

The Tor Project

Presented to the Peterborough Linux
User Group by Jason Wallwork

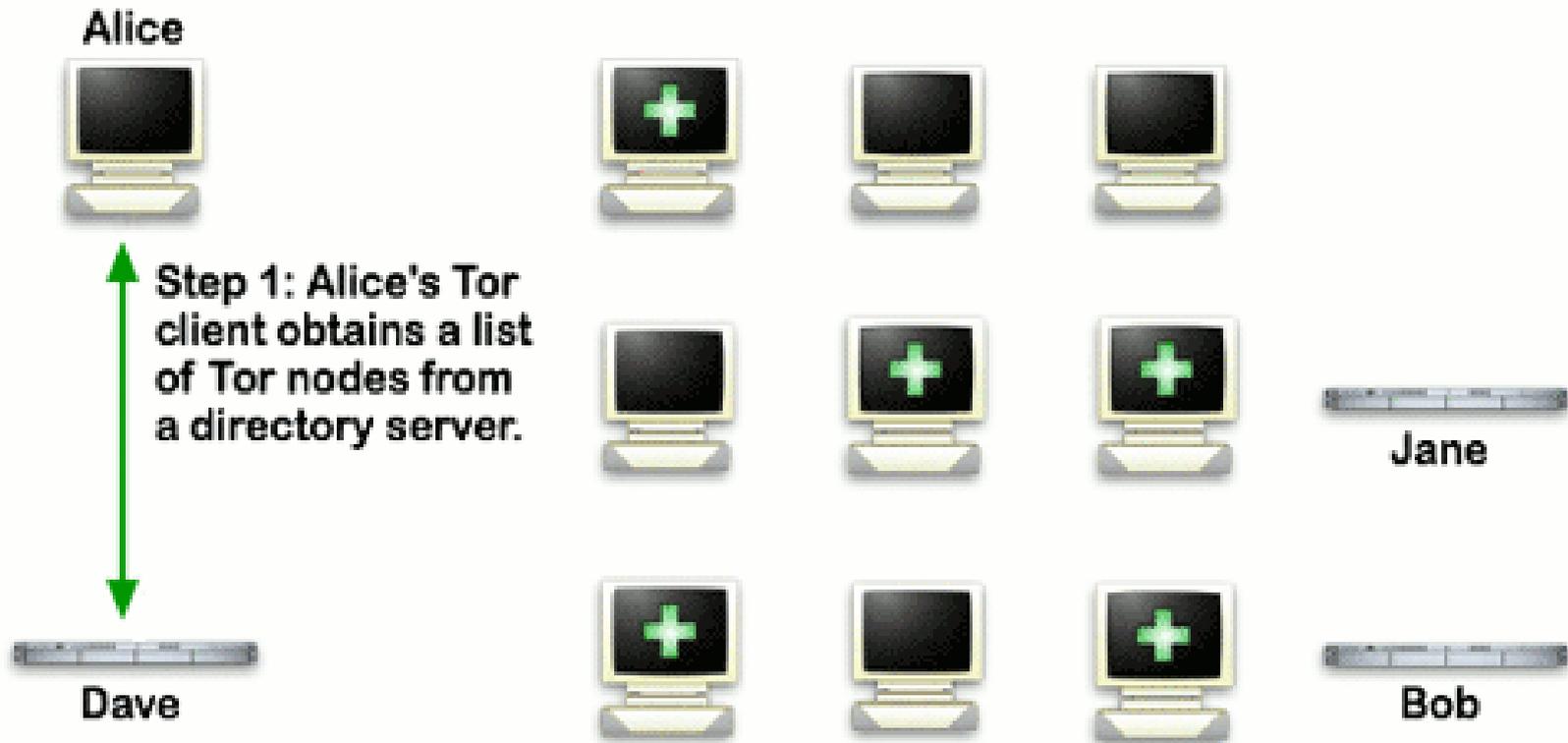
January 2, 2017

What is Tor?

- Two components
 - Free software
 - Open Network
- Network – group of volunteer-operated servers to improve privacy and security
 - Tor's users connect through a series of virtual tunnels rather than a direct connection
 - Tor's hidden services let users publish web sites and other services while masking location of the website

How Tor Works

How Tor Works: 1



How Tor Works: 2



Alice



Step 2: Alice's Tor client picks a random path to destination server. **Green links** are encrypted, **red links** are in the clear.



