Scientific Visualization in HPC
Data on Mesh
Plots
Operators/Filters
Analysis
Handle Large Data in Parallel
**GUI** - user interface

**Database Server** - connects to file system; reads metadata

**Compute Engine** - reads and processes data; sends geometry or images to viewer

**Viewer** - manages visualization windows

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**Client/Server Architecture**
Getting Data In

- Lots of built-in readers (over 100)
- Write your own reader
- Easily handles ascii data or raw binary
VisIt Demo
To copy data file:

```
scp std00###@nautilus.nics.utk.edu:/nics/a/proj/nautilustrain/ssh_global_10.cdf .
```

OR

```
http://web.eecs.utk.edu/~simmerma/ssh_global_10.cdf
```
Links

VisIt main site:
https://wci.llnl.gov/codes/visit/

VisIt wiki:

Paraview main site:
http://www.paraview.org/

ParaView wiki:
http://paraview.org/Wiki/ParaView

Molecular plots in Visit:

OverView (infovis for ParaView):
https://www.kitware.com/InfovisWiki/index.php/Main_Page