The Darknet Mesh Project
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Project is a collaboration between several UK Universities

• Concept of a Darknet will be familiar to many
• Address space assigned to yourselves that is unused
• Can be used to detect various forms of malicious traffic
• Per site/organisation Darknet usage brings benefits

However...

• IPv4 Exhaustion makes obtaining “virgin” IP Space Hard

• Scanners tend not to confine themselves to your IP space any more - random scanning more likely than systematic
Example (not to scale)

Site A (/16)

Site B (/16)

Site C (4* /24)
Site A (/16)

Site B (/16)

Site C (4* /24)
• With a conventional darknet setup, Site A would detect the traffic
• Sites B and C might continue in blissful ignorance of a problem
• Some other solutions exist eg. centralisation of reporting - this requires a lot of work and provides a single point of failure
• Our approach is to centralise only the registry of netblocks and contacts (and to have a failover if the update is unavailable)
Each Site knows Sites A, B, C’s address ranges and a contact, when the sensor sees traffic it contacts the site contact.

Notification is near instant to the remote site.
Further Work

• Under active development, new features coming soon, next release will also be packaged for further OSes

• http://projects.oucs.ox.ac.uk/darknet

• Code is freely available so it is possible to either set up your own mesh, or we would consider hosting a wider mesh than currently