

CONTENTS IN DETAIL

INTRODUCTION	XVI
About This Book	xvii
A Note on the Castle Theory Thought Exercises	xix
For Future Use	xx
A Ninja Primer	xx
The Historical Ninja	xx
The Ninja Scrolls	xxi
Ninja Philosophy	xxii
Ninja Techniques	xxiii
1	
MAPPING NETWORKS	1
<i>With these maps, the general can consider how to defend and attack a castle.</i>	
Understanding Network Maps	2
Collecting Intelligence Undetected	6
Creating Your Map	9
Recommended Security Controls and Mitigations	13
Debrief	13
2	
GUARDING WITH SPECIAL CARE	15
<i>Even castles with strong fortifications should be guarded, paying particular attention to the recessed corners.</i>	
Understanding Attack Vectors	16
The Concept of Guarding	17
Guarding Within a Cybersecurity Framework	17
Threat Modeling	18
Using Threat Modeling to Find Potential Attack Vectors	20
Recommended Security Controls and Mitigations	23
Debrief	24

3		
XENOPHOBIC SECURITY		25
<i>If you accept strangers without much thought, the enemy shinobi may come in disguised as a stranger and seek information from the inside.</i>		
Understanding Anti-Privilege		26
The Problem with Interoperability and Universal Standards		27
Developing Unique Characteristics for Your Environment		29
Do it yourself or seek commercial products		29
Recommended Security Controls and Mitigations		30
Debrief		31

4		
IDENTIFICATION CHALLENGE		33
<i>Though there are ancient ways for identifying marks, passwords, and certificates, unless you invent new ones and rotate them, the enemy will manage to infiltrate by having similar fake ones.</i>		
Understanding Authentication		35
Developing Matched-Pair Authenticators		37
Recommended Security Controls and Mitigations		38
Debrief		39

5		
DOUBLE-SEALED PASSWORD		41
<i>Sometimes, a set of signs such as pinching the nose or holding the ear should be used with these passwords.</i>		
A Concealed 2-Step Authentication		43
Developing Double-Sealed Passwords		44
Recommended Security Controls and Mitigations		46
Debrief		47

6		
HOURS OF INFILTRATION		49
<i>After waiting until the hour of Ox, the ninja realized that the guard had fallen asleep; everything was dead quiet, and the fire was out leaving all in darkness.</i>		
Understanding Time and Opportunities		50
Developing Time-Based Security Controls and Anomaly Detectors		51
Recommended Security Controls and Mitigations		54
Debrief		55

7		
ACCESS TO TIME		57
<i>You should start your attack with no delay and not prematurely but perfectly on time.</i>		
The Importance of Time.		58

Keeping Time Confidential	60
Determine Your Baseline	60
Assess Technical Capability	60
Establish Policy	60
Recommended Security Controls and Mitigations	61
Debrief	62

8 TOOLS 63

Remember, if you use a ninja tool, be sure to use it when the wind is whistling so as to hide any sound and always retrieve it.

Living Off the Land	65
Securing Tools	66
Recommended Security Controls and Mitigations	68
Debrief	69

9 SENSORS 71

Whether day or night, scouts for a far-distance observation should be sent out.

Identifying and Detecting Threats with Sensors	72
Better Sensors	73
Recommended Security Controls and Mitigations	76
Debrief	77

10 BRIDGES AND LADDERS 79

There will be no wall or moat that you cannot pass, no matter how high or steep it is, particularly if you use a ninja ladder.

Network Boundary Bridging	80
Countering Bridges	82
Recommended Security Controls and Mitigations	83
Debrief	83

11 LOCKS 85

There is no padlock that you cannot open. However, this all depends on how skilled you are; therefore, you should always get hands-on practice.

Physical Security	87
Improving Locks	88
Recommended Security Controls and Mitigations	89
Debrief	89

12
MOON ON THE WATER **91**

After making an agreement with your lord, you should lure the enemy out with bait to infiltrate their defenses.

Social Engineering 92
Defenses Against Social Engineering 94
Recommended Security Controls and Mitigations 96
Debrief 97

13
WORM AGENT **99**

Make a minomushi, or worm agent (aka insider threat), out of an enemy.

