

Sicurezza di rete e IA con Linux traffic control

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Linux Day 2025

Giornata nazionale per il software libero

Benevento – 25 Ottobre, 2025



UNIVERSITÀ DEGLI STUDI
DEL SANNIO Benevento




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Oct 24 15:30:02 opsys CRON[2731]: pam_unix(cron:session): session opened for user root by (uid=0)
Oct 24 15:30:02 opsys CRON[2732]: (root) CMD ([ -x /etc/init.d/anacron ] && if [ ! -d /run/systemd/system ];
then /usr/sbin/invoke-rc.d anacron start >/dev/null; fi)
Oct 24 15:30:02 opsys CRON[2731]: pam_unix(cron:session): session closed for user root
Oct 24 15:33:54 opsys systemd[1]: Started Run anacron jobs.
Oct 24 15:33:54 opsys anacron[2733]: Anacron 2.3 started on 2024-10-24
Oct 24 15:33:54 opsys anacron[2733]: Normal exit (0 jobs run)
Oct 24 15:33:54 opsys systemd[1]: anacron.service: Succeeded.
Oct 24 16:17:01 opsys CRON[2759]: pam_unix(cron:session): session opened for user root by (uid=0)
Oct 24 16:17:01 opsys CRON[2760]: (root) CMD ( cd / && run-parts --report /etc/cron.hourly)
Oct 24 16:17:01 opsys CRON[2759]: pam_unix(cron:session): session closed for user root
Oct 24 16:30:24 opsys sshd[3014]: pam_unix(sshd:auth): authentication failure; logname= uid=0 euid=0 tty=ssh
ruser= rhost=192.168.64.1 user=studente
Oct 24 16:30:26 opsys sshd[3014]: Failed password for studente from 192.168.64.1 port 49199 ssh2
Oct 24 16:30:45 opsys sshd[3014]: message repeated 2 times: [ Failed password for studente from 192.168.64.1
port 49199 ssh2]
Oct 24 16:30:47 opsys sshd[3014]: Connection closed by authenticating user studente 192.168.64.1 port 49199
[preauth]
Oct 24 16:30:47 opsys sshd[3014]: PAM 2 more authentication failures; logname= uid=0 euid=0 tty=ssh ruser=
rhost=192.168.64.1 user=studente
```



syslog

```
192.168.56.1 - - [14/Nov/2020:10:27:38 -0500] 5122 + 0 146 460 483 HTTP/1.1 "GET / HTTP/1.1" 200 "-"
"Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/86.0.4240.198
Safari/537.36"
192.168.56.1 - - [14/Nov/2020:10:27:39 -0500] 623 + 1 241 389 504 HTTP/1.1 "GET /favicon.ico HTTP/1.1" 404
"http://192.168.56.101/" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like
Gecko) Chrome/86.0.4240.198 Safari/537.36"
192.168.56.1 - - [14/Nov/2020:10:28:00 -0500] 123 - 0 0 0 0 - "-" 408 "-" "-"
192.168.56.1 - - [14/Nov/2020:10:28:57 -0500] 352 - 0 177 386 453 HTTP/1.1 "GET /index.html?PJRRDWHY=DYCI
HTTP/1.1" 200 "http://engadget.search.aol.com/search?q=YLKWIYQVY" "Mozilla/4.0 (compatible; MSIE 8.0; Windows
NT 6.1; WOW64; Trident/4.0; SLCC2; .NET CLR 2.0.50727; InfoPath.2)»
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the

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```

access
log

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port 49199 ssh2]
Oct 24 16:30:47 opsys sshd[3014]: Connection closed by authenticating user studente 192.168.64.1 port 49199
[preauth]

