Payment Card Industry Small Merchant Task Force

PAYMENT PROTECTION RESOURCES FOR SMALL MERCHANTS

Common Payment Systems

Version 1.0 | July 2016

PCI Security Standards Council®

Payment System Types and How to Secure Them

PAYMENT SYSTEM TYPES

To protect your business against payment data theft, you first have to understand how you take payments in your store or shop. What kind of equipment do you use, who are your bank and technology vendor partners, and how do these things all fit together?

Use these real-life visuals to identify what type of payment system you use, the kinds of risks associated with your system, and the security steps you can take to protect it.

Payment system types at-a-glance

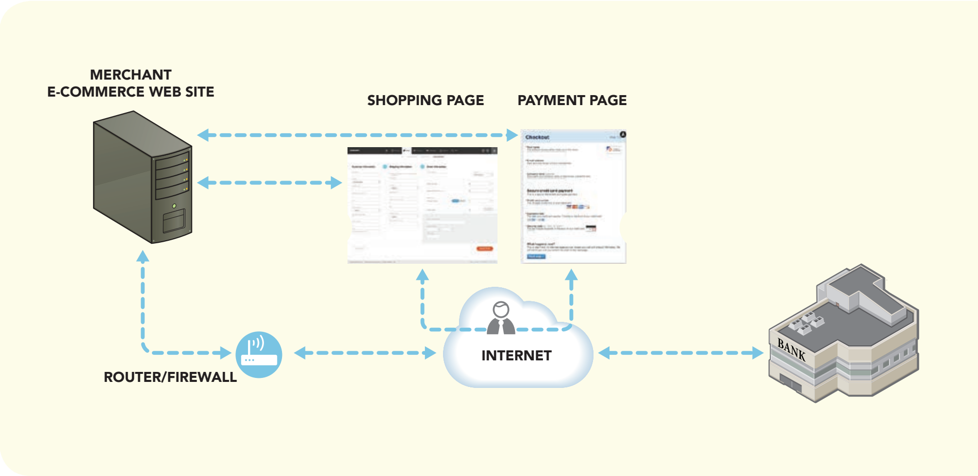
Type	Payment System Description
1	Dial-up payment terminal. Payments sent via phone line.
2	Dial-up payment terminal and Internet-connected electronic cash register. Payments sent via phone line.
3	Payment terminal connected to electronic cash register. Payments sent via Internet by electronic cash register.
4	Encrypting payment terminal connected to electronic cash register. Payment sent via Internet by electronic cash register.
5	Encrypting payment terminal and electronic cash register connected to Internet. Payments sent via Internet.
6	Encrypting payment terminal and electronic cash register share non-card data (semi-integrated). Payments sent via Internet by payment terminal.
7	Integrated payment terminal and payment middleware share card data. Payments send via Internet.
8	Encrypting wireless payment terminal (“Pay-at-Table”) with integrated payment terminal and “middleware.” Payments sent via Internet.
9	Payment terminal connected to electronic cash register, with additional connected equipment. Payments sent via Internet.
10	E-commerce merchant with fully outsourced payment page. Payments sent via Internet by third-party provider.
11	E-commerce merchant accepts payments on own payment page and manages own website. Payments sent via Internet by merchant.
12	Encrypting secure card reader and mobile payment terminal. Payments sent via cellular network only.
13	Encrypting secure card reader and mobile payment terminal. Payments sent via cellular network or Wi-Fi.
14	Virtual payment terminal accessed via merchant Internet browser. Payments sent via Internet.

PCi Security Standards Council®

How do you use this resource?

IDENTIFY WHICH VISUAL MOST CLOSELY REPRESENTS YOUR PAYMENT SYSTEM:

- This guide, intended to supplement the *Guide to Safe Payment*, shows several common payment system diagrams, starting with the most simple up to very complex.
- Each payment system diagram includes four views:
  1) Overview
  2) Risks - where card data is exposed
  3) Threats - how criminals can get card data
  4) Protections - recommended ways to protect card data.
- Flip through to find the one you recognize as yours.



UNDERSTAND YOUR RISKS AND THREATS:

- Once you find the payment system views that most closely matches yours, review the next two diagrams to see where card data is at risk for your business, and the ways your business is vulnerable to attack.

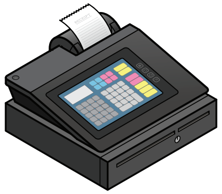
PROTECT CARD DATA AND YOUR BUSINESS WITH SECURITY BASICS:

- Lastly, review the fourth view for your payment system type that includes basic security recommendations to help you protect your business.
- This view includes links to the recommendations in the areas in the *Guide to Safe Payments* to help you in this process.
- See also *Questions to Ask Your Vendors* and the *Glossary of Payment and Information Security Terms*.

What do these terms mean?

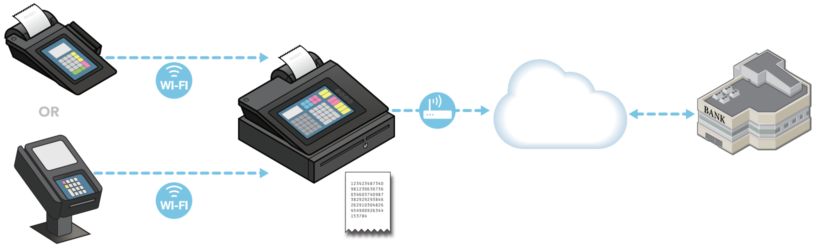
Depending on where in the world you are located, equipment used to take payments is called by different names. Here are the types we reference in this document and what they are commonly called.

A **PAYMENT TERMINAL** is the device used to take customer card payments via swipe, dip, insert, tap, or manual entry of the card number. Point-of-sale (or POS) terminal, credit card machine, PDQ terminal, or EMV/chip-enabled terminal are also names used to describe these devices.



An **ELECTRONIC CASH REGISTER** (or till) registers and calculates transactions, and may print out receipts, but it does not accept customer card payments.

An **INTEGRATED PAYMENT TERMINAL** is a payment terminal and electronic cash register in one, meaning it takes payments, registers and calculates transactions, and prints receipts.



A **PAYMENT SYSTEM** encompasses the entire process for accepting card payments in a retail location (including stores/shops and e-commerce storefronts), and may include a payment terminal, an electronic cash register, other devices or systems connected to a payment terminal (for example, Wi-Fi for connectivity or a PC used for inventory), servers with e-commerce components such as payment pages, and the connections out to a merchant bank.

A **MERCHANT BANK** is a bank or financial institution that processes credit and/or debit card payments on behalf of merchants. Acquirer, acquiring bank, and card or payment processor are also terms for this entity.

TYPE
1

Dial-up payment terminal. Payments sent via phone line.

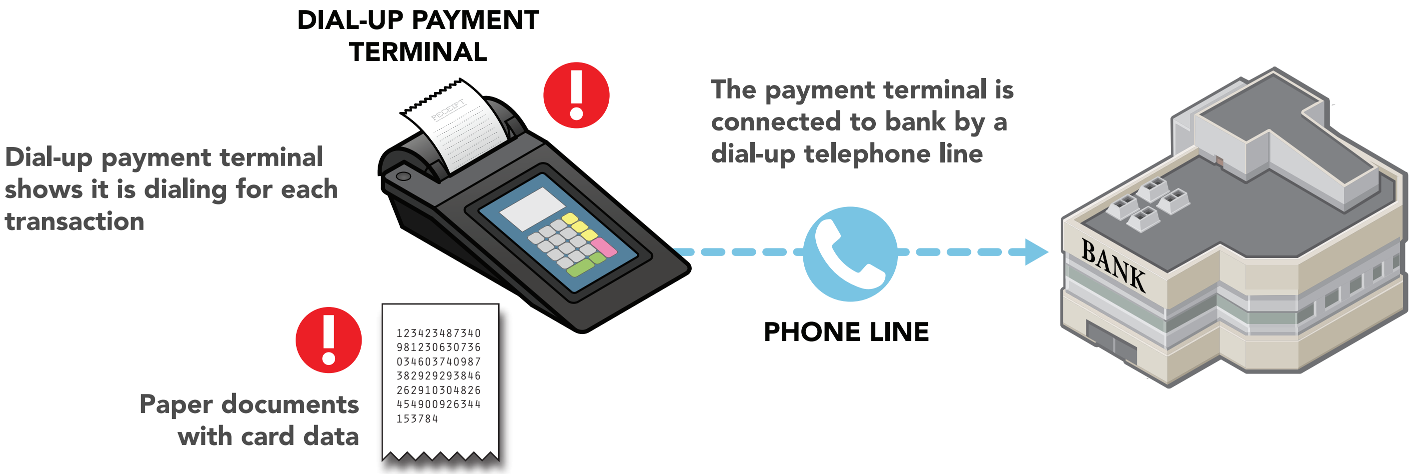
RISK PROFILE

Chip	Mag Stripe
LOWER	LOWER

TYPE 1 OVERVIEW | TYPE 1 RISKS | TYPE 1 THREATS | TYPE 1 PROTECTIONS

YES
This IS my setup.
Show me the details.

NO
This IS NOT my setup.
Show me the next setup.



DIAL-UP PAYMENT TERMINAL

Dial-up payment terminal shows it is dialing for each transaction

The payment terminal is connected to bank by a dial-up telephone line

PHONE LINE

Paper documents with card data

For this scenario, risks to card data are present at ❗ above. Risks explained on next page.

PCI Security Standards Council®

Payment Protection Resources for Small Merchants: Common Payment Systems

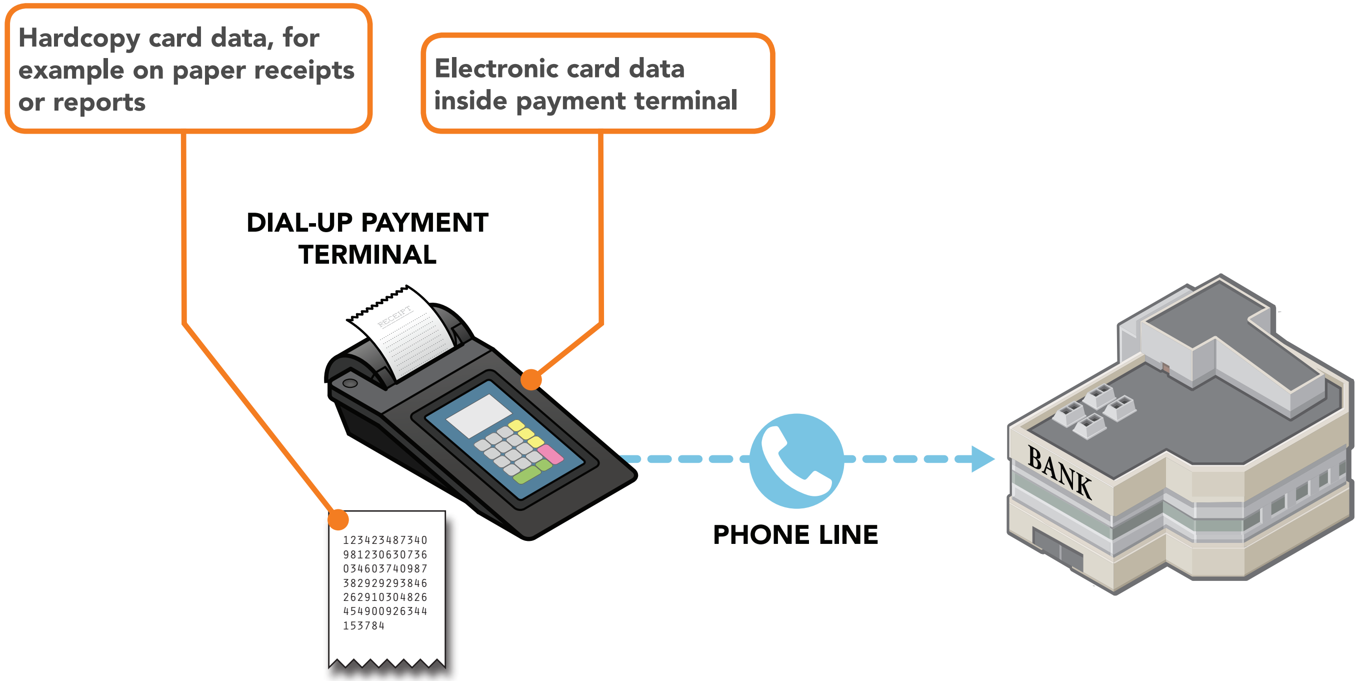
TYPE 1

Dial-up payment terminal. Payments sent via phone line.

RISK PROFILE

Chip	Mag Stripe
LOWER	LOWER

Where is your card data at risk?


Hardcopy card data, for example on paper receipts or reports

Electronic card data inside payment terminal

PCI Security Standards Council®

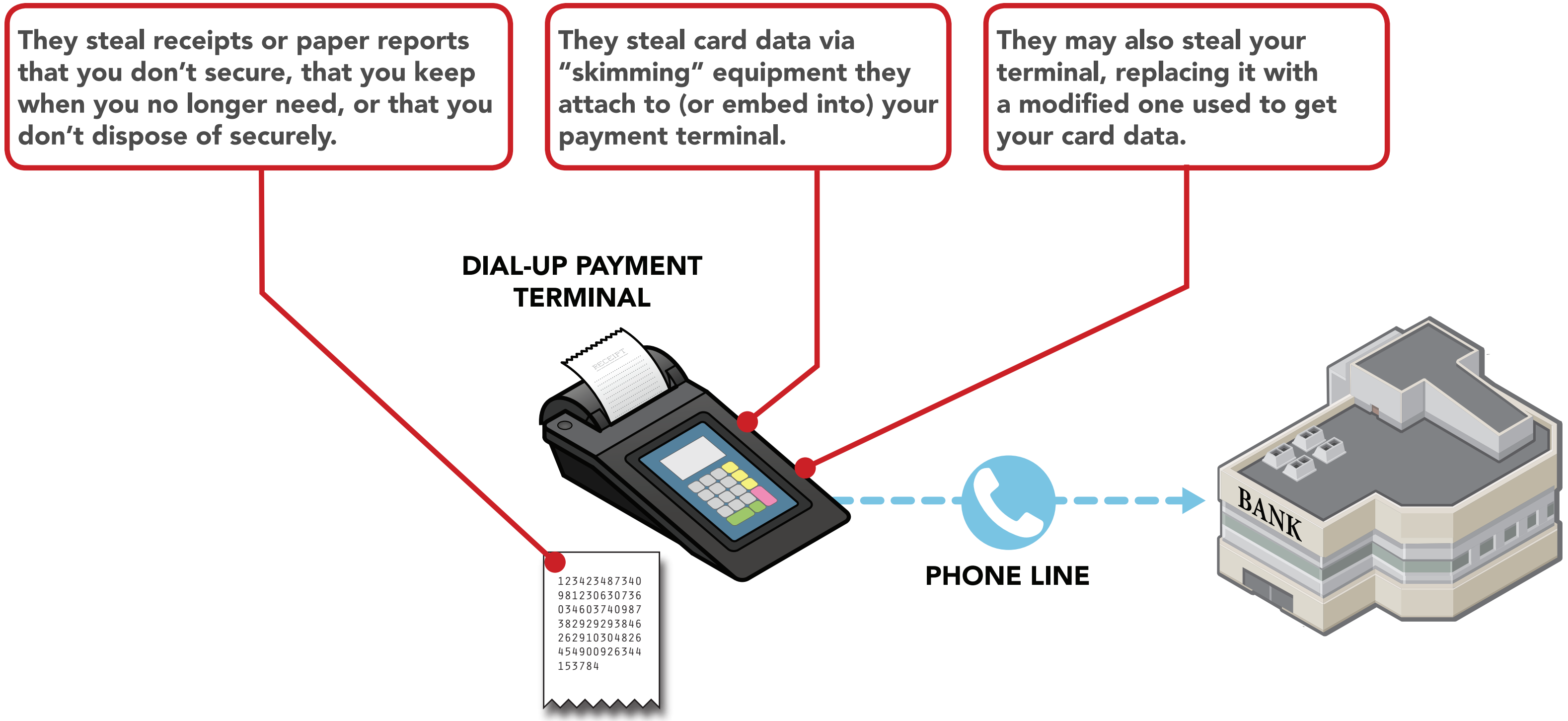
TYPE 1

Dial-up payment terminal. Payments sent via phone line.

RISK PROFILE

Chip	Mag Stripe
LOWER	LOWER

How do criminals get your card data?



They steal receipts or paper reports that you don't secure, that you keep when you no longer need, or that you don't dispose of securely.

They steal card data via "skimming" equipment they attach to (or embed into) your payment terminal.

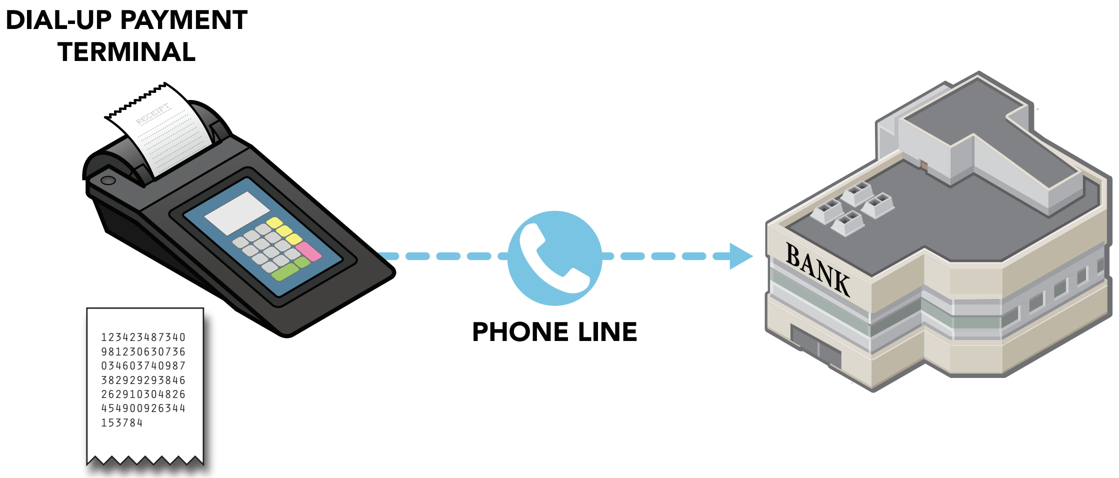
They may also steal your terminal, replacing it with a modified one used to get your card data.

TYPE 1 Dial-up payment terminal. Payments sent via phone line.

RISK PROFILE	
Chip	Mag Stripe
LOWER	LOWER

How do you start to protect card data today?*

- Protect card data and only keep what you need
- Inspect your payment terminals for damage or changes
- Ask your vendor partners for help if you need it



*Click on the icons above for the Guide to Safe Payments and information about these security basics.

TYPE 2

Dial-up payment terminal and Internet-connected electronic cash register. Payments sent via phone line.

RISK PROFILE

Chip: LOWER

Mag Stripe: LOWER

TYPE 2 OVERVIEW | TYPE 2 RISKS | TYPE 2 THREATS | TYPE 2 PROTECTIONS

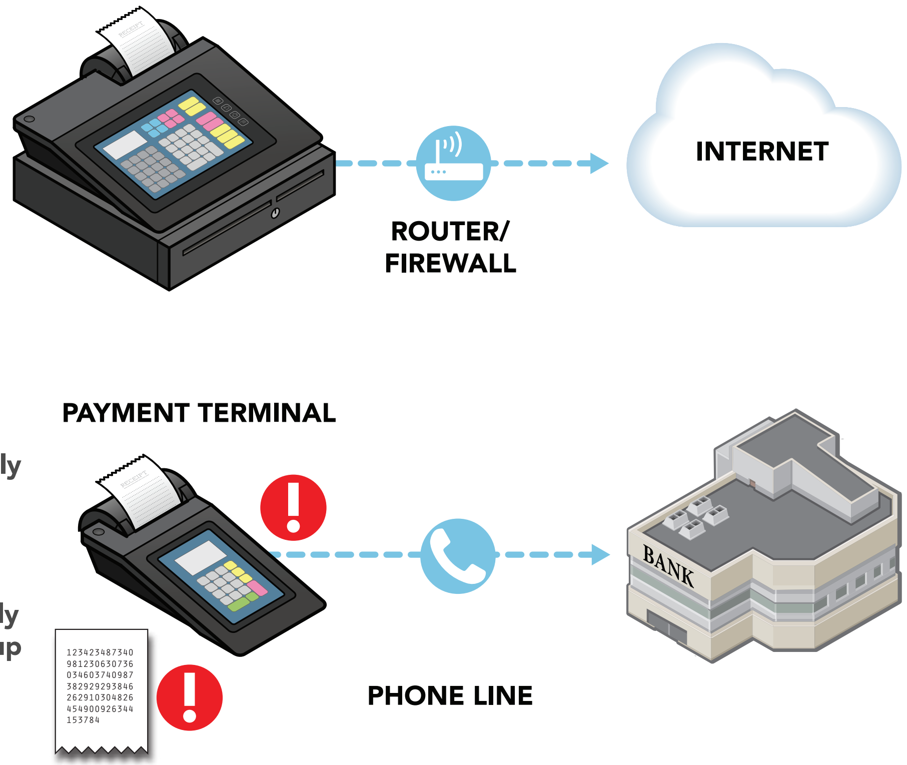
YES
This IS my setup.
Show me the details.

NO
This IS NOT my setup.
Show me the next setup.

BACK
to previous diagram.

ELECTRONIC CASH REGISTER

Electronic cash register connected to the Internet, but no card payments taken here



ROUTER/
FIREWALL

INTERNET

PAYMENT TERMINAL

Total sale amount is manually entered in the payment terminal

The payment terminal is only connected to bank by dial-up telephone line

PHONE LINE

Paper documents
with card data

For this scenario, risks to card data are present at ❗ above. Risks explained on next page.

PCI Security Standards Council ®

TYPE 2

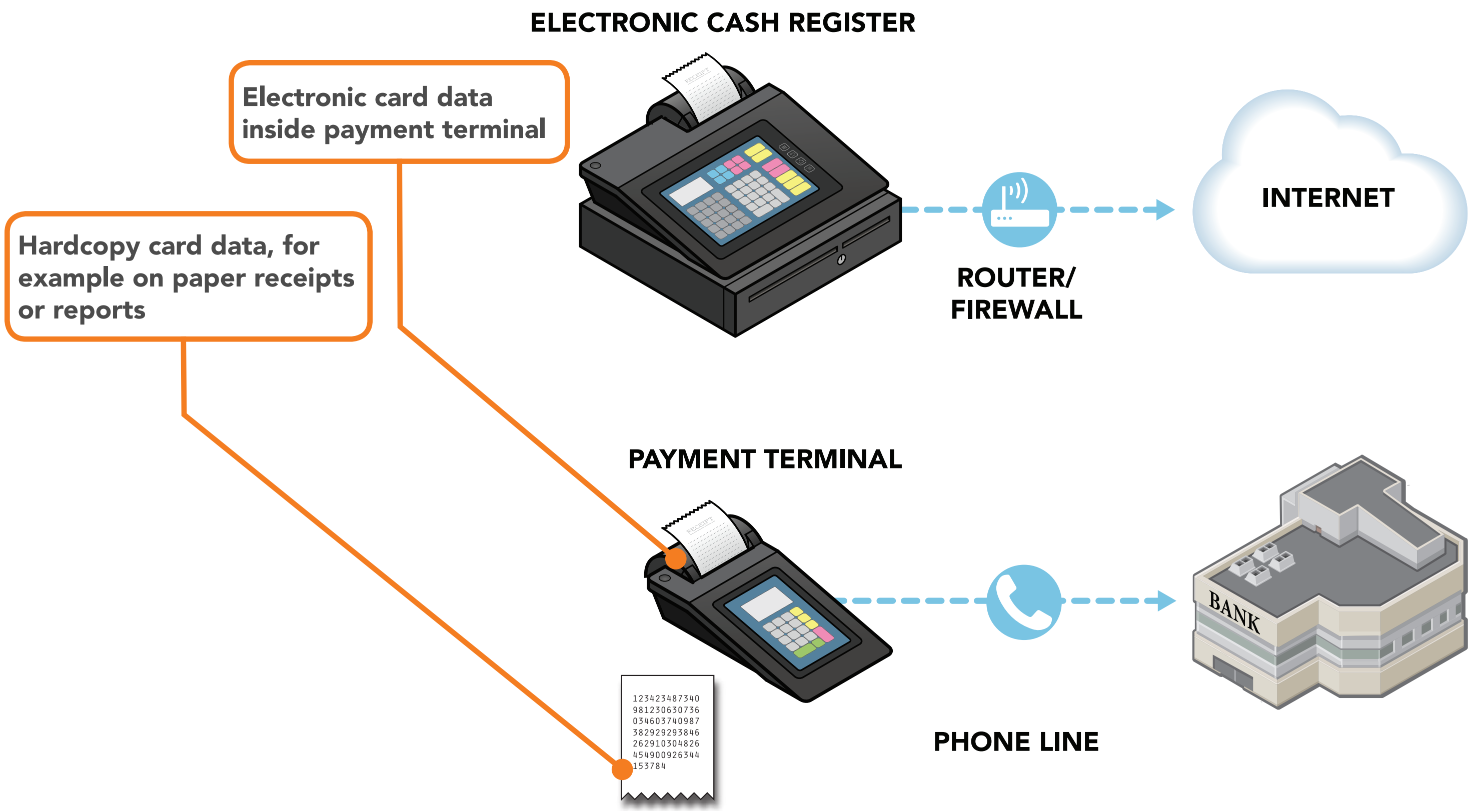
Dial-up payment terminal and Internet-connected electronic cash register. Payments sent via phone line.

RISK PROFILE

Chip	Mag Stripe
LOWER	LOWER

TYPE 2 OVERVIEW | TYPE 2 RISKS | TYPE 2 THREATS | TYPE 2 PROTECTIONS

Where is your card data at risk?



