Tutorial: Introduction to Globus

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The Challenge: Moving and Sharing Big Data Easily

• What should be trivial...

  “I need my data over there – at my _____” (supercomputing center, campus server, etc.)

  “I need to share my data with …”)

• … can be tedious, time-consuming and expensive

  “GAAAH! %&@#&”

  ! Config issues

  ! Firewall issues

  ! Accounts & access control

  ! Unexpected failure = manual retry
### Bandwidth Requirements to move Y Bytes of data in Time X

<table>
<thead>
<tr>
<th>10PB</th>
<th>25,020.0 Gbps</th>
<th>3,127.5 Gbps</th>
<th>1,042.5 Gbps</th>
<th>148.9 Gbps</th>
<th>34.7 Gbps</th>
</tr>
</thead>
<tbody>
<tr>
<td>1PB</td>
<td>2,502.0 Gbps</td>
<td>312.7 Gbps</td>
<td>104.2 Gbps</td>
<td>14.9 Gbps</td>
<td>3.5 Gbps</td>
</tr>
<tr>
<td>100TB</td>
<td>244.3 Gbps</td>
<td>30.5 Gbps</td>
<td>10.2 Gbps</td>
<td>1.5 Gbps</td>
<td>339.4 Mbps</td>
</tr>
<tr>
<td>10TB</td>
<td>24.4 Gbps</td>
<td>3.1 Gbps</td>
<td>1.0 Gbps</td>
<td>145.4 Mbps</td>
<td>33.9 Mbps</td>
</tr>
<tr>
<td>1TB</td>
<td>2.4 Gbps</td>
<td>305.4 Mbps</td>
<td>101.8 Mbps</td>
<td>14.5 Mbps</td>
<td>3.4 Mbps</td>
</tr>
<tr>
<td>100GB</td>
<td>238.6 Mbps</td>
<td>29.8 Mbps</td>
<td>9.9 Mbps</td>
<td>1.4 Mbps</td>
<td>331.4 Kbps</td>
</tr>
<tr>
<td>10GB</td>
<td>23.9 Mbps</td>
<td>3.0 Mbps</td>
<td>994.2 Kbps</td>
<td>142.0 Kbps</td>
<td>33.1 Kbps</td>
</tr>
<tr>
<td>1GB</td>
<td>2.4 Mbps</td>
<td>298.3 Kbps</td>
<td>99.4 Kbps</td>
<td>14.2 Kbps</td>
<td>3.3 Kbps</td>
</tr>
<tr>
<td>100MB</td>
<td>233.0 Kbps</td>
<td>29.1 Kbps</td>
<td>9.7 Kbps</td>
<td>1.4 Kbps</td>
<td>0.3 Kbps</td>
</tr>
</tbody>
</table>

Use a Science DMZ to optimize
http://fasterdata.es.net/science-dmz/

http://fasterdata.es.net
What is Globus Online?

• Move, sync, share files
  – Easy “fire-and-forget” transfers
  – Share with any Globus user or group
  – Automatic fault recovery & high performance
  – Across multiple security domains
  – Web, command line, and REST interfaces

• Minimize IT costs
  – Software as a Service (SaaS)
    • No client software installation
    • New features automatically available
  – Consolidated support & troubleshooting
  – Simple endpoint installation with Globus Connect and GridFTP

• Recommended by ALCF, ESnet, NERSC, XSEDE, Blue Waters, NCAR, many Universities
Globus Online Demo
For More Information

• Visit www.globusonline.org/signup to:
  – Get a free account to start moving and sharing files

• Visit www.globusonline.org for:
  – Tutorials, FAQs, Pro Tips, Troubleshooting
  – Papers, Case Studies

• Visit support.globusonline.org or contact support@globusonline.org for:
  – Help
  – Forums

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