metrics

Oct	Sat	Nov	14	17:29:31	1605374971	29	wordpress-6f947885bd-hfclp	1m	132Mi
rho	Sat	Nov	14	17:29:35	1605374975	33	wordpress-6f947885bd-hfclp	1m	132Mi
	Sat	Nov	14	17:29:36	1605374976	34	wordpress-6f947885bd-hfclp	72m	212Mi
	Sat	Nov	14	17:29:37	1605374977	35	wordpress-6f947885bd-hfclp	72m	212Mi
	Sat	Nov	14	17:30:35	1605375035	93	wordpress-6f947885bd-hfclp	100m	690Mi
	Sat	Nov	14	17:30:36	1605375036	94	wordpress-6f947885bd-hfclp	100m	690Mi

```

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"Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/86.0.4240.198
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Oct HTTP/1.1" 200 "http://192.168.56.101/" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like
the NT 6.1; WOW64; Trident/6.0; rv:11.0) like Gecko"
Oct 24 15:30:02 opsys CRON[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.167887 IP 172.16.0.1.45486 > 192.168.10.50.80: Flags [S], seq 2251923316,
Oct 24 15:33:54 opsys system[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.167891 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], seq
2594708041, ack 2251923317, win 28960, options [mss 1460,sackOK,TS val 44249868 ecr 368313,nop,wscale 7], length 0
Oct 24 15:33:54 opsys anacron[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.179881 IP 172.16.0.1.45486 > 192.168.10.50.80: Flags [S.], seq
2594708041, ack 2251923317, win 28960, options [mss 1460,sackOK,TS val 44249868 ecr 368313,nop,wscale 7], length 0
Oct 24 15:33:54 opsys anacron[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.179888 IP 172.16.0.1.45486 > 192.168.10.50.80: Flags [P.], seq 1:297, ack
1, win 229, options [nop,nop,TS val 368316 ecr 44249868], length 296: HTTP: GET
Oct 24 15:33:54 opsys system[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.179888 IP 172.16.0.1.45486 > 192.168.10.50.80: Flags [P.], seq 1:297, ack
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Oct 24 16:17:01 opsys CRON[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.179919 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], seq 1:5793, ack
235, options [nop,nop,TS val 44249871 ecr 368316], length 0
Oct 24 16:17:01 opsys CRON[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.313271 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], seq 1:5793, ack
235, options [nop,nop,TS val 44249871 ecr 368316], length 0
Oct 24 16:17:01 opsys CRON[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.313271 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], seq 1:5793, ack
235, options [nop,nop,TS val 44249871 ecr 368316], length 0
Oct 24 16:30:24 opsys sshd[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.313271 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], seq 1:5793, ack
235, options [nop,nop,TS val 44249871 ecr 368316], length 0
ruser= rhost=192.168.64.1
Oct 24 16:30:26 opsys sshd[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.313285 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], seq 5793:7241,
ack 297, win 235, options [nop,nop,TS val 44249904 ecr 368316], length 1448: HTTP
Oct 24 16:30:45 opsys sshd[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.313332 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], seq 7241:8689,
ack 297, win 235, options [nop,nop,TS val 44249904 ecr 368316], length 1448: HTTP
port 49199 ssh2]
Oct 24 16:30:47 opsys sshd[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.313332 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], seq 7241:8689,
ack 297, win 235, options [nop,nop,TS val 44249904 ecr 368316], length 1448: HTTP
[preauth]
Oct 24 16:30:47 opsys sshd[192.168.56.1] 192.168.56.1:22 (SSH) 192.168.10.50:80: 16:00:06.313525 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [FP.], seq
8689:11596, ack 297, win 235, options [nop,nop,TS val 44249904 ecr 368316], length
11596
Oct rho Sat Nov 14 17:29:31 1605374975 33 wordpress-6f947885bd-hfclp 1m 132Mi
Sat Nov 14 17:29:35 1605374975 33 wordpress-6f947885bd-hfclp 1m 132Mi
Sat Nov 14 17:29:36 1605374976 34 wordpress-6f947885bd-hfclp 72m 212Mi
Sat Nov 14 17:29:37 1605374977 35 wordpress-6f947885bd-hfclp 72m 212Mi