ELECTRONIC CASH REGISTER

Electronic card data inside payment terminal

Hardcopy card data, for example on paper receipts or reports

ROUTER/ FIREWALL

INTERNET

PAYMENT TERMINAL

PHONE LINE

PCI Security Standards Council®

TYPE 2

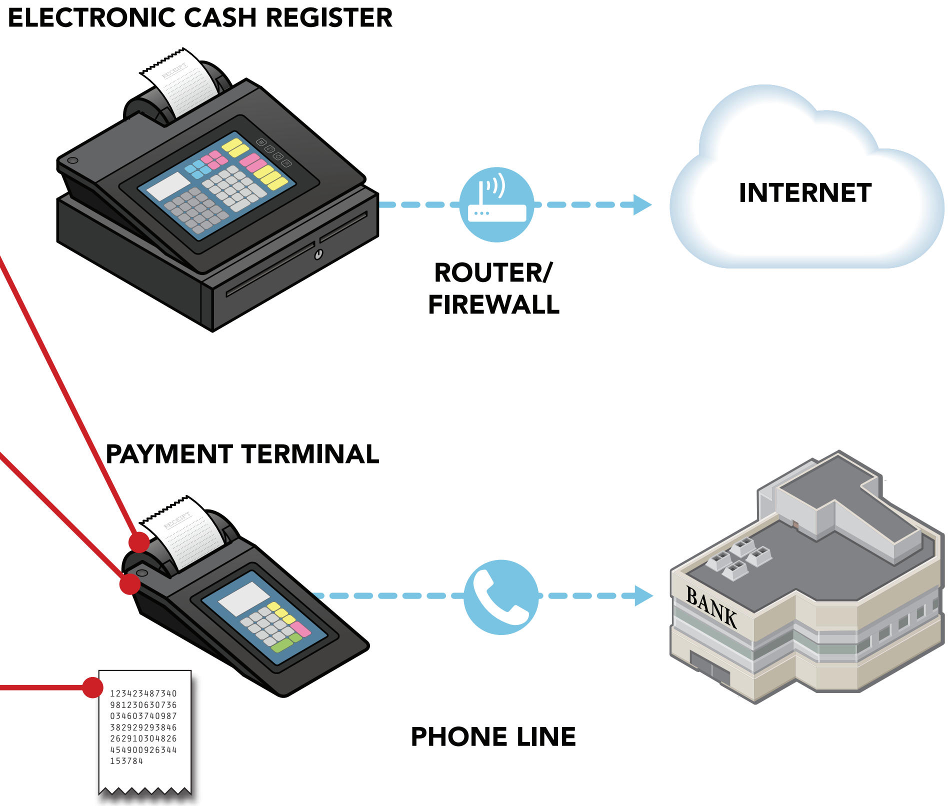
Dial-up payment terminal and Internet-connected electronic cash register. Payments sent via phone line.

RISK PROFILE

Chip: LOWER

Mag Stripe: LOWER

How do criminals get your card data?



They steal card data via "skimming" equipment they attach to (or embed into) your payment terminal.

They may also steal your terminal, replacing it with a modified one used to get your card data.

They steal receipts or paper reports that you don't secure, that you keep when you no longer need, or that you don't dispose of securely.

PCI Security Standards Council®

TYPE 2

Dial-up payment terminal and Internet-connected electronic cash register. Payments sent via phone line.

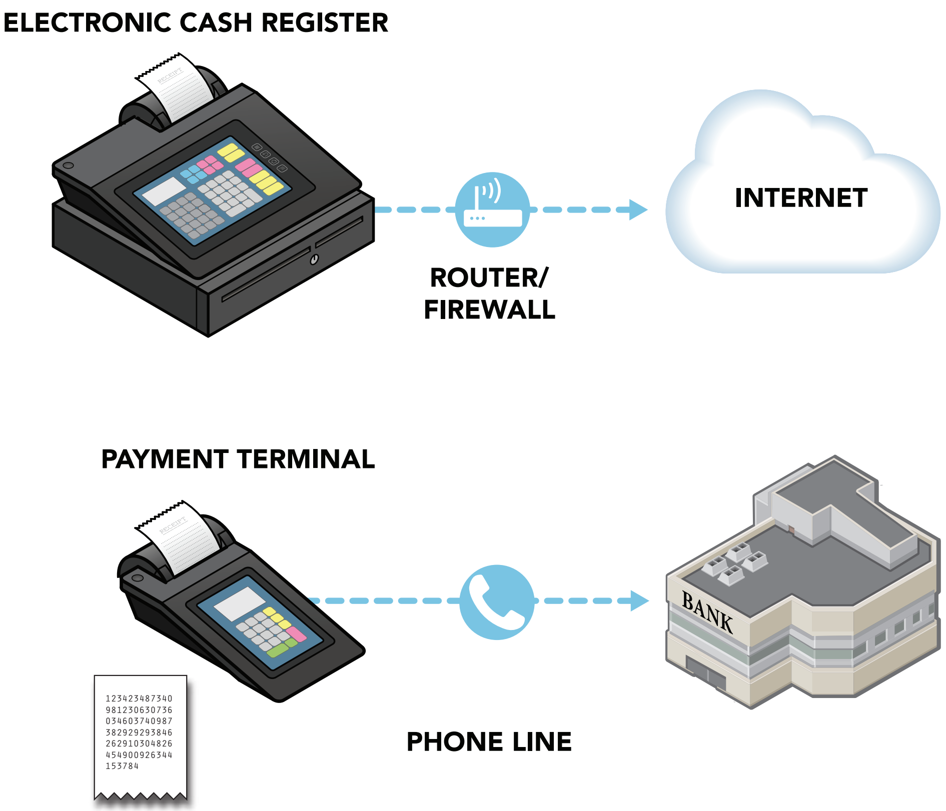
RISK PROFILE

Chip	Mag Stripe
LOWER	LOWER

TYPE 2 OVERVIEW | TYPE 2 RISKS | TYPE 2 THREATS | **TYPE 2 PROTECTIONS**

How do you start to protect card data today?*

- Protect your card data and only keep what you need
- Inspect your payment terminals for damage or changes
- Ask your vendor partners for help if you need it



ELECTRONIC CASH REGISTER

ROUTER/ FIREWALL

INTERNET

PAYMENT TERMINAL

PHONE LINE

*Click on the icons above for the Guide to Safe Payments and information about these security basics.

PCI Security Standards Council®

TYPE 3

Payment terminal connected to electronic cash register. Payments sent via Internet by electronic cash register.

RISK PROFILE

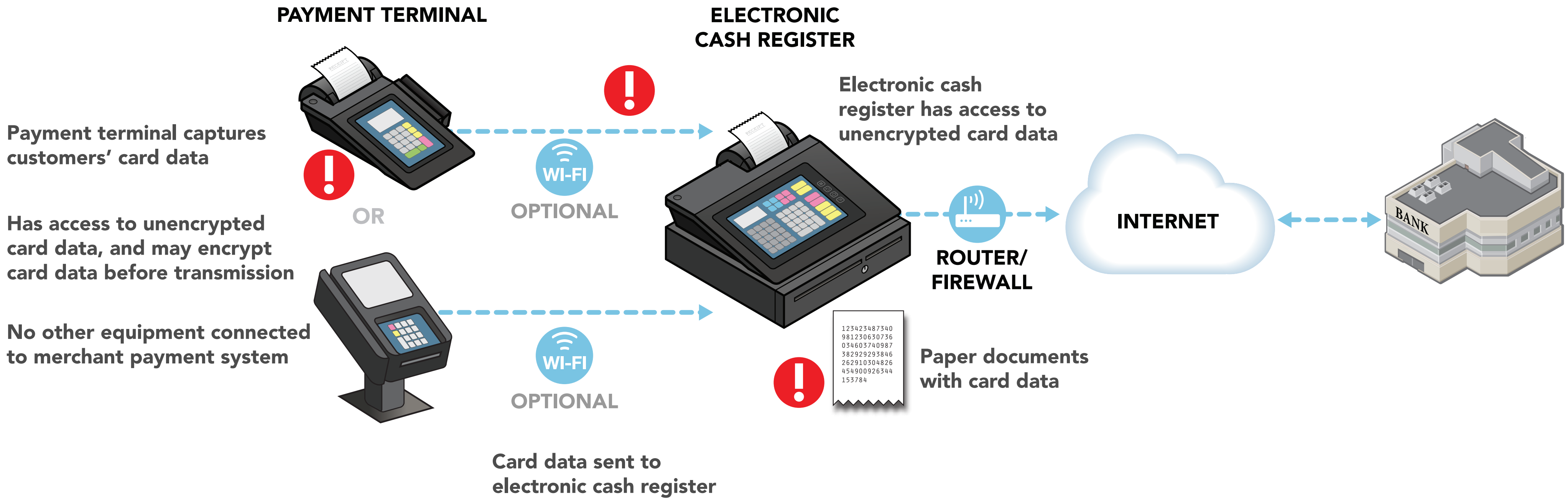
Chip	Mag Stripe
MODERATE	HIGHER

TYPE 3 OVERVIEW | TYPE 3 RISKS | TYPE 3 THREATS | TYPE 3 PROTECTIONS

YES
This IS my setup.
Show me the details.

NO
This IS NOT my setup.
Show me the next setup.

BACK
to previous diagram.



PAYMENT TERMINAL

Payment terminal captures customers' card data

Has access to unencrypted card data, and may encrypt card data before transmission

No other equipment connected to merchant payment system

OR

WI-FI
OPTIONAL

WI-FI
OPTIONAL

Card data sent to electronic cash register

ELECTRONIC CASH REGISTER

Electronic cash register has access to unencrypted card data

Paper documents with card data

ROUTER/ FIREWALL

INTERNET

For this scenario, risks to card data are present at ❗ above. Risks explained on next page.

Security Standards Council

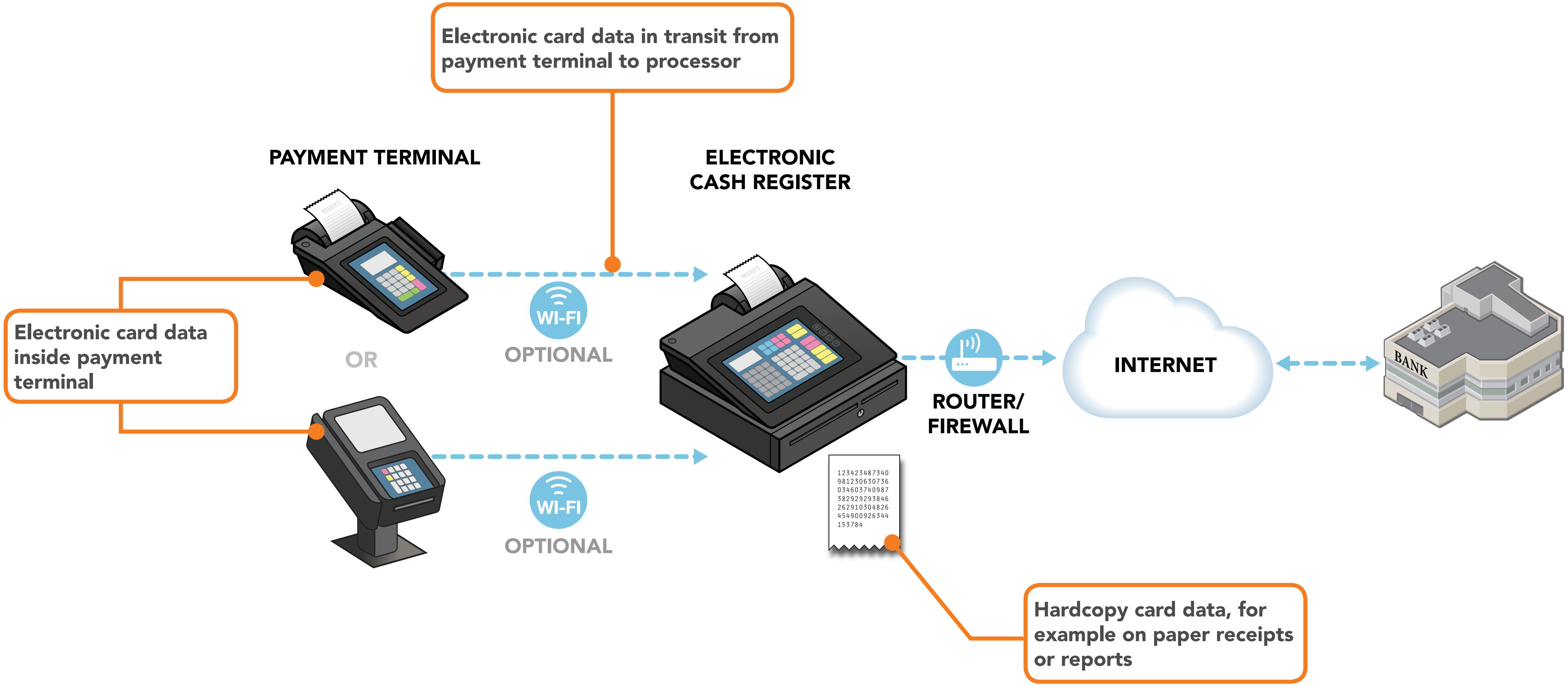
TYPE 3

Payment terminal connected to electronic cash register. Payments sent via Internet by electronic cash register.

RISK PROFILE

Chip	Mag Stripe
MODERATE	HIGHER

Where is your card data at risk?



Electronic card data in transit from payment terminal to processor

Electronic card data inside payment terminal

Hardcopy card data, for example on paper receipts or reports

PCI Security Standards Council®

TYPE 3

Payment terminal connected to electronic cash register. Payments sent via Internet by electronic cash register.

RISK PROFILE

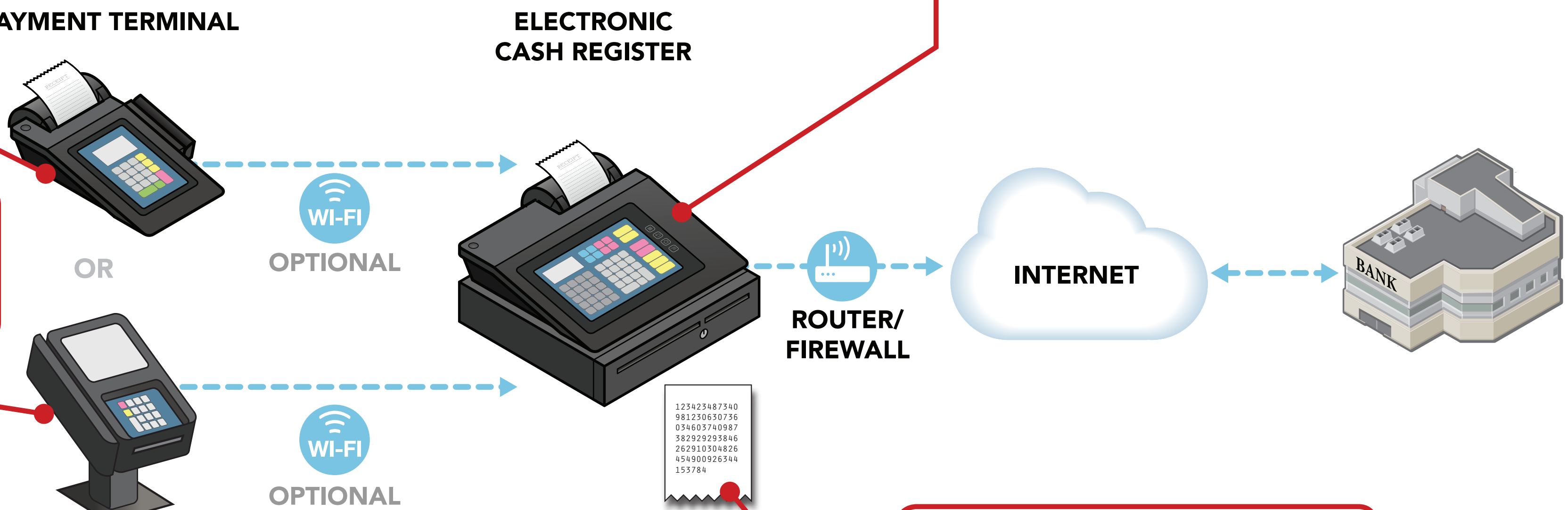
Chip: MODERATE

Mag Stripe: HIGHER

How do criminals get your card data?

They steal card data via "skimming" equipment they attach to (or embed into) your payment terminal.

They insert "malware"(software) onto a payment system that enables them to steal card data.



They may also steal your terminal, replacing it with a modified one used to get your card data.

They steal receipts or paper reports that you don't secure, that you keep when you no longer need, or that you don't dispose of securely.

TYPE 3

Payment terminal connected to electronic cash register. Payments sent via Internet by electronic cash register.

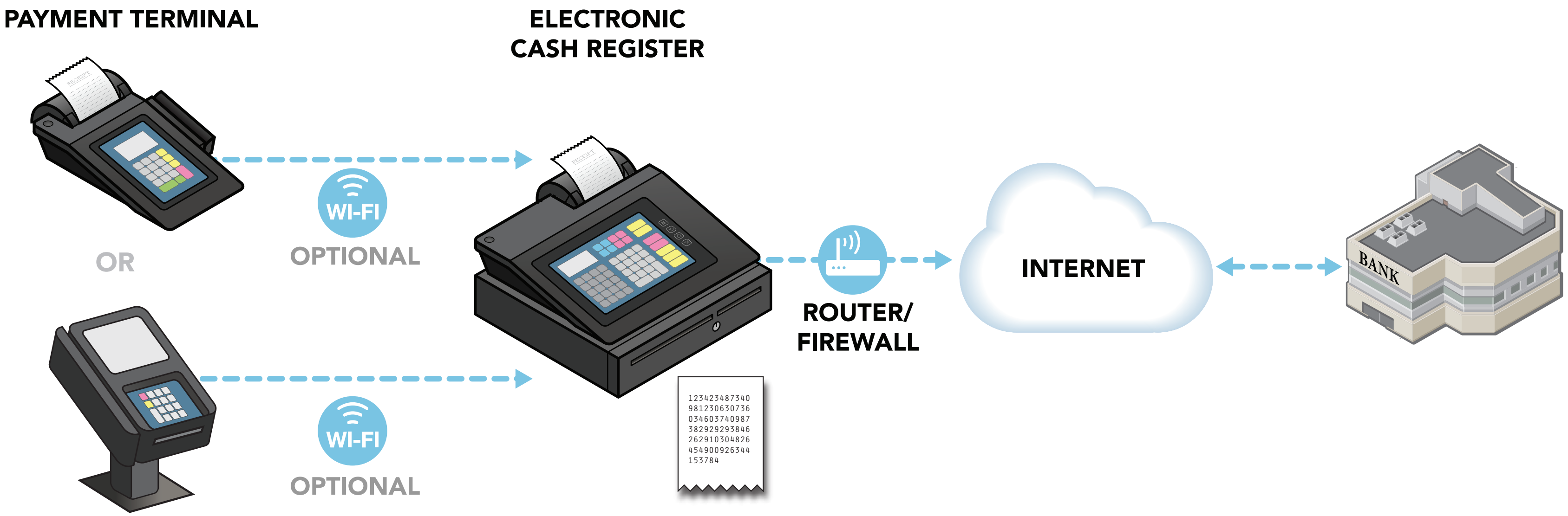
RISK PROFILE

Chip: MODERATE

Mag Stripe: HIGHER

How do you start to protect card data today?*

- Use strong passwords
- Ask your vendor partners for help if you need it
- Protect your business from the Internet
- Protect card data and only keep what you need
- Limit in-house access to your card data
- Make your card data useless to criminals
- Inspect your payment terminals for damage or changes
- Get regular vulnerability scanning
- Install patches from your payment terminal vendor
- Use a secure payment terminal



PAYMENT TERMINAL

OR

WI-FI OPTIONAL

WI-FI OPTIONAL

ELECTRONIC CASH REGISTER

ROUTER/ FIREWALL

INTERNET

*Click on the icons above for the Guide to Safe Payments and information about these security basics.

PCI Security Standards Council®

TYPE 4

Encrypting payment terminal connected to electronic cash register. Payments sent via Internet by electronic cash register.

RISK PROFILE

Chip	Mag Stripe
LOWER	MODERATE

TYPE 4 OVERVIEW | TYPE 4 RISKS | TYPE 4 THREATS | TYPE 4 PROTECTIONS

YES
This IS my setup.
Show me the details.

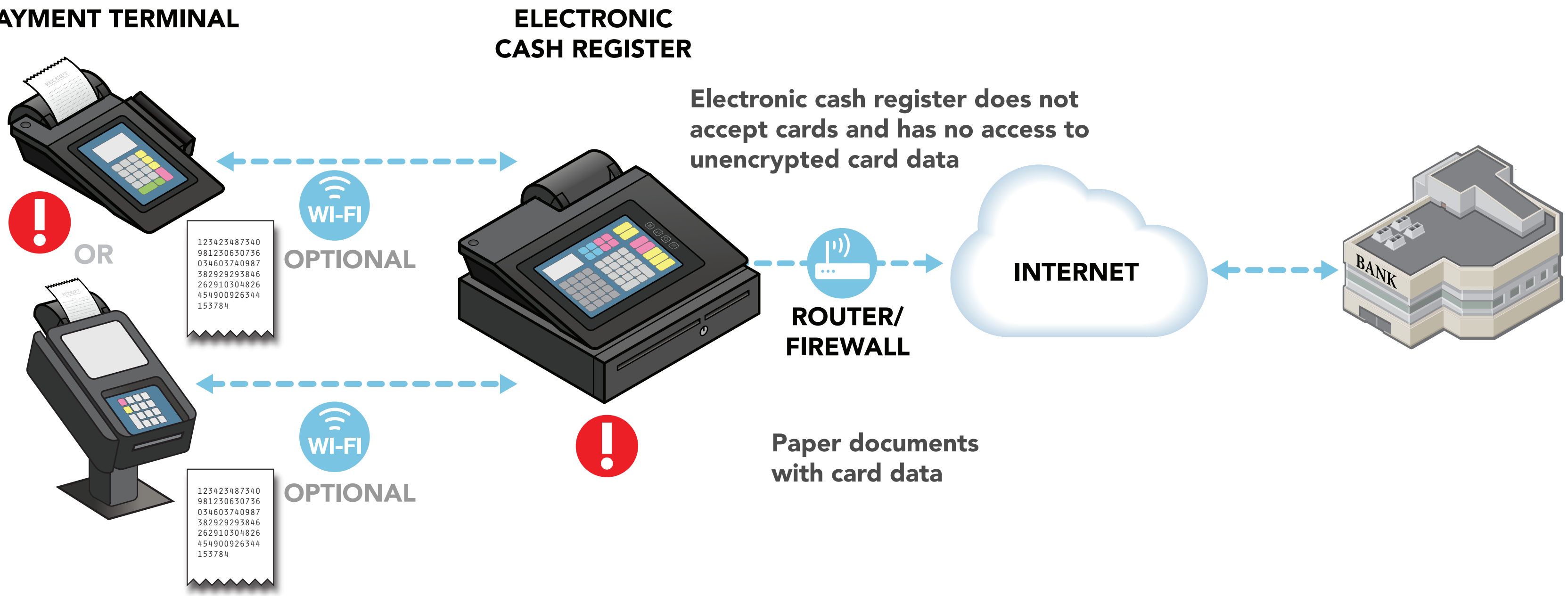
NO
This IS NOT my setup.
Show me the next setup.

BACK
to previous diagram.

Payment terminal encrypts card data (for example, using PCI's Secure Reading & Exchange of Data – SRED)

Merchant has no access to unencrypted data

No other equipment connected to merchant payment systems



Electronic cash register does not accept cards and has no access to unencrypted card data

Paper documents with card data

Encrypted data sent to electronic cash register

For this scenario, risks to card data are present at ❗ above. Risks explained on next page.

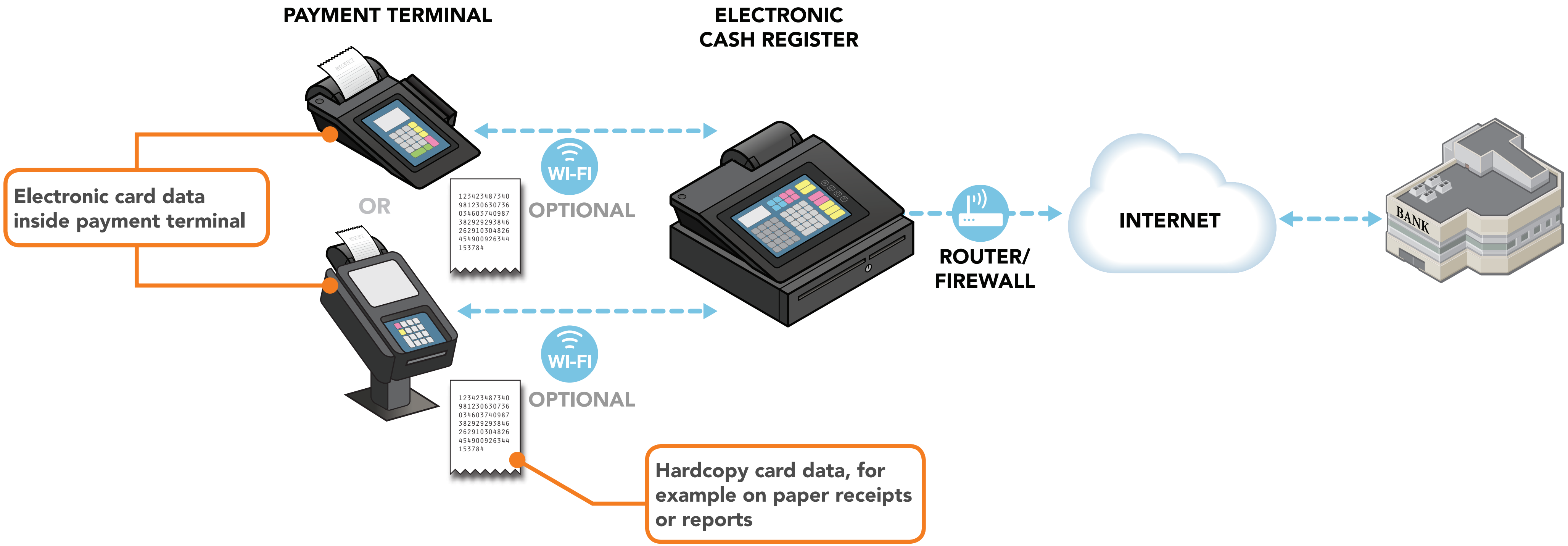
TYPE 4

Encrypting payment terminal connected to electronic cash register. Payments sent via Internet by electronic cash register.

