Queries to the SCM database from 26 June to 4 July 2018

From 26 June 2018, the attacker began querying the database from Citrix Server 2 using the A.A. account.

3 types of "**SQL**" queries which the attacker ran:

- (i) reconnaissance on the schema of the SCM database,
- (ii) direct queries relating to particular individuals, and
- (iii) bulk queries on patients in general.

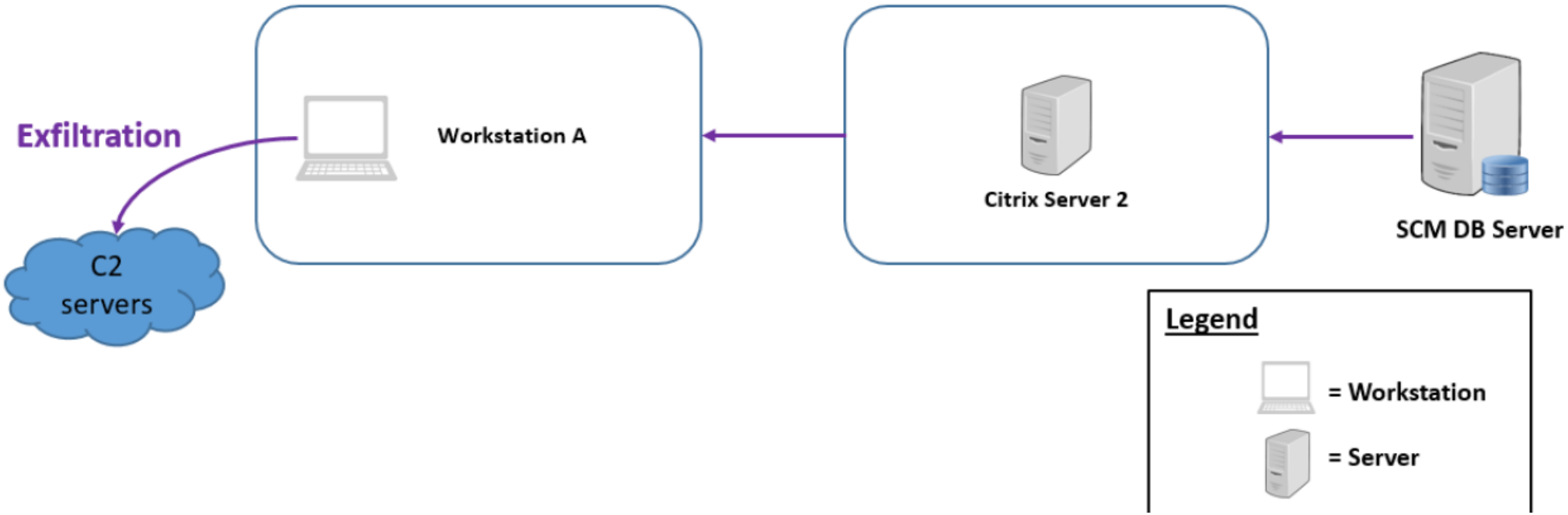
Queries to the SCM database from 26 June to 4 July 2018

The attacker was able to retrieve the following information from the SQL queries:

1. The Prime Minister's personal and outpatient medication data;
2. The demographic records of 1,495,364 patients, including their names, NRIC numbers, addresses, gender, race, and dates of birth;
3. The outpatient dispensed medication records of about 159,000 of the 1,495,364 patients mentioned in sub-paragraph (b) above.

Queries to the SCM database from 26 June to 4 July 2018

Figure 11: Data exfiltration route



Queries to the SCM database from 26 June to 4 July 2018

- The copying and exfiltration of data from the SCM database was stopped on 4 July 2018, after staff from IHiS discovered the unusual queries and took steps to prevent any similar queries from being run against the SCM database.

Attempts to re-enter the SingHealth Network on 18 and 19 July 2018

- After detection of malware on and communications from the S.P. server, CSA recommended that internet surfing separation should be implemented, to prevent the attacker from exercising command and control over any remaining footholds it may have in the network.
- Internet surfing separation was implemented on 20 July 2018.
- No further signs of malicious activity were detected thereafter.