Sat Nov 14 17:30:35 1605375035 93 wordpress-6f947885bd-hfclp 100m 690Mi
Sat Nov 14 17:30:36 1605375036 94 wordpress-6f947885bd-hfclp 100m 690Mi

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tcpdump

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192.168.56.1 - - [14/Nov/2020:10:27:38 -0500] 5122 + 0 146 460 483 HTTP/1.1 "GET / HTTP/1.1" 200 "-"
"Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/86.0.4240.198
Safari/537.36"
192.168.56.1 - - [14/Nov/2020:10:27:39 -0500] 623 + 1 241 389 504 HTTP/1.1 "GET /favicon.ico HTTP/1.1" 404
"http://192.168.56.101/" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_6) AppleWebKit/537.36 (KHTML, like
Gecko) Chrome/86.0.4240.198 Safari/537.36"
Oct 16:00:06.167887 IP 172.16.0.1.45486 > 192.168.10.50.80: Flags [S], seq 2251923316,
Oct 192.168.56.1 - - [14/Nov/2020:10:27:39 -0500] 623 + 1 241 389 504 HTTP/1.1 "GET /favicon.ico HTTP/1.1" 404
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16:00:06.167891 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], seq
2594708041, ack 2251923317, win 28960, options [mss 1460,sackOK,TS val 44249868
WS
NT 6.1; WOW64; Trident; rv:11.0; like Gecko) Chrome/86.0.4240.198 Safari/537.36" ecr 368313,nop,wscale 7], length 0
Oct 24 15:30:02 opsys CRON[ 16:00:06.179881 IP 172.16.0.1.45486 > 192.168.10.50.80: Flags [S.], ack 1, win 229,
Oct 24 15:33:54 opsys system[ 16:00:06.179881 IP 172.16.0.1.45486 > 192.168.10.50.80: Flags [S.], ack 1, win 229,
Oct 24 15:33:54 opsys anacr 16:00:06.179888 IP 172.16.0.1.45486 > 192.168.10.50.80: Flags [P.], seq 1:297, ack
Oct 24 15:33:54 opsys anacr 1, win 229, options [nop,nop,TS val 368316 ecr 44249868], length 296: HTTP: GET
Oct 24 15:33:54 opsys system[ 16:00:06.179888 IP 172.16.0.1.45486 > 192.168.10.50.80: Flags [P.], seq 1:297, ack
/?OHU=ZMUPSA HTTP/1.1
Oct 24 16:17:01 opsys CRON[ 16:00:06.179919 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], ack 297, win
Oct 24 16:17:01 opsys CRON[ 235, options [nop,nop,TS val 44249871 ecr 368316], length 0
Oct 24 16:17:01 opsys CRON[ 16:00:06.313271 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], seq 1:5793, ack
Oct 24 16:30:24 opsys sshd[ 297, win 235, options [nop,nop,TS val 44249904 ecr 368316], length 5792: HTTP:
ruser= rhost=192.168.64.1 HTTP/1.1 200 OK
Oct 24 16:30:26 opsys sshd[ 16:00:06.313285 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], seq 5793:7241,
Oct 24 16:30:45 opsys sshd[ ack 297, win 235, options [nop,nop,TS val 44249904 ecr 368316], length 1448: HTTP
port 49199 ssh2] 16:00:06.313332 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S.], seq 7241:8689,
Oct 24 16:30:47 opsys sshd[ ack 297, win 235, options [nop,nop,TS val 44249904 ecr 368316], length 1448: HTTP
[preauth] 16:00:06.313525 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [FP.], seq
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Oct 24 15:30:02 opsys CRON[16:00:06.179881 IP 172.16.0.1.45486 > 192.168.10.50.80: Flags [S], seq 1:297, ack
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Oct 24 15:33:54 opsys system[16:00:06.179888 IP 172.16.0.1.45486 > 192.168.10.50.80: Flags [P.], seq 1:297, ack
Oct 24 16:17:01 opsys CRON[16:00:06.179888 IP 172.16.0.1.45486 > 192.168.10.50.80: Flags [P.], seq 1:297, ack
Oct 24 16:17:01 opsys CRON[16:00:06.179919 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S], seq 1:5702, win 0
Oct 24 16:17:01 opsys CRON[235, options [nop,nop,TS val 44249871 ecr 368316], length 0
Oct 24 16:30:24 opsys sshd[16:00:06.313271 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S], seq 1:5702, win 0
ruser= rhost=192.168.64.1 HTTP/1.1 200 OK
Oct 24 16:30:26 opsys sshd[16:00:06.313285 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S], seq 1:5702, win 0
Oct 24 16:30:45 opsys sshd[16:00:06.313332 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S], seq 1:5702, win 0
port 49199 ssh2] 16:00:06.313332 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S], seq 1:5702, win 0
Oct 24 16:30:47 opsys sshd[16:00:06.313525 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S], seq 1:5702, win 0