RISK PROFILE

Chip	Mag Stripe
LOWER	MODERATE

Where is your card data at risk?



Electronic card data inside payment terminal

Hardcopy card data, for example on paper receipts or reports

TYPE 4

Encrypting payment terminal connected to electronic cash register. Payments sent via Internet by electronic cash register.

RISK PROFILE

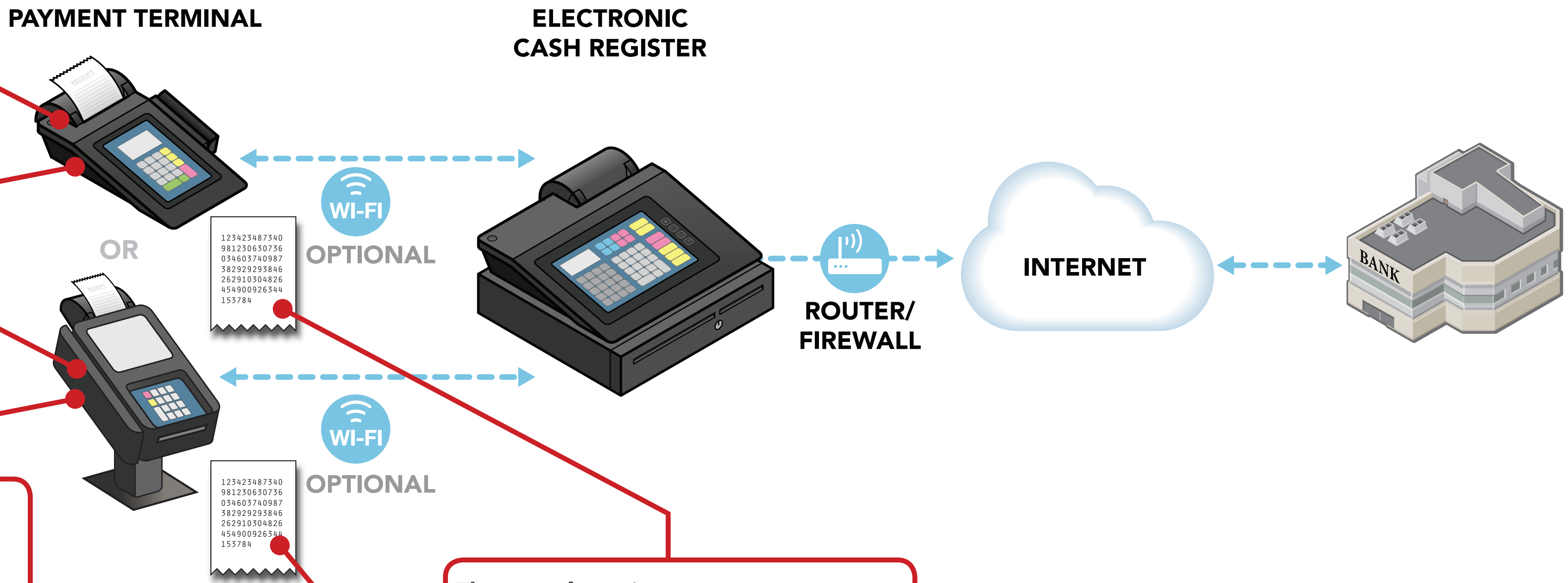
Chip: LOWER

Mag Stripe: MODERATE

TYPE 4 OVERVIEW | TYPE 4 RISKS | **TYPE 4 THREATS** | TYPE 4 PROTECTIONS

How do criminals get your card data?

They steal card data via "skimming" equipment they attach to (or embed into) your payment terminal.



They may also steal your terminal, replacing it with a modified one used to get your card data.

They steal receipts or paper reports that you don't secure, that you keep when you no longer need, or that you don't dispose of securely.

TYPE 4

Encrypting payment terminal connected to electronic cash register. Payments sent via Internet by electronic cash register.

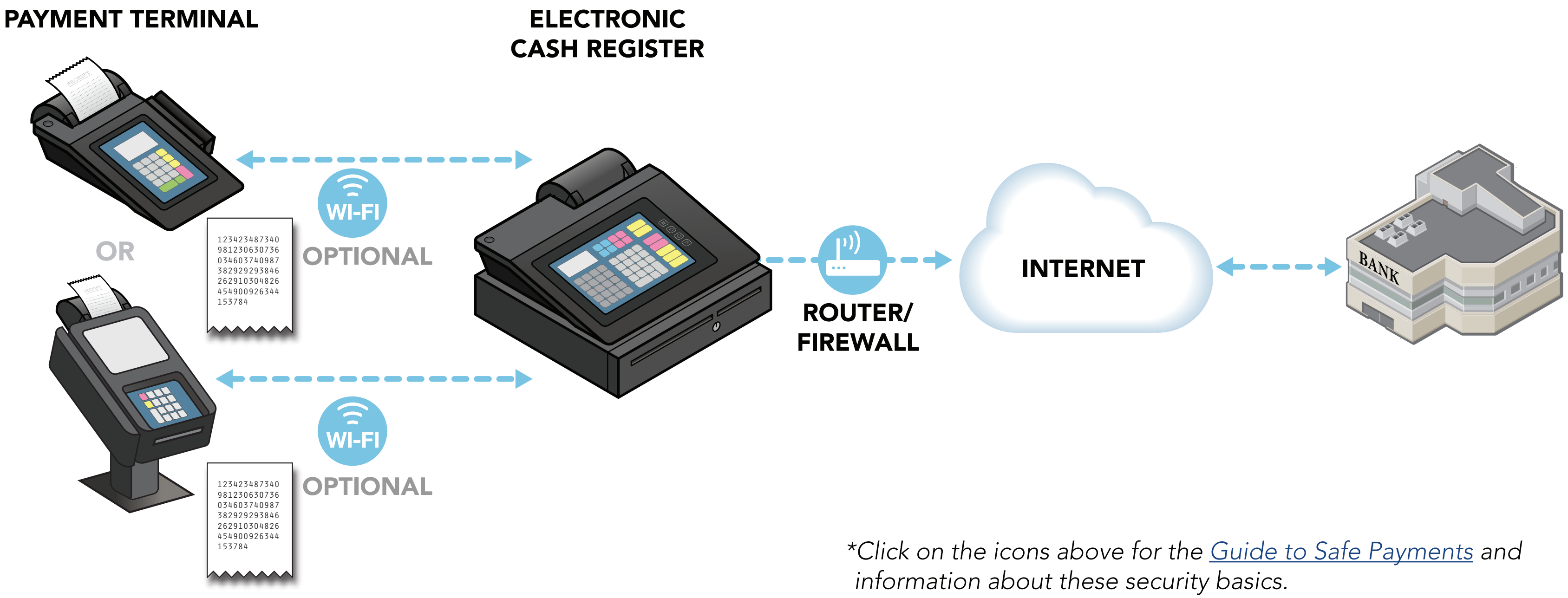
RISK PROFILE

Chip: LOWER

Mag Stripe: MODERATE

How do you start to protect card data today?*

- Use strong passwords
- Ask your vendor partners for help if you need it
- Use a secure payment terminal
- Protect card data and only keep what you need
- Protect in-house access to your card data
- Protect your business from the Internet
- Inspect your payment terminals for damage or changes
- Limit remote access for your vendor partners - don't give hackers easy access
- Install patches from your payment terminal vendor
- Get regular vulnerability scanning



*Click on the icons above for the Guide to Safe Payments and information about these security basics.

TYPE 5

Encrypting payment terminal and electronic cash register connected to the Internet. Payments sent via Internet by payment terminal.

RISK PROFILE

Chip	Mag Stripe
LOWER	LOWER

TYPE 5 OVERVIEW | TYPE 5 RISKS | TYPE 5 THREATS | TYPE 5 PROTECTIONS

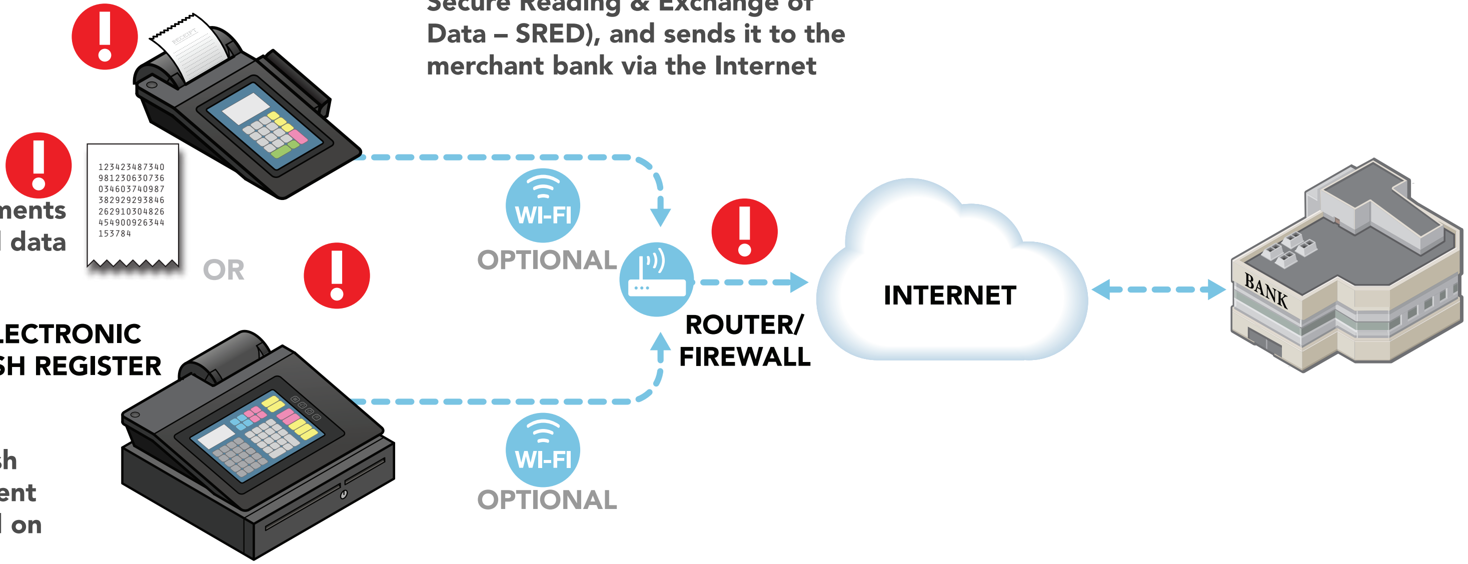
YES
This IS my setup.
Show me the details.

NO
This IS NOT my setup.
Show me the next setup.

BACK
to previous diagram.

Merchant has no access to unencrypted data (in electronic form)

No other equipment connected to merchant payment systems



Paper documents with card data

Payment terminal encrypts card data (for example, using PCI's Secure Reading & Exchange of Data – SRED), and sends it to the merchant bank via the Internet

Total sale amount from electronic cash register is manually entered in payment terminal; no card payments accepted on electronic cash register

For this scenario, risks to card data are present at ❗ *above. Risks explained on next page.*

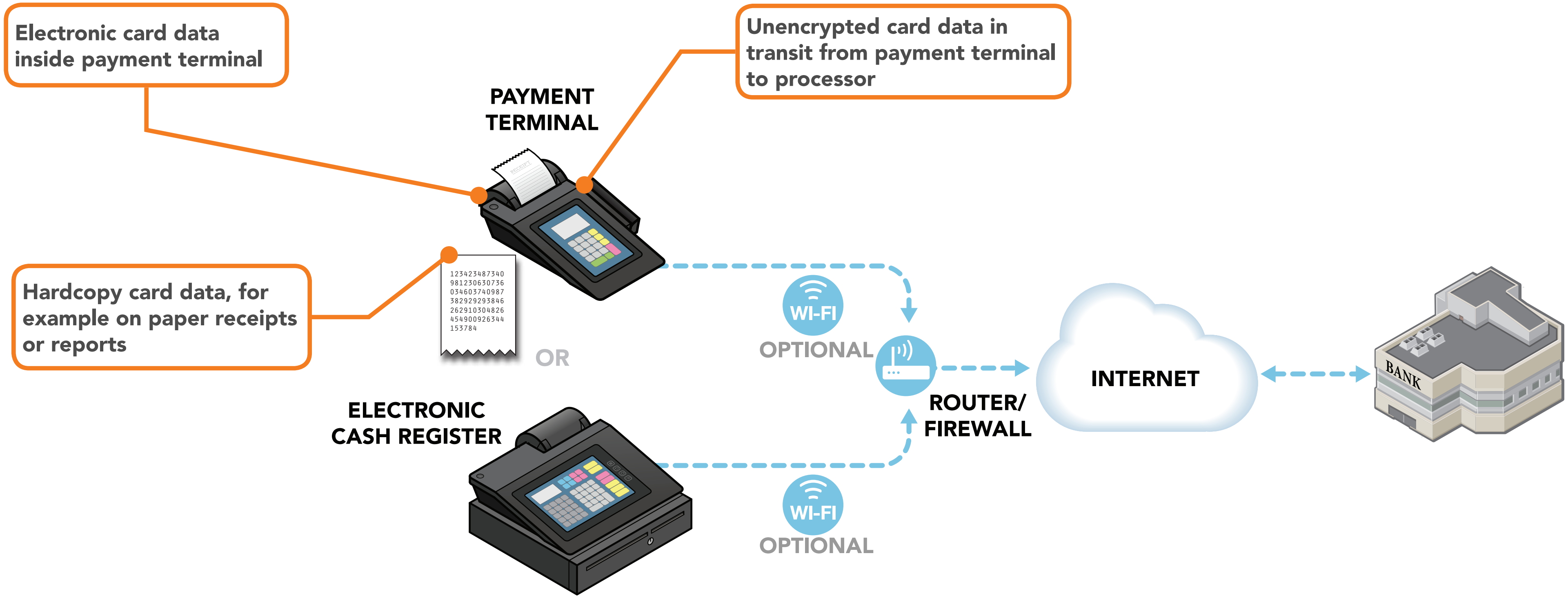
PCI Security Standards Council®

Encrypting payment terminal and electronic cash register connected to the Internet. Payments sent via Internet by payment terminal.

RISK PROFILE

Chip	Mag Stripe
LOWER	LOWER

Where is your card data at risk?



Electronic card data inside payment terminal

Unencrypted card data in transit from payment terminal to processor

Hardcopy card data, for example on paper receipts or reports

TYPE 5

Encrypting payment terminal and electronic cash register connected to the Internet. Payments sent via Internet by payment terminal.

RISK PROFILE

Chip: LOWER

Mag Stripe: LOWER

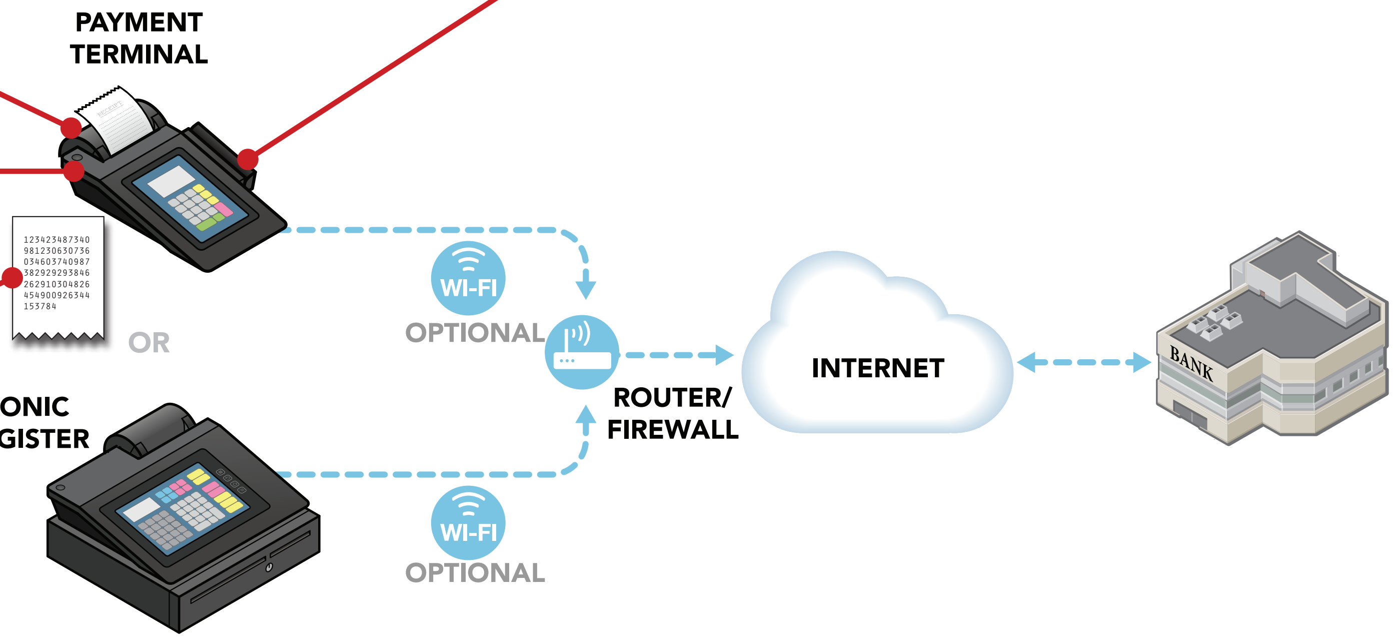
How do criminals get your card data?

They steal card data via "skimming" equipment they attach to (or embed into) your payment terminal.

They insert "malware"(software) onto a payment system that enables them to steal card data.

They may also steal your terminal, replacing it with a modified one used to get your card data.

They steal receipts or paper reports that you don't secure, that you keep when you no longer need, or that you don't dispose of securely.



TYPE 5

Encrypting payment terminal and electronic cash register connected to the Internet. Payments sent via Internet by payment terminal.

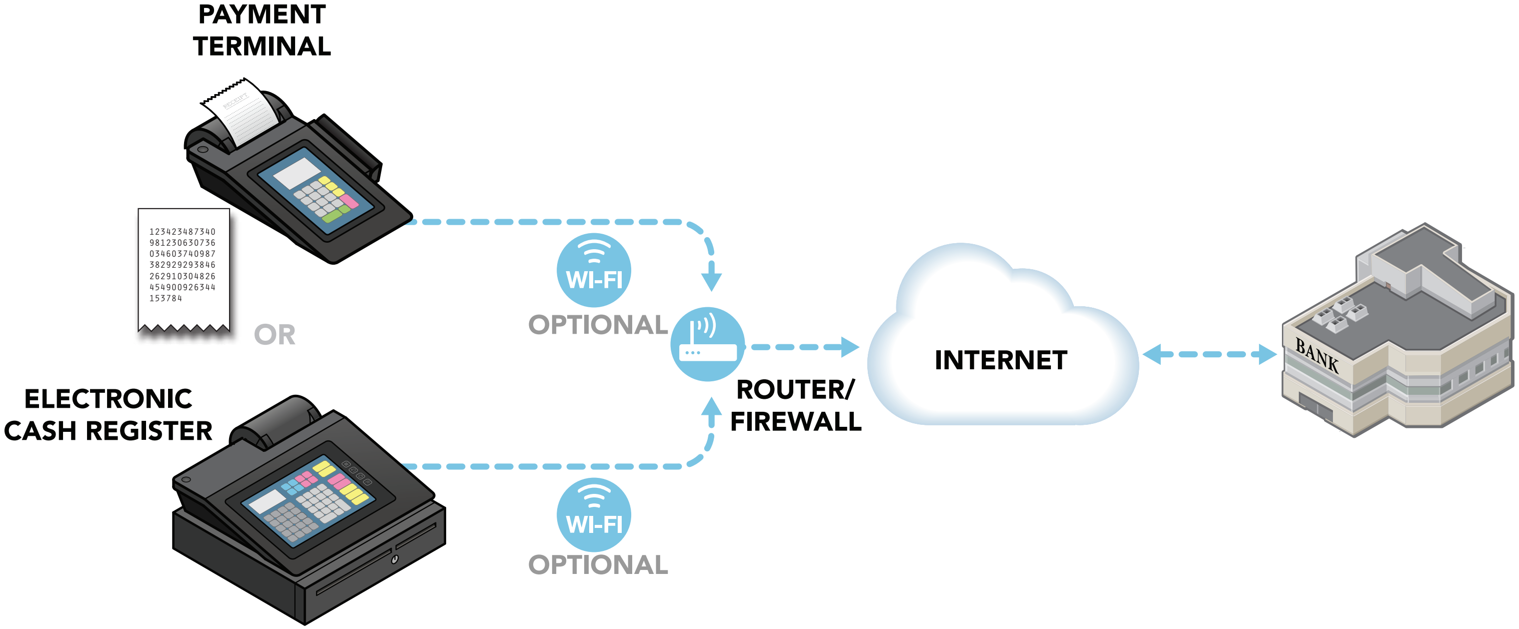
RISK PROFILE

Chip	Mag Stripe
LOWER	LOWER

TYPE 5 OVERVIEW | TYPE 5 RISKS | TYPE 5 THREATS | **TYPE 5 PROTECTIONS**

How do you start to protect card data today?*

- Use strong passwords
- Protect in-house access to your card data
- Protect your business from the Internet
- Protect card data and only keep what you need
- Limit remote access for your vendor partners - don't give hackers easy access
- Inspect your payment terminals for damage or changes
- Get regular vulnerability scanning
- Ask your vendor partners for help if you need it
- Use a secure payment terminal



*Click on the icons above for the Guide to Safe Payments and information about these security basics.

PCI Security Standards Council®

Payment Protection Resources for Small Merchants: Common Payment Systems

TYPE 6

Encrypting payment terminal and electronic cash register share non-card data (semi-integrated). Payment sent via Internet by payment terminal.

RISK PROFILE

Chip	Mag Stripe
LOWER	MODERATE

TYPE 6 OVERVIEW | TYPE 6 RISKS | TYPE 6 THREATS | TYPE 6 PROTECTIONS

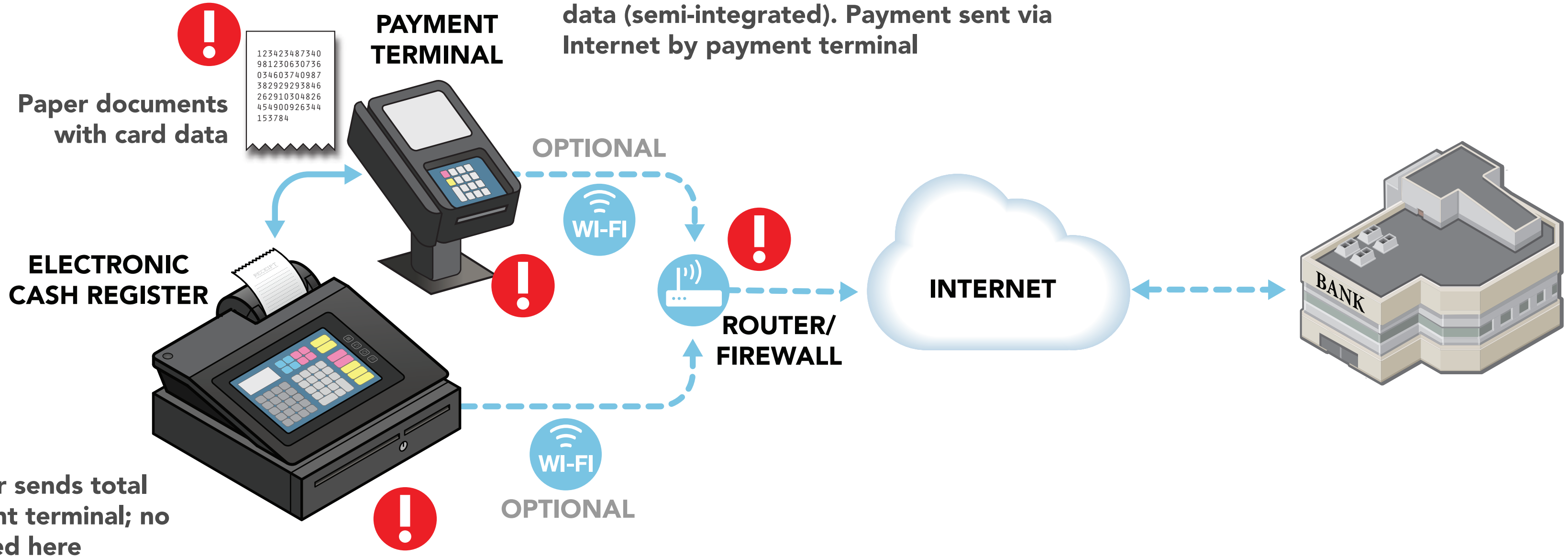
YES
This IS my setup.
Show me the details.

NO
This IS NOT my setup.
Show me the next setup.

BACK
to previous diagram.

No card data shared between electronic cash register and payment terminal

No other equipment connected to merchant payment systems



Encrypting payment terminal and electronic cash register share non-card data (semi-integrated). Payment sent via Internet by payment terminal

Electronic cash register sends total sale amount to payment terminal; no card payments accepted here

For this scenario, risks to card data are present at ❗ above. Risks explained on next page.

