



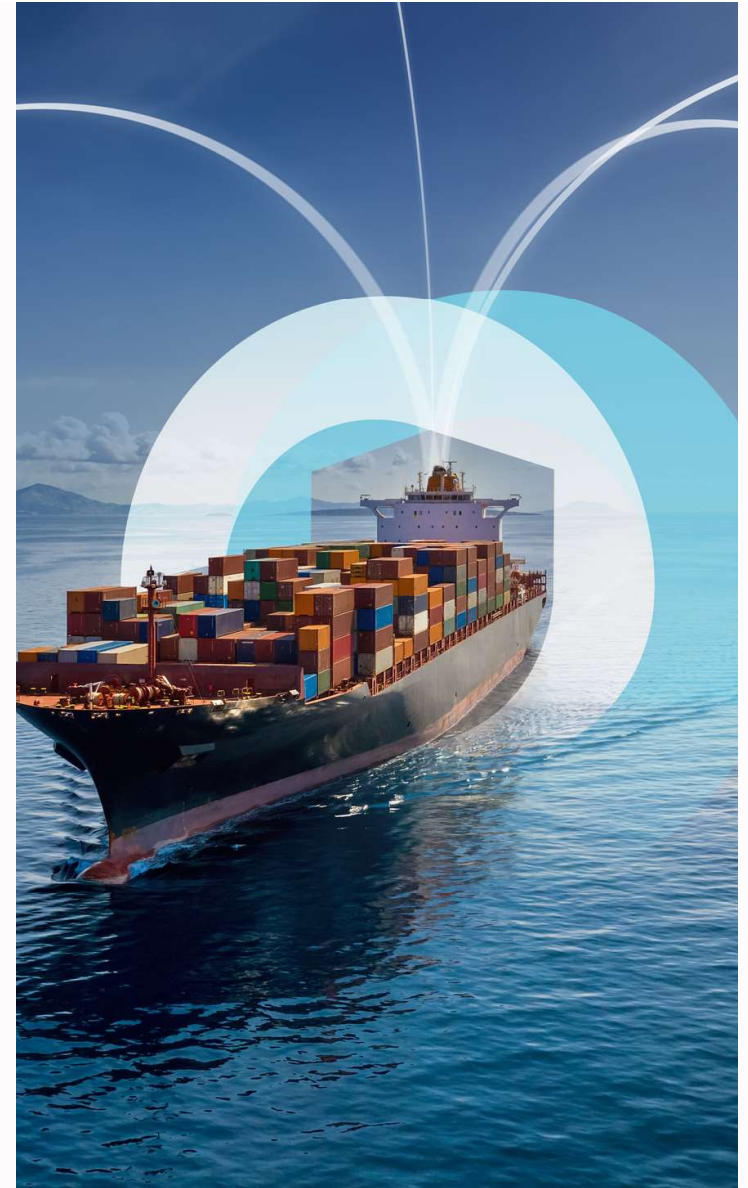
CONNECTIVITY

Where do we go?

Advanced connectivity
& cyber security solutions

Youri-Hart - Port-IT

2024-11

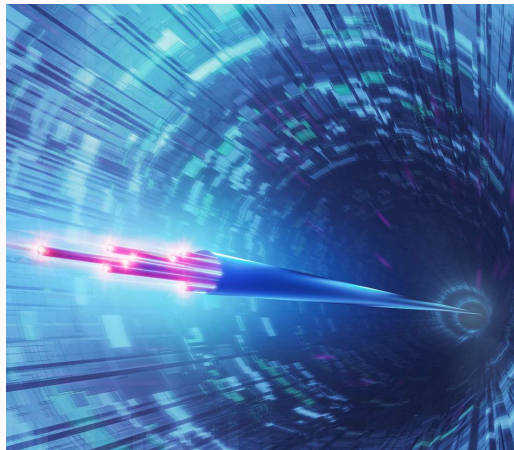


The rise of (fast) LEO connections

The race started on July 2022 (SpaceX)