[preauth] 16:00:06.313525 IP 192.168.10.50.80 > 172.16.0.1.45486: Flags [S], seq 1:5702, win 0
Oct rho Sat Nov 14 17:29:31 1 8689:11596, ack 297, win 235, options [nop
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Sat Nov 14 17:29:37 1605374977 35 wordpress-6f947885bd-hfclp
Sat Nov 14 17:30:35 1605375035 93 wordpress-6f947885bd-hfclp
Sat Nov 14 17:30:36 1605375036 94 wordpress-6f947885bd-hfclp





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Splunk Report Shows Observability is a Business Catalyst for AI Adoption, Customer Experience, and Product Innovation

Tuttavia, i team ITOps e di ingegneria spesso si trovano ad affrontare troppi strumenti diversi (59%) e un elevato volume di falsi allarmi (52%).



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Per affrontare queste sfide, i team ITOps e di ingegneria stanno adottando l'intelligenza artificiale per accelerare la risoluzione dei problemi: il 76% degli intervistati utilizza regolarmente l'osservabilità basata sull'intelligenza artificiale nei propri flussi di lavoro quotidiani.

Splunk Report Shows Business Catalyst for Customer Experience Innovation

Tuttavia, i team ITops e di strumenti diversi (59%) e un elevato volume di **Condividi**

21 ottobre 22:54 Laura Aprati

Per affrontare queste sfide, i team ITops e di l'intelligenza artificiale per accelerare la intervistati utilizza regolarmente l'osservazione artificiale nei propri flussi di lavoro quotidiani.

Cybertech 2025

Il futuro della cybersicurezza tra intelligenza artificiale e regole da applicare

L'ottava edizione, che vede un aumento di presenze del 20% rispetto al 2024, apre uno squarcio sulla situazione delle nuove tecnologie in un momento storico in cui si riflette anche molto sul loro dual use

Nel 2025 c'è stato un aumento dei pericoli, con oltre 30.000 nuove vulnerabilità identificate, un aumento del 17% rispetto al 2024. Allo stesso tempo, la spesa globale in cybersecurity ha superato i 200 miliardi di dollari, sostenuta da un'ondata di attacchi sempre più sofisticati, alimentati anche da intelligenza artificiale offensiva e deepfake altamente realistici, ossia immagini, audio o video generati con l'IA ma capaci di risultare più che credibili.



Adversarial Traffic Signs. Hackers can
trick a self-driving car... | by David...

Visita >



Adversarial Traffic Signs. Hackers can
trick a self-driving car... | by David...

Visita >



(b) Trigger Embedded Image



Adversarial Traffic Signs. Hackers can
trick a self-driving car... | by David...

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(b) Trigger Embedded Image

Slight Street Sign Modifications Can Completely Fool Machine Learning Algorithms

Minor changes to street sign graphics can fool machine learning algorithms something

BY EVAN ACKERMAN | 04 AUG 2017

Evan Ackerman is IEEE Spectrum



Stop - 0.976



Speed Limit - 0.989

Adversarial Traffic Signs. Hackers can trick a self-driving car... | by David...

Visita >

(b) Trigger Embedded Image

This colorful printed patch makes you pretty much invisible to AI

/ The patch only fools a specific algorithm, but researchers are working on more flexible solutions

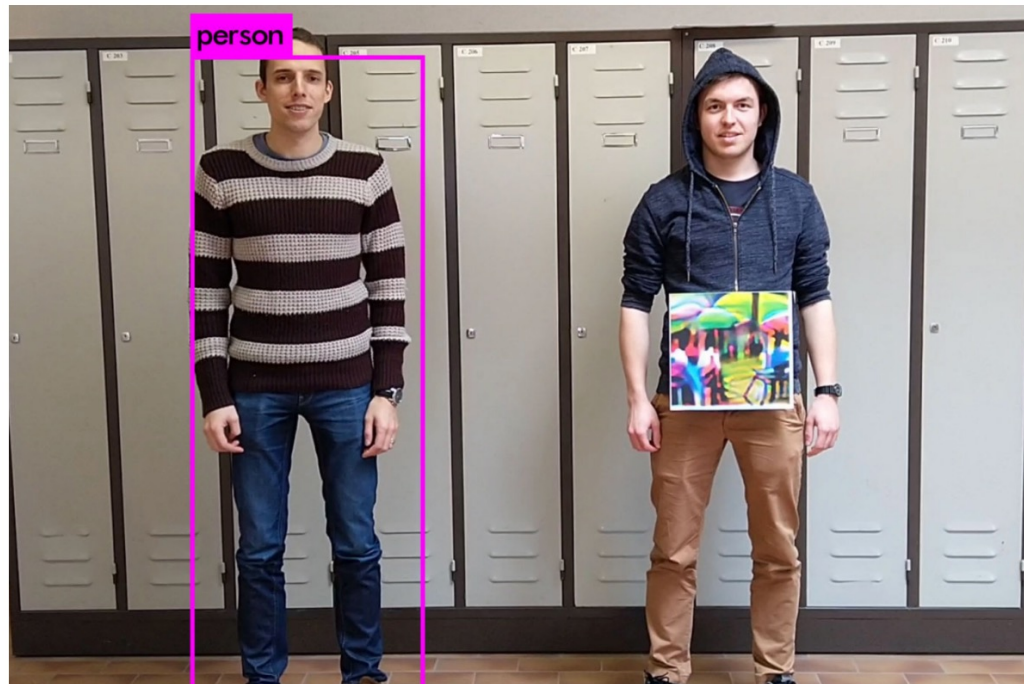
by **James Vincent**

Apr 23, 2019 at 7:45 PM GMT+2



0 Comments

If you buy something from a Verge link, Vox Media may earn a commission. [See our ethics statement.](#)

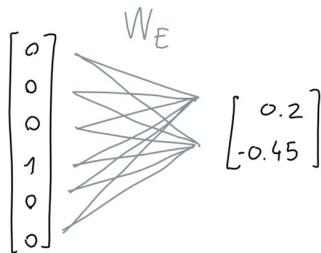


These types of images are known as 'adversarial examples' for their ability to fool computer vision systems.

Photo: Simen Thys, Wiebe Van Ranst, Toon Goedeme

74

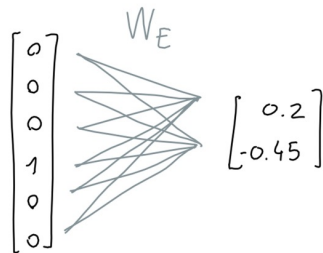
Poland is a Central European country with a rich history, vibrant culture, and resilient landscape that ranges from the sandy beaches of the Baltic Sea to the rugged Carpathian Mountains. Major cities like Warsaw and Gdansk blend historical architectural heritage with modern amenities, reflecting Poland's dynamic evolution over the centuries.



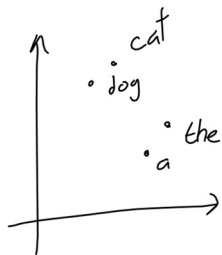