PCI Security Standards Council®

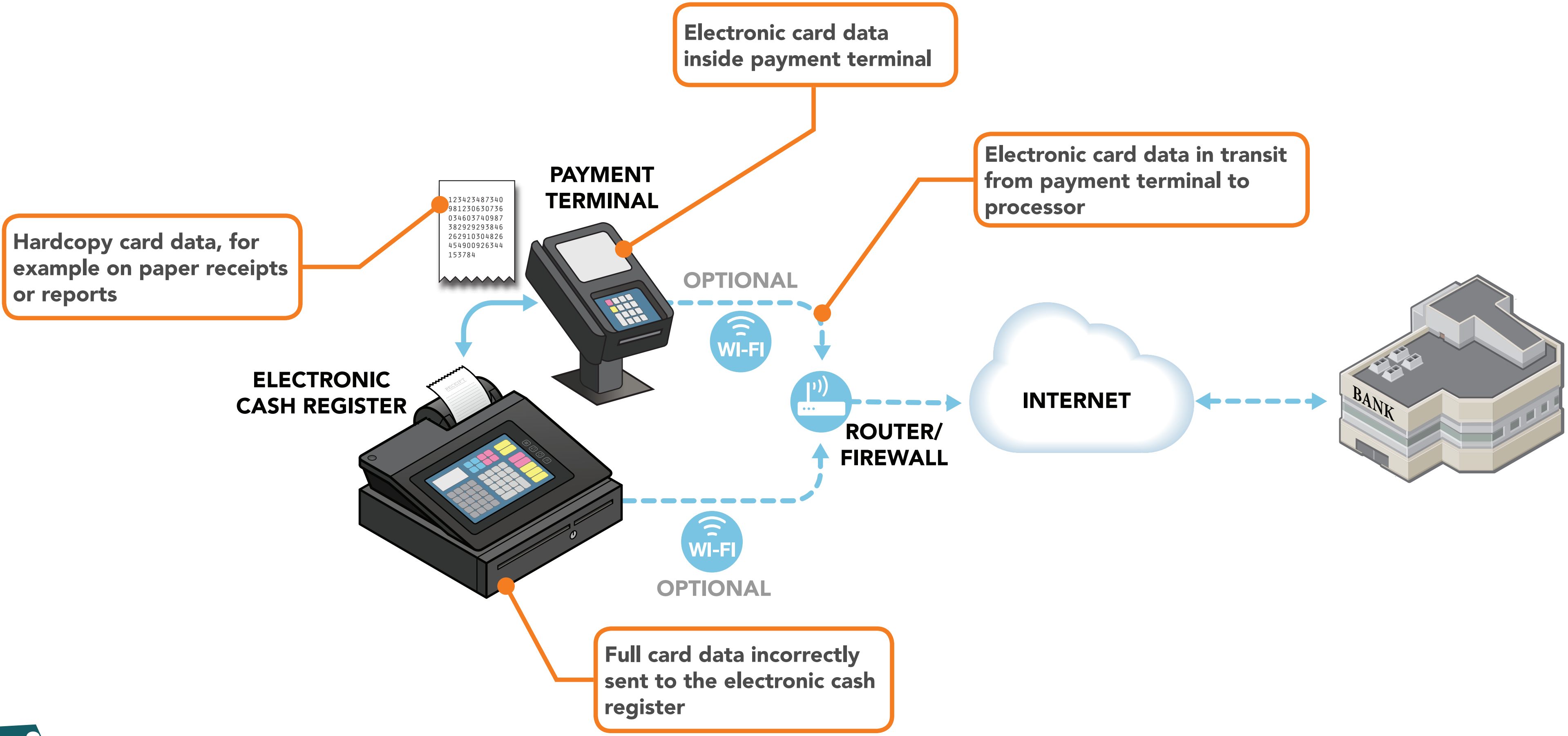
TYPE 6

Encrypting payment terminal and electronic cash register share non-card data (semi-integrated). Payment sent via Internet by payment terminal.

RISK PROFILE

Chip	Mag Stripe
LOWER	MODERATE

Where is your card data at risk?



Electronic card data inside payment terminal

Electronic card data in transit from payment terminal to processor

Hardcopy card data, for example on paper receipts or reports

Full card data incorrectly sent to the electronic cash register

PCI Security Standards Council®

TYPE 6

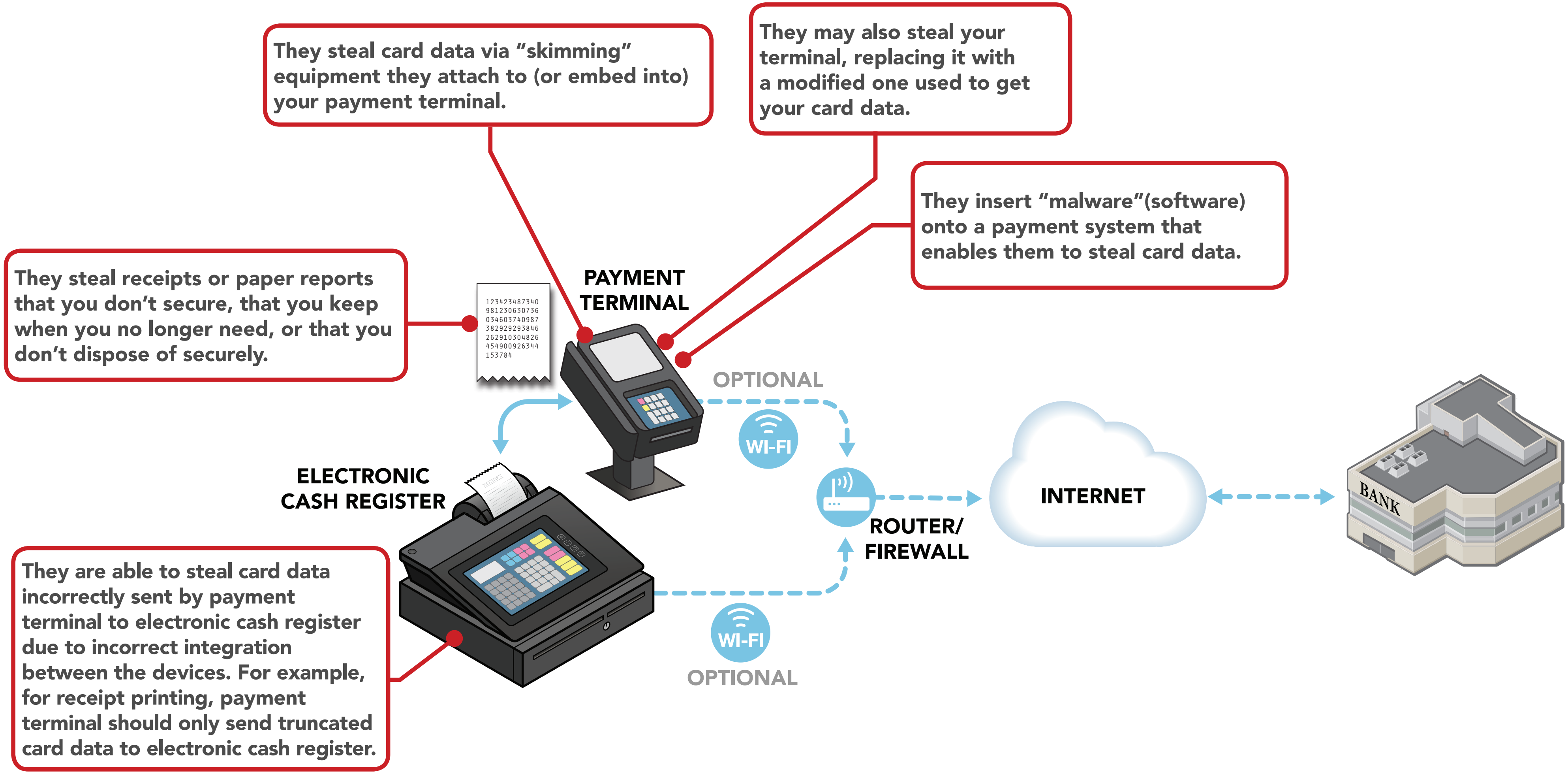
Encrypting payment terminal and electronic cash register share non-card data (semi-integrated). Payment sent via Internet by payment terminal.

RISK PROFILE

Chip	Mag Stripe
LOWER	MODERATE

TYPE 6 OVERVIEW | TYPE 6 RISKS | TYPE 6 THREATS | TYPE 6 PROTECTIONS

How do criminals get your card data?


They steal card data via "skimming" equipment they attach to (or embed into) your payment terminal.

They may also steal your terminal, replacing it with a modified one used to get your card data.

They insert "malware"(software) onto a payment system that enables them to steal card data.

They steal receipts or paper reports that you don't secure, that you keep when you no longer need, or that you don't dispose of securely.

They are able to steal card data incorrectly sent by payment terminal to electronic cash register due to incorrect integration between the devices. For example, for receipt printing, payment terminal should only send truncated card data to electronic cash register.

PCI Security Standards Council®

Payment Protection Resources for Small Merchants: Common Payment Systems

TYPE 6

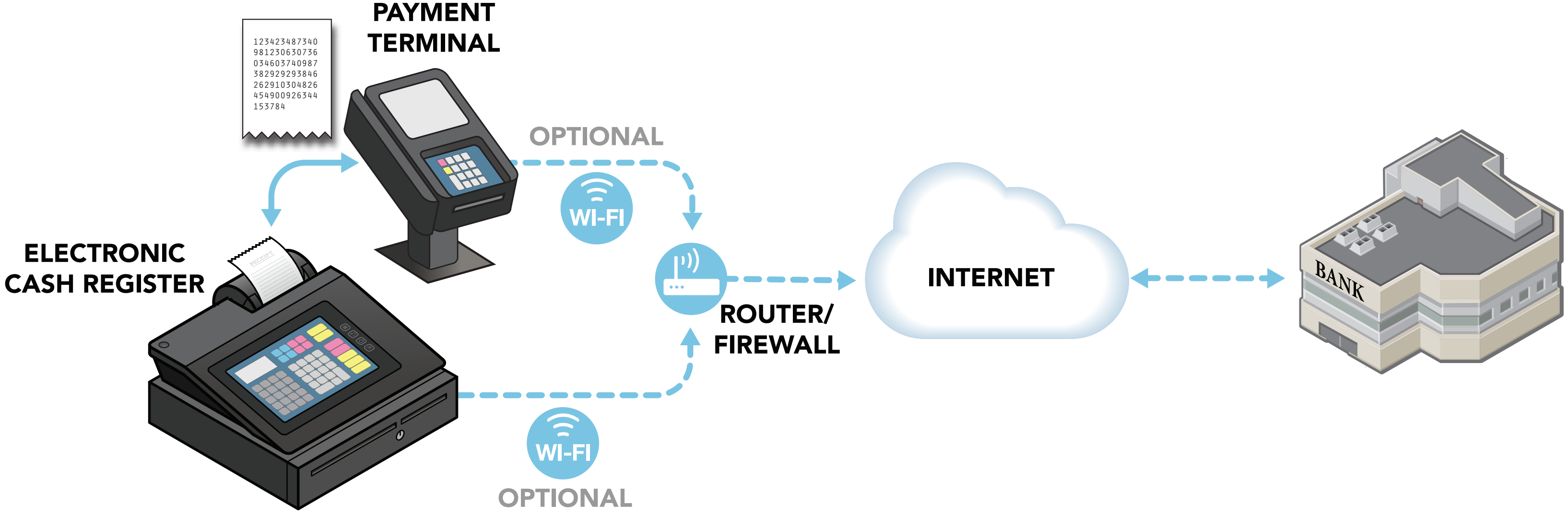
Encrypting payment terminal and electronic cash register share non-card data (semi-integrated). Payment sent via Internet by payment terminal.

RISK PROFILE

Chip	Mag Stripe
LOWER	MODERATE

How do you start to protect card data today?*

- Use strong passwords
- Protect in-house access to your card data
- Protect your business from the Internet
- Protect card data and only keep what you need
- Limit remote access for your vendor partners - don't give hackers easy access
- Inspect your payment terminals for damage or changes
- Get regular vulnerability scanning
- Ask your vendor partners for help if you need it
- Use a secure payment terminal



*Click on the icons above for the Guide to Safe Payments and information about these security basics.

PCI Security Standards Council®

TYPE 7

Integrated payment terminal and middleware share card data. Payments send via Internet.

RISK PROFILE

Chip 🚫

Mag Stripe HIGHER

TYPE 7 OVERVIEW | TYPE 7 RISKS | TYPE 7 THREATS | TYPE 7 PROTECTIONS

YES
This IS my setup.
Show me the details.

NO
This IS NOT my setup.
Show me the next setup.

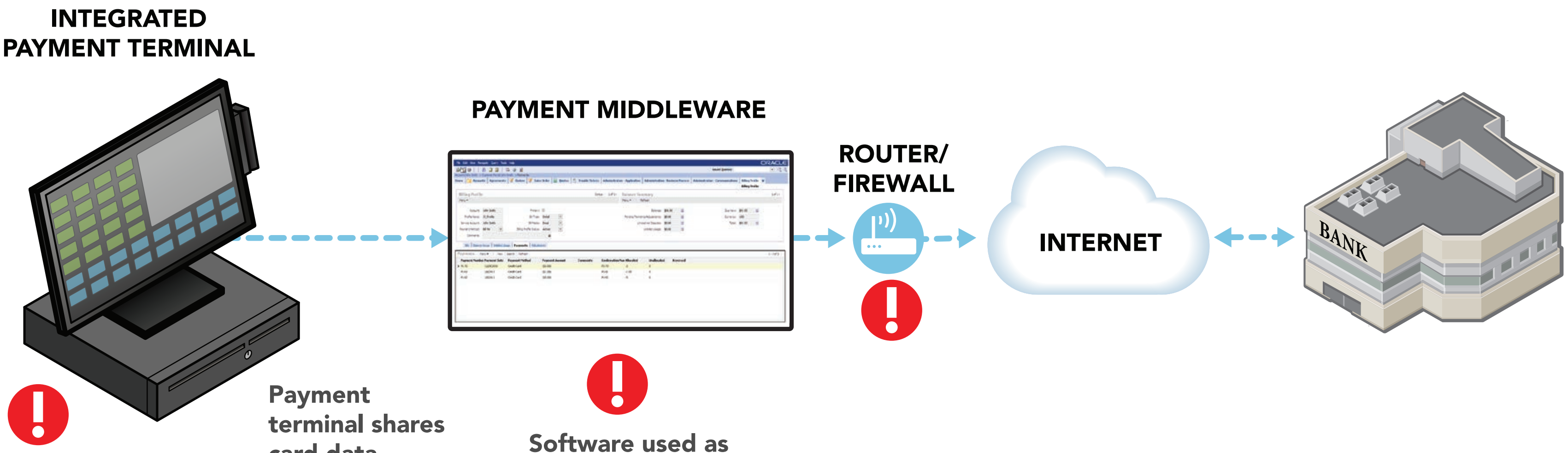
BACK
to previous diagram.

Payment terminal and electronic cash register combined

Card is swiped by a staff member; diagram is not applicable for chip cards

No separate PIN entry device

No other equipment connected to merchant payment system



❗ Payment terminal shares card data with payment middleware

❗ Software used as part of payment transaction

❗

For this scenario, risks to card data are present at ❗ above. Risks explained on next page.

TYPE 7

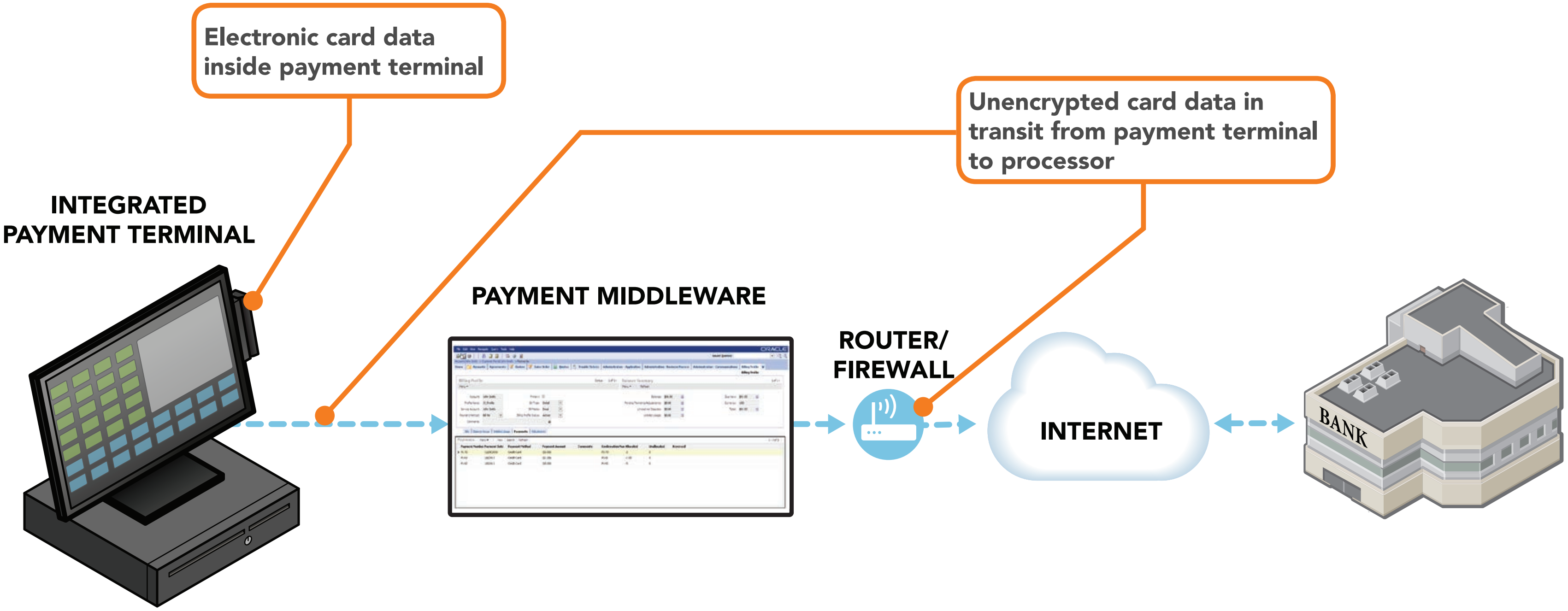
Integrated payment terminal and middleware share card data. Payments send via Internet.

RISK PROFILE

Chip ⊘

Mag Stripe HIGHER

Where is your card data at risk?



Electronic card data inside payment terminal

Unencrypted card data in transit from payment terminal to processor

INTEGRATED PAYMENT TERMINAL

PAYMENT MIDDLEWARE

ROUTER/ FIREWALL

INTERNET

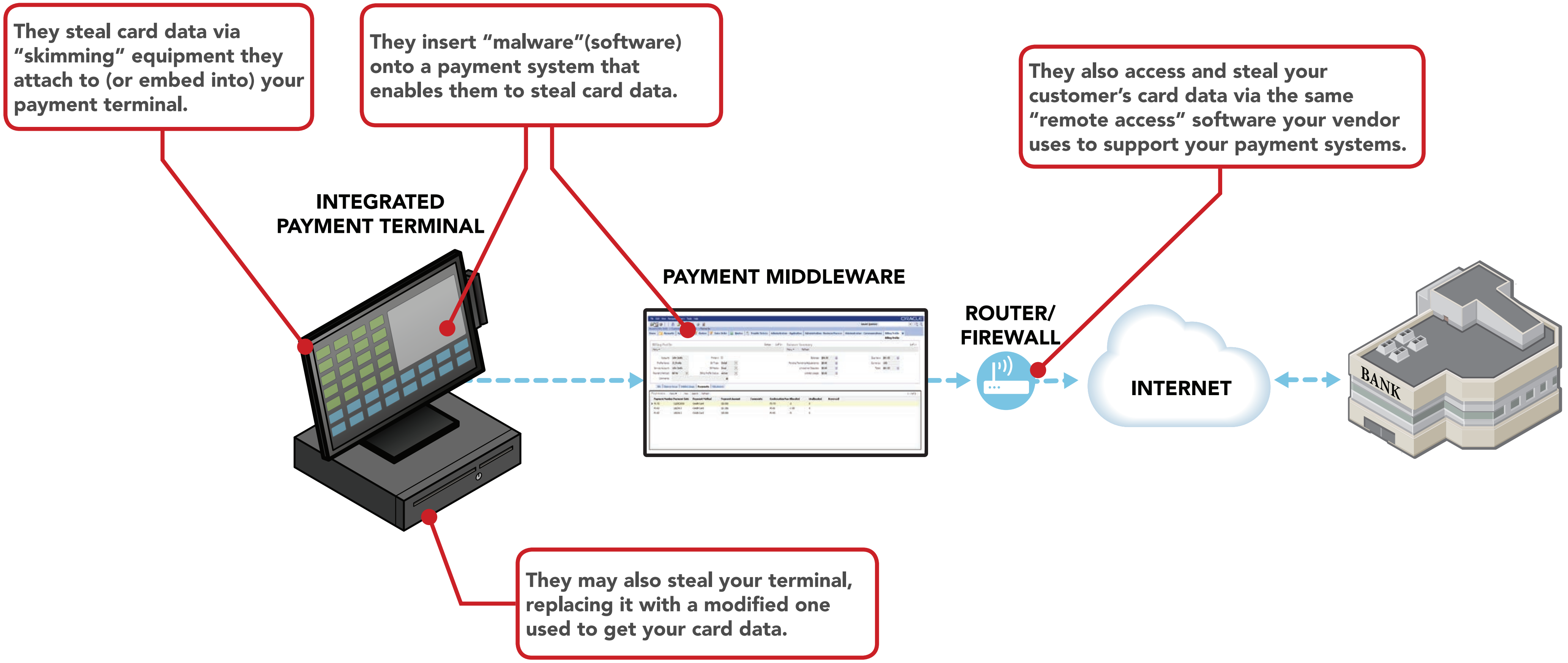
TYPE 7

Integrated payment terminal and middleware share card data. Payments send via Internet.

RISK PROFILE

Chip	Mag Stripe
⊘	HIGHER

How do criminals get your card data?



They steal card data via "skimming" equipment they attach to (or embed into) your payment terminal.

They insert "malware"(software) onto a payment system that enables them to steal card data.

They also access and steal your customer's card data via the same "remote access" software your vendor uses to support your payment systems.

They may also steal your terminal, replacing it with a modified one used to get your card data.

PCI Security Standards Council®

TYPE 7

Integrated payment terminal and middleware share card data. Payments send via Internet.

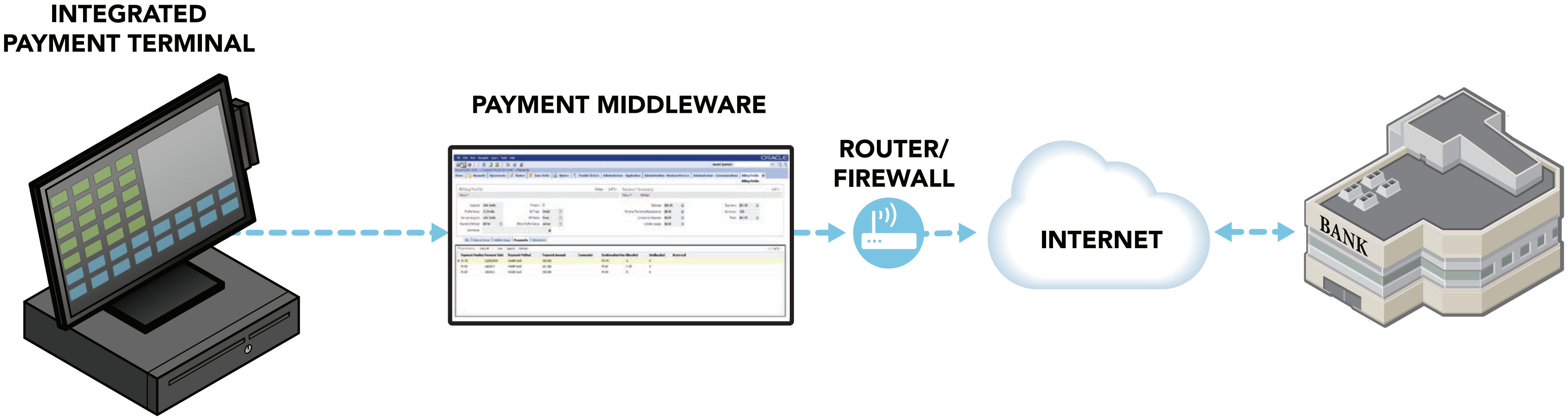
RISK PROFILE

Chip ⃠

Mag Stripe HIGHER

How do you start to protect card data today?*

- Use strong passwords
- Protect in-house access to your card data
- Use a secure payment terminal
- Protect card data and only keep what you need
- Limit remote access for your vendor partners - don't give hackers easy access
- Protect your business from the Internet
- Inspect your payment terminals for damage or changes
- Use anti-virus software
- Make your card data useless to criminals
- Ask your vendor partners for help if you need it
- Get regular vulnerability scanning



*Click on the icons above for the Guide to Safe Payments and information about these security basics.

Security Standards Council ®

TYPE 8

Encrypting wireless payment terminal ("pay-at-table") with integrated payment terminal and middleware. Payments sent via Internet.

RISK PROFILE

Chip	Mag Stripe
LOWER	MODERATE

TYPE 8 OVERVIEW | TYPE 8 RISKS | TYPE 8 THREATS | TYPE 8 PROTECTIONS

YES
This IS my setup.
Show me the details.