Insider Threats 101
A New Approach to Insider Threats 102
Recommended Security Controls and Mitigations 105
Debrief 106

14
GHOST ON THE MOON **107**

According to Japanese legend, if you knew how to seek the ghost who tends trees on the moon, he could invite you to the moon to eat the leaves of his tree, making you invisible.

Implants 108
Protections from Implants. 109
Recommended Security Controls and Mitigations 111
Debrief 112

15
THE ART OF THE FIREFLIES **113**

The art of fireflies should be performed only after you know everything about the enemy in great detail so that you can construct your deception in accordance with the target's mindset.

Attribution 114
Approaches to Handling Attribution 116
Recommended Security Controls and Mitigations 118
Debrief 119

16
LIVE CAPTURE **121**

Use good judgment to determine whether the target is actually inattentive or whether they are employing a ruse to lure ninjas and capture them.

Live Analysis 124
Confronting Live Threats 125

Recommended Security Controls and Mitigations	127
Debrief	129
17	
FIRE ATTACK	131
<i>First, it is easy to set fires; second, it is not easy for the enemy to put out the fire; and third, if your allies are coming to attack the castle at the same time, the enemy will lose any advantage as the fortifications will be understaffed.</i>	
Destructive Cyber Attacks	133
Safeguards from (Cyber) Fire Attacks	134
Recommended Security Controls and Mitigations	137
Debrief	138
18	
COVERT COMMUNICATION	139
<i>When a shinobi is going to communicate with the general after he has gotten into the enemy's castle, the shinobi needs to let his allies know where he is. It is essential to arrange for the time and place to do this.</i>	
Command and Control Communication	141
Controlling Coms	143
Recommended Security Controls and Mitigations	144
Debrief	146
19	
CALL SIGNS	147
<i>When you steal in, the first thing you should do is mark the route, showing allies the exit and how to escape.</i>	
Operator Tradecraft	148
Detecting the Presence of Call Signs	149
Recommended Security Controls and Mitigations	150
Debrief	151
20	
LIGHT, NOISE, AND LITTER DISCIPLINE	153
<i>The traditions of the ancient shinobi say you should lock the doors before you have a look at the enemy with fire.</i>	
Cyber Light, Noise, and Litter	155
Detection Discipline	156
Recommended Security Controls and Mitigations	158
Debrief	158

21
CIRCUMSTANCES OF INFILTRATION **159**

You should infiltrate at the exact moment that the enemy moves and not try when they do not move—this is a way of principled people.

Adversarial Opportunity 161
Adversarial Adversity 162
Recommended Security Controls and Mitigations 163
Debrief 163

22
ZERO-DAYS **165**

A secret will work if it is kept; you will lose if words are given away.

Zero-Day 168
Zero-Day Defense 169
Recommended Security Controls and Mitigations 172
Debrief 174

23
HIRING SHINOBI **175**

In order to defend against enemy plans or shinobi, or should an emergency arise, you may think it more desirable to have a large number of people. However, you should not hire more people into your army without careful consideration.

Cybersecurity Talent 177
Talent Management 179
Recommended Security Controls and Mitigations 181
Debrief 182

24
GUARDHOUSE BEHAVIOR **185**

Do not let your guard down, even if you are not confronting the enemy.

Security Operations Center Issues and Expectations 187
Influencing Behavior 188
Recommended Security Controls and Mitigations 191
Debrief 192

25
ZERO-TRUST THREAT MANAGEMENT **195**

If you enter a room from the rear and if there is someone in the room who is not asleep, then they will not suspect you as an intruder. It is because those who come from the rear are not considered possible thieves or assailants.

Threat Opportunity 196
Blocking the Suspicious 198
Recommended Security Controls and Mitigations 200
Debrief 200

26		
SHINOBI TRADECRAFT		201
<i>Secret techniques to infiltrate without fail are deceptive, and they are varied and flexible and are done according to opportunity. Thus, as a basis, you should embrace the old ways of the shinobi who served under ancient great generals, but remember not only to keep to these ways but to adapt them, each dependent on the situation and the moment.</i>		
Techniques, Tactics, and Procedures		204
Pyramid of Pain.		205
ATT&CK Framework.		206
Threat Intelligence		206
Cyber Threat Intelligence		208
Recommended Security Controls and Mitigations		210
Debrief		211
NOTES		213
INDEX		223