GHPN-RG @ GGF9

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Agenda

1. Agenda Bashing and Administrivia   [5']

2. GHPN overview. Progress against milestones [5']

3. draft-ggf-ghpn-netissues-1   [20']

4. draft-ggf-ghpn-opticalnets-0   [20']

5. upcoming milestones, next steps   [10']

6. Short presentations: [30']
   - DWDM-RAM, by Joe Mambretti
   - Satellite data transfers ..., by Marco Tana
   - Ideas on quality monitoring ..., by Gigi Karmous-Edwards

GHPN-RG ?

- To bridge gaps between Networking and Grid advanced communities
  - E.g., Grid requirements not yet understood by 'Netheads'
  - E.g., Net rules/features ignored by 'Gridheads'

- while countering any premature ossification around Grid/Net dominant scenarios
  - E.g., Advocacy of Grids using non-traditional mixes of end-systems and net infrastructures

- Outcomes: Informational or BCP Drafts, new RGs/WGs, liaisons with other Groups

"<u>High-Performance</u> Networking RG" ?

- It does NOT necessarily imply:
  Gigabit/s or Terabit/s !!!

- It's short for: "Highly **effective** OR **efficient** networking, AND **qualitatively** different from established practice (if any)"

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To witness …
how about two recent work items

- Fat optical pipes
  - Control vs. Data physical separation
  - Circuit semantics
  - (G)UNI

- Sensor fields
  - Severe resource constrains
  - Intermittent connectivity in time & space

Two GHPN drafts underway

Just released ahead of GGF9:

- draft-ggf-ghpn-netissues-<u>1</u>
  - Pain points in attaching Grids to the network

- draft-ggf-ghpn-opticalnets-<u>0</u>
  - Convergence of optical nets and Grids; problems and opportunities

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Progress wrt Milestones

- opticalnets-0 has rocketed thru our charts
  - Unplanned draft

- The netissues draft is moving nicely
  - On track for a GWD-I milestone by GGF10 date

- This one slipped, GGF11 is more likely

  By GGF9 cutoff date. First draft of a new GWD-I track document. What demands do grid applications really put on the network? Do some grid applications abuse the network? Among things, this draft will cross-reference the OGSA use-cases document and GHPN's own draft-net-issues-with-grids, to characterize actual network utilization patterns according to several metrics.

[drafts presented here]

Three challenges ahead

- Leap from issues to recommendations

- Carve out and define OGSIfied services

- Transcend netissues-1 and opticalnets-0 draft boundaries

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Next Steps

- **By GGF10 cutoff date**. New revisions of *netissues* and *opticalnets* sent out for wide circulation inside and outside GGF. Submit the two drafts for GWD-I track.

- **By GGF10 cutoff date**. Plans for OGSIfied services and BOF activities

Email über alles

Anything we do happens here:
ghpn-wg@gridforum.org

Drafts in the making, new Drafts, comments, ideas, why and why-nots, technical news ...

Home page:
http://forge.gridforum.org/projects/ghpn-rg/

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[Backup]

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GHPN Charter—the long version

The Grid High-Performance Networking Research Group **focuses on the relationship between network research and Grid application** and infrastructure development. The objective of GHPNRG is **to bridge the gap between the networking and grid research** communities. It accomplishes its goal by **serving as a forum for information exchange on advances and requirements in both fields**, as well as by providing a **focal point for liaison activities** between the GGF and the various networking standards bodies. Specific topics of interest include, but are not limited to:

- End-to-end performance
- High-performance transport protocols
- Emerging network technologies
- The interface between Grid applications and network services
- Deployment of new technologies on the Internet and overlay networks

GHPN Charter—the long version 2

- **The GHPNRG provides a forum** for such topics until sufficient maturity and interest to both communities is reached **that naturally results in the formation of a separate WG or RG to pursue them further**. The discussions of GHPN are carried out both during the meetings and on the GHPN mailing list.

- Two specific goals of the GHPN-RG are identifying:

  - grid application requirements and implementations that are not supported or understood by the networking community and
  - advanced networking features that are not being utilized by grid applications.

New Milestones
(as currently published, with edits)

- **June 6th 2003**. First drafts of the two [ed: now ONE] top-ten documents. Begin circulation with other groups.

- **By GGF9 cutoff date.** First draft of a new GWD-I track document. What demands do grid applications really put on the network? Do some grid applications abuse the network? Among things, this draft will cross-reference the OGSA use-cases document and GHPN's own draft-net-issues-with-grids, to characterize actual network utilization patterns according to several metrics.

- **By GGF10 cutoff date.** Combine feedback from other groups, submit the two [ed: now ONE] top-ten documents for GWD-I track.

- **By GGF10 cutoff date.** First draft of a new GWD-I track document. Sensor nets, post VonNeumann architectures ... what is the impact on Grids an their usage of the network? In which ways can networking research help?

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