Latency of 40 MS or less



Speeds of 200 Mbit+



Internet on a vessel





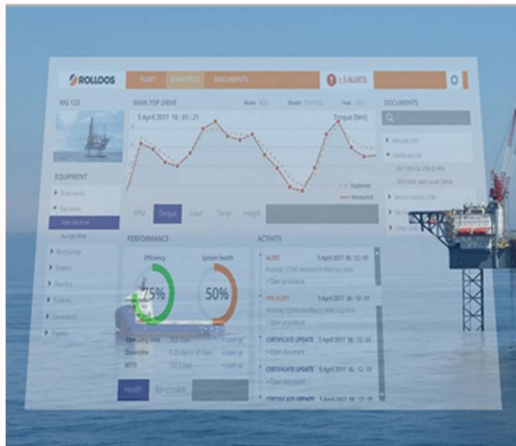
TELESATTM



amazon | project kuiper



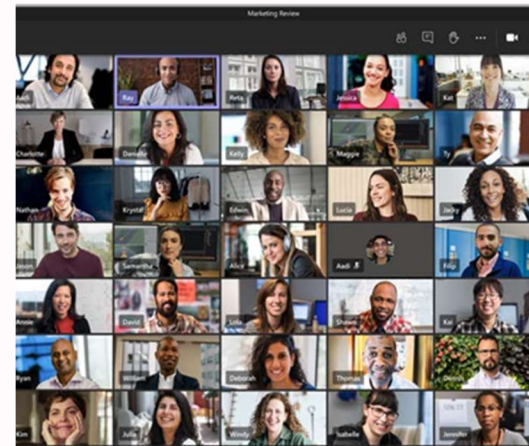
Better connectivity & more technology



The result of improved connectivity is that people tend to connect more.



We 'love' to have everything connected to the Internet, but should we?



Videocalling will result in lower travel costs.

Targeted cyber attacks

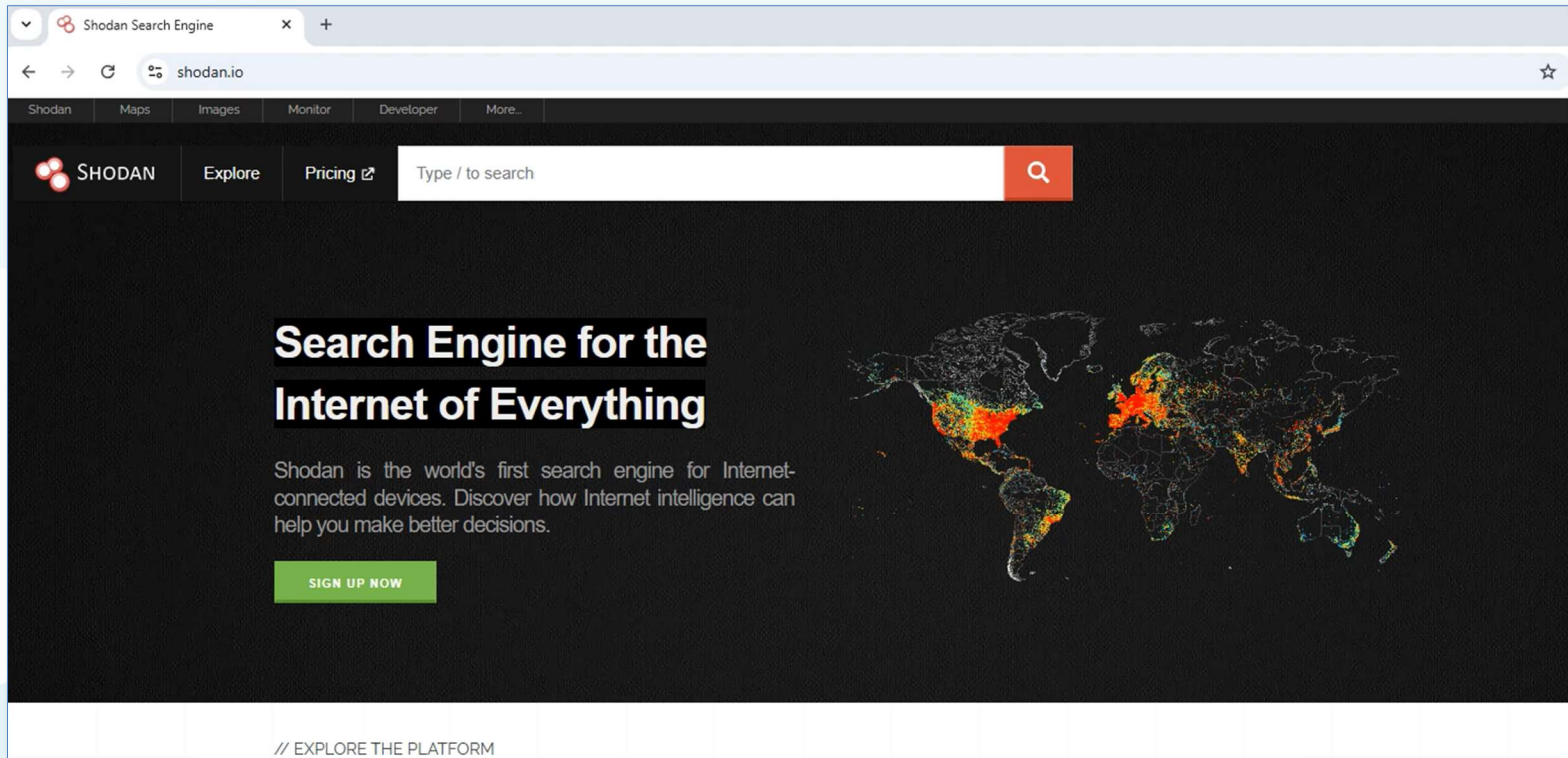
*"If the enemy leaves a door open,
you must rush in."*