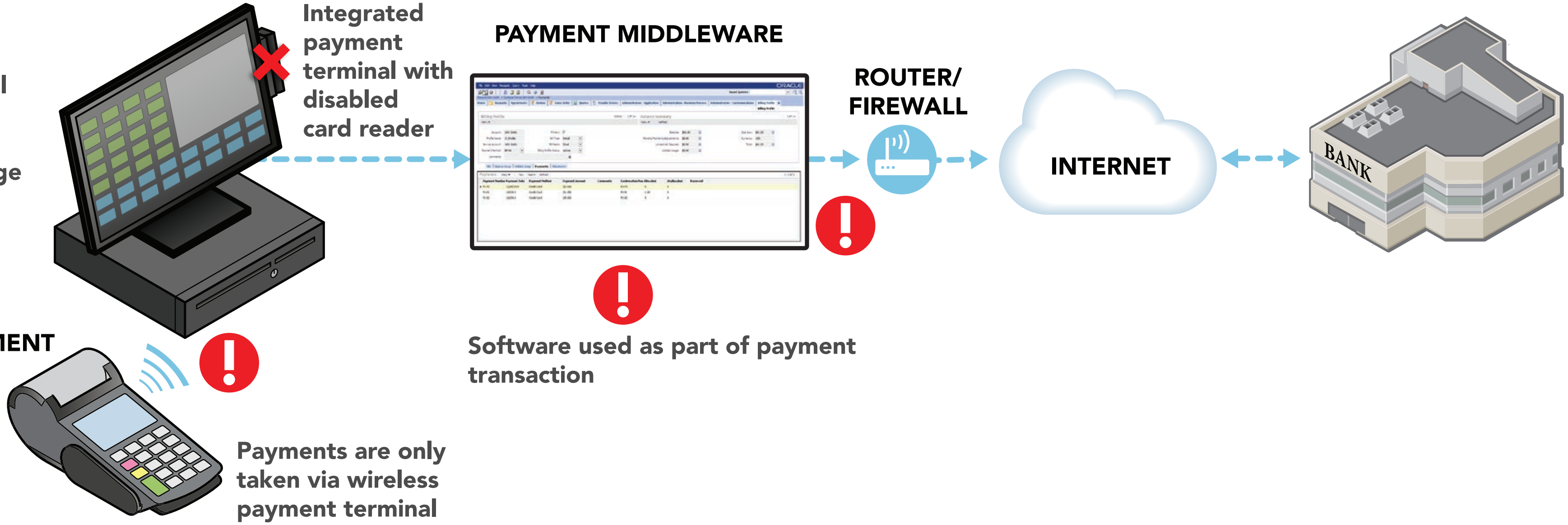
NO
This IS NOT my setup.
Show me the next setup.

BACK
to previous diagram.

Encrypted card data shared with terminal and middleware

No other equipment connected to merchant payment systems

Wireless payment terminal encrypts card data (for example, using PCI's Secure Reading & Exchange of Data – SRED)



INTEGRATED PAYMENT TERMINAL

Integrated payment terminal with disabled card reader

PAYMENT MIDDLEWARE

Software used as part of payment transaction

ROUTER/ FIREWALL

INTERNET

WIRELESS PAYMENT TERMINAL

Payments are only taken via wireless payment terminal

For this scenario, risks to card data are present at ❗ *above. Risks explained on next page.*

PCI Security Standards Council ®

Payment Protection Resources for Small Merchants: Common Payment Systems

TYPE 8

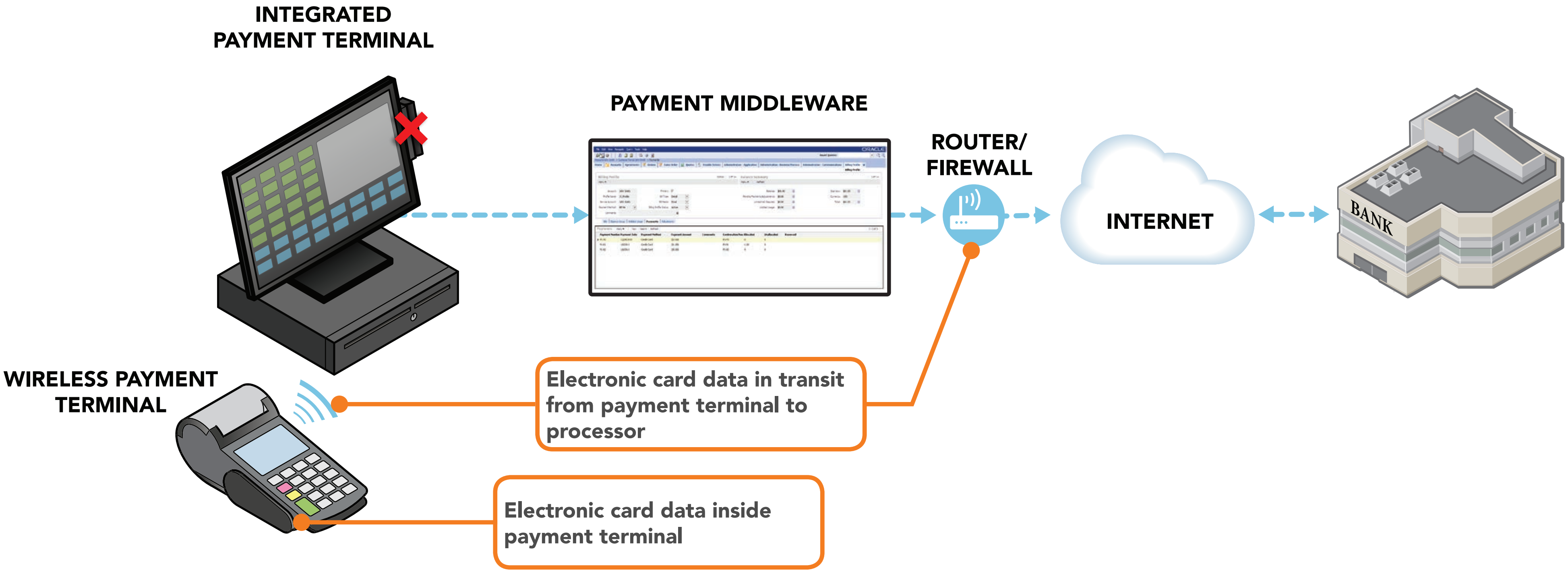
Encrypting wireless payment terminal ("pay-at-table") with integrated payment terminal and middleware. Payments sent via Internet.

RISK PROFILE

Chip	Mag Stripe
LOWER	MODERATE

TYPE 8 OVERVIEW | TYPE 8 RISKS | TYPE 8 THREATS | TYPE 8 PROTECTIONS

Where is your card data at risk?



Electronic card data in transit from payment terminal to processor

Electronic card data inside payment terminal

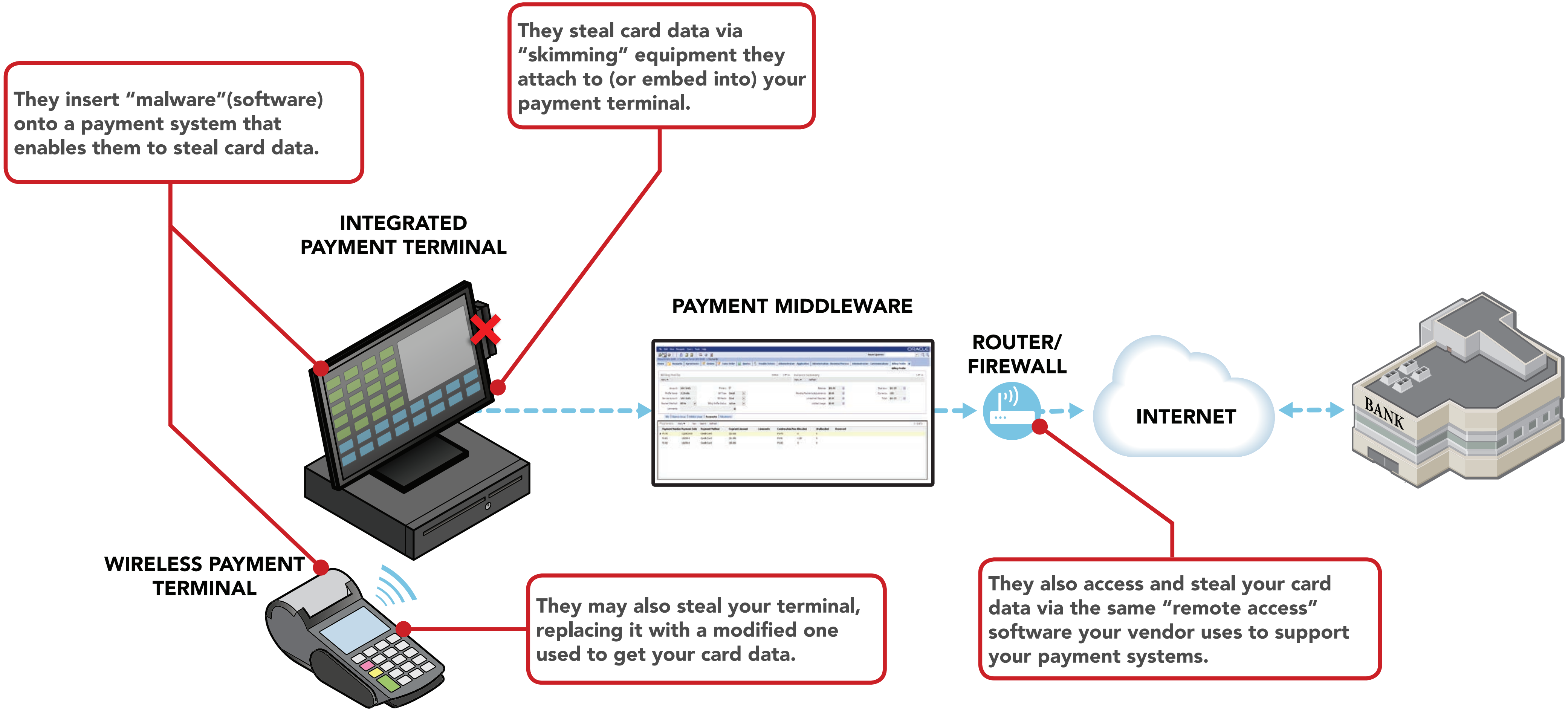
TYPE 8

Encrypting wireless payment terminal ("pay-at-table") with integrated payment terminal and middleware. Payments sent via Internet.

RISK PROFILE

Chip	Mag Stripe
LOWER	MODERATE

How do criminals get your card data?



They insert "malware"(software) onto a payment system that enables them to steal card data.

They steal card data via "skimming" equipment they attach to (or embed into) your payment terminal.

They may also steal your terminal, replacing it with a modified one used to get your card data.

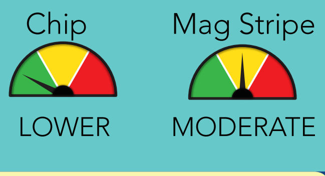
They also access and steal your card data via the same "remote access" software your vendor uses to support your payment systems.

PCi Security Standards Council®

TYPE 8

Encrypting wireless payment terminal ("pay-at-table") with integrated payment terminal and middleware. Payments sent via Internet.

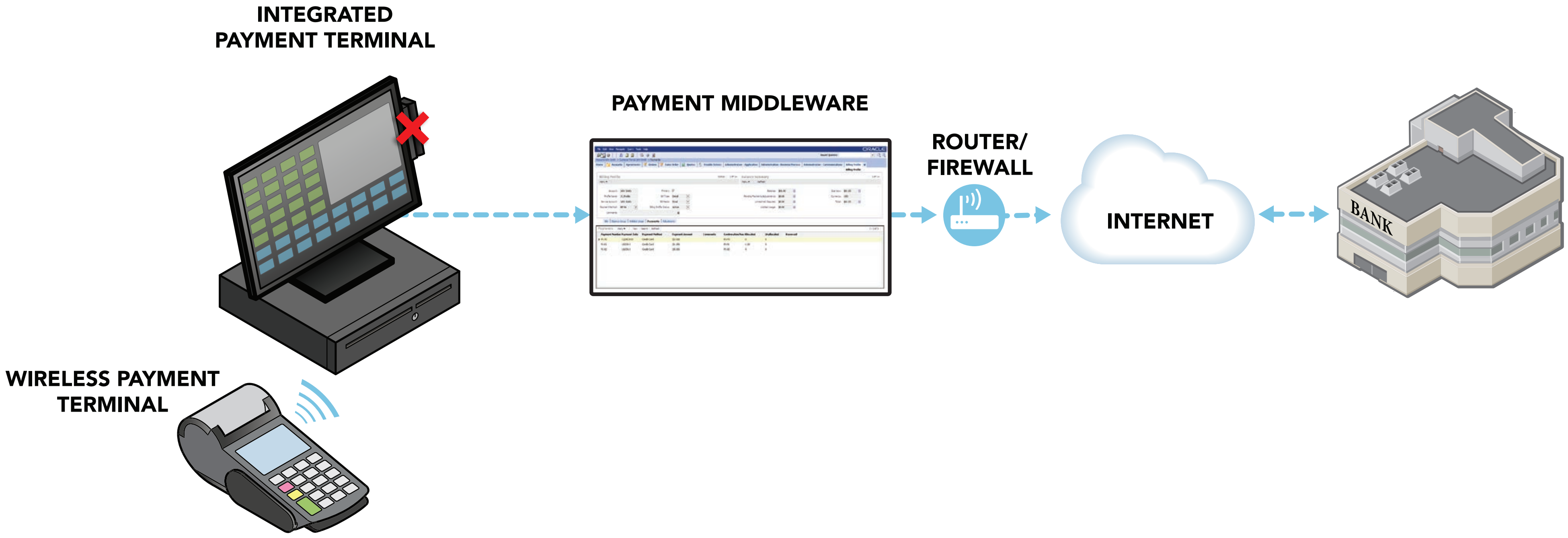
RISK PROFILE



TYPE 8 OVERVIEW | TYPE 8 RISKS | TYPE 8 THREATS | TYPE 8 PROTECTIONS

How do you start to protect card data today?*

- Use strong passwords
- Protect in-house access to your card data
- Use a secure payment terminal
- Protect card data and only keep what you need
- Limit remote access for your vendor partners - don't give hackers easy access
- Protect your business from the Internet
- Inspect your payment terminals for damage or changes
- Use anti-virus software
- Make your card data useless to criminals
- Ask your vendor partners for help if you need it
- Get regular vulnerability scanning



*Click on the icons above for the Guide to Safe Payments and information about these security basics.

PCI Security Standards Council®

TYPE 9

Payment terminal connects to electronic cash register with additional connected equipment. Payments sent via Internet.

RISK PROFILE

HIGHER

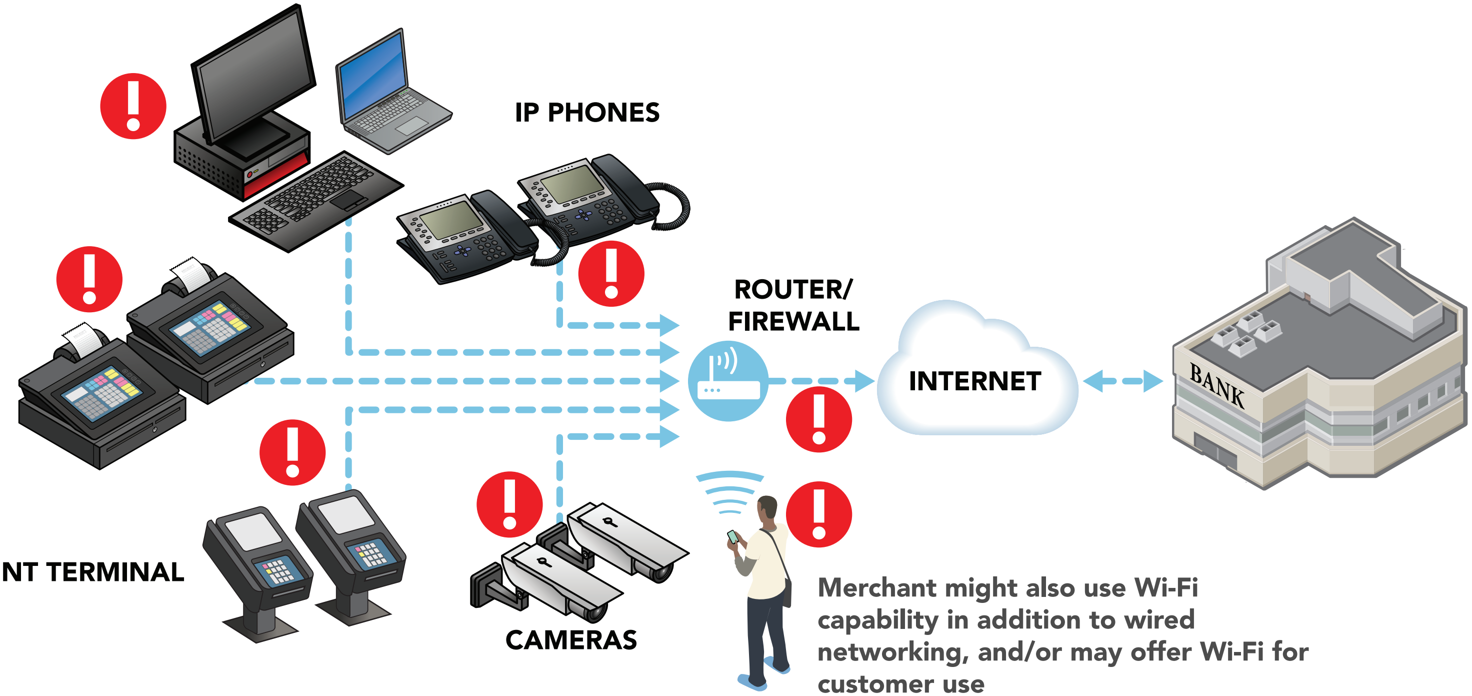
TYPE 9 OVERVIEW | TYPE 9 RISKS | TYPE 9 THREATS | TYPE 9 PROTECTIONS

YES
This IS my setup.
Show me the details.

NO
This IS NOT my setup.
Show me the next setup.

BACK
to previous diagram.

There are many risk points here due to the additional equipment in the same network as the payment terminal and also connected to the Internet. Each device and system has to be configured and managed securely to minimize risk.



Card data can be entered on electronic cash register or payment terminal

Merchant might also use Wi-Fi capability in addition to wired networking, and/or may offer Wi-Fi for customer use

For this scenario, risks to card data are present at ❗ above. Risks explained on next page.

PCI Security Standards Council®

Payment Protection Resources for Small Merchants: Common Payment Systems

TYPE 9

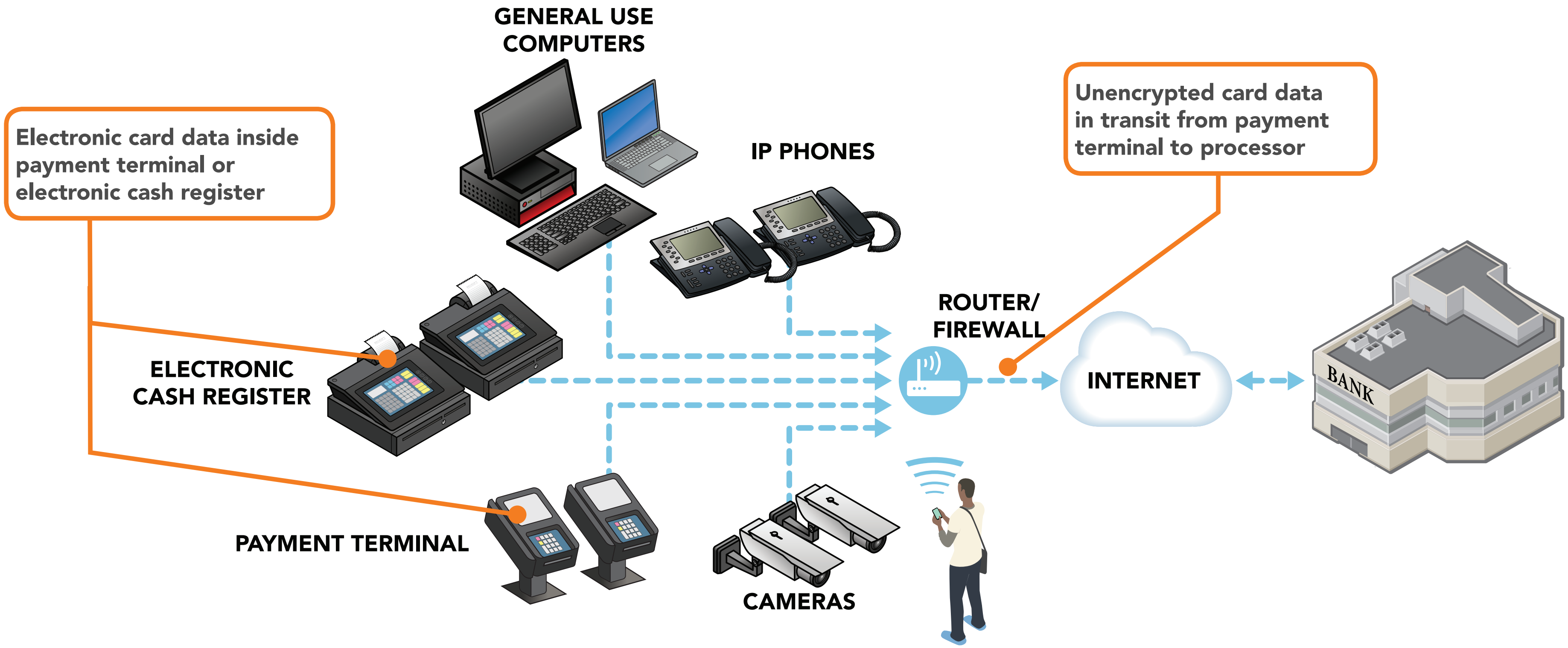
Payment terminal connects to electronic cash register with additional connected equipment. Payments sent via Internet.

RISK PROFILE

HIGHER

TYPE 9 OVERVIEW | TYPE 9 RISKS | TYPE 9 THREATS | TYPE 9 PROTECTIONS

Where is your card data at risk?



Electronic card data inside payment terminal or electronic cash register

Unencrypted card data in transit from payment terminal to processor

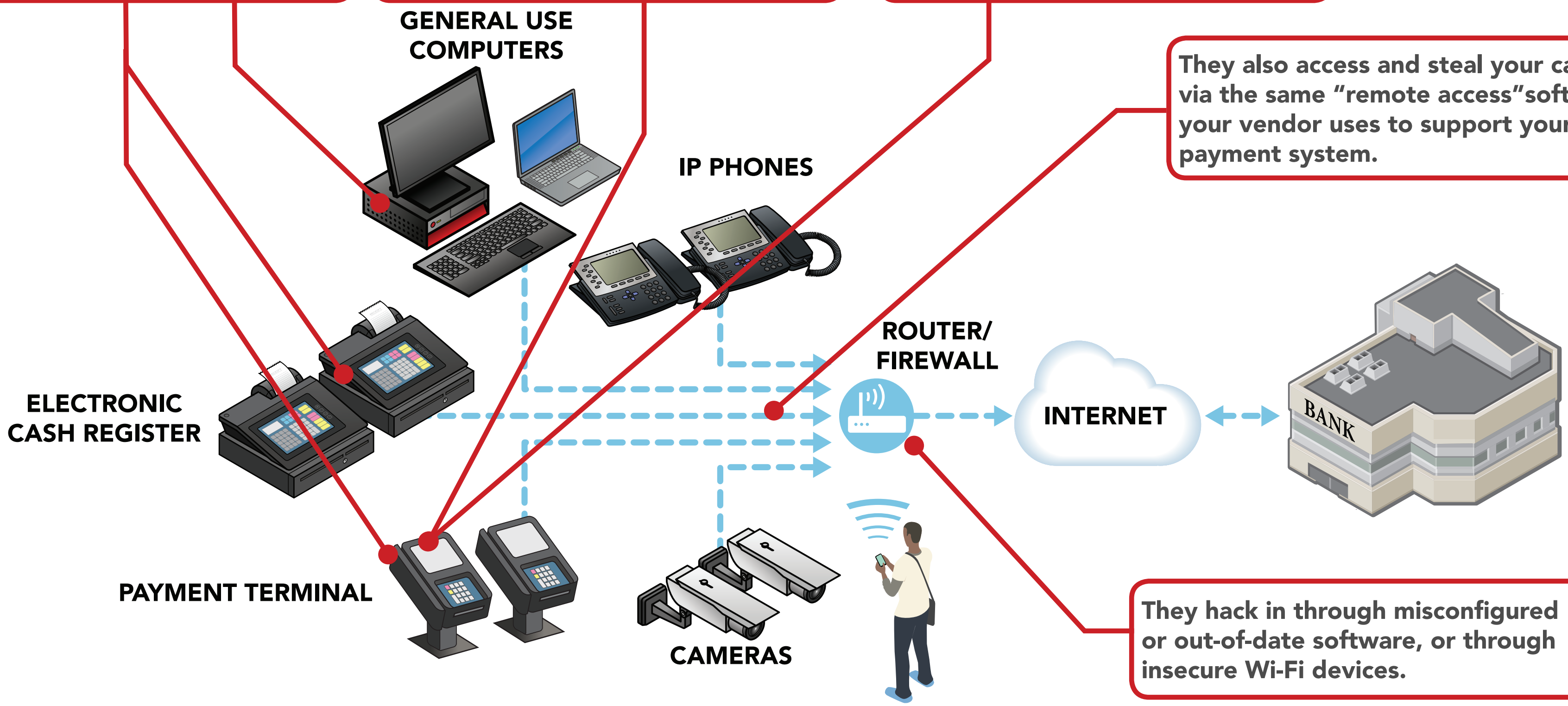
TYPE 9

Payment terminal connects to electronic cash register with additional connected equipment. Payments sent via Internet.

RISK PROFILE

HIGHER

How do criminals get your card data?



They insert "malware"(software) onto a payment system that enables them to steal card data.

They steal card data via "skimming" equipment they attach to (or embed into) your payment terminal.

They may also steal your terminal, replacing it with a modified one used to get your card data.

They also access and steal your card data via the same "remote access"software your vendor uses to support your payment system.

They hack in through misconfigured or out-of-date software, or through insecure Wi-Fi devices.

PCI Security Standards Council®

TYPE 9

Payment terminal connects to electronic cash register with additional connected equipment. Payments sent via Internet.

