

IT Performance Team

Summary of actions and achievements

The performance of services and applications running across the department's Wide Area Network (WAN) is **influenced by a wide variety of factors** as described in the [information pack](#) released in June.

Formed in May, the **IT Performance Team** is working to improve stability and performance across all aspects of the Department of Education network.

IT Performance Team objectives

- **Examine customer issues, and liaise directly with schools and school groups**
- **Work with internal teams and third-party vendors to assess our environment**
- **Make recommendations on changes to approach and process**

Performance Analysis

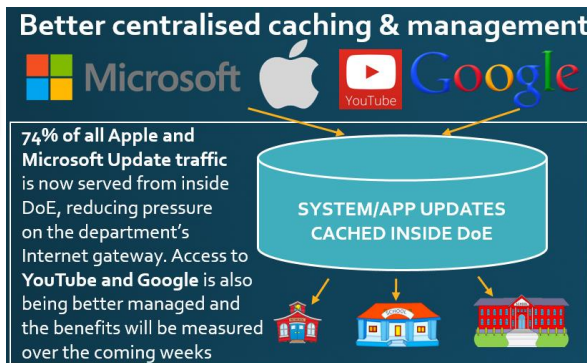
- **School visits & discussions with principals groups to measure and understand performance issues**
- **In-depth monitoring of school links and analysis of DoE application traffic at the servers and across the WAN**
- **Investigation of internet traffic and engagement with vendors regarding better caching opportunities**

Actions across the DoE Network

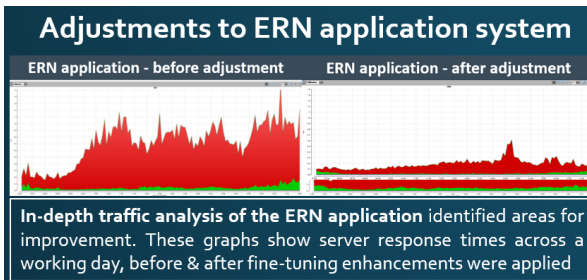
- **A planned increase in DoE internet capacity from 6Gbit/sec to 8 Gbit/sec was brought forward and implemented in June**
- **Controlling our internet traffic more effectively:**

Other actions in place and future plans

- **In liaison with Microsoft, a patch was released to address an issue impacting PCs with only 2GB of RAM**
- **A trial of actively de-prioritising Windows and Apple updates during school hours only was conducted at a few schools at the end of term 2. The congestion relief for those schools was clearly evident and plans are being developed to extend the solution to all schools**



- **Incorporated additional analysis into ongoing ERN improvement work:**



- **Provided updated proxy configuration advice to schools with iPads to optimise access to local services**

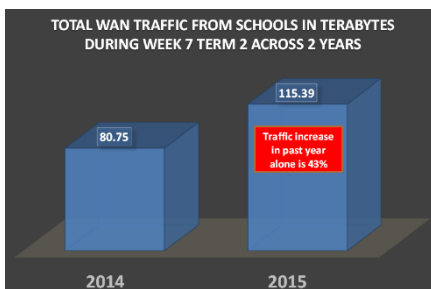
hours only was conducted at a few schools at the end of term 2. The congestion relief for those schools was clearly evident and plans are being developed to extend the solution to all schools

- **Quality of Service is being applied to prioritise throughput for traffic of specific types and limiting less-critical traffic**

- **Blocking access to subscriber based video-streaming and television streaming Entertainment-category websites**

Plus:

- **Working closely with schools**
- **Better BYOD management**
- **Continued traffic monitoring**
- **Further capacity increases**
- **DoE Applications testing**



The growth in internet demand over the last 12 months has been significant since the end of DER and the start of BYOD

