Visualising Data

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“Why do we need to Visualise Data?”

- Most straight data output is not intuitive
- Humans do well with graphical outputs
- Humans do pattern recognition well
- Visualising summarises data
- Visualising is easy for non-techies to understand
- Visualising is useful for trending or making a point

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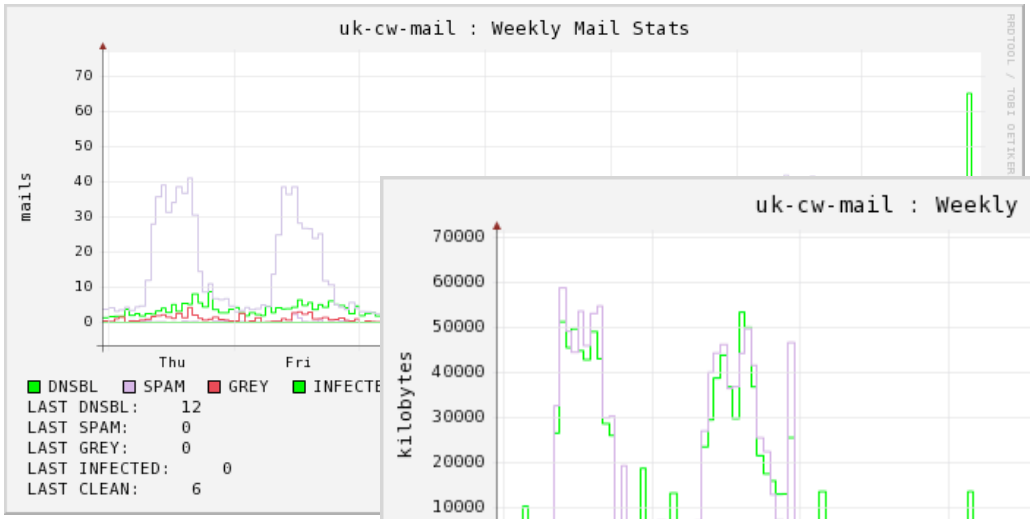
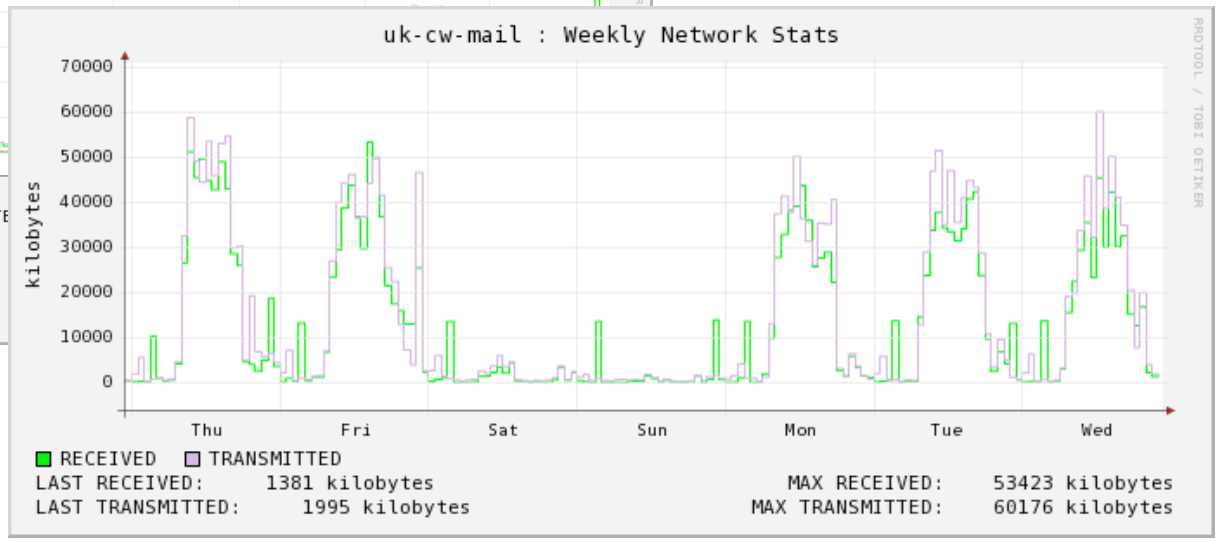
“Visualising Data - Trending”

- This example is for logging trends as graphs
- This can be done using MRTG/RRDTool/etc
- Useful to spot trends
- Shows management how something is doing in an easy to understand way





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“Visualising - Custom”

- Creating visual representations is only limited by imagination and ability
- This example uses simple bash scripting
- Takes network data and colorizes it
- Makes it easy to see at a glance what traffic is flowing
- <demo>

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“Visualising - Pictures”

- Are many tools for “alternate” data watching
- An interesting one is Driftnet
- Shows the actual pictures from web traffic flows
- Great fun to a party trick but use with caution
- <demo>

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“Visualising - Flows”

- Another tool is Etherape
- Creates a “light show” based on length and bandwidth of a net flow
- Can apply filters
- Very useful as a graphical way to see what goes where
- <demo>

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“Visualising - Relationships”

- Afterglow can be used to with Graphviz to create Relationship diagrams
- Any tuplet of data can be used
- Makes very pretty pictures
- Very useful to see relationships between traffic and hosts
- Very useful to see unrelated relationships
- <demo>

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“Moving Forward…”

- All previous examples are only a small showing of what can be done
- Visualisation can be a small thing and can scale to a large solution (ie: Ntop)
- Any way to make large amounts of data easier to understand is useful
- Just look around and see what works for you

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Thank you for your attention

-Appendix-

-MRTG - http://oss.oetiker.ch/mrtg/

-RRDTool - http://oss.oetiker.ch/rrdtool/

-Driftnet - http://ex-parrot.com/~chris/driftnet/

-Etherape - http://etherape.sourceforge.net/

-Afterglow - http://afterglow.sourceforge.net/

-Graphviz - http://www.graphviz.org/

-NTop - http://www.ntop.org

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