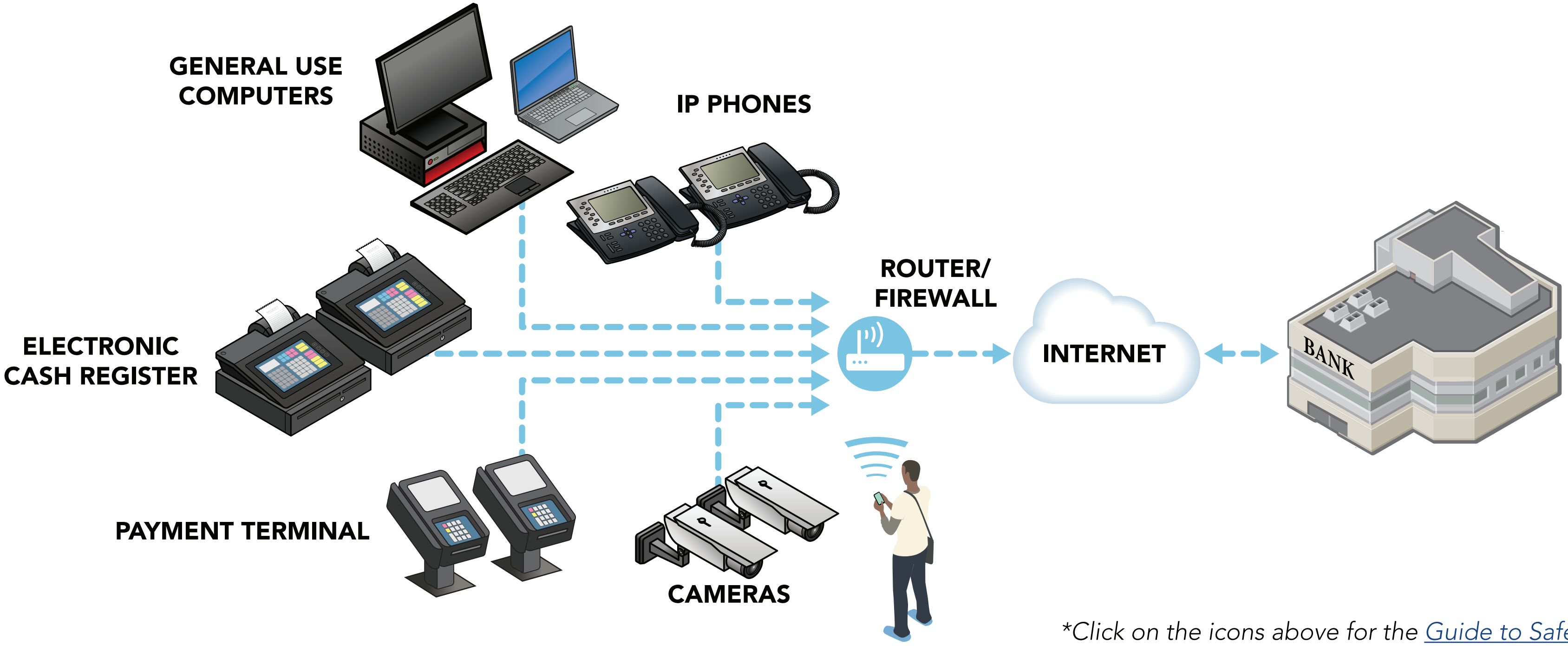
RISK PROFILE

HIGHER

TYPE 9 OVERVIEW | TYPE 9 RISKS | TYPE 9 THREATS | TYPE 9 PROTECTIONS

How do you start to protect card data today?*

- Use strong passwords
- Protect in-house access to your card data
- Use a secure payment terminal
- Protect card data and only keep what you need
- Limit remote access for your vendor partners - don't give hackers easy access
- Protect your business from the Internet
- Inspect your payment terminals for damage or changes
- Use anti-virus software
- Make your card data useless to criminals
- Ask your vendor partners for help if you need it
- Get regular vulnerability scanning



*Click on the icons above for the Guide to Safe Payments and information about these security basics.

Payment Protection Resources for Small Merchants: Common Payment Systems

TYPE 10

E-commerce merchant with fully-outsourced payment page. Payments sent via Internet by third-party provider.

RISK PROFILE

LOWER

TYPE 10 OVERVIEW | TYPE 10 RISKS | TYPE 10 THREATS | TYPE 10 PROTECTIONS

YES
This IS my setup.
Show me the details.

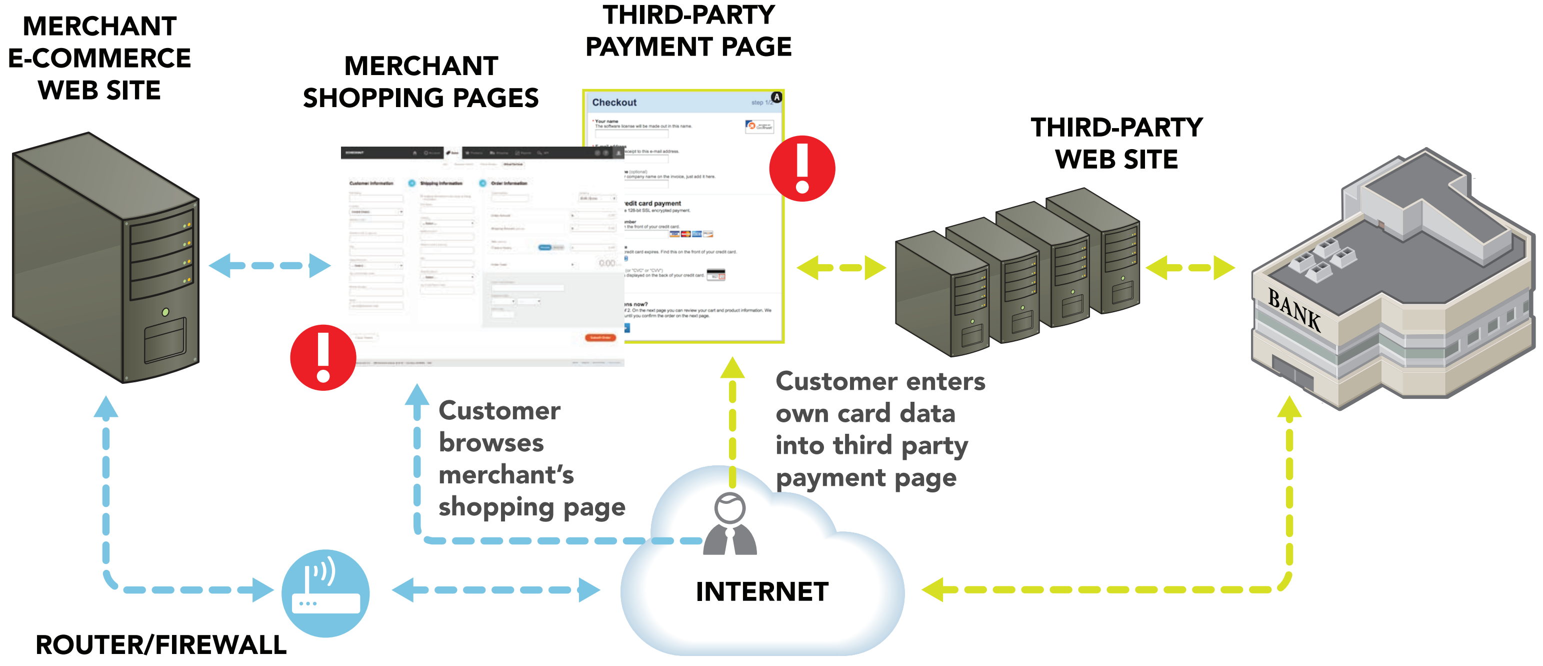
NO
This IS NOT my setup.
Show me the next setup.

BACK
to previous diagram.

Merchant's entire payment page is outsourced to a PCI DSS compliant third party

Merchant manages own website, but has no access to the payment page

Merchant has only product info (shopping pages, etc.) available from their website, and never has access to, or the ability to control, any card data



MERCHANT E-COMMERCE WEB SITE

MERCHANT SHOPPING PAGES

THIRD-PARTY PAYMENT PAGE

THIRD-PARTY WEB SITE

Customer browses merchant's shopping page

Customer enters own card data into third party payment page

INTERNET

ROUTER/FIREWALL

Shopping pages may be delivered by merchant or merchant's hosting provider

For this scenario, risks to card data are present at ❗ above. Risks explained on next page.

PCI Security Standards Council ®

TYPE 10

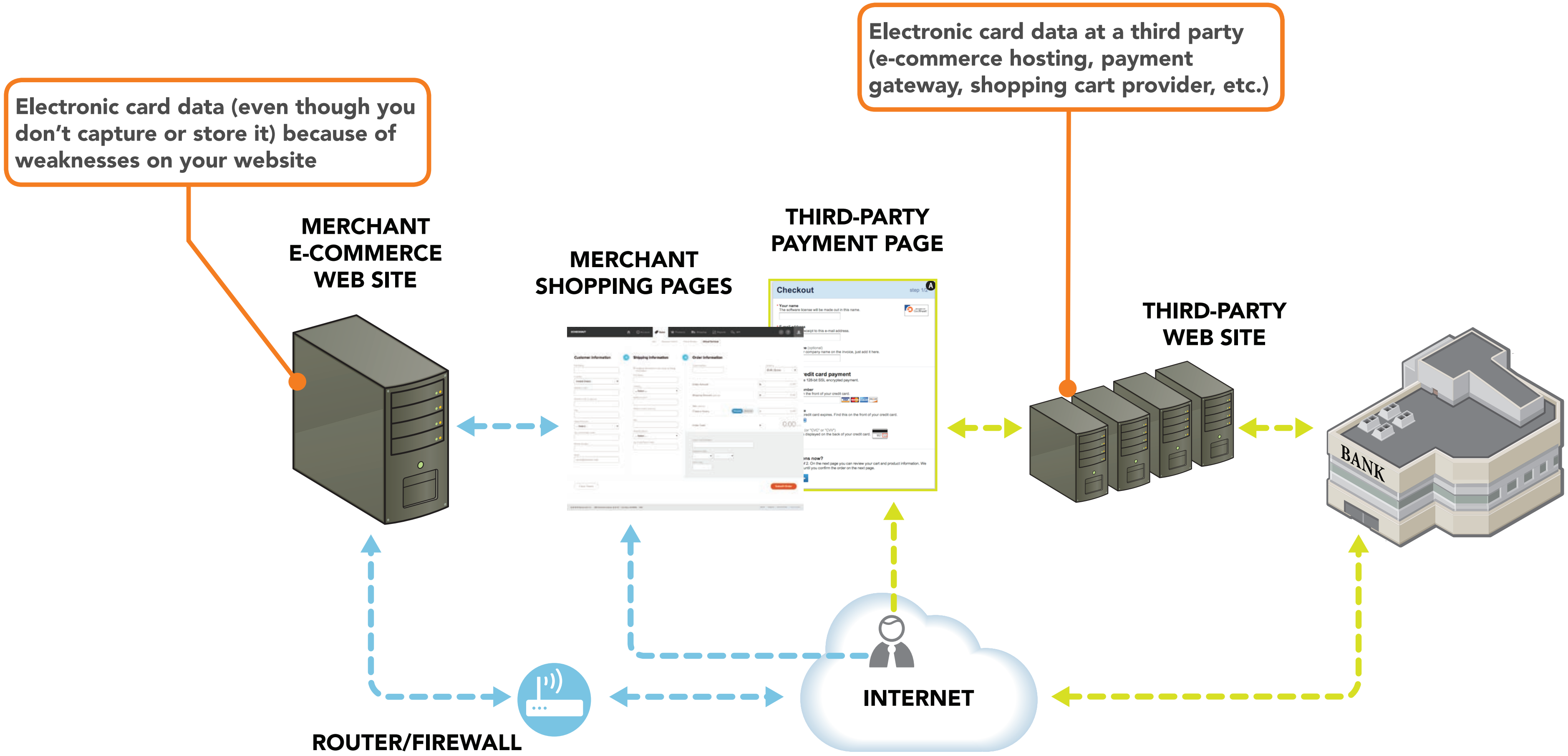
E-commerce merchant with fully-outsourced payment page. Payments sent via Internet by third-party provider.

RISK PROFILE

LOWER

TYPE 10 OVERVIEW | TYPE 10 RISKS | TYPE 10 THREATS | TYPE 10 PROTECTIONS

Where is your card data at risk?



Electronic card data (even though you don't capture or store it) because of weaknesses on your website

Electronic card data at a third party (e-commerce hosting, payment gateway, shopping cart provider, etc.)

Payment Protection Resources for Small Merchants: Common Payment Systems

TYPE 10

E-commerce merchant with fully-outsourced payment page. Payments sent via Internet by third-party provider.

RISK PROFILE

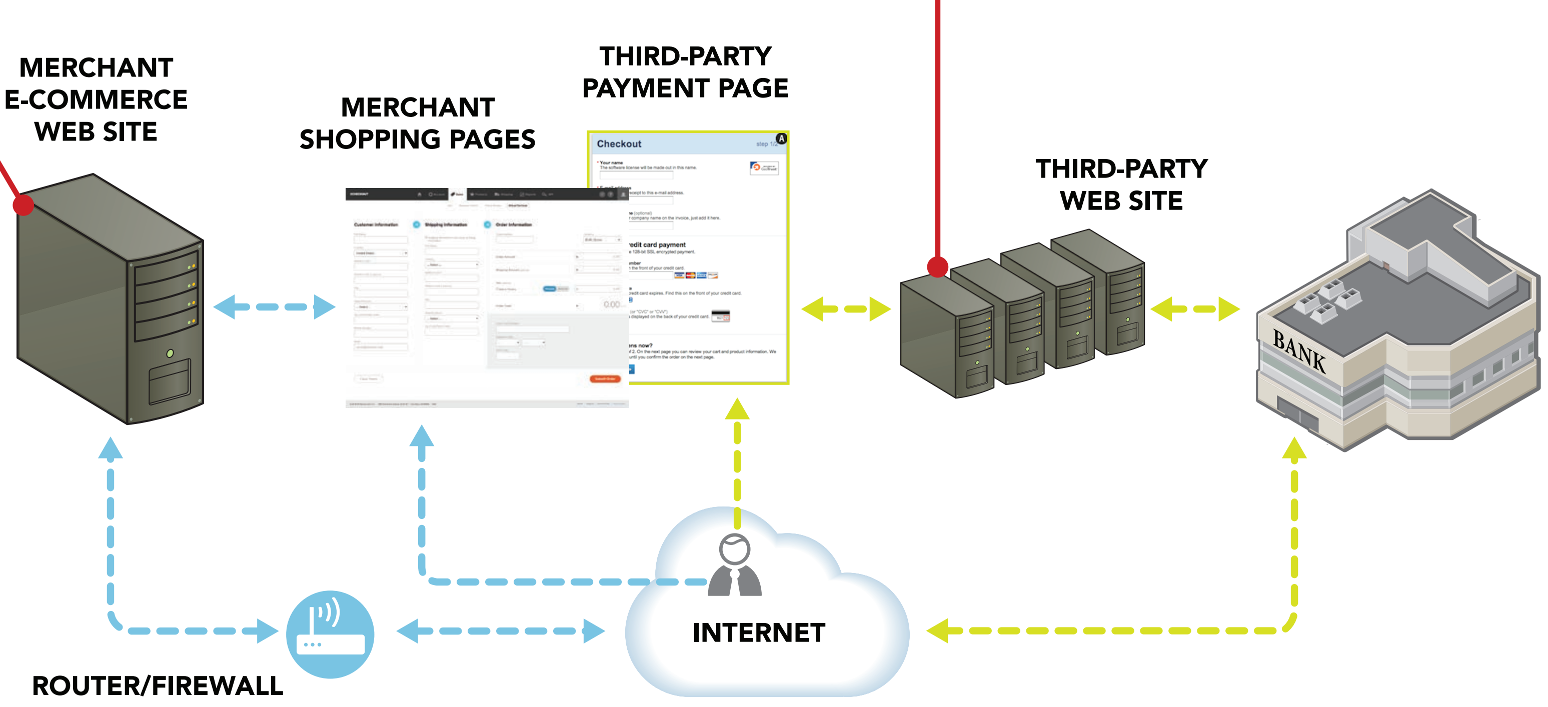
LOWER

TYPE 10 OVERVIEW | TYPE 10 RISKS | TYPE 10 THREATS | TYPE 10 PROTECTIONS

How do criminals get your card data?

They compromise your website due to vulnerabilities, and they intercept card data as your customers send it to your outsourced e-commerce provider.

They may steal card data from outsourced providers using a variety of methods (install malware, via misconfigured software, etc.).



Security Standards Council®

TYPE 10

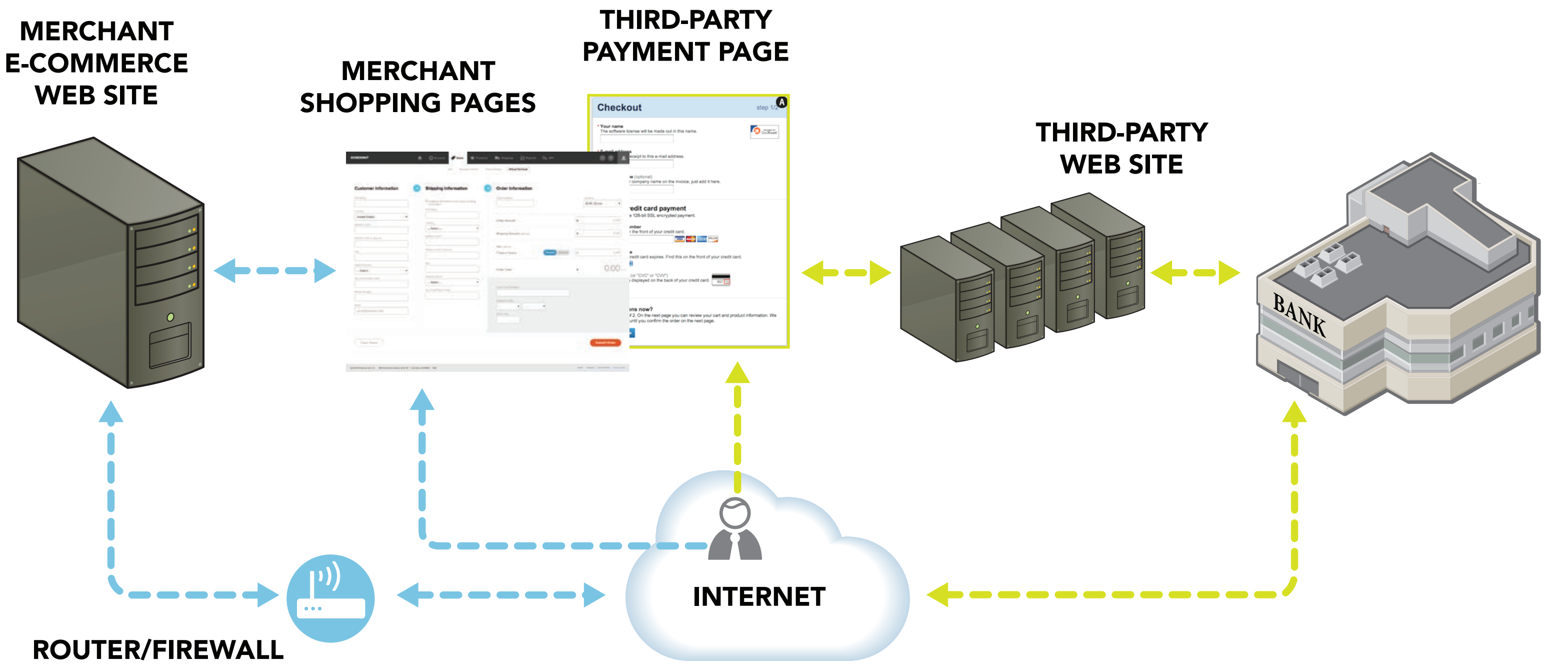
E-commerce merchant with fully-outsourced payment page. Payments sent via Internet by third-party provider.

RISK PROFILE

LOWER

How do you start to protect card data today?*

- Use strong passwords
- Install patches from your vendors
- Ask your vendor partners for help if you need it
- Protect your business from the Internet



*Click on the icons above for the Guide to Safe Payments and information about these security basics.

TYPE 11

E-commerce merchant accepts payments on own payment page and manages own website. Payments sent via Internet by merchant.

RISK PROFILE

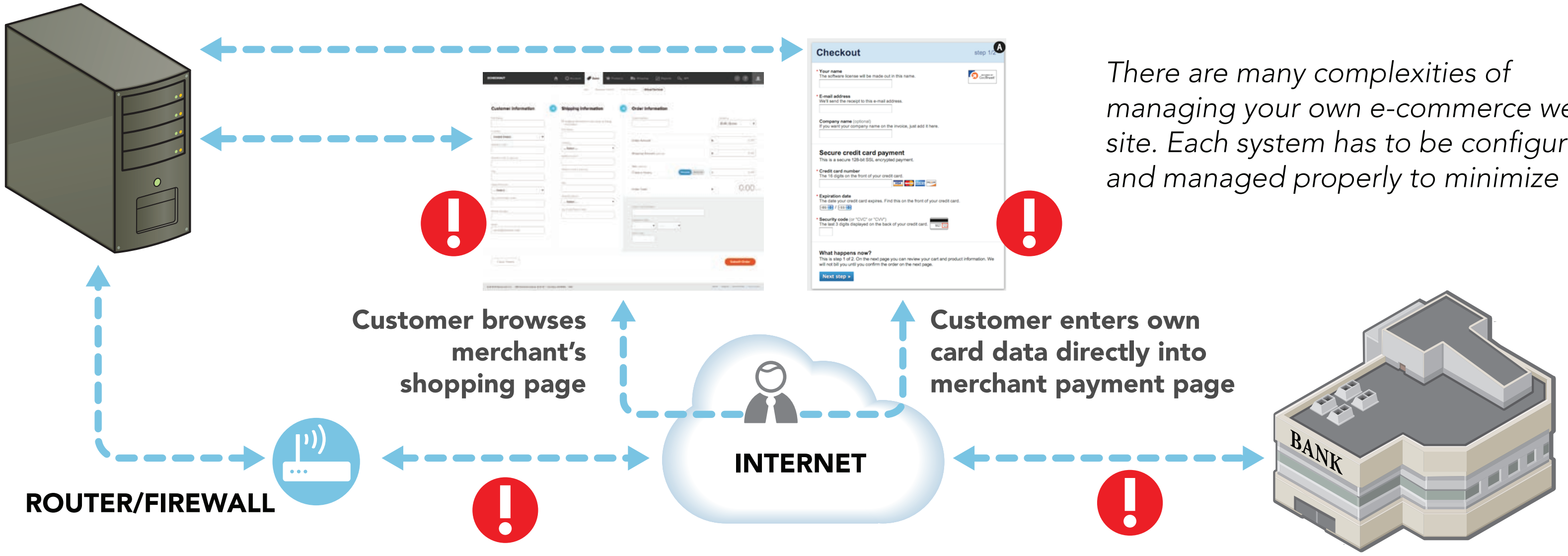
HIGHER

TYPE 11 OVERVIEW | TYPE 11 RISKS | TYPE 11 THREATS | TYPE 11 PROTECTIONS

YES
This IS my setup.
Show me the details.

NO
This IS NOT my setup.
Show me the next setup.

BACK
to previous diagram.



Shopping pages and/or payment pages may be hosted by merchant or merchant's hosting provider

Checkout step 1/2

* Your name
The software license will be made out in this name.

* E-mail address
We'll send the receipt to this e-mail address.

Company name (optional)
If you want your company name on the invoice, just add it here.

Secure credit card payment
This is a secure 128-bit SSL encrypted payment.

* Credit card number
The 16 digits on the front of your credit card.

* Expiration date
The date your credit card expires. Find this on the front of your credit card.

* Security code (or "CVC" or "CVV")
The last 3 digits displayed on the back of your credit card.

What happens now?
This is step 1 of 2. On the next page you can review your cart and product information. We will not bill you until you confirm the order on the next page.

Next step »

Merchant manages website, including payment page (or elements of the payment page)

Customer browses merchant's shopping page

Customer enters own card data directly into merchant payment page

There are many complexities of managing your own e-commerce web site. Each system has to be configured and managed properly to minimize risk.

For this scenario, risks to card data are present at ❗ *above. Risks explained on next page.*

PCI Security Standards Council®

Payment Protection Resources for Small Merchants: Common Payment Systems

TYPE 11

E-commerce merchant accepts payments on own payment page and manages own website. Payments sent via Internet by merchant.

