November 29, 2023

Cybersecurity for Cities: A Bootstrapping Guide

Tech and Innovation Center Series
Local Infrastructure Hub

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US DIGITAL RESPONSE

Tech and Innovation Center
Core Values

DRIVEN BY SHARED GOALS

Don't do tech for tech's sake. Priorities should be shaped through participatory processes.

DESIGNED FOR PEOPLE

Processes and products that reflect the needs of deeply diverse groups and individuals.

WELL-RESOURCED

Sustainable delivery systems with the workforce, policies, and agility to ensure effective regulation and integration.

BUILT FOR TRUST

Resilient solutions that are transparent, secure, available, reliable, durable, and privacy-conscious.

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Cybersecurity is taking a growing toll: 2022 saw the largest-ever leak of personal data and record theft of digital assets

Hacker claims to have stolen 1 billion records of Chinese citizens from police

An anonymous internet user posted on the hacker forum Breach Forums last week offering to sell the more than 23 terabytes of data for 10 bitcoins, equivalent to about $200,000,

U.S. Agency Links North Korea Crime Ring to $540 Million Axie Infinity Crypto Hack

Lazarus Group has allegedly stolen nearly $2 billion of crypto since 2017

Source: NBC News, WSJ

Why are we seeing more intrusions than ever?

- Security often not a primary consideration.
- Feature-rich systems may be poorly understood—combinations of features create unforeseen vulnerabilities.
- Implementations are buggy—e.g. buffer overflows, cross-site scripting.
- Networks are more open and accessible than ever, increasing exposure and making it easy to cover tracks.
- Many attacks are not even technical in nature—e.g.phishing, social engineering.

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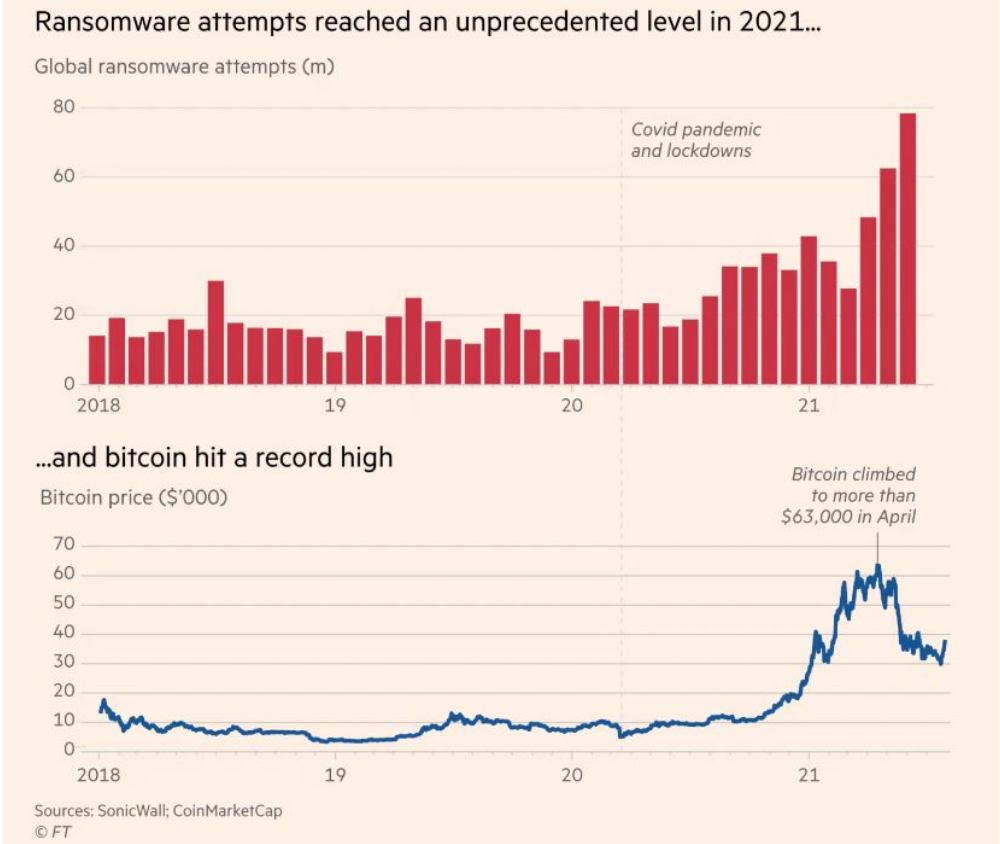
Source: Prof. Vitaly Shmatikov, Cornell Tech

Cybercrime is economically-motivated, and easier than ever to monetize



Cities are on the front lines of cybersecurity

Every month in 2023 has seen major breaches of city cybersecurity.

Month	City	Type	Implication
January	Atlanta	ransomware	$17m recovery cost
February	New Orleans	website bug	personal data on 100k residents
February	Oakland	ransomware	Phones + 311 down for weeks
March	San Francisco	payroll software	personal data on 70k employees
April	Chicago	City water billing software	personal data on 50k residents
May	Philadelphia	City health dept website bug	personal data on 40k residents
June	San Jose	ransomware	$10m recovery cost

Source: Cyber Defense Magazine

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That biggest-ever data breach in 2022?