INTERNET TRAFFIC - Most Visited Websites

School

Sort Ordering: Bytes

Report period: 1/6/2015 to 7/6/2015

Date Printed: 02/07/2015

| Rank | WEBSITE URL / ADDRESS | Bytes | % of Bytes |
|---------|--|-----------------|------------|
| 1 | swcdn.apple.com | 184,102,695,448 | 59.12 % |
| 2 | a197.phobos.apple.com | 15,945,739,753 | 5.12 % |
| 3 | a740.phobos.apple.com | 11,164,340,141 | 3.59 % |
| 4 | audiocontentdownload.apple.com | 8,398,870,053 | 2.70 % |
| 5 | mesu.apple.com | 4,681,086,489 | 1.50 % |
| 6 | a1839.phobos.apple.com | 3,464,129,855 | 1.11 % |
| 7 | appldnld.apple.com | 3,262,697,864 | 1.05 % |
| 8 | a995.phobos.apple.com | 2,594,190,216 | 0.83 % |
| 9 | a507.phobos.apple.com | 2,228,933,849 | 0.72 % |
| 10 | a1230.phobos.apple.com | 1,932,107,231 | 0.62 % |
| 11 | software.onthehub.com | 1,570,755,240 | 0.50 % |
| 12 | a1089.phobos.apple.com | 882,165,856 | 0.28 % |
| 13 | a1831.phobos.apple.com | 802,927,634 | 0.26 % |
| 14 | a513.phobos.apple.com | 778,574,954 | 0.25 % |
| 15 | a366.phobos.apple.com | 603,104,257 | 0.19 % |
| 16 | a1645.phobos.apple.com | 532,596,251 | 0.17 % |
| 17 | a884.phobos.apple.com | 523,396,399 | 0.17 % |
| 18 | a1664.phobos.apple.com | 463,625,051 | 0.15 % |
| 19 | a595.phobos.apple.com | 459,016,212 | 0.15 % |
| 20 | a1624.phobos.apple.com | 413,930,484 | 0.13 % |
| 21 | a921.phobos.apple.com | 408,607,287 | 0.13 % |
| 22 | a1530.phobos.apple.com | 394,170,026 | 0.13 % |
| 23 | a685.phobos.apple.com | 391,112,611 | 0.13 % |
| 24 | a1621.phobos.apple.com | 387,489,173 | 0.12 % |
| 25 | a563.phobos.apple.com | 376,160,620 | 0.12 % |
| 26 | a1732.phobos.apple.com | 371,319,391 | 0.12 % |
| 27 | a1034.phobos.apple.com | 364,492,719 | 0.12 % |
| 28 | a1851.phobos.apple.com | 358,193,053 | 0.12 % |
| 29 | a562.phobos.apple.com | 347,900,295 | 0.11 % |
| 30 | a514.phobos.apple.com | 338,439,840 | 0.11 % |
| 31 | a1957.phobos.apple.com | 327,988,749 | 0.11 % |
| 32 | a922.phobos.apple.com | 326,759,850 | 0.10 % |
| 33 | a732.phobos.apple.com | 323,277,789 | 0.10 % |
| 34 | a1756.phobos.apple.com | 315,448,285 | 0.10 % |
| 35 | a1220.phobos.apple.com | 312,721,831 | 0.10 % |
| 36 | a125.phobos.apple.com | 304,413,516 | 0.10 % |
| 37 | a1078.phobos.apple.com | 297,654,738 | 0.10 % |
| 38 | a432.phobos.apple.com | 294,140,469 | 0.09 % |
| 39 | a496.phobos.apple.com | 288,609,931 | 0.09 % |
| 40 | a396.phobos.apple.com | 286,585,335 | 0.09 % |
| 41 | a1895.phobos.apple.com | 286,000,964 | 0.09 % |
| 42 | a1579.phobos.apple.com | 284,303,471 | 0.09 % |
| 43 | a558.phobos.apple.com | 271,267,246 | 0.09 % |
| 44 | a639.phobos.apple.com | 265,620,177 | 0.09 % |
| 45 | a1930.phobos.apple.com | 261,673,081 | 0.08 % |
| 46 | a684.phobos.apple.com | 259,193,654 | 0.08 % |
| 47 | a104.phobos.apple.com | 248,927,711 | 0.08 % |
| 48 | a1796.phobos.apple.com | 244,224,348 | 0.08 % |
| 49 | a79.phobos.apple.com | 243,664,591 | 0.08 % |
| 50 | a739.phobos.apple.com | 243,616,394 | 0.08 % |
| of 4023 | | 254,228,860,382 | 81.64 % |

The above table represents the internet requests from one school, in one week. 81% of all internet traffic to the school was iPad updates alone. Their entire Top 50 sites. It comprised 250GB of unnecessary traffic that was flooding their link.