RISK PROFILE

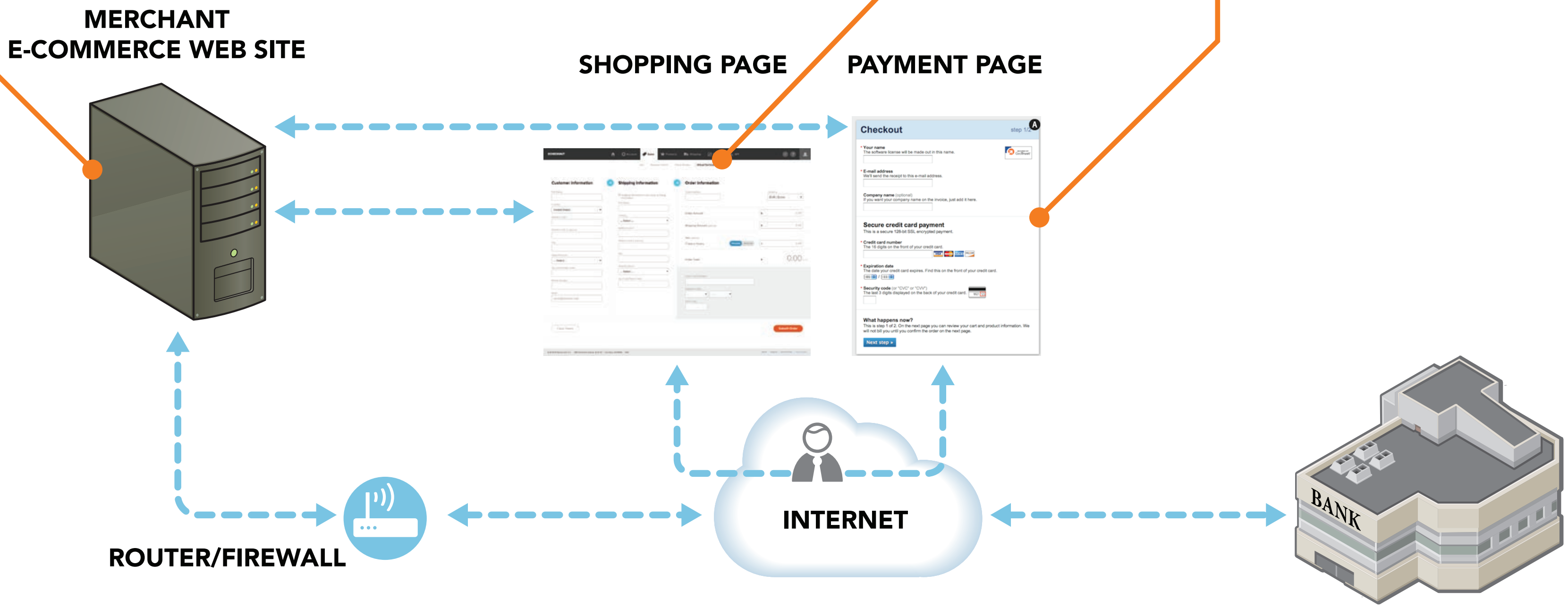
HIGHER

TYPE 11 OVERVIEW | TYPE 11 RISKS | TYPE 11 THREATS | TYPE 11 PROTECTIONS

Where is your card data at risk?

Electronic card data because of weaknesses on your website (even though you don't capture or store it)

Electronic card data at a third party (e-commerce hosting, payment gateway, shopping cart provider, etc.)



Checkout step 1/2

* Your name
The software license will be made out in this name.

* E-mail address
We'll send the receipt to this e-mail address.

Company name (optional)
If you want your company name on the invoice, just add it here.

Secure credit card payment
This is a secure 128-bit SSL encrypted payment.

* Credit card number
The 16 digits on the front of your credit card.

* Expiration date
The date your credit card expires. Find this on the front of your credit card.

* Security code (or "CVC" or "CVV")
The last 3 digits displayed on the back of your credit card.

What happens now?
This is step 1 of 2. On the next page you can review your cart and product information. We will not bill you until you confirm the order on the next page.

Next step »

TYPE 11

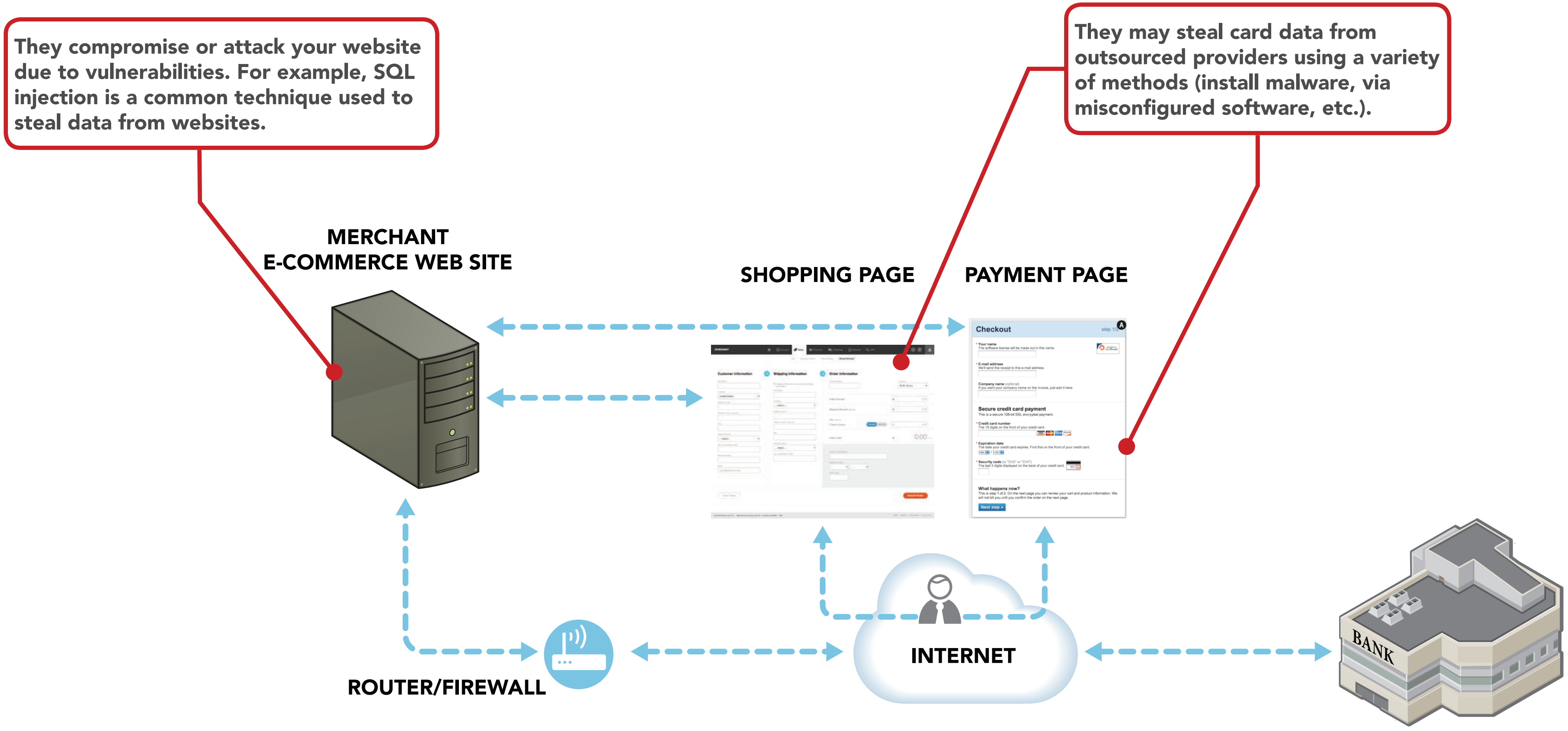
E-commerce merchant accepts payments on own payment page and manages own website. Payments sent via Internet by merchant.

RISK PROFILE

HIGHER

TYPE 11 OVERVIEW | TYPE 11 RISKS | **TYPE 11 THREATS** | TYPE 11 PROTECTIONS

How do criminals get your card data?



They compromise or attack your website due to vulnerabilities. For example, SQL injection is a common technique used to steal data from websites.

They may steal card data from outsourced providers using a variety of methods (install malware, via misconfigured software, etc.).

TYPE 11

E-commerce merchant accepts payments on own payment page and manages own website. Payments sent via Internet by merchant.

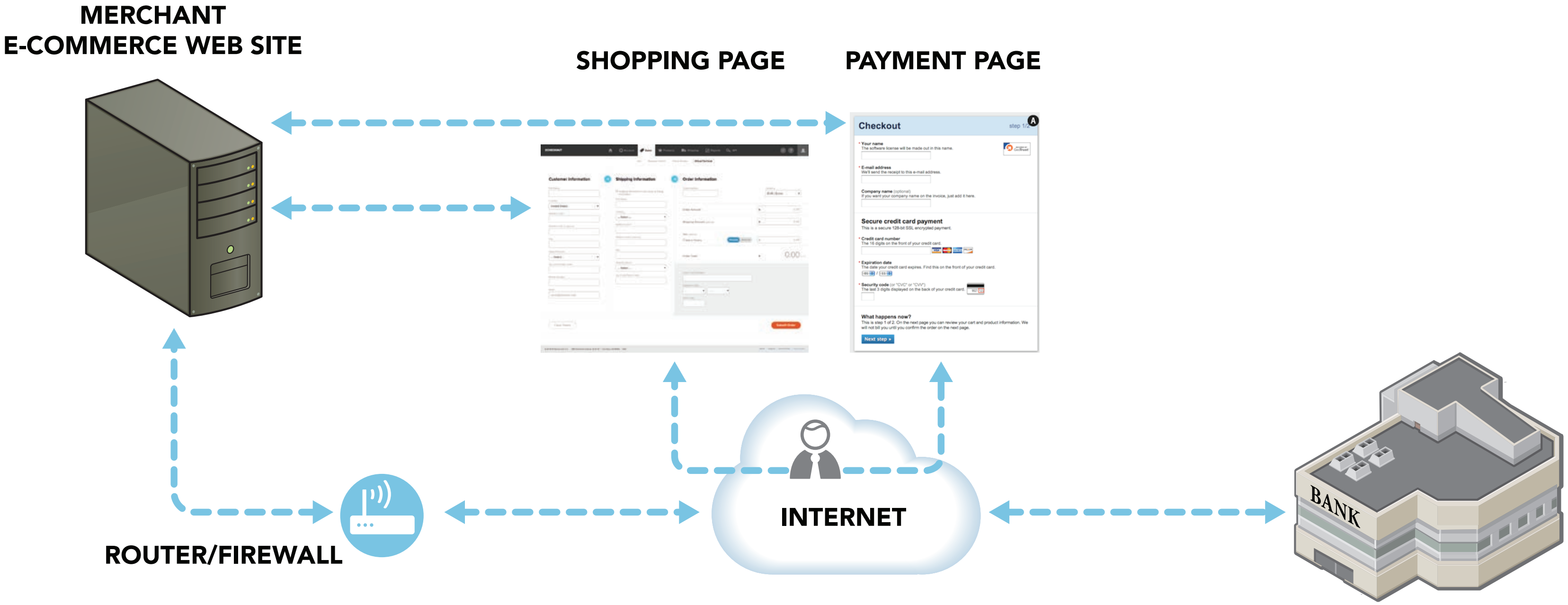
RISK PROFILE

HIGHER

TYPE 11 OVERVIEW | TYPE 11 RISKS | TYPE 11 THREATS | **TYPE 11 PROTECTIONS**

How do you start to protect card data today?*

- Use strong passwords
- Protect in-house access to your card data
- Use a secure payment terminal
- Protect card data and only keep what you need
- Limit remote access for your vendor partners - don't give hackers easy access
- Protect your business from the Internet
- Install patches from your payment terminal vendor
- Use anti-virus software
- Make your card data useless to criminals
- Ask your vendor partners for help if you need it
- Get regular vulnerability scanning



Checkout step 1/2

* Your name
The software license will be made out in this name.

* E-mail address
We'll send the receipt to this e-mail address.

Company name (optional)
If you want your company name on the invoice, just add it here.

Secure credit card payment
This is a secure 128-bit SSL encrypted payment.

* Credit card number
The 16 digits on the front of your credit card.

* Expiration date
The date your credit card expires. Find this on the front of your credit card.

* Security code (or "CVC" or "CVV")
The last 3 digits displayed on the back of your credit card.

What happens now?
This is step 1 of 2. On the next page you can review your cart and product information. We will not bill you until you confirm the order on the next page.

Next step »

Click on the icons above for the Guide to Safe Payments and information about these security basics.

PCI Security Standards Council®

Payment Protection Resources for Small Merchants: Common Payment Systems

TYPE 12

Encrypting secure card reader and mobile payment terminal. Payments sent via cellular network only.

RISK PROFILE

Chip: LOWER

Mag Stripe: LOWER

TYPE 12 OVERVIEW | TYPE 12 RISKS | TYPE 12 THREATS | TYPE 12 PROTECTIONS

YES
This IS my setup.
Show me the details.

NO
This IS NOT my setup.
Show me the next setup.

BACK
to previous diagram.

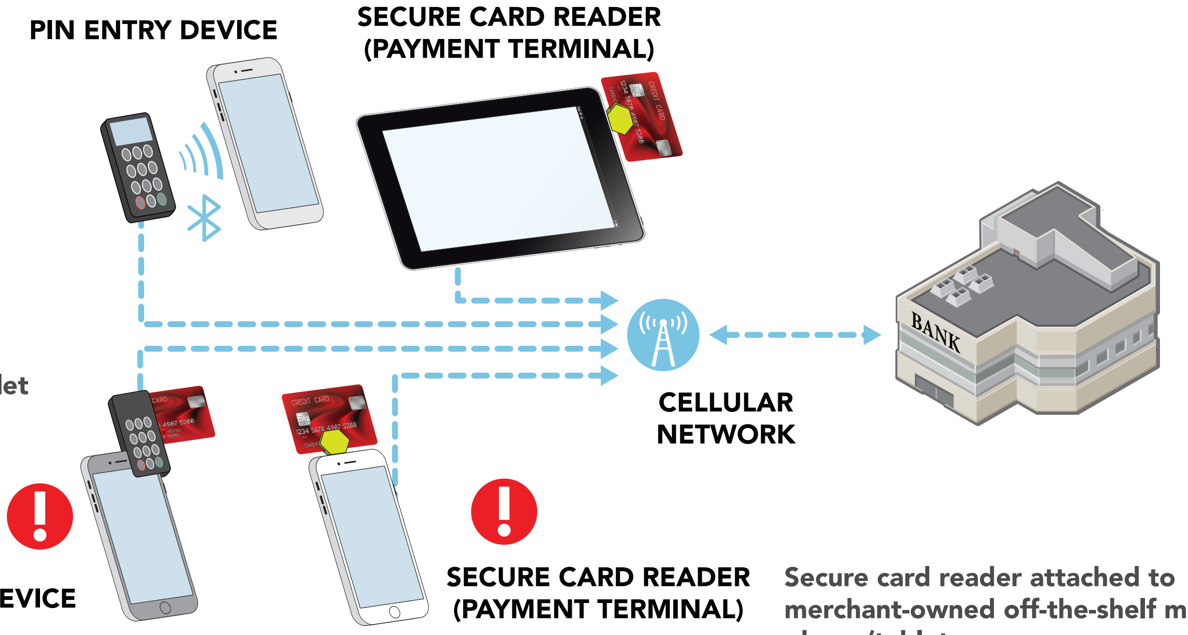
Different devices are used to read magnetic stripe card data, enter personal identification number (PIN), and read chip card data

Mobile payment terminal only connects to the Internet over the cellular network and does not use Wi-Fi

For merchants when at non-fixed locations (flea market, trade show, etc.)

Card data and PIN are encrypted in the secure card reader and PIN entry device before sending to phone/tablet; phone/tablet only has access to encrypted card data

Merchant has no ability to manually enter card data



PIN ENTRY DEVICE

SECURE CARD READER (PAYMENT TERMINAL)

CELLULAR NETWORK

PIN ENTRY DEVICE

SECURE CARD READER (PAYMENT TERMINAL)

Secure card reader attached to merchant-owned off-the-shelf mobile phone/tablet

For this scenario, risks to card data are present at ❗ above. Risks explained on next page.

TYPE 12

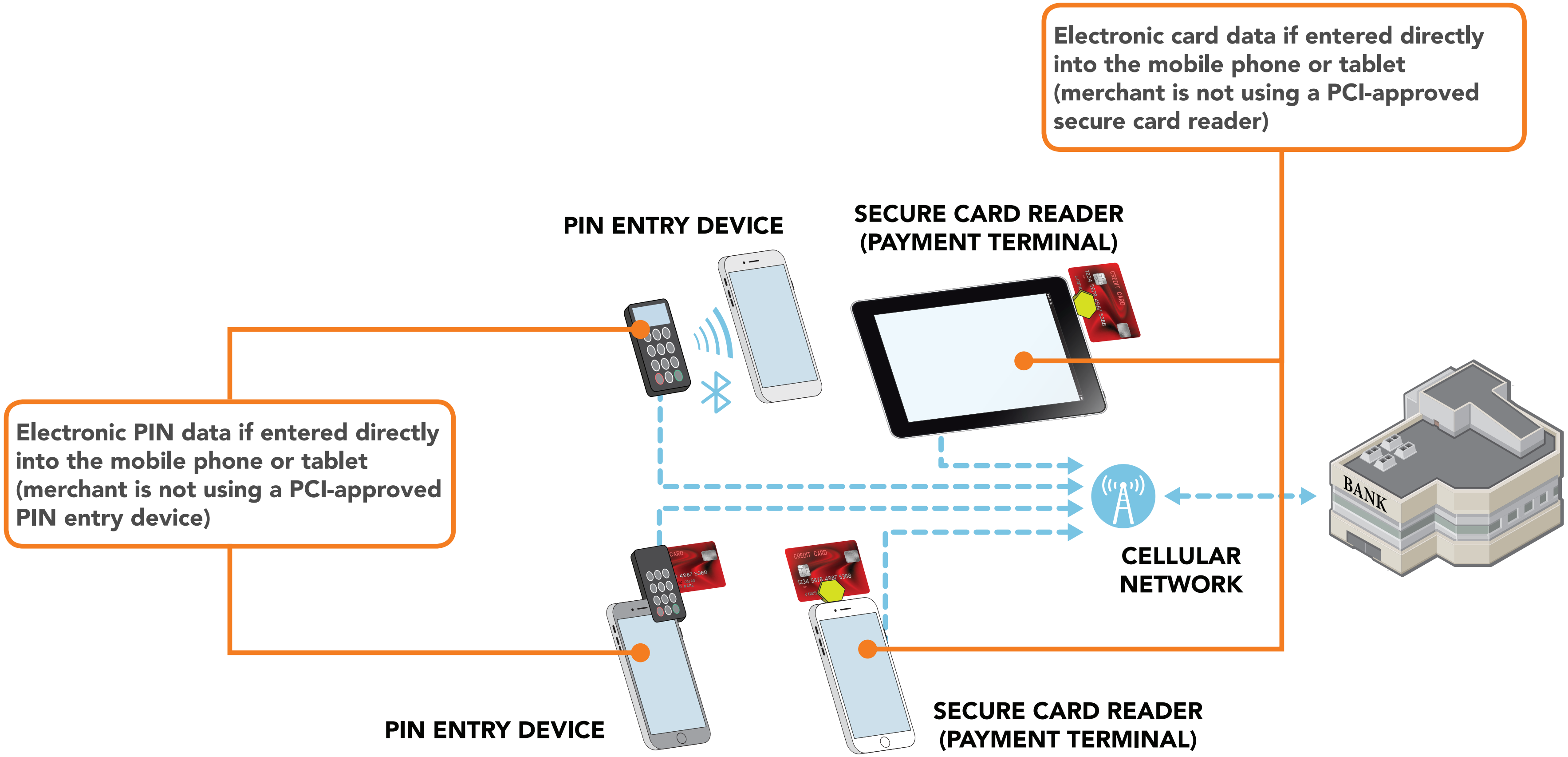
Encrypting secure card reader and mobile payment terminal. Payments sent via cellular network only.

RISK PROFILE

Chip	Mag Stripe
LOWER	LOWER

TYPE 12 OVERVIEW | **TYPE 12 RISKS** | TYPE 12 THREATS | TYPE 12 PROTECTIONS

Where is your card data at risk?


PIN ENTRY DEVICE
SECURE CARD READER (PAYMENT TERMINAL)
CELLULAR NETWORK
BANK
PIN ENTRY DEVICE
SECURE CARD READER (PAYMENT TERMINAL)

Electronic card data if entered directly into the mobile phone or tablet (merchant is not using a PCI-approved secure card reader)

Electronic PIN data if entered directly into the mobile phone or tablet (merchant is not using a PCI-approved PIN entry device)

PCI Security Standards Council®

Payment Protection Resources for Small Merchants: Common Payment Systems

TYPE 12

Encrypting secure card reader and mobile payment terminal. Payments sent via cellular network only.

RISK PROFILE

Chip: LOWER

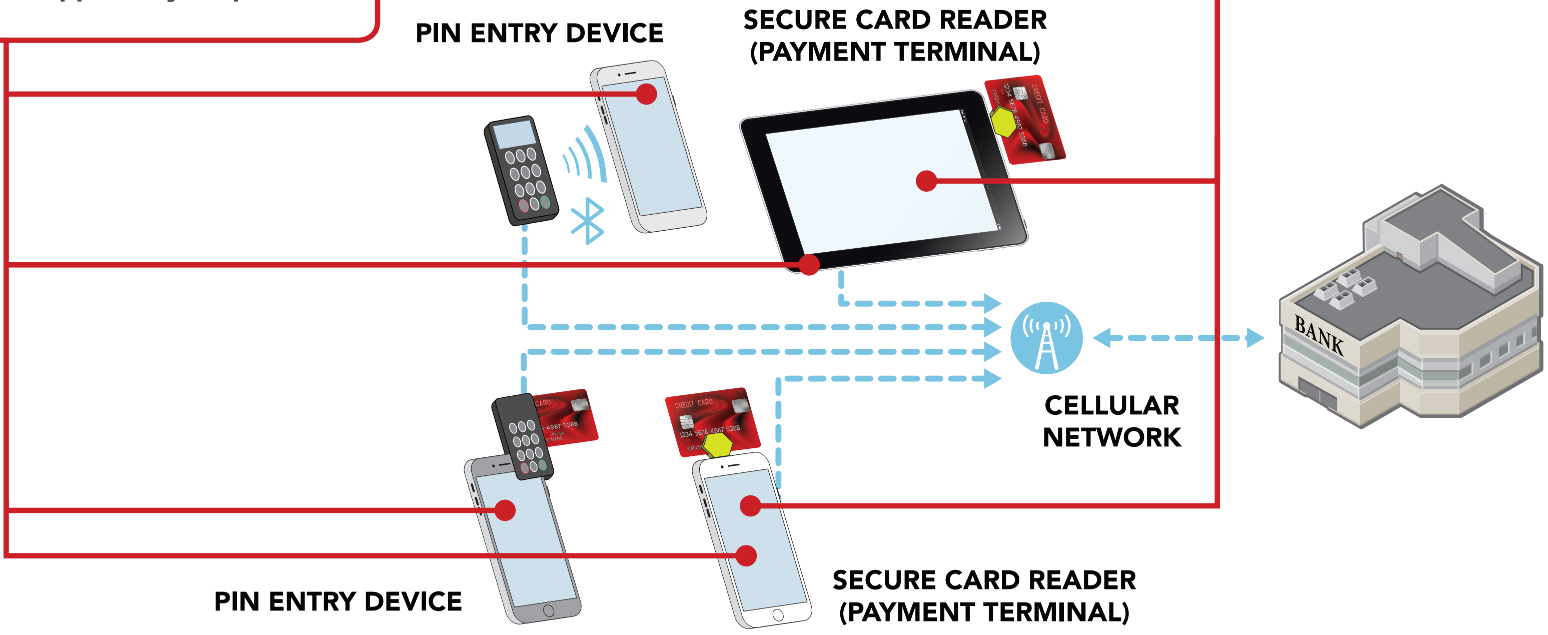
Mag Stripe: LOWER

How do criminals get your card data?

They may hack into phone/tablet and insert "malware"(software) that enables them to steal card data or PIN data on mobile phones/tablets.

They use applications in "app store" that enable them to steal card or PIN data when you download that app onto your phone/ tablet.

Criminals may swap out the secure card reader for one they have modified to include a skimmer.



PIN ENTRY DEVICE

SECURE CARD READER (PAYMENT TERMINAL)

CELLULAR NETWORK

BANK

PIN ENTRY DEVICE

SECURE CARD READER (PAYMENT TERMINAL)

PCI Security Standards Council®

TYPE 12

Encrypting secure card reader and mobile payment terminal. Payments sent via cellular network only.

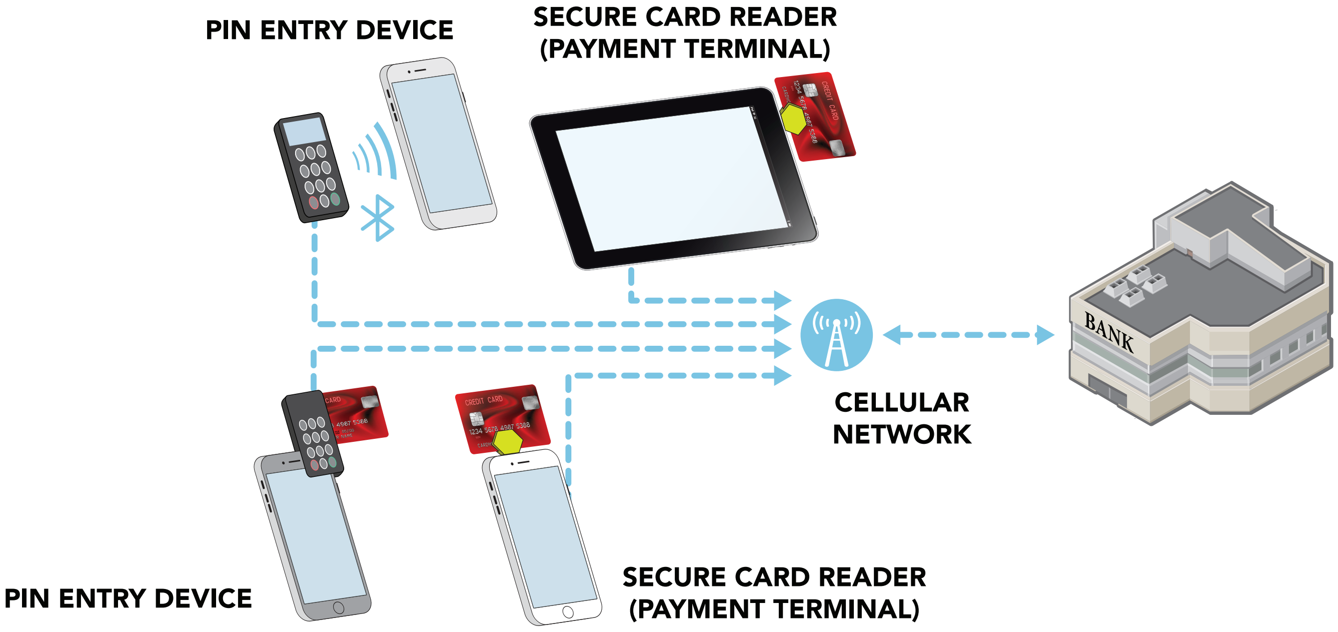
RISK PROFILE

Chip	Mag Stripe
LOWER	LOWER

TYPE 12 OVERVIEW · TYPE 12 RISKS · TYPE 12 THREATS · TYPE 12 PROTECTIONS

How do you start to protect card data today?*

- Inspect your secure card readers and PIN entry devices for damage or changes
- Install patches from your vendors
- Ask your vendor partners for help if you need it
- Use anti-virus software
- Use a secure card reader and PIN entry device
- Make your card data useless to criminals



PIN ENTRY DEVICE

SECURE CARD READER (PAYMENT TERMINAL)

CELLULAR NETWORK

PIN ENTRY DEVICE

SECURE CARD READER (PAYMENT TERMINAL)

*Click on the icons above for the Guide to Safe Payments and information about these security basics.