It was a city.

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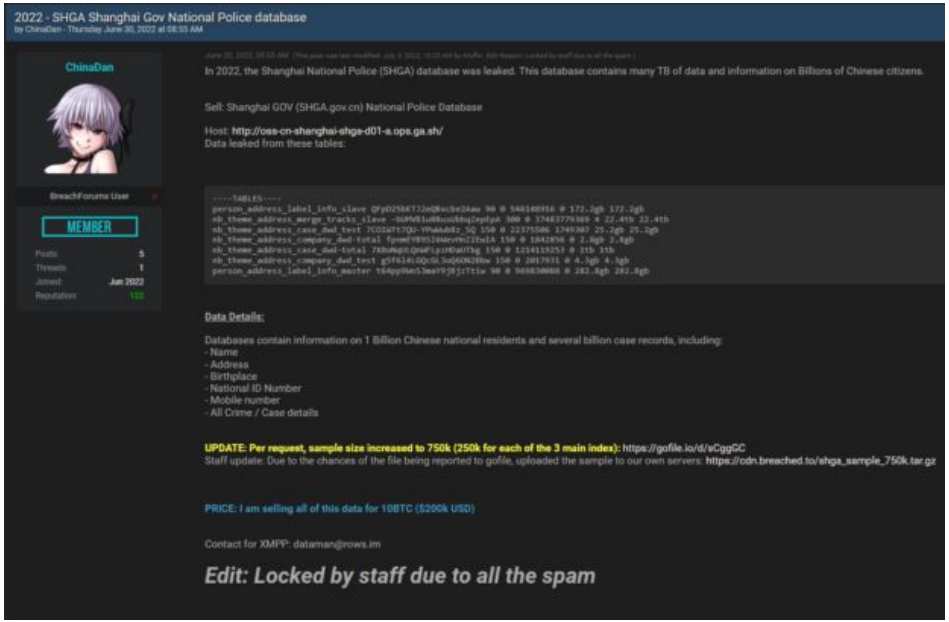

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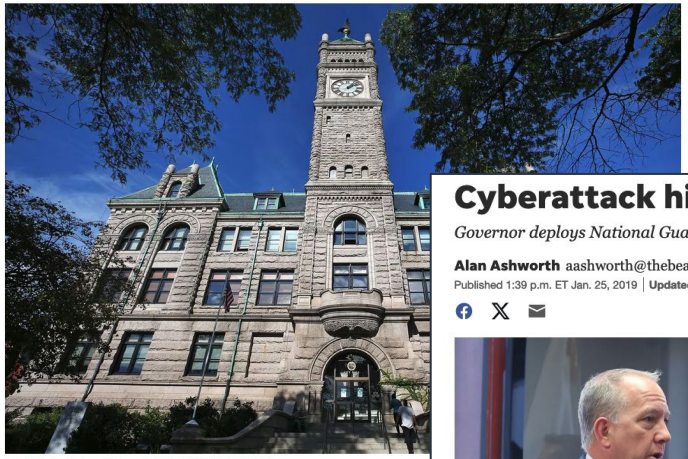
Not just big cities

Hackers claim to publish data seized from Lowell in cybersecurity breach

By Laura Crimaldi Globe Staff, Updated May 14, 2023, 5:14 p.m.



Lowell City Hall in Lowell, Mass. DAVID L. RYAN/GLOBE STAFF

Cyberattack hits Akron

Governor deploys National Guard team to investigate ransom demand

Alan Ashworth aashworth@thebeaconjournal.com

Published 1:39 p.m. ET Jan. 25, 2019 | **Updated 9:20 p.m. ET Jan. 25, 2019**

Akron Mayor Dan Horrigan addresses the media during a news conference Friday at the Stubbs Justice Center. Standing with the mayor are FBI agent Bryan Smith, center, and Akron Police Chief Kenneth Ball. [Phil Masturzo/Beacon Journal/Ohio.com] *Akron Beacon Journal*

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Why are cities such good targets?

Cities are good targets:

- mission-critical nature
- sensitive data holdings
- deep pockets

With lots of vulnerabilities:

- Aging IT infrastructure and legacy systems
- Inadequate staffing and skills
- Poor security practices (e.g. passwords, erasing discarded machines, etc.)

Source: Cyber Defense Magazine

Federal and state resources for local government cybersecurity

The flagship cybersecurity program under the Bipartisan Infrastructure Law is the **State and Local Cybersecurity Grant Program**

- FY2023 funding is $375m
- Only states and territories may apply
- 80% of its awarded funds must be passed through to local units of government, can be in form of in-kind services

Now is the time to:

- Check with your state SLCGP administrator for resource request procedures (e.g. New Jersey's call is until through Dec. 8)
- Engage with state CISOs and coordinating agencies about needs and priorities for FY2024 (federal process re-starts in August 2024)

November 2023

Cybersecurity for Cities: A Bootstrapping Guide

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Co-founder and Co-chair, Coalition of City CISOs

The next Tech and Innovation Center Series webinar will be on December 13, 2023.

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