

Exceptional service in the national interest



Inferring Netflow Data

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U.S. DEPARTMENT OF
ENERGY



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Background

- Netflow Data
- Cloud Service Provider (CSP) logs
 - Box.com
 - Amazon Web Services



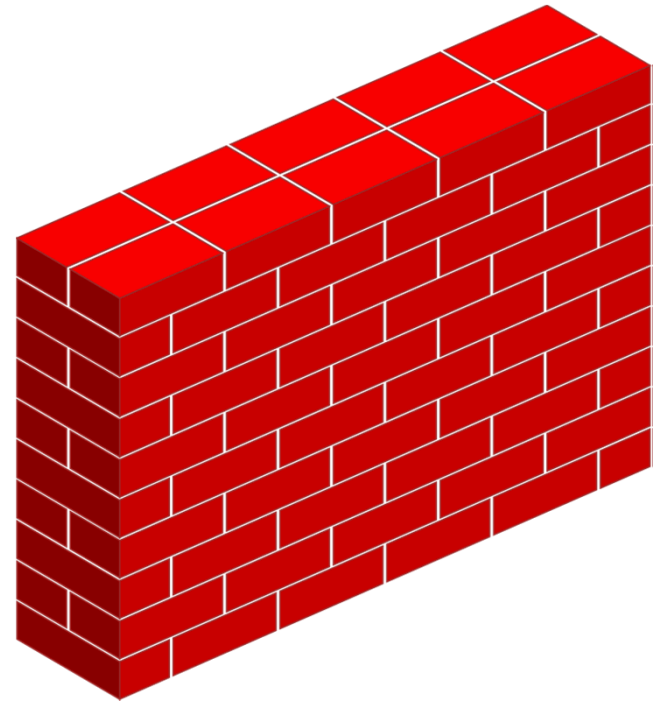
Task

- Infer missing netflow data fields from synthetic CSP logs
- Potential inferable data:
 - Destination IP
 - Source and Destination Ports
 - Sensor ID

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Version				IHL				TOS				Length																			
Identification																Flags				Fragment Offset											
TTL				Protocol				Checksum																							
Source Address																															
Destination Address																															
Options																								Padding							

Obstacles

- Unknown Information
- Admin Rights
- Amazon Web Services restrictions
- Computer Problems



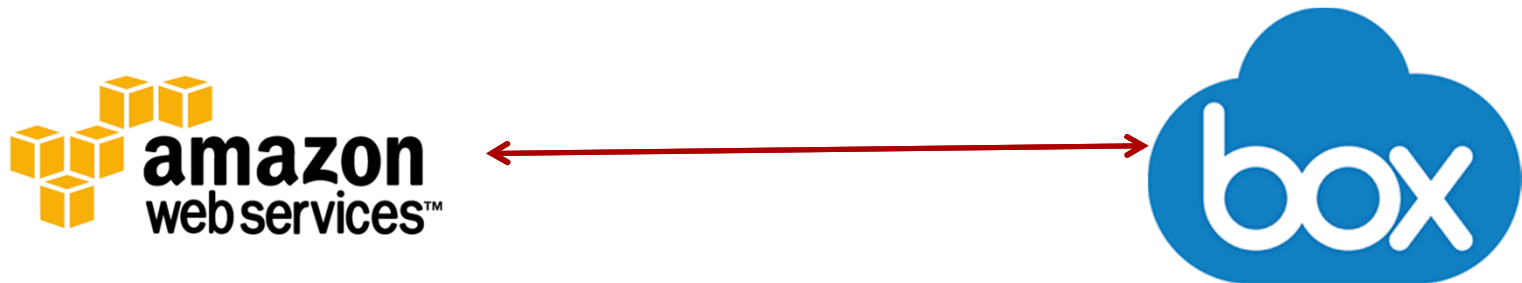
Outcomes

- Sensor ID confirmed
- Destination IP restricted for Box



Ongoing Work

- Client side packet capture
- Make box calls from AWS server



Next Steps

- Confirm Destination IP spread for Box.com
- Confirm Assumed Ports