

SHARKFEST '12

Wireshark Developer and User Conference

Graeme Bailey

Troubleshooter

TARCA
TROUBLESHOOTING & ROOT CAUSE ANALYSIS

@TARCAtools

What shall we talk about?

- In case you haven't noticed I'm from England
 - You're probably thinking all we talk about is the weather
 - Wimbledon means rain in July
 - Any big golf tournament in Britain means rain
 - Queens Diamond Jubilee so it rained in June
 - The Olympics, any guesses what the weather will be in July/August
- So let's talk about the weather!
 - So now you're probably thinking.....
 - 'What's that got to do with Wireshark?'
 - Please humour with me!
 - and yes there are two u's in humour!

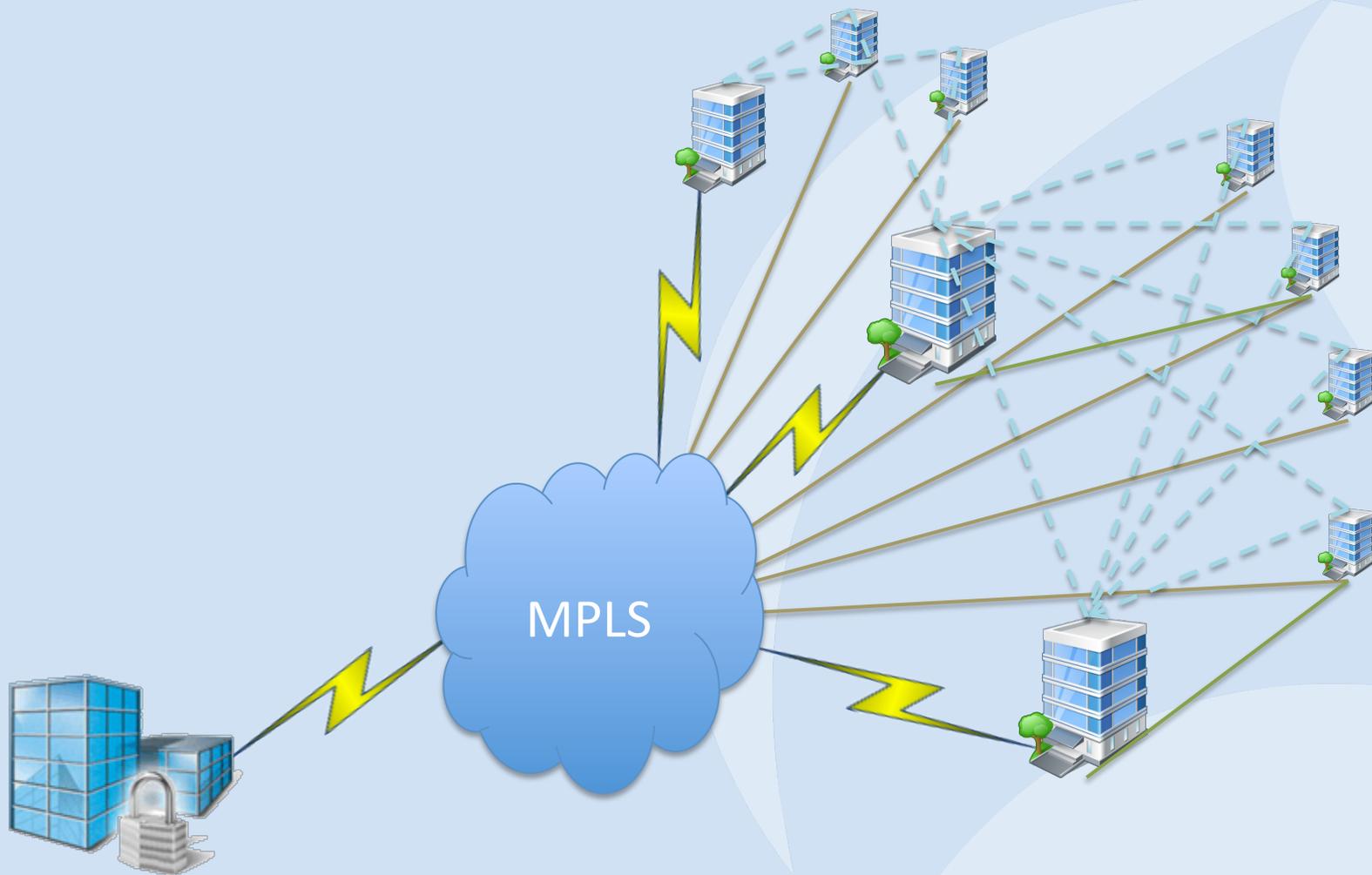
What's the weather been like this year?