Sun Tzu



- Maritime systems are often EOL
- Windows 10 next year EOL - no updates
- With connections like home, it's no 'challenge' for an attacker to get into a vessel.
- Limited budgets available as IT is not part of the operational costs
- Majority of current attacks comes from users onboard the vessel. Not external.. yet!





The image shows a browser window displaying the Shodan Search Engine homepage. The browser's address bar shows the URL "shodan.io". The page features a dark theme with a navigation menu at the top containing "Shodan", "Maps", "Images", "Monitor", "Developer", and "More...". Below the navigation is a search bar with the placeholder text "Type / to search" and a red search button. The main content area has a large heading "Search Engine for the Internet of Everything" and a subheading "Shodan is the world's first search engine for Internet-connected devices. Discover how Internet intelligence can help you make better decisions." A green "SIGN UP NOW" button is positioned below the text. To the right of the text is a world map with a network overlay, where various regions are highlighted in red, orange, and yellow. At the bottom of the page, there is a link that says "// EXPLORE THE PLATFORM".

Shodan Search Engine

shodan.io

Shodan Maps Images Monitor Developer More...

SHODAN Explore Pricing [Type / to search](#)

Search Engine for the Internet of Everything

Shodan is the world's first search engine for Internet-connected devices. Discover how Internet intelligence can help you make better decisions.

[SIGN UP NOW](#)

// EXPLORE THE PLATFORM

Not secure 209.198.141.56:8083/objects?PageID=20

HOME	HOME
CONTACTS	Local time: 2007-03-13 04:28:28
CALL LOGS	
SIP SETTINGS	HANDSET
UPLOAD FIRMWARE	Name: TT-3672A IP Handset
IMPORT/EXPORT	Type: Voice
HELP	Serial number: 10721047
	Software version: 1.20, build 1948
	Build date: 11/3/2002
	NETWORK
	DNCP server: Enabled (10.109.106.1)
	IP address: 10.109.106.252
	Subnet mask: 255.255.255.0
	Default gateway: 10.109.106.1
	MAC address: 00:11:CF:03:4C:2C
	SIP
	SIP profile: Certus
	SIP status: Registered

Shodan Search IP Handset

shodan.io/search?query=thrane

View Report View on Map Advanced Search

Access Granted: Want to get more out of your existing Shodan account? Check out everything you have access to.

