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YOU’RE STEALING MY BUSINESS

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Service Theft in DOCSIS Networks

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What are we doing?

A POC performed for a major North American Operator

- Investigate Service Theft on Broadband networks
- Focus Initially on DOCSIS networks
- Can easily extend to Fiber, DSL or Wi-Fi networks

Results yielded a real time service monitoring appliance

How did we do it?

A two tiered approach

- External – Identify state of the art piracy tools and techniques via Open Source Intelligence (OSINT) research

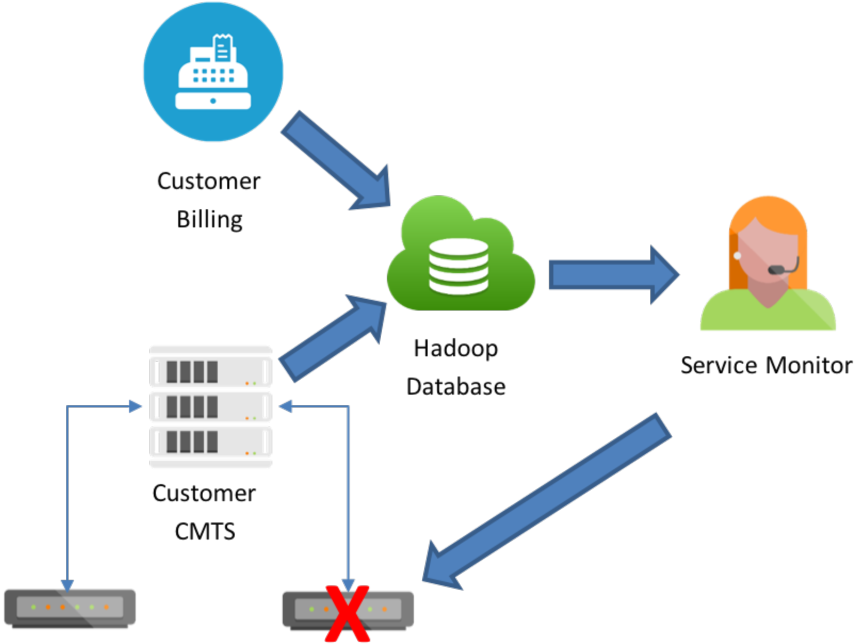
- Internal – Develop modem reconciliation system identifying rogue devices on the network

OSINT Research

Research of OSINT information within the Dark, Deep & Clear Nets

- Targeted hacks of Operator CPE
- Targeted hacks of Operator network

Modem Reconciliation



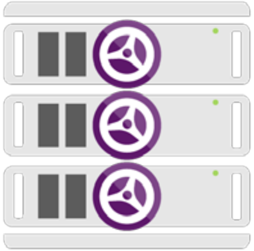
Hadoop Database reconciles connected modems with valid billing accounts

- Each modem has valid billing address
- Each modem is located at billing address
- Rogue modems removed per operator security policy

What did we find on the Dark Web?

- Hacking exploits
- Sale of theft related products
- Internal theft
- Social engineering

What did we find in the data center?



- No billing account – 2% / day
- Billing status disconnected – 0.4% / day
- Restricted bootfile – 0.2% - 0.3% / day
- Cloned MAC address - .06% / month

In conclusion…

We summarize the results of a POC performed for a major North American Operator

- Multiple exploits identified through OSINT research

- Large quantity of theft identified on operator’s network

Identified theft if mitigated leads to real revenue as well as OpEx recovery.

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THANK YOU!

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