

Risk Assessment Part II - Controls

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I. Short Description of Home

City, State: Montreal, Quebec

Home type: 3½ room (1 bedroom, 1 bath), Apartment. Single level. 8th floor with balcony, elevator.

Security features: Secure exterior door w/intercom, Secure interior door with standard lock and deadbolt.

II. Tables from Part I

Assets:

Home > 1 bed/1 bath 8th floor apartment	\$5000 (estimated cost of moving to equivalent unit including first/last rent, deposit, movers, supplies, moving van)
Furniture > Livingroom	\$1400 {2 desks (\$380), sofa (\$700), small dining table (\$50), 2 chairs (\$70), Lamps, pillows, rugs, etc (\$200)}
Furniture > Bedroom	\$1350 {1 bed (\$900), Dresser (\$200), Rug, lamps, end tables (\$250)}
Kitchen	\$1050 {Dishes (\$200), Cookware (\$500), Appliances (\$350)}
Clothing > Pants, shirts, etc	\$700
Clothing > Winter gear	\$350
Musical instruments > 2 keyboards	\$750
Musical instruments > 2 guitars	\$450
Musical instruments > audio interface, speakers, headphones, cables	\$420
Plants > 26 living plants/pots	\$400
Art > pictures, paintings, pottery	\$500
Books > Personal Library	\$300
Books > School Textbooks	\$670
Computer Monitor	\$140
Record player	\$90
Records	\$60
Cash > Canadian currency	\$87
TOTAL	\$13717

Table 1. Asset(s) identified and their value to the homeowner

Data and Information Assets:

Personally Identifiable Information (PII)	Name, Address, Phone Number, Email address	Private	SC PII = {(confidentiality, LOW), (integrity, MODERATE), (availability, HIGH)}
Personally Identifiable	Social security number	Sensitive, Confidential	SC PII = {(confidentiality,

Information (PII)			HIGH), (integrity, HIGH), (availability, HIGH)}
Personally Identifiable Information (PII)	CA Driver's License number	Sensitive, Confidential	SC PII = {(confidentiality, HIGH), (integrity, HIGH), (availability, HIGH)}
Personally Identifiable Information (PII)	Passport number	Sensitive, Confidential	SC PII = {(confidentiality, HIGH), (integrity, HIGH), (availability, HIGH)}
Personally Identifiable Information (PII)	Date of birth	Private	SC PII = {(confidentiality, HIGH), (integrity, HIGH), (availability, HIGH)}
Personally Identifiable Information (PII)	Login details (usernames/passwords)	Sensitive, Confidential, Personal Use Only	SC PII = {(confidentiality, HIGH), (integrity, MODERATE), (availability, MODERATE)}
Private Health Information (PHI)	Medical record number	Private	SC PHI = {(confidentiality, HIGH), (integrity, HIGH), (availability, MODERATE)}
Private Health Information (PHI)	Pharmacy account number	Private	SC PHI = {(confidentiality, HIGH), (integrity, HIGH), (availability, MODERATE)}
Financial Information (FI)	Etrade Stock Brokerage Account Number	Sensitive, Confidential	SC FI = {(confidentiality, HIGH), (integrity, HIGH), (availability, MODERATE)}
Financial Information (FI)	Etrade Checking Account Number	Sensitive, Confidential	SC FI = {(confidentiality, HIGH), (integrity, HIGH), (availability, MODERATE)}
Financial Information (FI)	Debit card number	Sensitive, Confidential	SC FI = {(confidentiality, HIGH), (integrity, HIGH), (availability, HIGH)}
Education Information (EI)	SJSU Student ID number	Private	SC EI = {(confidentiality, LOW), (integrity, HIGH), (availability, MODERATE)}

Table 2. Information assets, data elements and potential impact

Information Technology Assets:

External Hard Drive (LaCie 4TB)	\$160	SC Private photos = {(confidentiality, HIGH), (integrity, MODERATE), (availability, MODERATE)} SC Music recordings = {(confidentiality, LOW),	SC External Hard Drive = {(confidentiality, HIGH), (integrity, MODERATE), (availability, HIGH)}