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1, 290, 86902, 39733, 328, 290, 128005, 22114, 136, 29
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3, 27974, 15636, 2599, 136769, 11, 118662, 384, 11, 32
6, 499, 67, 47899, 25306, 19322, 24022, 483, 6809, 272
46, 11, 66890, 50029, 885, 14012, 26416, 1072, 290, 39
264, 364

[illegible]

Poland is a Central European country known for its rich history, vibrant culture, and resilient landscape that ranges from the sandy beaches of the Baltic Sea to the rugged Carpathian Mountains. Major cities like Warsaw and Gdansk blend historical architecture with modern amenities, reflecting Poland's dynamic evolution over the centuries.

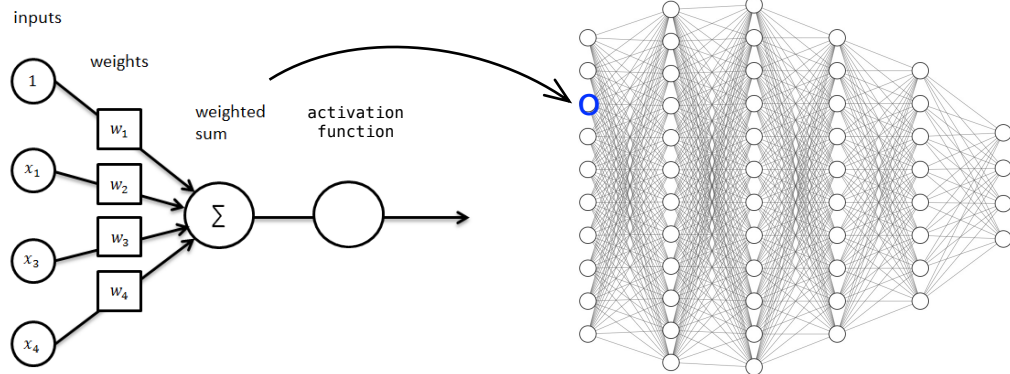
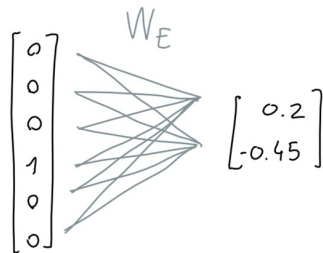


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6, 499, 67, 47899, 25306, 19322, 24022, 483, 6809, 272
46, 11, 66890, 50029, 885, 14012, 26416, 1072, 290, 39
264, 364

[illegible]

The diagram illustrates a single neuron model. On the left, there are four input nodes: a constant '1' and three variables x_1 , x_3 , and x_4 . Each input node is connected to a corresponding weight box labeled w_1 , w_2 , w_3 , and w_4 respectively. These weighted inputs then feed into a central summation node, represented by a circle with a sigma symbol (Σ). The output of the summation node is labeled 'weighted sum'. This result then passes through an 'activation function' node, represented by a circle, before exiting the neuron to the right.

Poland is a Central European country with a rich history, vibrant culture, and resilient landscape that ranges from the Baltic Sea to the rugged Carpathian Mountains. Major cities like Warsaw and Gdansk blend historical architecture with modern amenities, reflecting Poland's dynamic evolution over the centuries.




Poland is a Central European country with a rich history, vibrant culture, and resilient landscape that ranges from the sandy beaches of the Baltic Sea to the rugged Carpathian Mountains. Major cities like Warsaw and Gdansk blend historical architecture with modern amenities, reflecting Poland's dynamic evolution over the centuries.

8

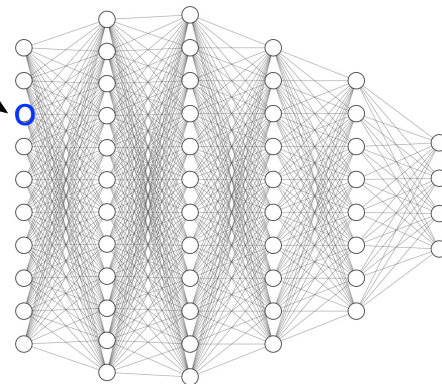
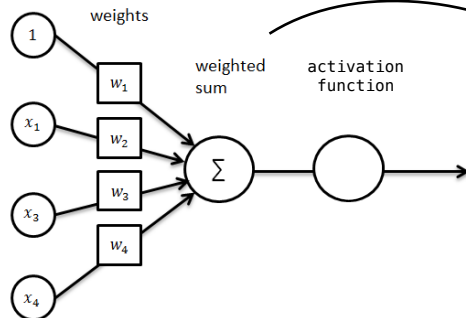
[illegible]

W_E



$\begin{bmatrix} 0.2 \\ -0.45 \end{bmatrix}$

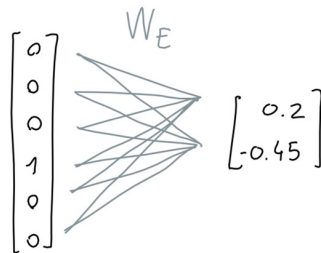
A scatter plot with a vertical axis labeled 'n' and a horizontal axis with an arrow. Four points are plotted and labeled: 'cat' is the highest point, followed by 'dog', 'the', and 'a' is the lowest point.



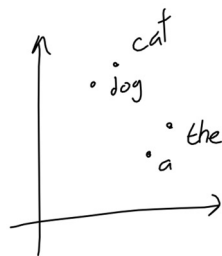
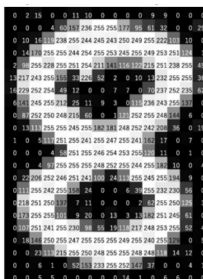
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0.0500	0.038	0.0240	0.07400	0.0297	0.15000	0.0800	0.0830	0.0670	0.063	0.1600	0.21000	0.0310	0.1100	0.0380	0.0500	0.0930
0.1200	0.039	0.0500	0.00470	0.0420	0.00910	0.1600	0.0200	0.1500	0.017	0.1300	0.03500	0.0150	0.0840	0.3000	0.1300	0.0930
0.2600	0.008	0.0201	0.01700	0.0290	0.39000	0.3600	0.1200	0.1500	0.130	0.0490	0.06600	0.0140	0.0330	0.0060	0.2300	0.0950
0.0260	0.330	0.0570	0.01000	0.0400	0.07100	0.0044	0.1700	0.0530	0.150	0.2100	0.19000	0.0950	0.2000	0.0060	0.0064	0.0780
0.0300	0.025	0.1700	0.06900	0.2300	0.02200	0.1100	0.0320	0.0970	0.063	0.1200	0.22000	0.0130	0.1200	0.0450	0.0420	0.2700
0.0520	0.280	0.2000	0.07300	0.0707	0.09400	0.0074	0.0800	0.0940	0.035	0.3500	0.06700	0.0810	0.1100	0.0350	0.0170	0.0500
0.1800	0.088	0.2000	0.18000	0.0440	0.06700	0.0160	0.1900	0.0170	0.330	0.1700	0.03900	0.0660	0.2200	0.0890	0.1400	0.1300
0.1300	0.300	0.1600	0.02300	0.0023	0.00240	0.4100	0.1200	0.0120	0.002	0.190	0.01400	0.0190	0.0880	0.0360	0.1400	0.0880
0.0110	0.021	0.0920	0.56000	0.0340	0.03200	0.3200	0.1600	0.0460	0.220	0.0048	0.00260	0.2500	0.0200	0.0120	0.2100	0.0640
0.1000	0.049	0.3600	0.22000	0.0640	0.09600	0.0430	0.2400	0.1200	0.056	0.1300	0.06900	0.0140	0.0850	0.0370	0.0220	0.0230
0.0440	0.042	0.0400	0.16000	0.0403	0.06600	0.0870	0.0580	0.2100	0.070	0.2300	0.21000	0.0070	0.0250	0.0720	0.0620	0.1100
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0.0580	0.078	0.1200	0.13000	0.1400	0.02100	0.1900	0.0590	0.0033	0.042	0.0450	0.05700	0.0620	0.0740	0.1100	0.0160	0.0630