209.198.141.56

customer:stlabgr@pop.starlinkis...
SpaceX Services, Inc.
Netherlands, Amsterdam

HTTP/1.0 200 OK
Date: Wed, 07 Mar 2007 07:33:52 GMT
Connection: close
Server: TT-3672 IP Handset - 1.20.1948
Last-Modified: Sun, 03 Jan 2006 12:00:03 GMT
Content-Type: text/html
Content-Length: 616

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html...>

85.221.76.203

customer:stlabgr@pop.starlinkis...
GLOBALCONNECT AS
Norway, Oslo

HTTP/1.1 200 OK
Expires: Tue, 29 Oct 2024 22:11:43 GMT
Cache-Control: max-age=0
Set-Cookie: RL_adm=xxx; expires=Thursday, 01-Jan-1970 00:00:01 GMT
Content-Type: text/html
Server: thtttd 2.250
Transfer-Encoding: chunked
Date: Tue, 29 Oct 2024 22:11:42 GMT

16CS
<!DOCTYPE HTML PUBLIC "-//W3C//...>

217.142.26.64

customer:stlabgr@pop.starlinkis...
SpaceX Services, Inc.
Bulgaria, Sofia

HTTP/1.0 200 OK
Date: Wed, 14 Feb 2007 15:21:06 GMT
Connection: close
Server: TT-3672 IP Handset - 1.20.1948
Last-Modified: Sun, 03 Jan 2006 12:00:03 GMT
Content-Type: text/html
Content-Length: 616

```

hap -T4 -A -v 209.198.141.56
Initiating NSE at 22:39
Completed NSE at 22:39, 1.40s elapsed
Initiating NSE at 22:39
Completed NSE at 22:39, 0.00s elapsed
hap scan report for customer.frtideul.pop.starlinkisp.net (209.198.141.56)
Host is up (0.047s latency).
#_show_ 996 filtered tcp ports (no-response)
PORT      STATE SERVICE
21/tcp    closed ident
11/tcp    open  reverse-ssl SSL/TLS ClientHello
fingerprint-strings:
  NULL:
  S/v
  isupport.fortinet-ca2.fortinet.com
  Californial
  Sunnyvale1
  Fortinet1
  Certificate Authority1
  fortinet-subca2003
  Californial
  Sunnyvale1
  Fortinet1
  Certificate Authority1
  support1#0!
  support@fortinet.com
  Californial
  Sunnyvale1
  Fortinet1
  Certificate Authority1
  fortinet-ca21#0!
  support@fortinet.com
  Californial
  Sunnyvale1
  Fortinet1
  Certificate Au
#3/tcp open  us-srv?
fingerprint-strings:
FourOnFourRequest:
  HTTP/1.0 404 Object Not Found
  Date: Tue, 13 Mar 2007 04:30:11 GMT
  Connection: close
  Server: TT-3672 IP Handset - 1.20.1948
  Content-Type: text/html
  Content-Length: 95
<html><head><title>Not Found</title></head><body>The requested URL was not f
GetRequest:

```



Rules and regulations

- All vessels larger than 500 GT
- Better protection of both IT & OT
- No guidelines, but regulations
- Investing in IT and cyber is crucial
- Yearly inspections / audits
- Class certification



Costs involved

The need to invest in solid IT and cybersecurity solutions



Antivirus does not comply



Detailed plans on how to protect a vessel.



Annual surveys are mandatory (cyber drills)



Third party involvement is mandatory

Costs involved

The need to invest in solid IT and cybersecurity solutions

**WHICH
SOLUTIONS ARE
MANDATORY?**



- Endpoint Protection
- UTM
- NDR
- Vulnerability Management
- MFA
- Awareness training
- SOC



Why take action?

- To avoid longer port stays due to network disruption
- In tenders/ bids customers are asking what YOU are doing to protect their data.
- Protecting your company data (scandals)
- Responsible for crew data
- To avoid potential claims
- **Just because it is the right thing to do!**



THANK YOU



Yuri Hart
CEO Port-IT