		(integrity, MODERATE), (availability, MODERATE))}	
		SC SJSU schoolwork = {(confidentiality, LOW), (integrity, HIGH), (availability, HIGH)}	
Laptop Computer (Macbook Air)	\$1700	SC Private photos = {(confidentiality, HIGH), (integrity, MODERATE), (availability, MODERATE))}	SC Laptop Computer = {(confidentiality, HIGH), (integrity, HIGH), (availability, HIGH)}
		SC Music recordings = {(confidentiality, LOW), (integrity, MODERATE), (availability, MODERATE))}	
		SC SJSU schoolwork = {(confidentiality, LOW), (integrity, HIGH), (availability, HIGH)}	
		SC Financial Information = {(Confidentiality, HIGH), (Integrity, HIGH), (Availability, MODERATE))}	
Smart phone (iPhone XR)	\$900	SC Private photos = {(confidentiality, HIGH), (integrity, MODERATE), (availability, MODERATE))}	SC Smart phone = {(confidentiality, HIGH), (integrity, HIGH), (availability, HIGH)}
		SC Music recordings = {(confidentiality, LOW), (integrity, MODERATE), (availability, MODERATE))}	
		SC Financial Information = {(Confidentiality, HIGH), (Integrity, HIGH), (Availability, MODERATE)}	
Router (TP-Link)	\$120	SC Router = {(confidentiality, HIGH), (integrity, HIGH), (availability, HIGH)}	SC Router = {(confidentiality, HIGH), (integrity, HIGH), (availability, HIGH)}

Table 3. Information technology assets, estimated value, and potential impact

III. Tables 4, 5, 6: Threats, vulnerabilities, and current and proposed mitigation strategies for three assets.

Home > 1 bed/1 bath 8 th floor apartment

Deliberate acts of theft	Located in high-density, urban area prone to theft (Medium)	Main entrance “duplicatable key” lock; Apartment door deadbolt	Petition management to upgrade main entrance lock to use non-duplicatable keys & issue new keys to residents. Buy “SimpliSafe” or similar home security system with cameras that stream to my smartphone.
Force of Nature: Fire	Internal structure of building made of combustible wood, drywall. High density building. Many surrounding buildings made of wood, susceptible to lightning, etc.	Fire alarms with batteries. Building fire extinguishers in glass cases downstairs.	Purchase “Smart” smoke alarm that connects to my phone. Create or ask for map of all building fire extinguishers and fire alarm pull stations and hang by front door.
Human Error: Fire	During lockdown we cook at home and sometimes smoke inside.	Water bucket. Ashtrays.	Buy home fire extinguisher for under kitchen sink. Commit to only smoking outside on balcony.

Table 4: Threats, vulnerability, and mitigation strategies

Musical instruments > keyboards, audio interface, speakers, amplifiers			
Technological obsolescence: Older electrical wiring & outlets.	Power surge could destroy sensitive electrical instruments.	Cheap, older powerbar. I try not to plug in multiple amplifiers to same outlet.	Upgrade to ETL certified surge protector powerbar. Replace standard outlets with GFCI outlets. Petition building management to upgrade building breakers from screw-in to modern switch breakers.

Table 5: Threats, vulnerability, and mitigation strategies

Plants > 26 living plants in pots			
Force of Nature: Extremely cold	Plants are located near	Maintaining temperature in	Insulate windows with plants nearby with bubble wrap or special plastic

Montreal winter weather	windows	house	window insulation kit. Install heat lamp or light bulb between windows and plants. Move low-light plants to top of refrigerator.
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Table 6: Threats, vulnerability, and mitigation strategies

IV. Tables 7, 8, 9: threats, vulnerabilities, and current and proposed mitigation strategies for three information assets.