0.0760	0.015	0.0027	0.17000	0.0085	0.01100	0.0550	0.0420	0.1500	0.063	0.0800	0.16000	0.1020	0.0920	0.0540	0.1400	0.0020
0.0490	0.034	0.0750	0.00033	0.1000	0.06700	0.3600	0.1800	0.0560	0.045	0.0550	0.00510	0.0160	0.0015	0.0400	0.0810	0.0160
0.5700	0.240	0.2200	0.00059	0.1200	0.02400	0.0400	0.0200	0.0830	0.110	0.2000	0.00978	0.0201	0.0340	0.0600	0.0600	0.2100
0.0013	0.790	0.0840	0.28000	0.0490	0.24000	0.0640	0.1700	0.0760	0.087	0.0940	0.13000	0.0540	0.0260	0.0250	0.0800	0.0330
0.0280	0.045	0.0086	0.05000	0.0420	0.25000	0.0110	0.0110	0.1200	0.500	0.0220	0.28000	0.0310	0.2300	0.2800	0.0630	0.0540

Token count
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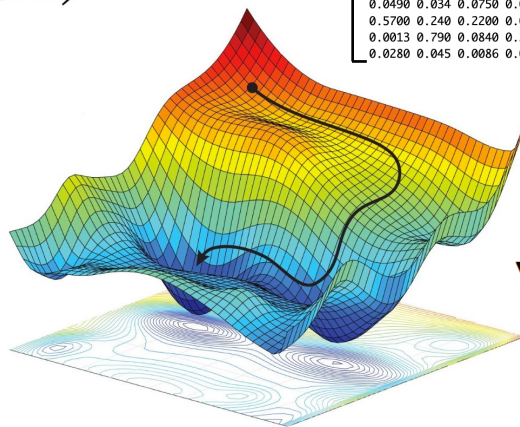
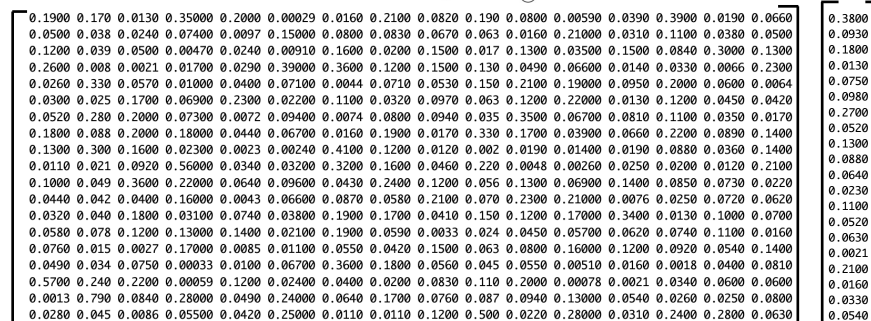
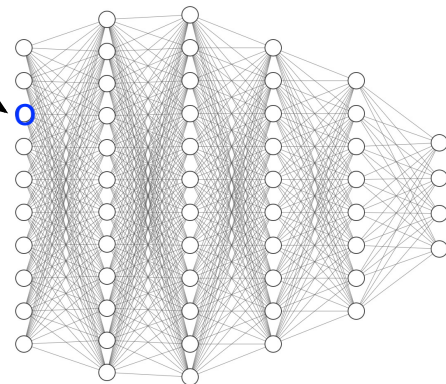
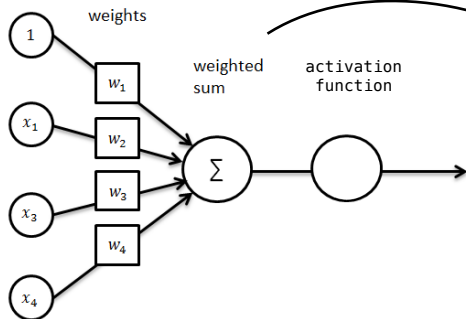
Poland is a Central European country with a rich history, vibrant culture, and resilient economy. It boasts a diverse landscape that ranges from the Baltic Sea to the rugged Carpathian Mountains. Major cities like Warsaw and Krakow blend historical architecture with modern amenities, reflecting Poland's dynamic development over the centuries.



7651, 427, 382, 261, 13399, 11836, 4931, 5542, 395, 16
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1, 290, 86902, 39733, 328, 290, 128005, 22114, 316, 29
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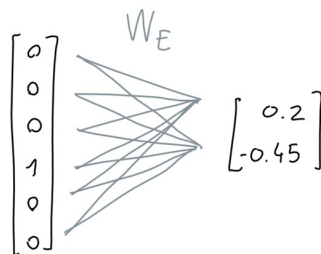
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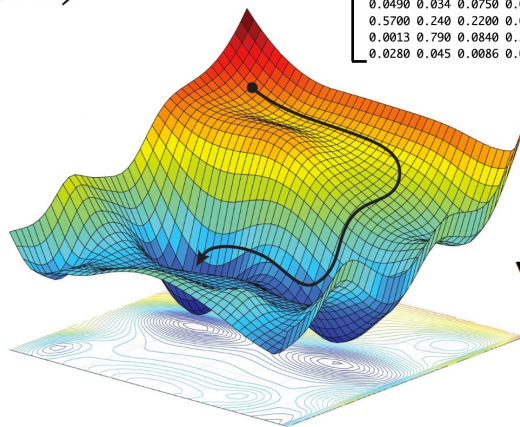
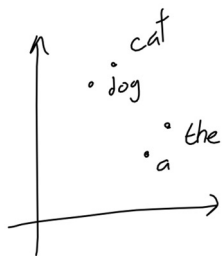
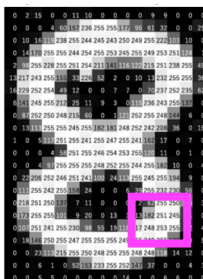
$$\nabla_{\mathbf{x}} y = \left[\frac{\partial y}{\partial x_1}, \frac{\partial y}{\partial x_2}, \dots, \frac{\partial y}{\partial x_n} \right]$$

Token count
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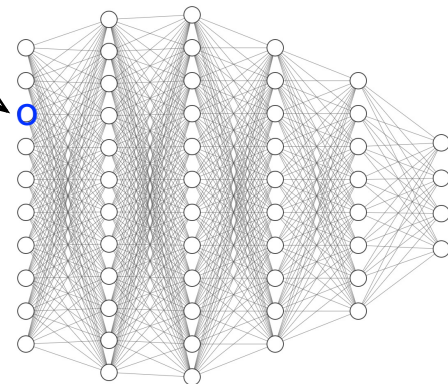
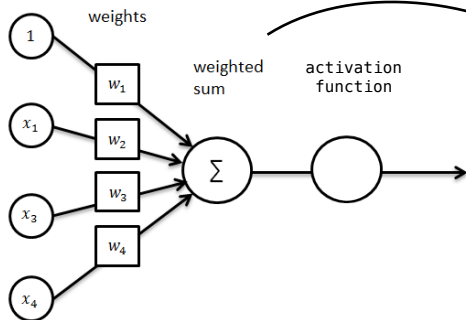
Poland is a Central European country with a rich history, vibrant culture, and resilient landscapes of the Baltic Sea to the rugged Carpathian Mountains. Major cities like Warsaw and Gdansk blend historical architectural monuments, reflecting Poland's dynamic history over the centuries.



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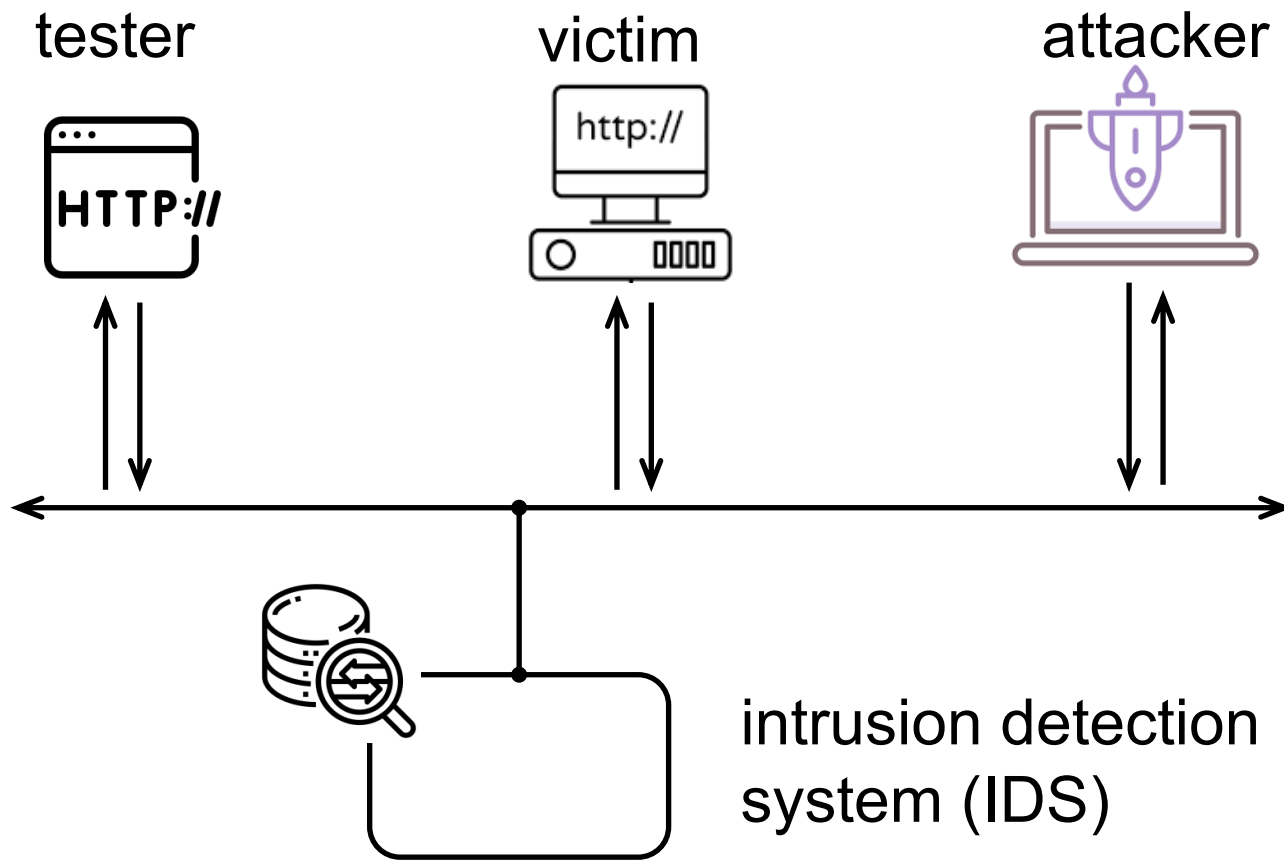


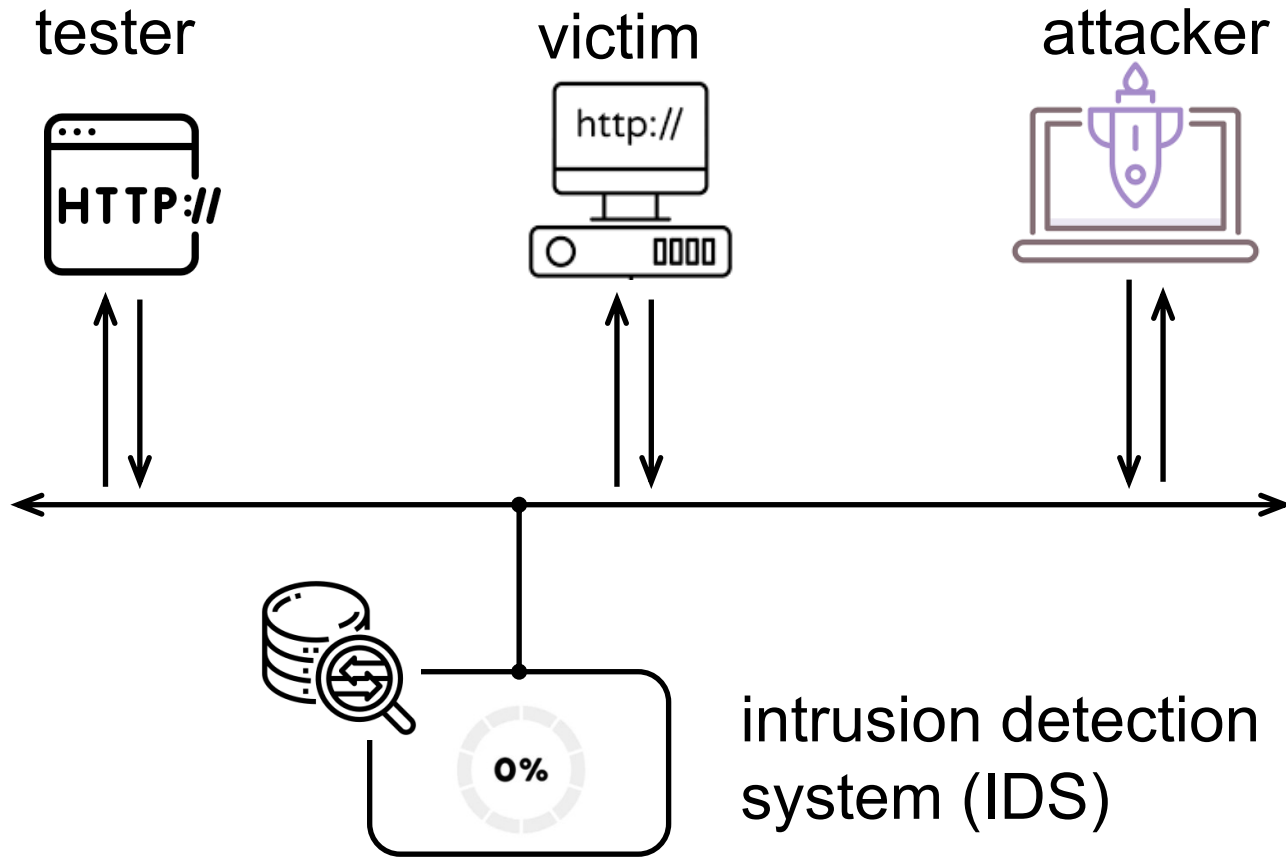
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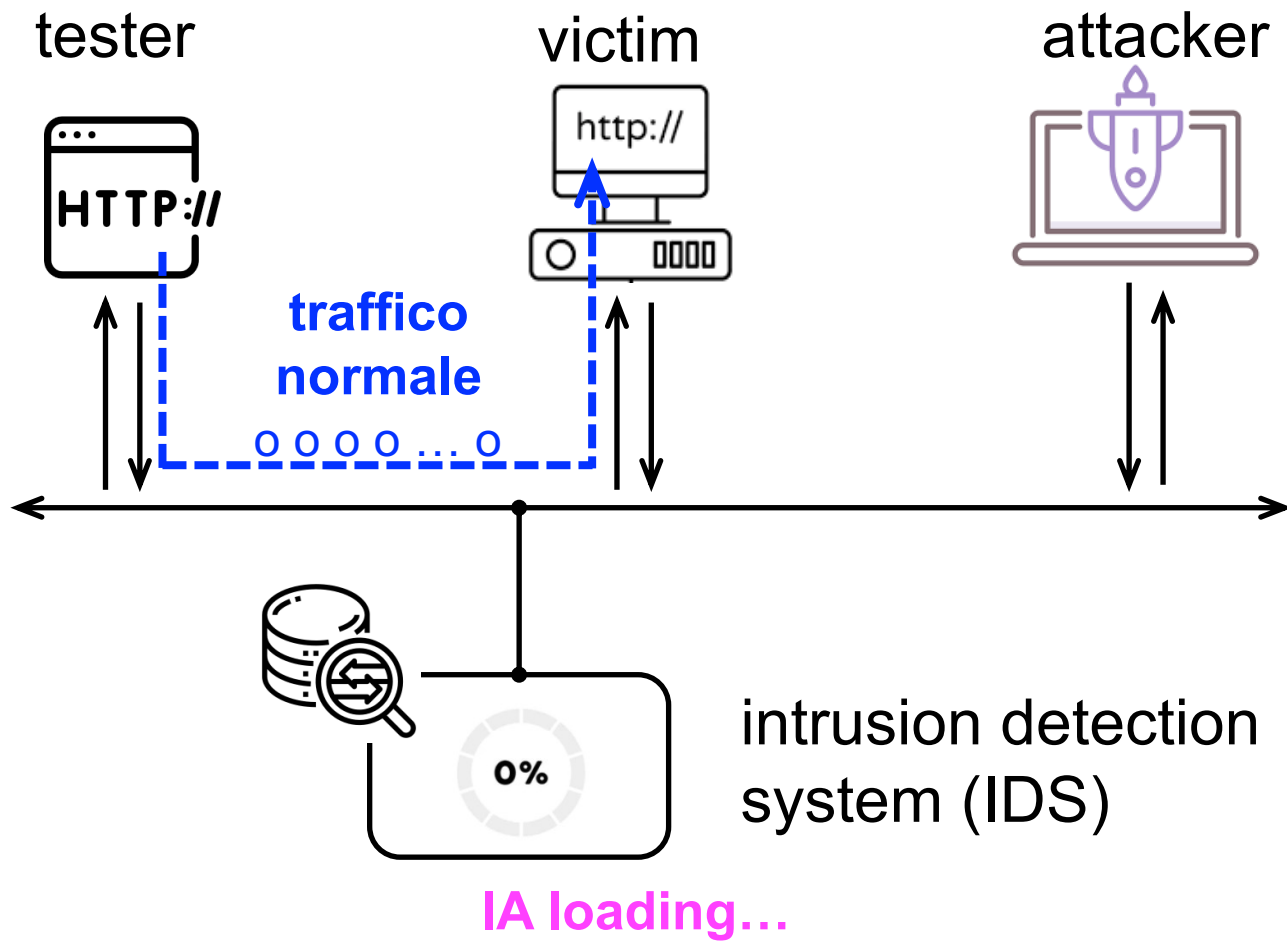
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0.0500	0.038	0.0240	0.07400	0.0097	0.15000	0.0800	0.0830	0.0670	0.063	0.0160	0.21000	0.0310	0.1100	0.0380	0.0500
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0.2600	0.008	0.0021	0.01700	0.0290	0.39000	0.3600	0.1200	0.1500	0.130	0.0490	0.06600	0.0140	0.0330	0.0066	0.2300
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0.0520	0.280	0.2000	0.07300	0.0072	0.09400	0.0074	0.0800	0.0940	0.035	0.3500	0.06700	0.0810	0.1100	0.0350	0.0170
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0.1300	0.300	0.1600	0.02300	0.0023	0.00240	0.4100	0.1200	0.0120	0.002	0.0190	0.01400	0.0190	0.0800	0.0360	0.1400
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0.1000	0.049	0.3600	0.22000	0.0640	0.09600	0.0430	0.2400	0.1200	0.056	0.1300	0.06900	0.1400	0.0850	0.0730	0.0220
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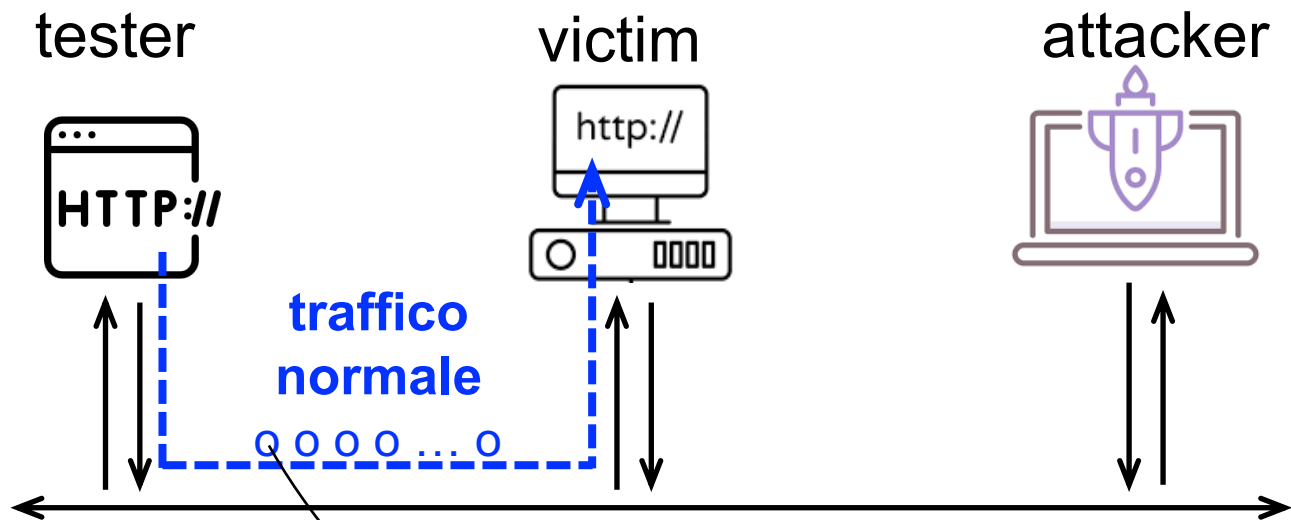
$$\nabla_{\mathbf{x}} y = \left[\frac{\partial y}{\partial x_1}, \frac{\partial y}{\partial x_2}, \dots, \frac{\partial y}{\partial x_n} \right]$$



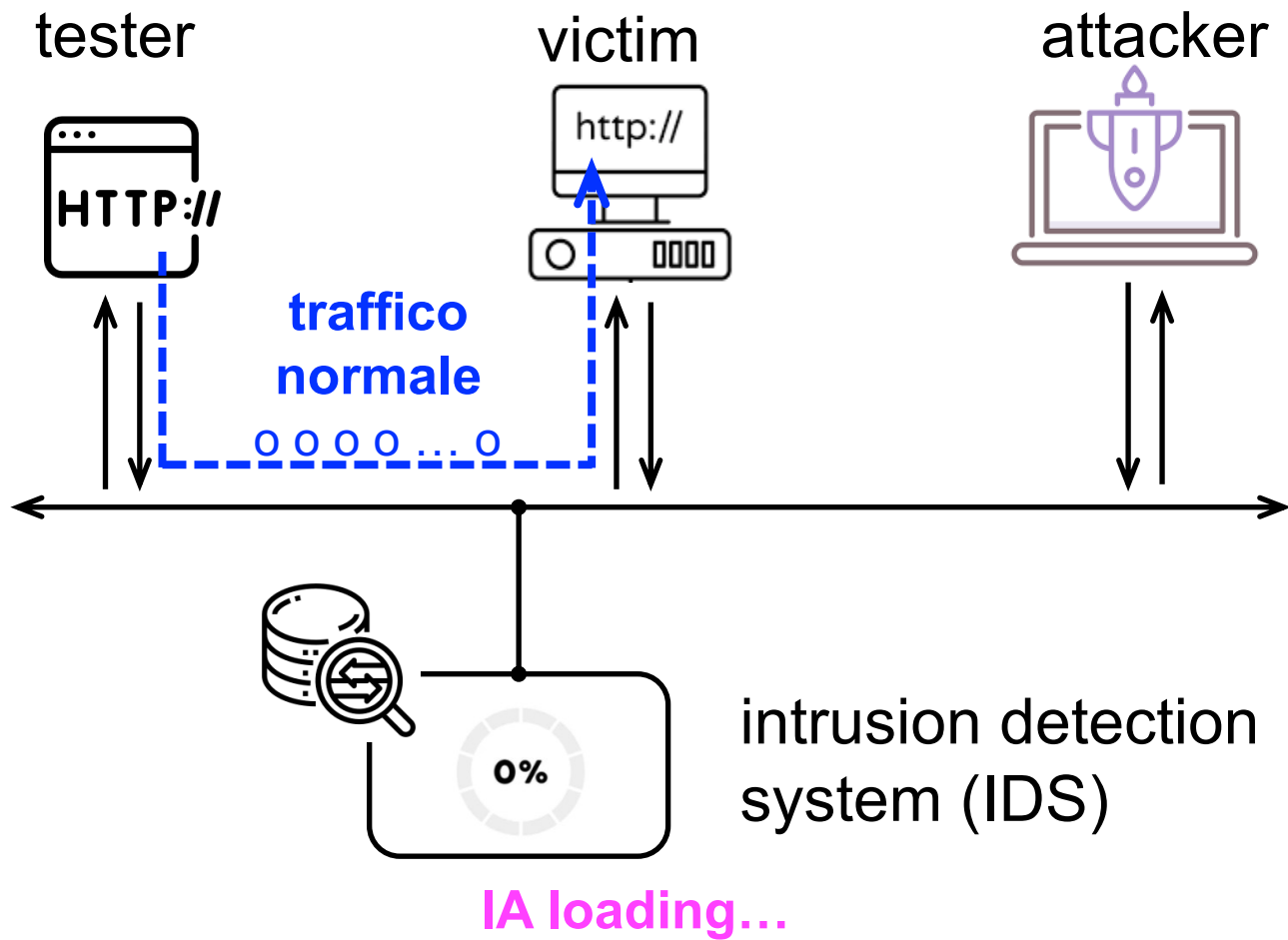


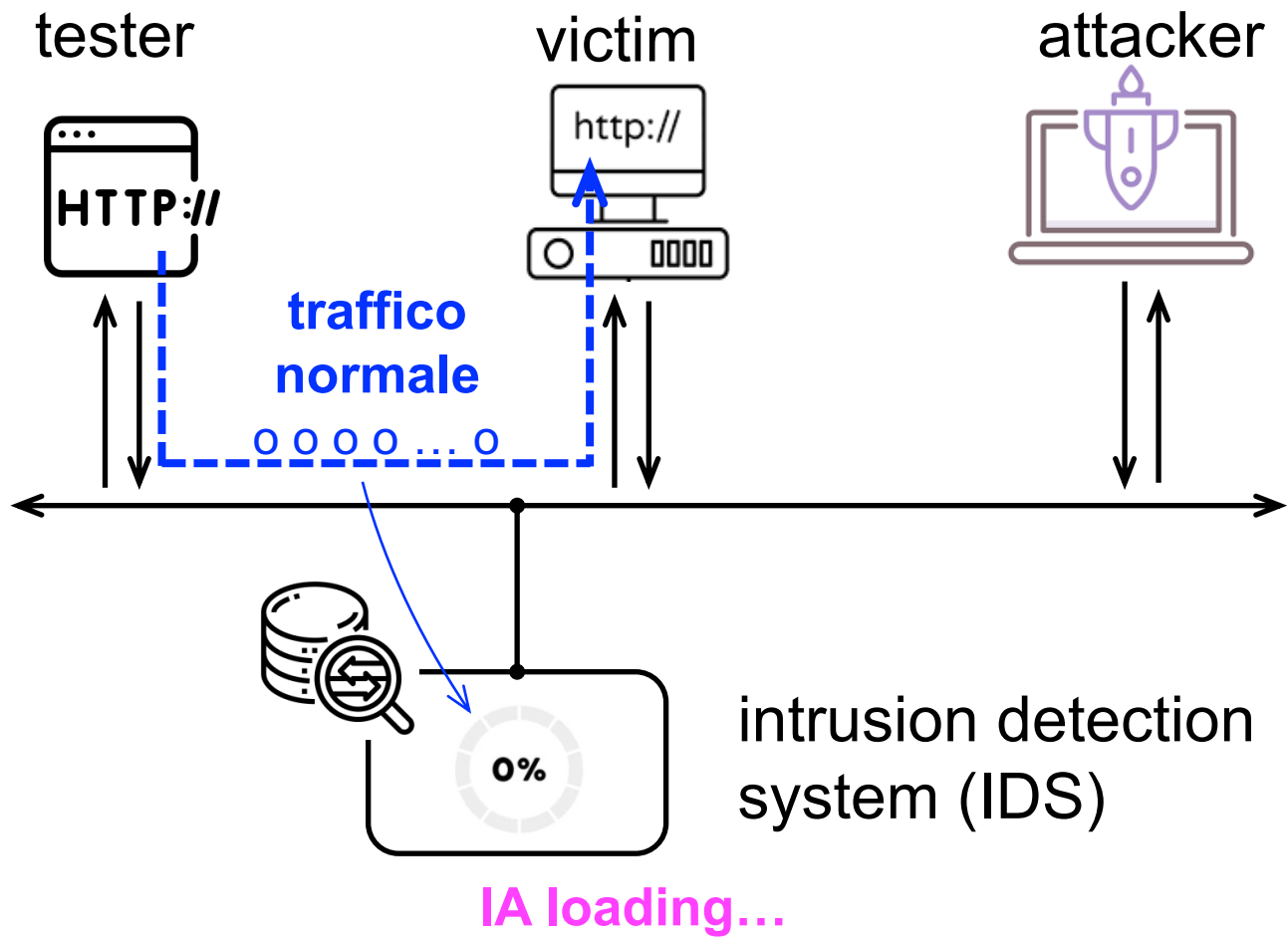
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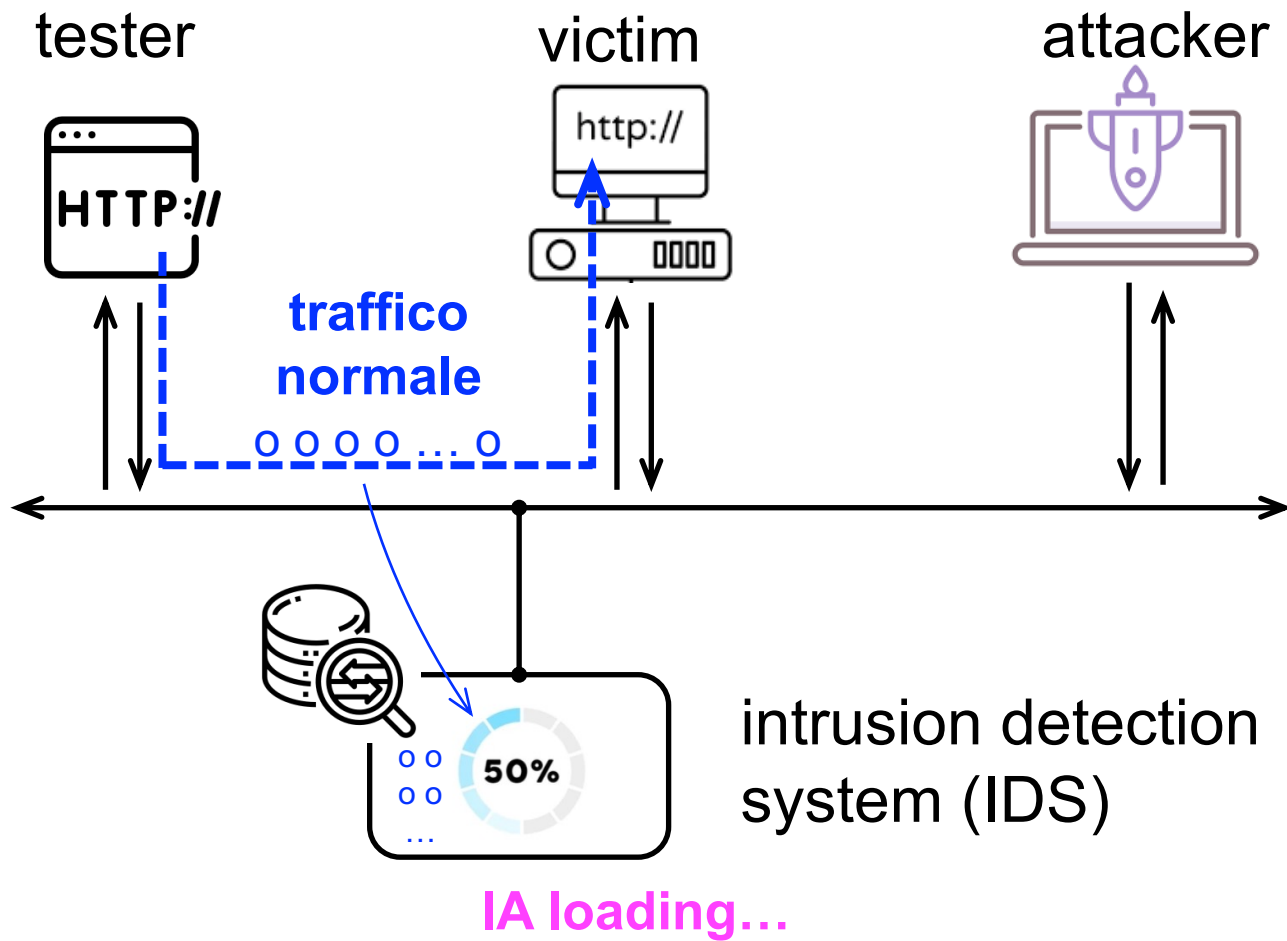


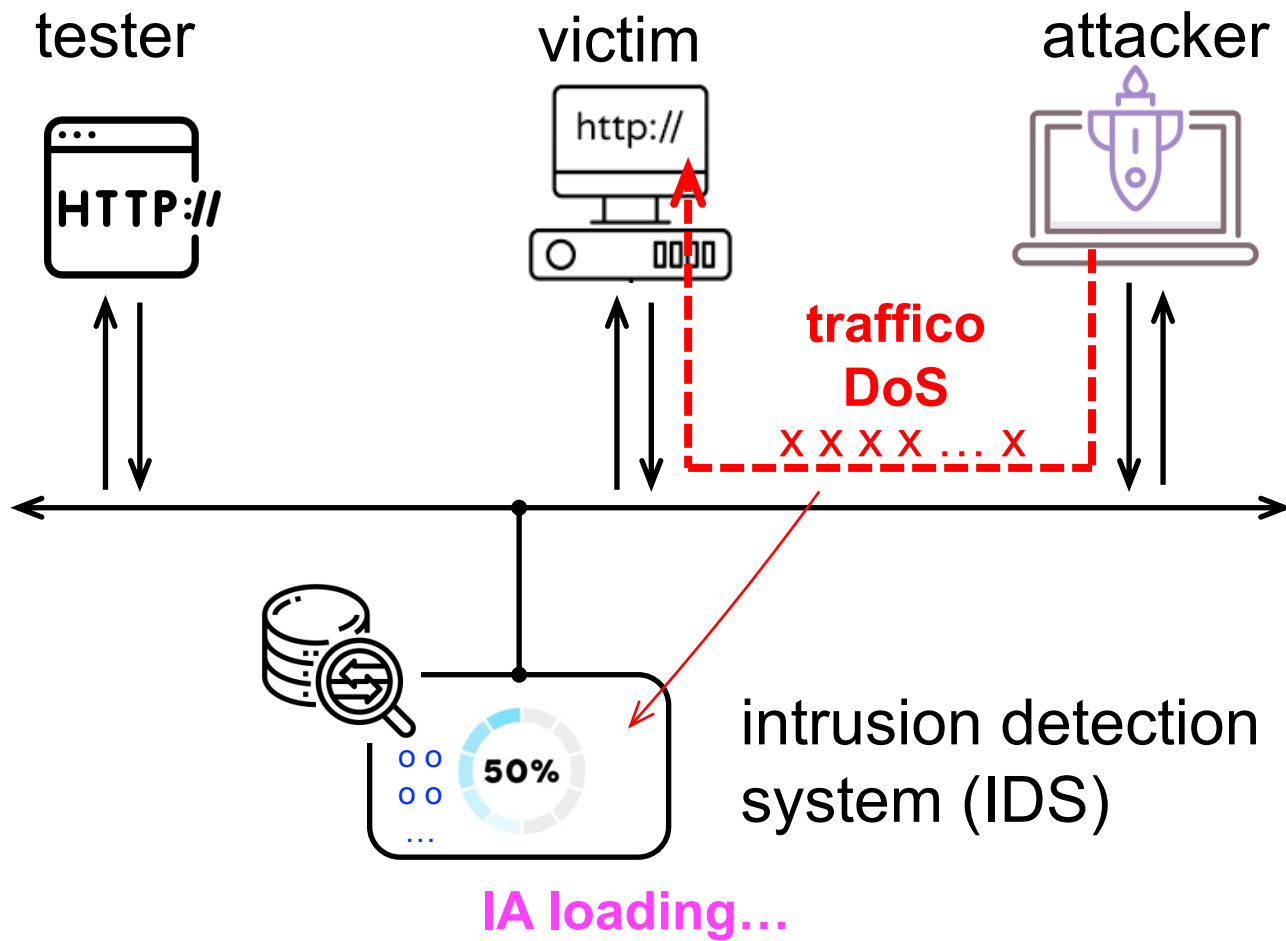


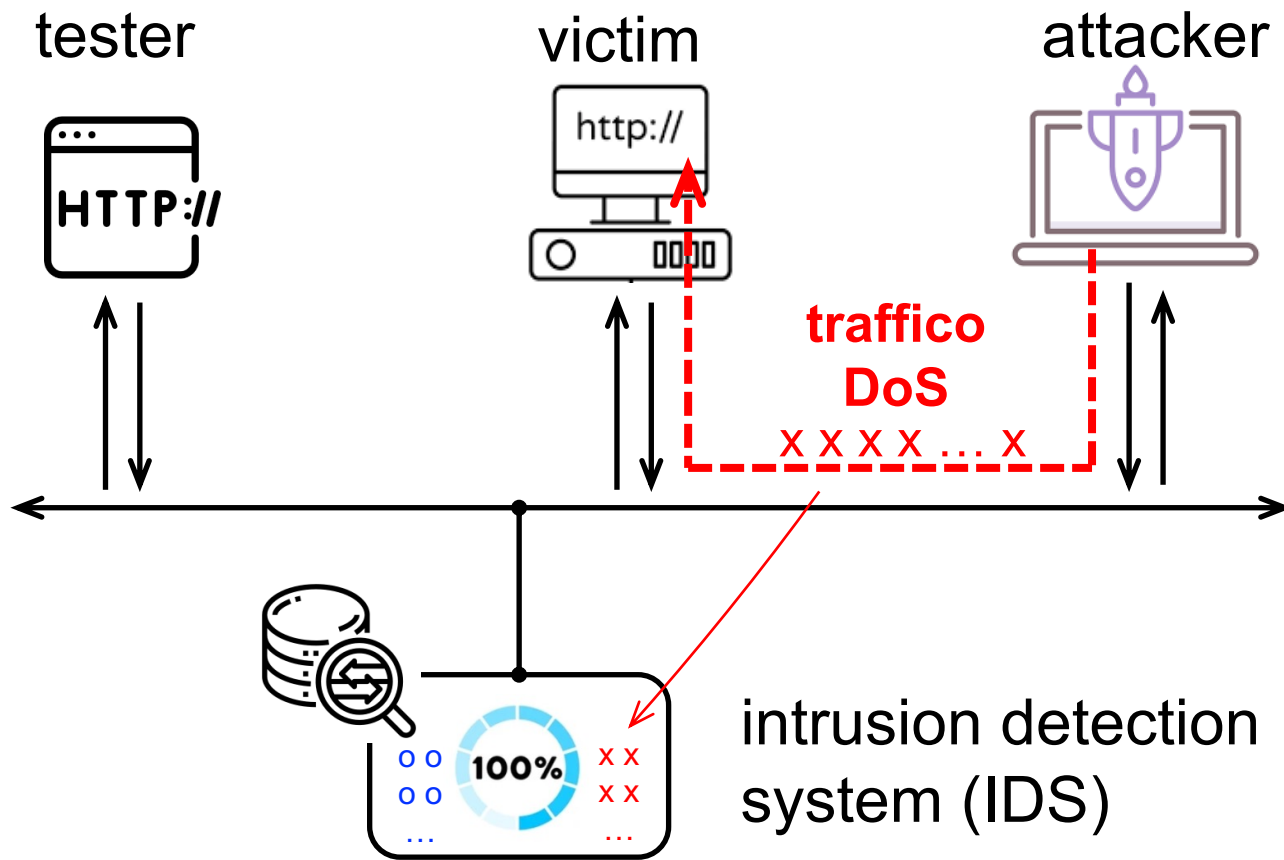
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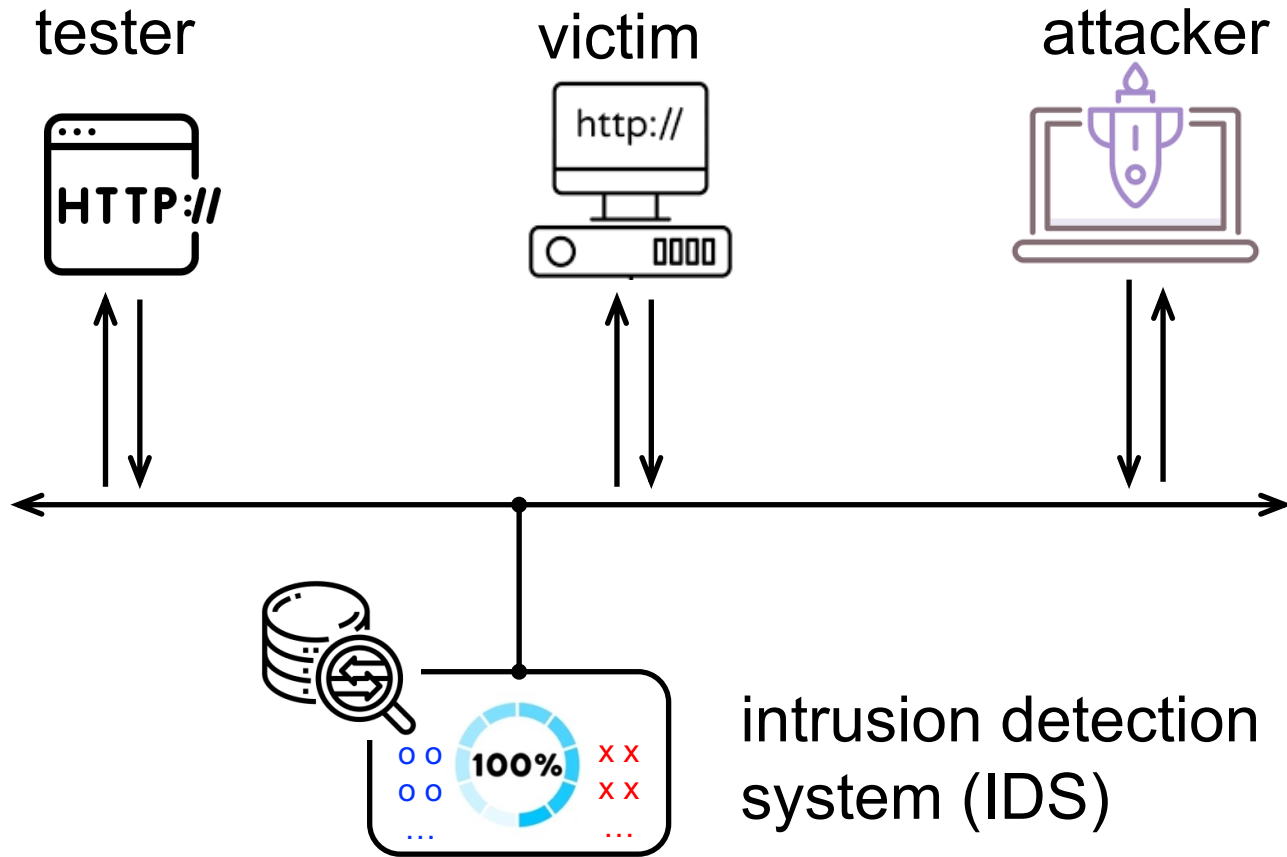








IA loading complete!



tc, Linux utility for traffic control

TC(8)

Linux

TC(8)

NAME

tc - show / manipulate traffic control settings

SYNOPSIS