- One of the driest winters for years?
- Following the previous very dry year?
- Most of England officially declared a drought zone
- April 5th most water companies introduced usage restrictions, primarily the 'Hosepipe Ban'
- So on April 5th it started raining heavily
- And hardly stopped until the 28th
- Obviously it was 'the wrong type of rain!'

What was I doing in April?

- Troubleshooting for a client with about 100 sites across a large part of the drought zone
 - Many sites suffering poor performance
 - Network captures showed evidence of packet loss
 - Implemented system to test paths across the network
 - Path between the two largest offices average 1% loss
 - Peak packet loss on the link over 20%
 - Many other paths experiencing similar levels of packet loss

What's going on?



What were those dates?

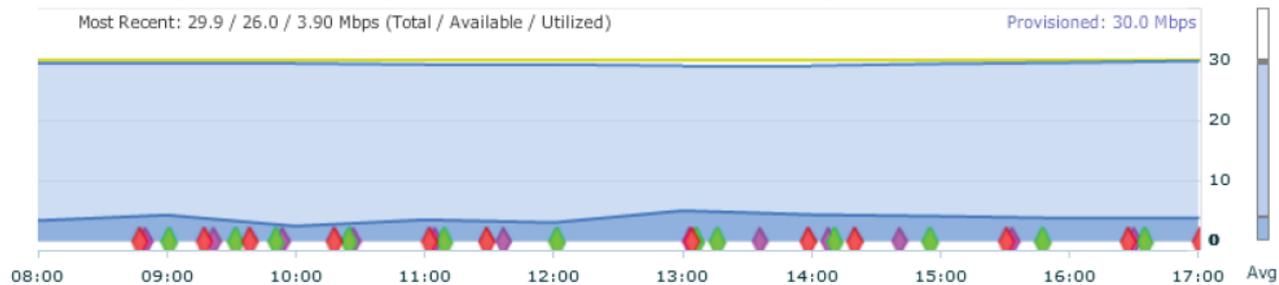
Path Measurement Data

Chart Time: April 16, 2012 08:00 - 17:01

— Total Capacity ● Available Capacity ● Utilized Capacity — Provisioned Capacity ● Unusable Capacity

Most Recent: 29.9 / 26.0 / 3.90 Mbps (Total / Available / Utilized)

Provisioned: 30.0 Mbps



● Data Loss

Most Recent: 0.83 %



How the weather effects the network

- We asked a user, a scientist, if she'd noticed if the performance was worse when it rained heavily?
 - She thought for a few moments, then replied
 - 'I hadn't thought about it but it was very bad last Thursday when it was p***ing down. I put it down to the fact that a lot of the field engineers had come into the office to catch up on admin and get out of the rain. In fact it was so slow I gave up and went out myself.'
- We hadn't thought of that bit
 - Heavy rain degrades network **and** increases demand!

The funny thing is!

- This information has thrown a big spanner (wrench) into one of their major projects
 - They have started to roll out VoIP to all offices!
 - Positive is that they now know about this before the rollout!
 - I've suggested 'jokingly' that they should record a message along the lines of:
 - 'Thank you for calling, sorry you are having trouble getting through. Please call back when it has stopped raining.'
- And the really funny thing is.....
 - Sorry, you had to be there.....

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