Debit Card Number			
Deliberate act of theft	Pickpocketing really does happen in Montreal—there are warnings on TripAdvisor.ca and in local news.	Awareness of personal surroundings	Keep wallet in front pocket. Buy non-slip, clip, or chain wallet.
Human error: Loss	This is the most likely threat. I ride on the subway a lot and my wallet can slip out of my pocket when I sit down and stand up.	Regular checking to make sure I have wallet	Buy non-slip wallet, clip, or chain wallet. Make photocopy of front and back of debit card so I can at least order groceries while waiting for a replacement.
Obsolescence: Expiration	My debit card number will expire eventually. Perhaps while I am in Montreal and away from my permanent address.	Expectation that my bank will send me a new card prior to expiration	Create Google or Apple reminder to warn me about upcoming expiration

Table 7: Threats, vulnerability, and mitigation strategies

U.S. Passport number			
Deliberate act of theft	Pickpocketing really does happen in Montreal—there are warnings on TripAdvisor.ca and in local news.	Awareness of personal surroundings	Leave passport at home, in locked safe, unless travelling internationally. Keep photo of passport saved on phone and in cloud.
Human error: Loss	This is the most likely threat. I ride on the subway a lot	Regular checking to	Leave passport at home, in locked safe, unless

	and my passport can slip out of my pocket when I sit down and stand up.	make sure I have passport	travelling internationally. Keep photo of passport saved on phone and in cloud.
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Table 8: Threats, vulnerability, and mitigation strategies

Login details (usernames/passwords)			
Technical hardware failures or errors	My passwords are stored in my browser, only on my personal computer	None	Keep browser login and password saved on trusted friend or partner's computer. Use smartphone as secondary authentication device.
Deliberate acts of information extortion: Ransomware	My passwords are stored in my browser, only on my personal computer. If computer is disabled by Ransomware, I am unable to login to email, banking, etc.	Sophos home premium ransomware protection	Keep browser login and password saved on trusted friend or partner's computer

Table 9: Threats, vulnerability, and mitigation strategies

V. Tables 10, 11, 12: Threats, vulnerabilities, and current and proposed mitigation strategies for three information technology assets.

External Hard Drive (LaCie 4TB)			
Deliberate acts of theft	My apartment is vulnerable to break-ins	Main entrance lock; Apartment door deadbolt	Improve apartment security with better locks, cameras, etc.
Technical hardware failures or errors	All hard drives are prone to eventual hardware failure.	Treat hard drive carefully, as with any fragile item.	"Monitor drive health; reduce data load; manage drive life cycle; always use 'remove device' option" ("Prevent external harddrive failure" 2020)

Table 10: Threats, vulnerability, and mitigation strategies

Laptop Computer (Macbook Air)			

Deliberate acts of theft	My apartment is vulnerable to break-ins	Main entrance lock; Apartment door deadbolt	Improve apartment security with better locks, cameras, etc. Install laptop lock and loop around desk or table.
Technical hardware or software failures or errors	All laptops are prone to eventual hardware or software failure.	Treat Macbook carefully, as with any fragile item.	“Avoid filling drive to full capacity. Restore laptop to original state every year. Run disk utility to check computer for any damaged files. Run updates. Don’t leave charger on continuously” (Lan, 2020).
Deliberate software attacks	Viruses, worms, macros, denial of service, Ransomware	Sophos Premium Home Edition	“Keep software up-to-date; avoid phishing scams; practice good password management; back-up data regularly” (Berkeley, 2020)

Table 11: Threats, vulnerability, and mitigation strategies

Router (TP-Link)			
Deliberate acts of theft	My apartment is vulnerable to break-ins. Frankly, it seems unlikely that someone would steal my router, but you never know.	Main entrance lock; Apartment door deadbolt	Keep old router as backup. Improve apartment security with better locks, cameras, etc.
Technical hardware failures or errors	All routers are prone to eventual hardware failure. Routers are vulnerable to brown-outs and lightning strikes (Aganju, 2017)	Treat the router carefully, as with any fragile item.	Dust around the laptop, never turn it off, allow airflow to avoid overheating (Aganju, 2017). Invest in a ETL certified surge protector.

Table 12: Threats, vulnerability, and mitigation strategies

References

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