```
tc [ OPTIONS ] qdisc [ add | change | replace | link | delete ] dev DEV [ parent qdisc-id | root ] [ handle qdisc-id ] [ ingress_block BLOCK_INDEX ] [ egress_block BLOCK_INDEX ] qdisc [ qdisc specific parameters ]
```

```
tc [ OPTIONS ] class [ add | change | replace | delete ] dev DEV parent qdisc-id [ classid class-id ] qdisc [ qdisc specific parameters ]
```

```
tc [ OPTIONS ] filter [ add | change | replace | delete | get ] dev DEV [ parent qdisc-id | root ] [ handle filter-id ] protocol protocol prio priority filtertype [ filtertype specific parameters ] flowid flow-id
```

```
tc [ OPTIONS ] filter [ add | change | replace | delete | get ] block BLOCK_INDEX [ handle filter-id ] protocol protocol prio priority filtertype [ filtertype specific parameters ] flowid flow-id
```

netem Network Emulator is an enhancement of the Linux traffic control facilities that allow to add delay, packet loss, duplication and more other characteristics to packets outgoing from a selected network interface.

When traffic is shaped, its rate of transmission is under control. Shaping may be more than lowering the available bandwidth – it is also used to smooth out bursts in traffic for better network behaviour. **Shaping occurs on egress.**

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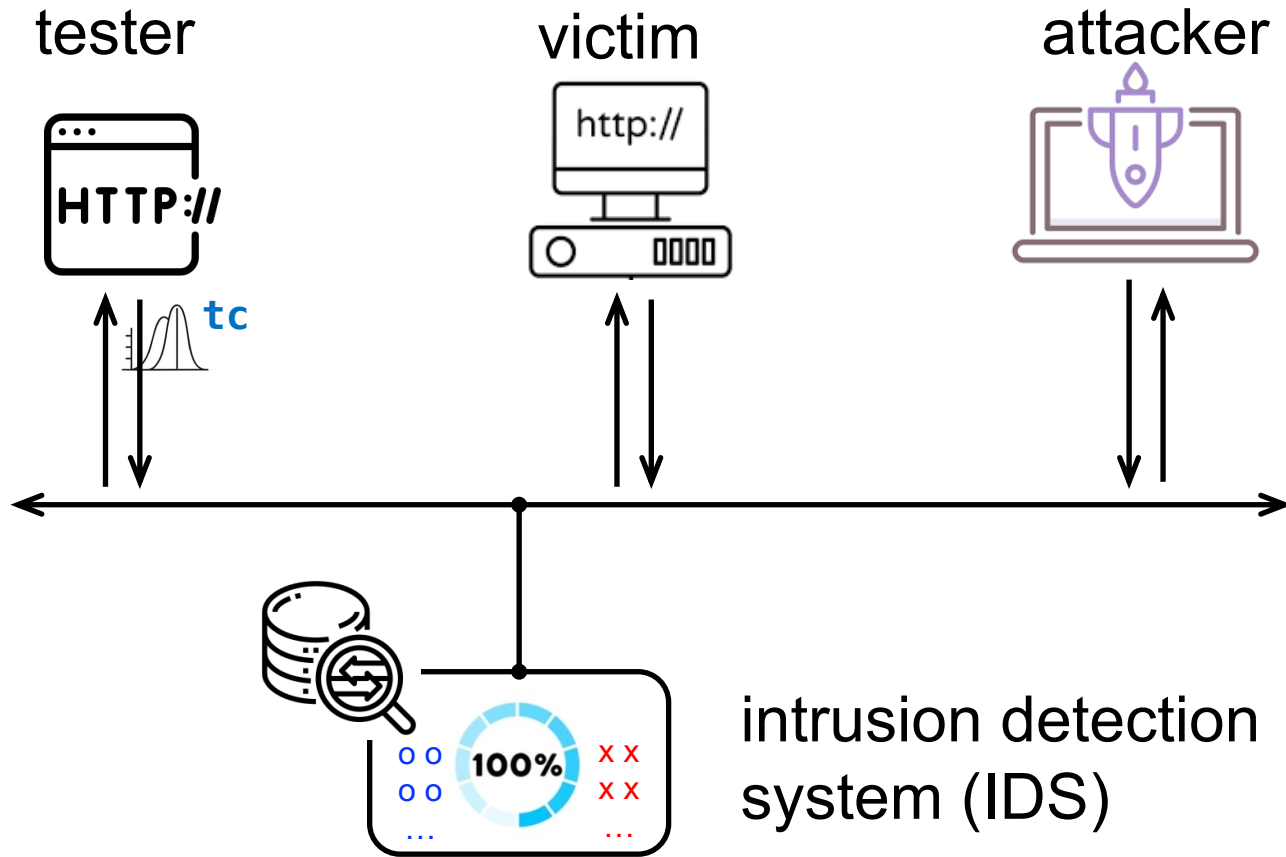
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```