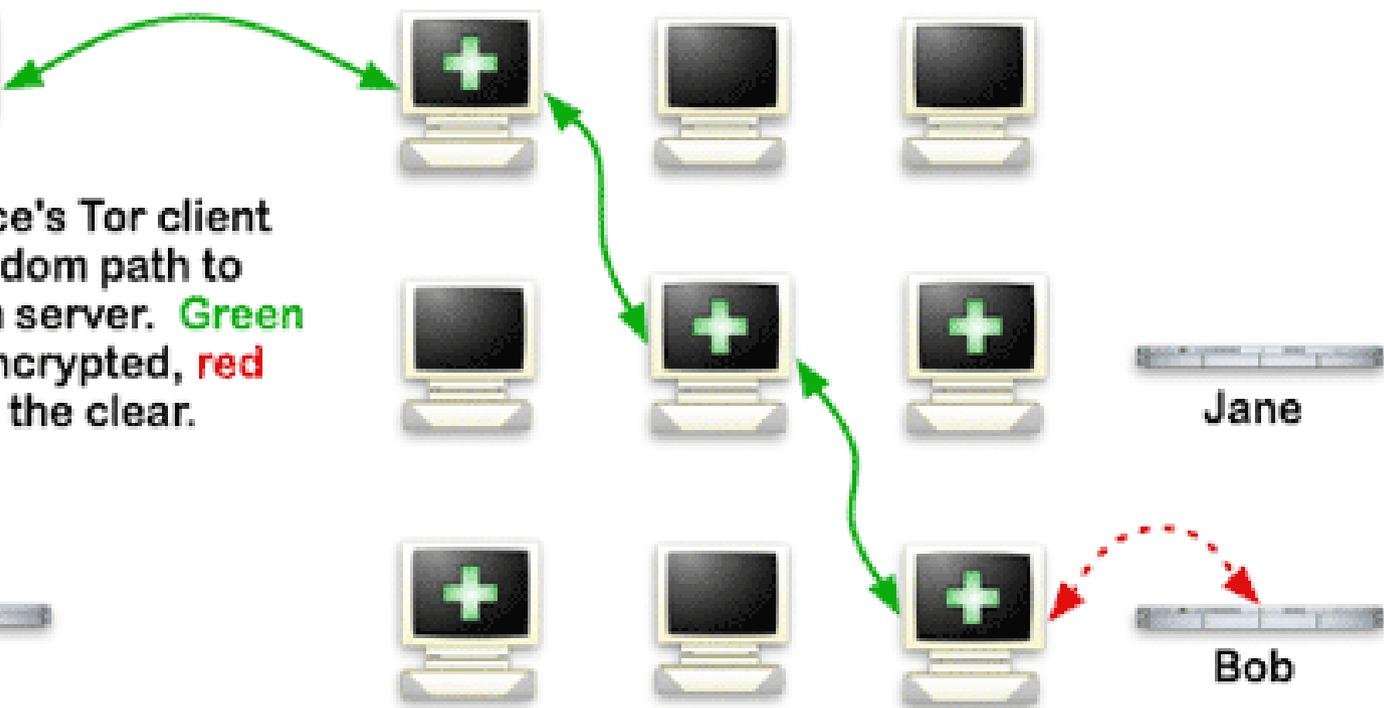
Dave



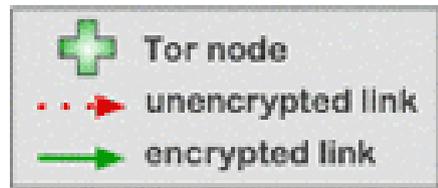
Jane



Bob



How Tor Works: 3



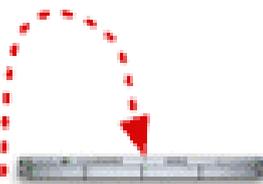
Alice



Step 3: If at a later time, the user visits another site, Alice's tor client selects a second random path. Again, **green links** are encrypted, **red links** are in the clear.



