Shared Fate Visualizations

Discussion led by Steve Marron

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Goal: "see" how sessions tend to drop packets at similar times

New: "corrected" data

1. Sessions sorted by start time

Show SharedFate1p24.ps

- Heavy tail duration distribution

- "idle times" appear together?

- Small packets appear at ends

2. "Bandwidth View" of Sizes

Show SharedFate1p31.ps

- Random "slot" (re) assignment

- Avoids "large vertical spread"

- Better use of "y-axis"
  (need only 32 slots)

- "Too few" show up?

3. Bandwidth View of Max Proportion

Show SharedFate1p32.ps

- Better contrast shows more

- Can't see "common misses"

4. Bandwidth view of On Times

Show SharedFate1p33.ps

- Better than above view?

- Which are "idle times" vs. "diconnects"?

- Still don't see shared fate

5. Bandwidth view of Connected Times

Show SharedFate1p34.ps

- Now see connections

- Difference show Idle times

- Begin to see shared fate?

6. Connection Levels

Show SharedFate1p35.ps

- Blue: Connected, but no data, "idle time"

- Green: Connected, data < 1/3

- Yellow: 1/3 < data < 2/3

- White: 2/3 < data

- Shows "nature of connections"

- Begin to see shared fate?

- Better view?

7. Connection levels, sorted by size

Show SharedFate1p36.ps

- "High data slots" at bottom

- better grouping

- not all long idle times together

8. Conn'n levels, sorted by idle time on

Show SharedFate1p38.ps

- Still better shared fate grouping

- Several "bad patches"?

- Better sorting possible?

9. Sort on "Connection Status", t = 240

Show SharedFate1p43.ps

- 18 of 36 slots off.

- 6 "idle together"? shared fate???

- 8 active slots.

- t = 240 gave "good vis'l impres'n"

10. Sort on "Connection Status", t = 150

Show SharedFate1p42.ps

- 7 off, 5 idle, 20 active

- shared fate?? (idles overlap well)

11. Sort on "Connection Status", t = 190

Show SharedFate1p41.ps

- Poor overlap of idles

- Shared fate???

- Statistically significant?

12. Study Number of Idle Connections

Show SharedFate1p51.ps

- Many "low" periods

- Several "peaks"

- "Really there" shown by SiZer

- focus on t = 146, 195, 248

13. Sort on "Connection Status", t = 195

Show SharedFate1p52.ps

- shows shared fate?

14. Sort on "Connection Status", t = 146

Show SharedFate1p53.ps

- idle times don't line up well

- 5 "long idles", among 12 total

- peak driven by "spurious" idles

15. Sort on "Connection Status", t = 248

Show SharedFate1p54.ps

- similar lessons

- some nearby "long idles" not in?

- need more stable meas. of "idle"

17. # Conn's idle in full 0.5 sec window

Show SharedFate1p61.ps

- Many "low" periods

- Similar 3 major peaks

- Now two minor peaks as well (careful about SiZer here)

- "Really there" shown by SiZer

- focus on t = 152, 193, 242

- t's slightly different from before

18. Sorts for individual times

Show SharedFate1p63.ps, SharedFate1p63.ps and SharedFate1p64.ps

- Good views of "shared fates"???