```
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```

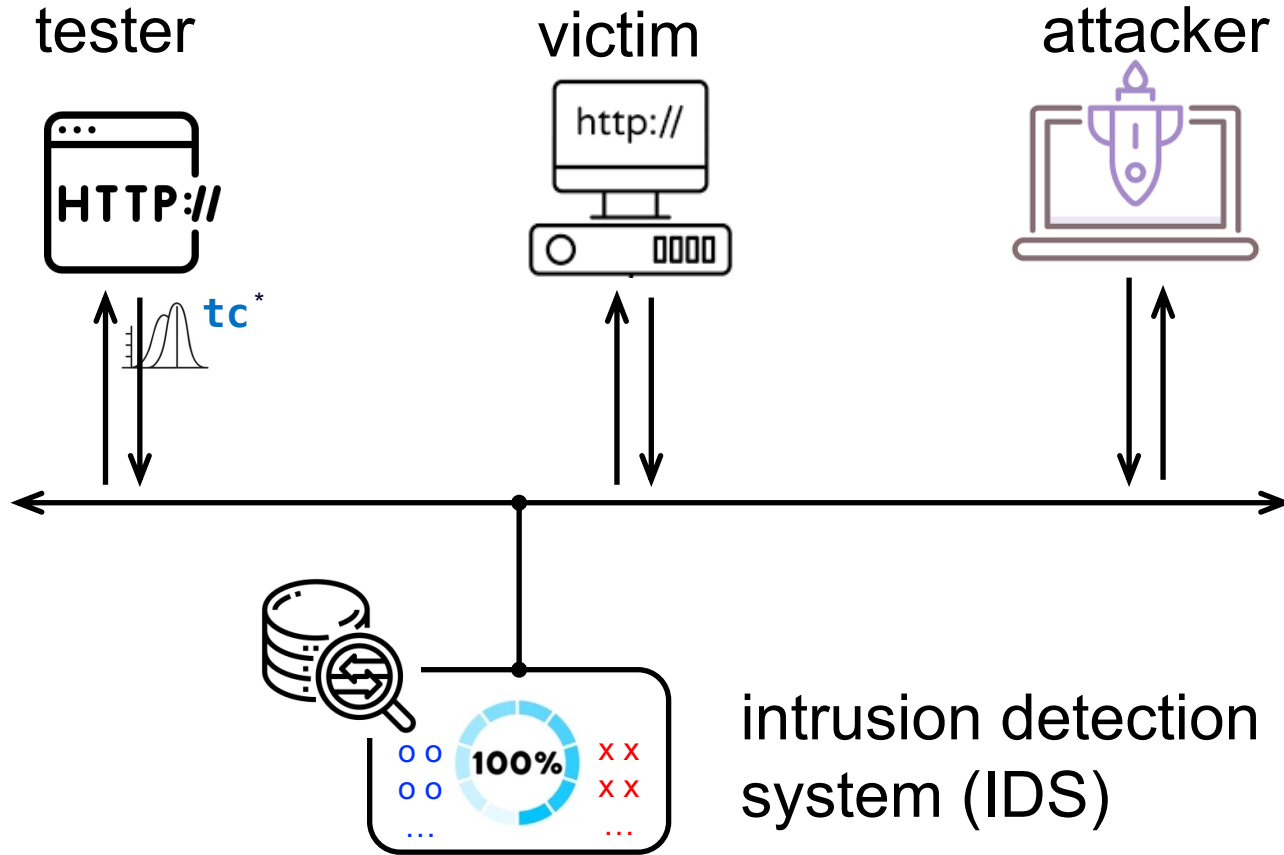
```
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```

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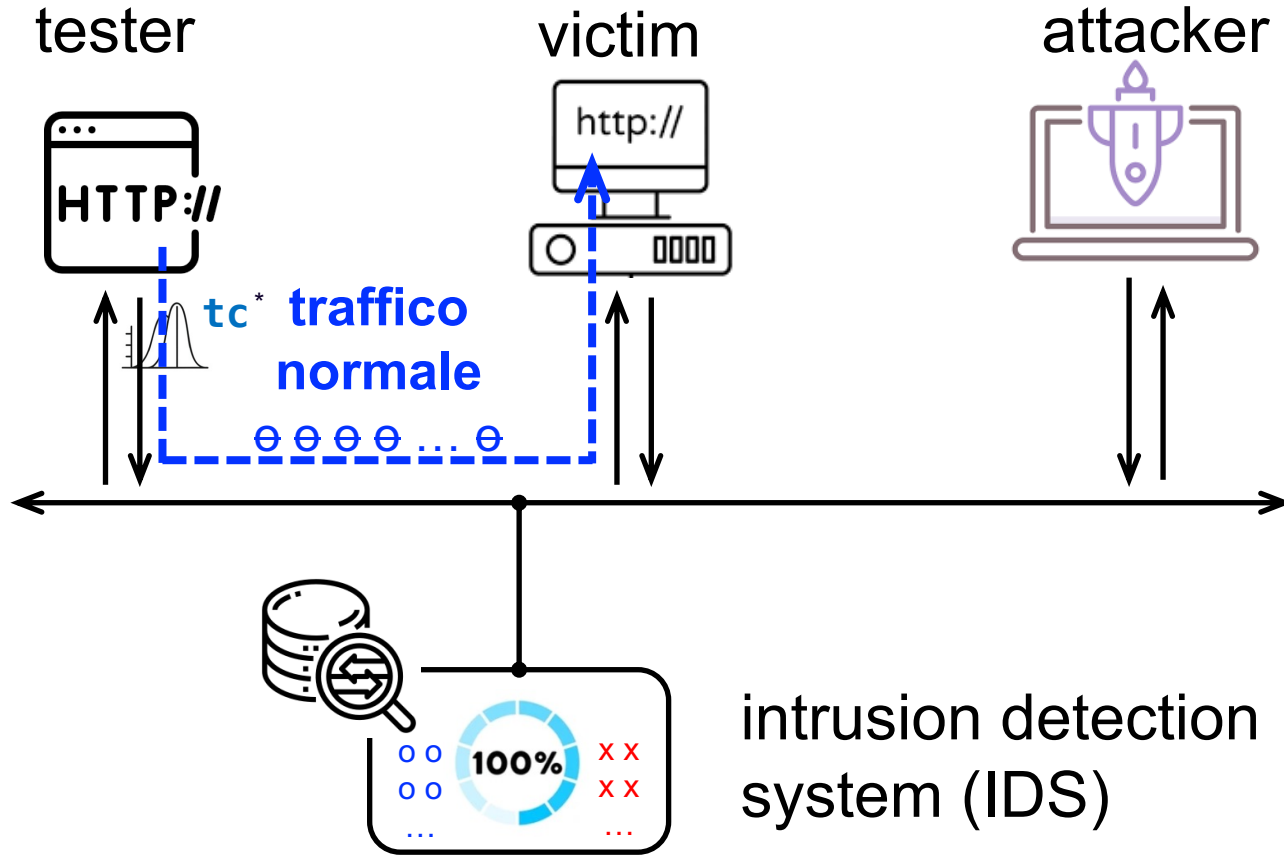
When traffic is shaped, its rate of transmission is under control. Shaping may be more than lowering the available bandwidth – it is also used to smooth out bursts in traffic for better network behaviour. **Shaping occurs on egress.**



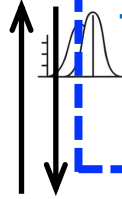
* 20 ms **delay**
25 ms **jitter**
5% **lost**
5% **corrupted**
2% **duplicated**



* 20 ms **delay**
25 ms **jitter**
5% **lost**
5% **corrupted**
2% **duplicated**



tester



- * 20 ms delay
- 25 ms jitter
- 5% lost
- 5% corrupted
- 2% duplicated

tc * traffico
normale

victim



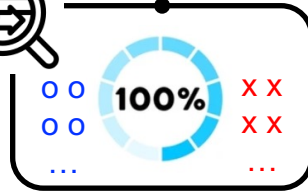
attacker



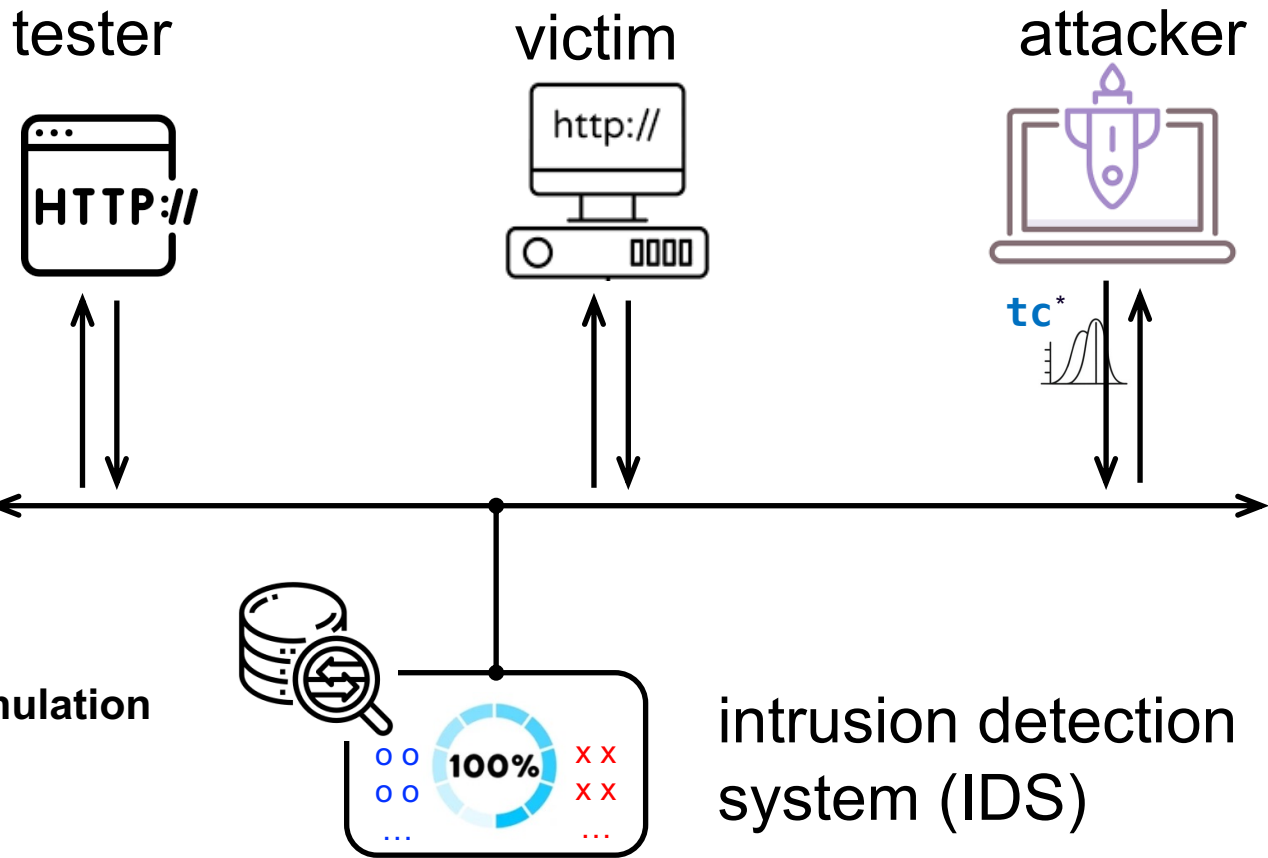
REJECTED

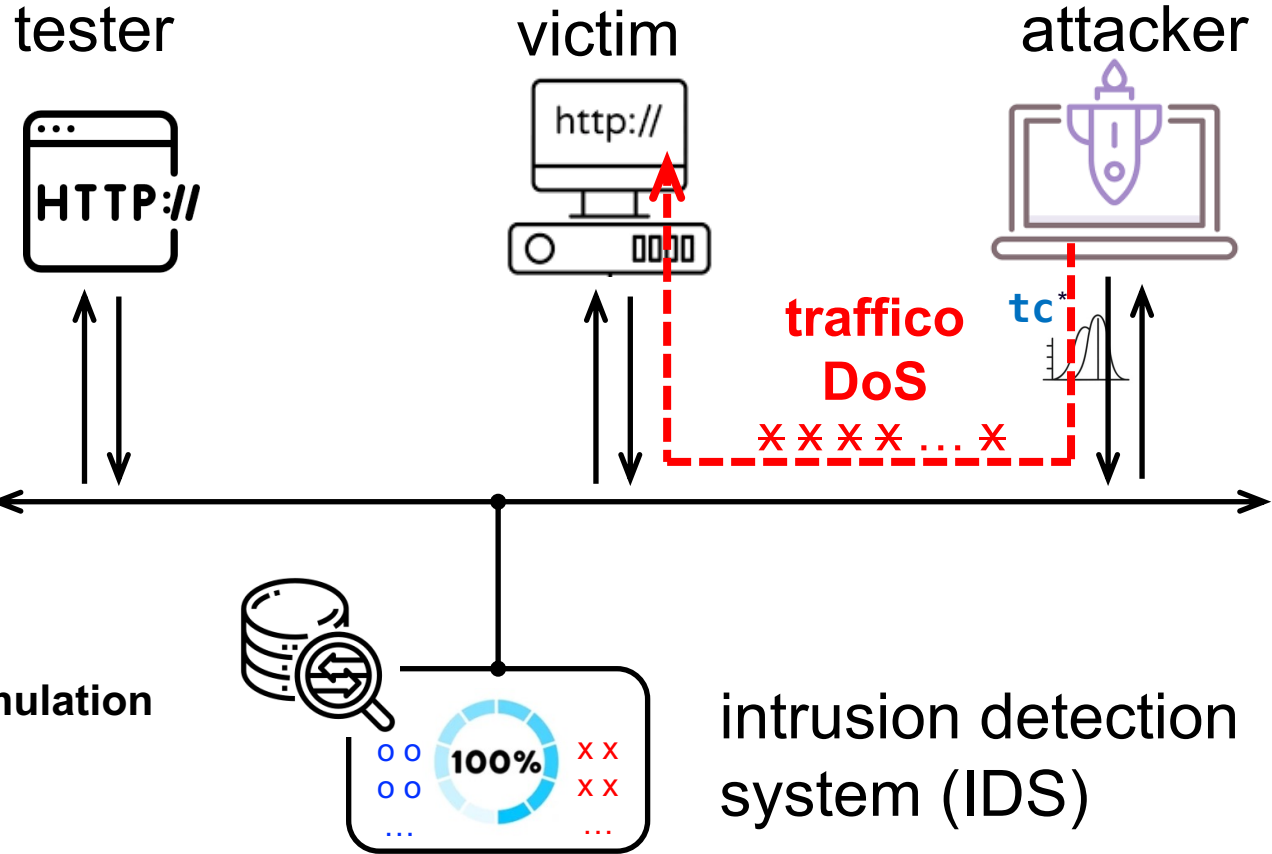


overstimulation



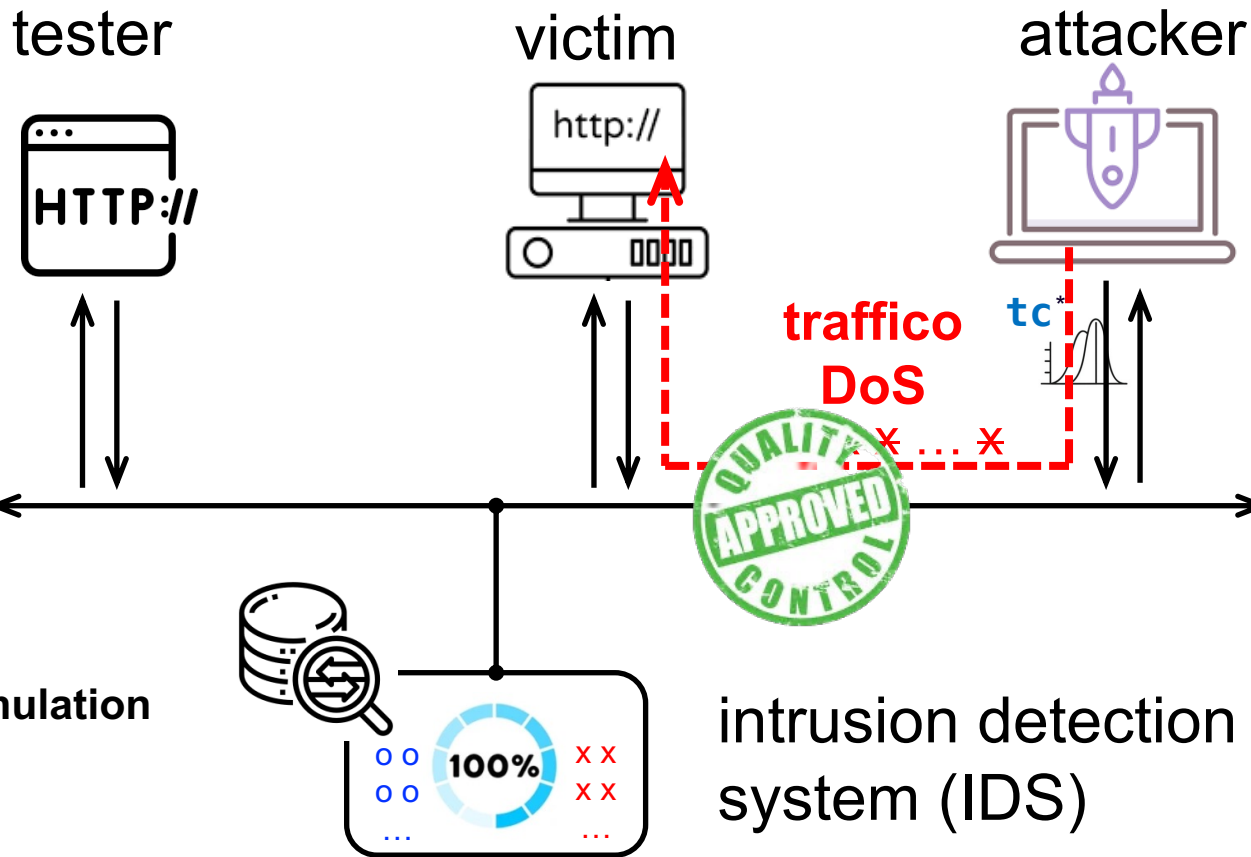
intrusion detection
system (IDS)





overstimulation

**intrusion detection
system (IDS)**



overstimulation



evasion

**intrusion detection
system (IDS)**

*"Free your mind,
secure your data"...*
network and AI

Data is to AI
as Food is to
Humans

Antonio Pecchia

antonio.pecchia@unisannio.it