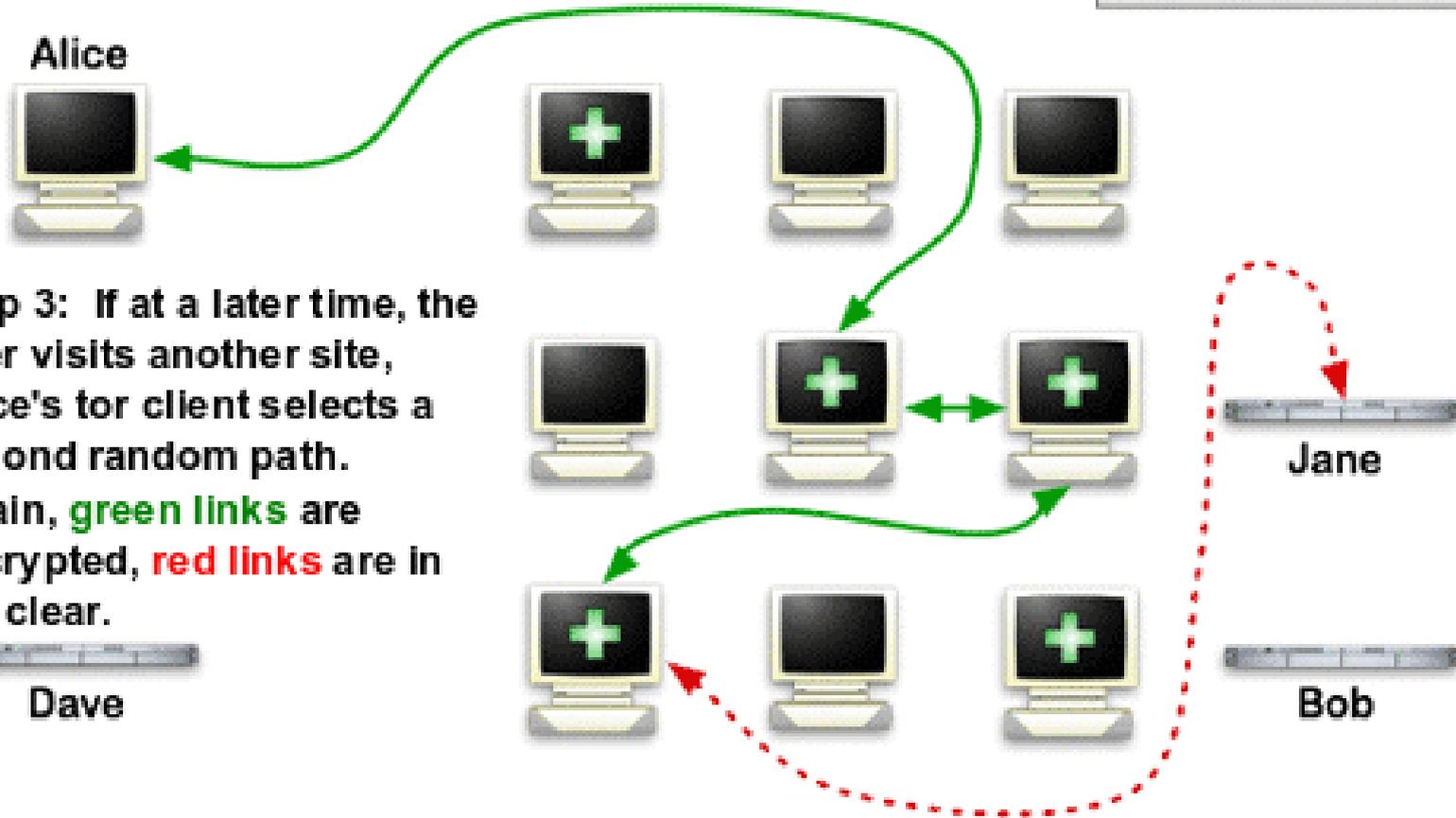
Dave



Jane



Bob



Why Use Tor?

- Using Tor encrypts the headers, not just the data in the packets
- Protect privacy from unscrupulous marketers and identity thieves
 - ISPs can keep logs of websites, you visit, the text of every search you perform and even userid and password information – websites can store similar information
- Protect children online by masking IP address which can be used to find location
- To circumvent censorship in foreign countries and
- More here:
<https://www.torproject.org/about/torusers.html.en>

How to Use Tor

- Within your favorite distribution or OS:
 - Go to torproject.org and click on Download Tor
 - The download files from the website don't install – you download the zipped file and extract it
 - Then click on the link that says Setup Tor, choose direction connection (or proxied if you are using one) and you're in
 - Then just use the browser like you normally would
 - DO read the short notes on the download page

How to use Tor (cont'd)

- Use a distribution that has Tor built-in as a Live CD or from a flash drive
 - Like Tails
 - This is more complicated than just downloading Tor
 - Upsides
 - it makes sure **all** connections go through the Tor network
 - Leaves no trace on the computer
 - Uses cryptographic tools to encrypt files, emails and instant messaging