TYPE 13

Encrypting secure card reader and mobile payment terminal. Payments sent via cellular network or Wi-Fi.

RISK PROFILE

Chip	Mag Stripe
MODERATE	MODERATE

TYPE 13 OVERVIEW | TYPE 13 RISKS | TYPE 13 THREATS | TYPE 13 PROTECTIONS

YES
This IS my setup.
Show me the details.

NO
This IS NOT my setup.
Show me the next setup.

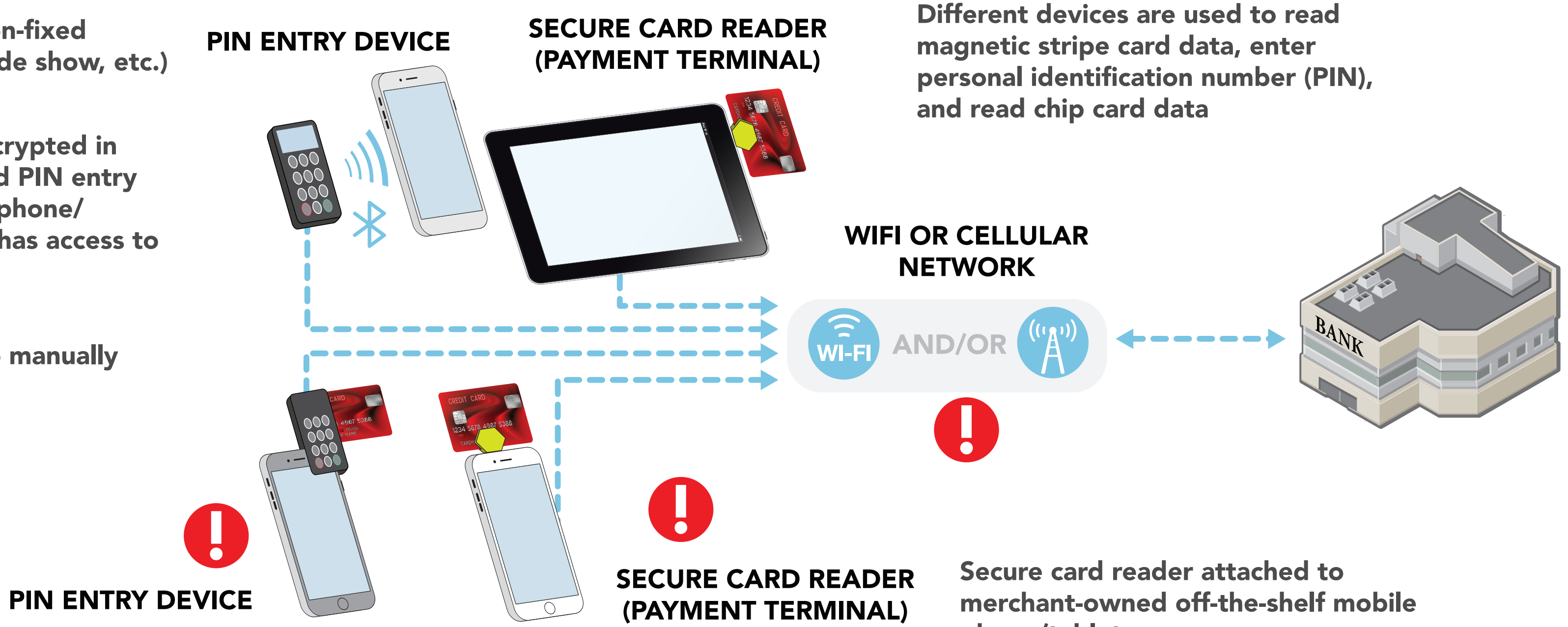
BACK
to previous diagram.

Connects to Internet over the cellular network and/or Wi-Fi.

For merchants when at non-fixed locations (flea market, trade show, etc.)

Card data and PIN are encrypted in the secure card reader and PIN entry device before sending to phone/tablet; phone/tablet only has access to encrypted card data

Merchant has no ability to manually enter card data


PIN ENTRY DEVICE
SECURE CARD READER (PAYMENT TERMINAL)
WIFI OR CELLULAR NETWORK
WI-FI
AND/OR
BANK
PIN ENTRY DEVICE
SECURE CARD READER (PAYMENT TERMINAL)

Different devices are used to read magnetic stripe card data, enter personal identification number (PIN), and read chip card data

Secure card reader attached to merchant-owned off-the-shelf mobile phone/tablet

For this scenario, risks to card data are present at ❗ above. Risks explained on next page.

TYPE 13

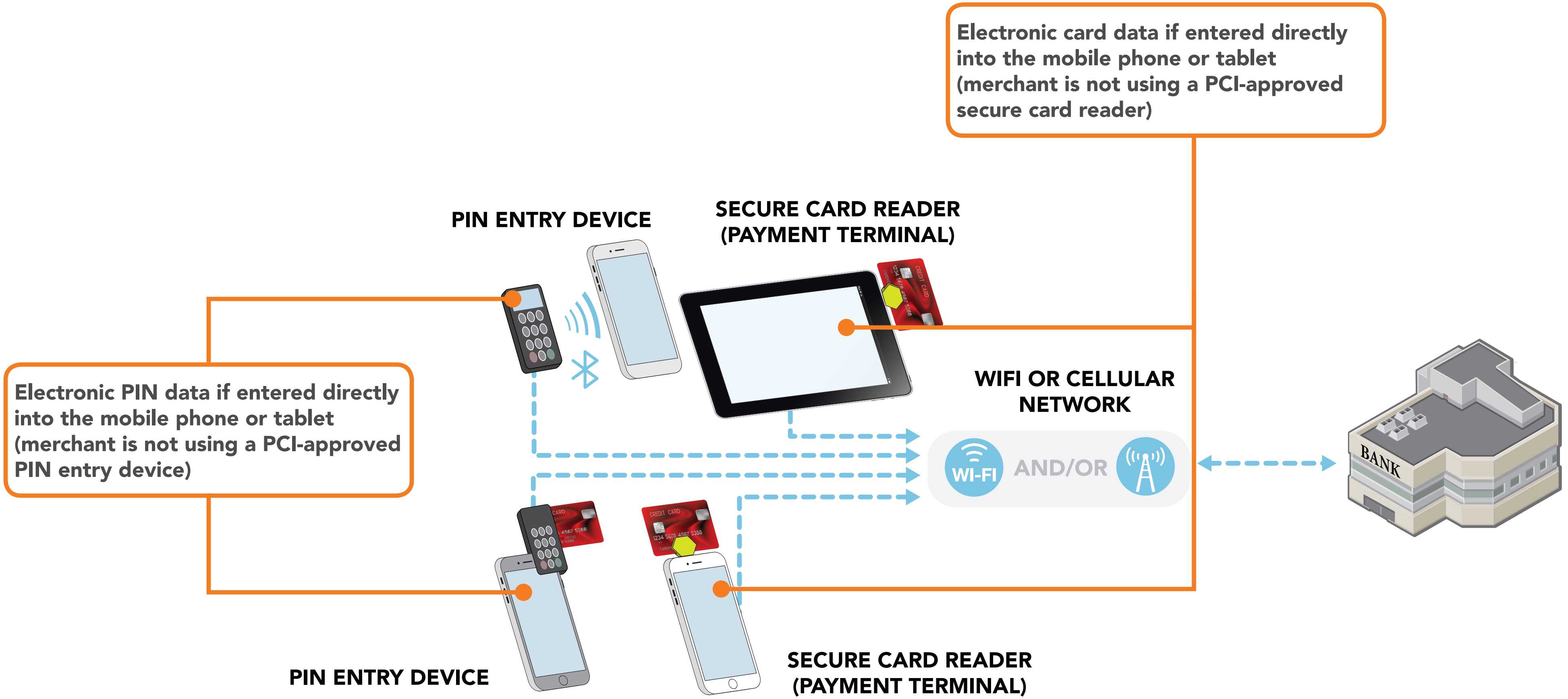
Encrypting secure card reader and mobile payment terminal. Payments sent via cellular network or Wi-Fi.

RISK PROFILE

Chip: MODERATE

Mag Stripe: MODERATE

Where is your card data at risk?



Electronic card data if entered directly into the mobile phone or tablet (merchant is not using a PCI-approved secure card reader)

Electronic PIN data if entered directly into the mobile phone or tablet (merchant is not using a PCI-approved PIN entry device)

PIN ENTRY DEVICE
SECURE CARD READER (PAYMENT TERMINAL)
WIFI OR CELLULAR NETWORK
WI-FI
AND/OR
BANK
PIN ENTRY DEVICE
SECURE CARD READER (PAYMENT TERMINAL)

PCI Security Standards Council®

TYPE 13

Encrypting secure card reader and mobile payment terminal. Payments sent via cellular network or Wi-Fi.

RISK PROFILE

Chip	Mag Stripe
MODERATE	MODERATE

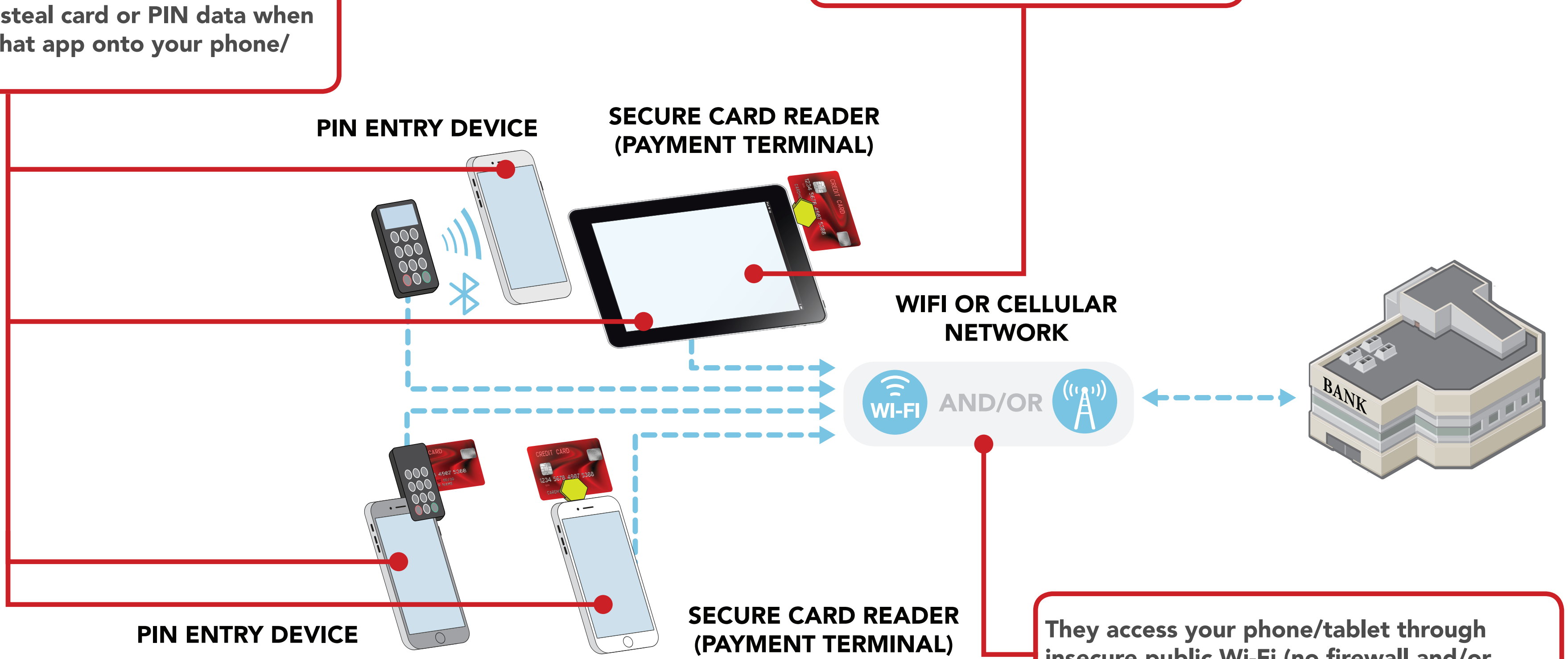
TYPE 13 OVERVIEW | TYPE 13 RISKS | TYPE 13 THREATS | TYPE 13 PROTECTIONS

How do criminals get your card data?

They may hack into phone/tablet and insert "malware"(software) that enables them to steal card data or PIN data on mobile phones/tablets.

They use applications in "app store" that enable them to steal card or PIN data when you download that app onto your phone/ tablet.

Criminals may swap out the secure card reader for one they have modified to include a skimmer.



PIN ENTRY DEVICE
SECURE CARD READER (PAYMENT TERMINAL)
WIFI OR CELLULAR NETWORK
WI-FI
AND/OR
BANK
PIN ENTRY DEVICE
SECURE CARD READER (PAYMENT TERMINAL)

They access your phone/tablet through insecure public Wi-Fi (no firewall and/or unknown security) to steal card or PIN data

PCI Security Standards Council®

TYPE 13

Encrypting secure card reader and mobile payment terminal. Payments sent via cellular network or Wi-Fi.

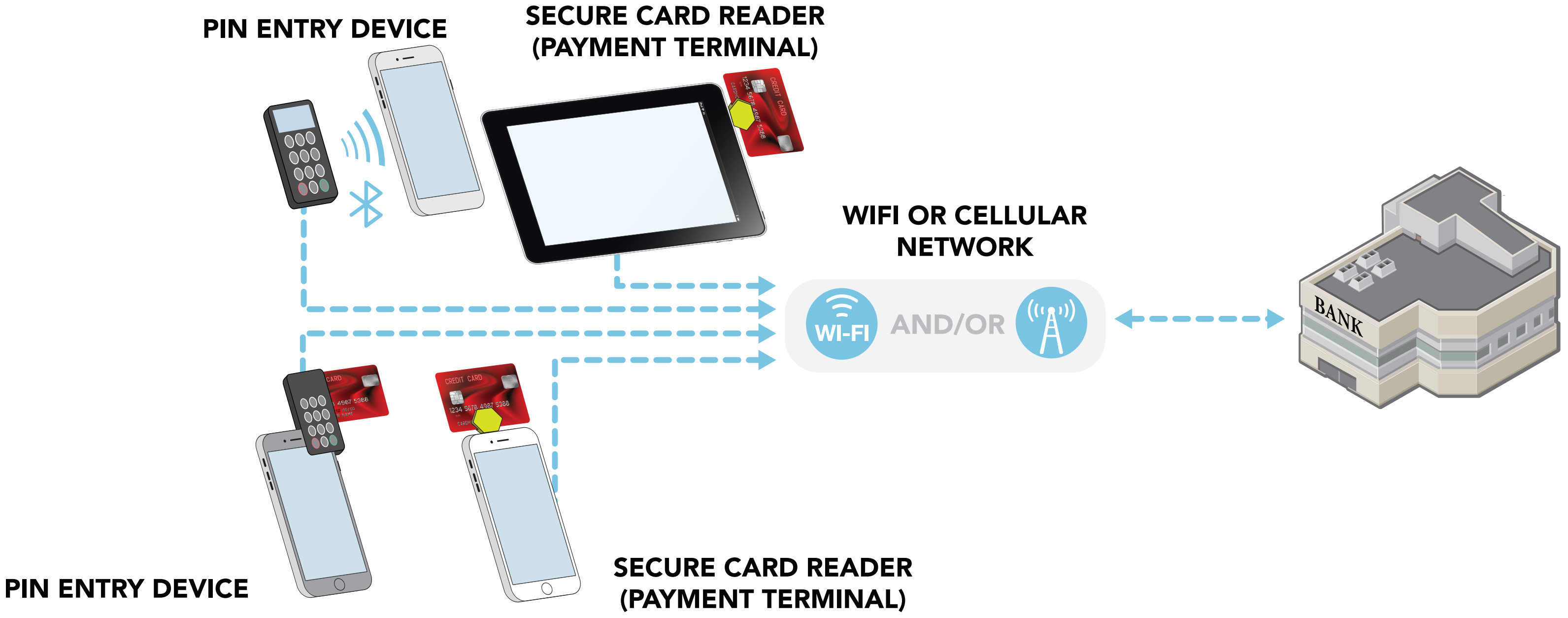
RISK PROFILE

Chip	Mag Stripe
MODERATE	MODERATE

TYPE 13 OVERVIEW | TYPE 13 RISKS | TYPE 13 THREATS | **TYPE 13 PROTECTIONS**

How do you start to protect card data today?*

- Use strong passwords
- Protect in-house access to your card data
- Protect your business from the Internet
- Inspect your secure card readers and PIN entry devices for damage or changes
- Limit remote access for your vendor partners - don't give hackers easy access
- Make your card data useless to criminals
- Install patches from your payment terminal vendor
- Use anti-virus software
- Ask your vendor partners for help if you need it
- Use a secure card reader and PIN entry device


PIN ENTRY DEVICE
SECURE CARD READER (PAYMENT TERMINAL)
WIFI OR CELLULAR NETWORK
WI-FI
AND/OR
BANK
PIN ENTRY DEVICE
SECURE CARD READER (PAYMENT TERMINAL)

*Click on the icons above for the Guide to Safe Payments and information about these security basics.

PCI Security Standards Council®

Payment Protection Resources for Small Merchants: Common Payment Systems

TYPE 14

Virtual payment terminal accessed via merchant Internet browser. Payments sent via Internet.

RISK PROFILE

LOWER

TYPE 14 OVERVIEW | TYPE 14 RISKS | TYPE 14 THREATS | TYPE 14 PROTECTIONS

YES
This IS my setup.
Show me the details.

NO
This IS NOT my setup.
Take me back to the beginning.

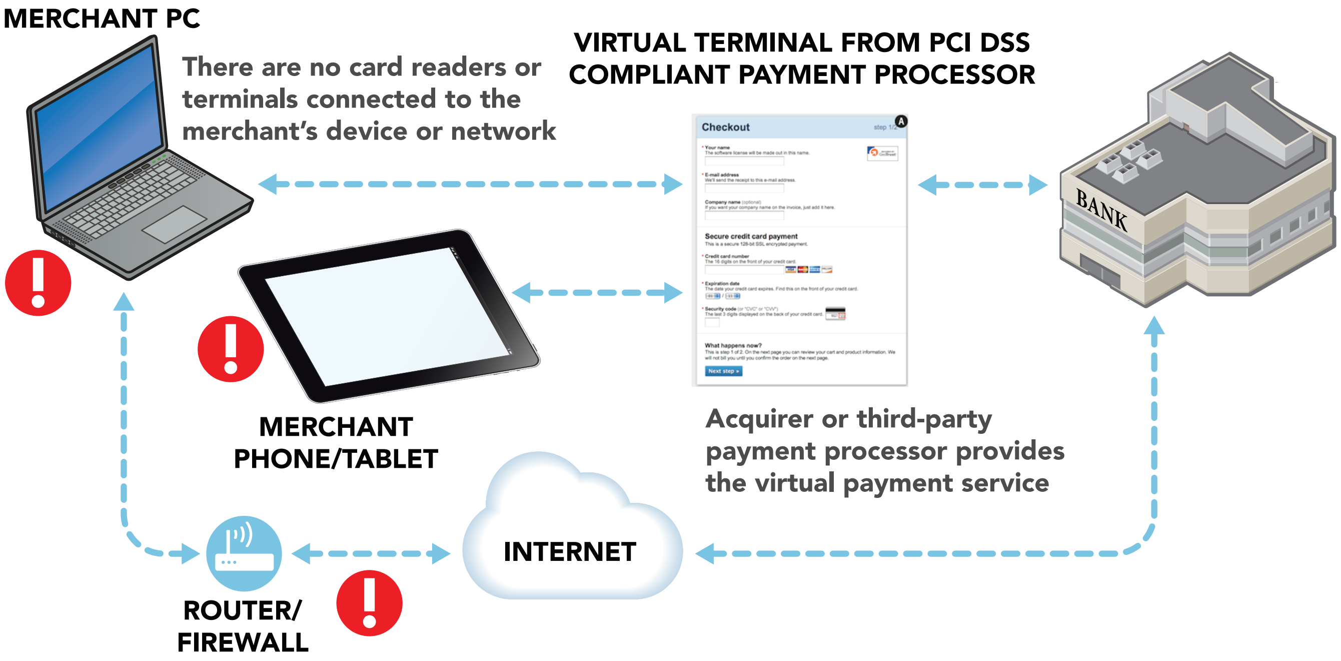
BACK
to previous diagram.

Note that there is greater risk if mobile payment acceptance is done over unprotected public Wi-Fi since criminals can steal your card data via that unsecured network.

A "virtual terminal" is a web page accessed by the merchant, for example, with a computer or a tablet

Merchant manually enters card data via their web browser into the virtual terminal

For merchants without a traditional payment terminal. They manually enter transactions one at a time and usually have low payment transaction volume (for example, those doing sales from home)



There are no card readers or terminals connected to the merchant's device or network

Checkout step 1/2

* Your name
The software license will be made out in this name.

* E-mail address
We'll send the receipt to this e-mail address.

Company name (optional)
If you want your company name on the invoice, just add it here.

Secure credit card payment
This is a secure 128-bit SSL encrypted payment.

* Credit card number
The 16 digits on the front of your credit card.

* Expiration date
The date your credit card expires. Find this on the front of your credit card.

* Security code (or "CVC" or "CVV")
The last 3 digits displayed on the back of your credit card.

What happens now?
This is step 1 of 2. On the next page you can review your cart and product information. We will not bill you until you confirm the order on the next page.

Next step »

Acquirer or third-party payment processor provides the virtual payment service

For this scenario, risks to card data are present at ❗ above. Risks explained on next page.

PCI Security Standards Council®

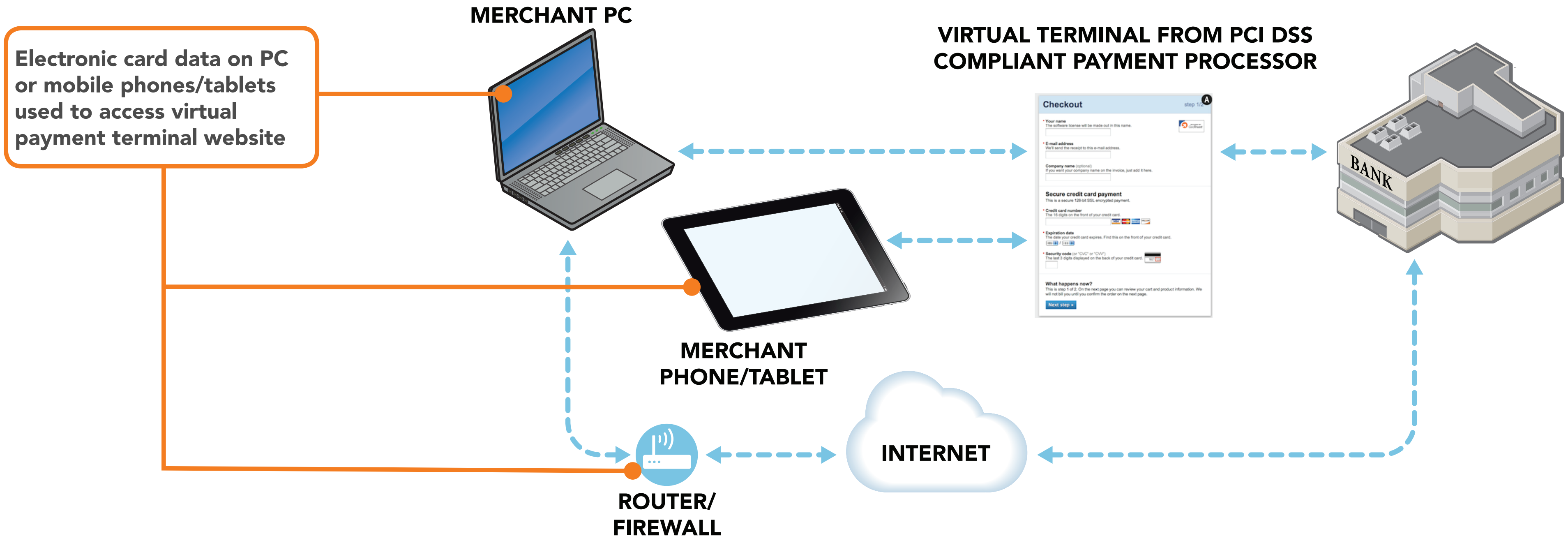
TYPE 14

Virtual payment terminal accessed via merchant Internet browser. Payments sent via Internet.

RISK PROFILE

LOWER

Where is your card data at risk?



Electronic card data on PC or mobile phones/tablets used to access virtual payment terminal website

Checkout step 1/2

* Your name
The software license will be made out in this name.

* E-mail address
We'll send the receipt to this e-mail address.

Company name (optional)
If you want your company name on the invoice, just add it here.

Secure credit card payment
This is a secure 128-bit SSL encrypted payment.

* Credit card number
The 16 digits on the front of your credit card.

* Expiration date
The date your credit card expires. Find this on the front of your credit card.

* Security code (or "CVC" or "CVV")
The last 3 digits displayed on the back of your credit card.

What happens now?
This is step 1 of 2. On the next page you can review your cart and product information. We will not bill you until you confirm the order on the next page.

Next step »

TYPE 14

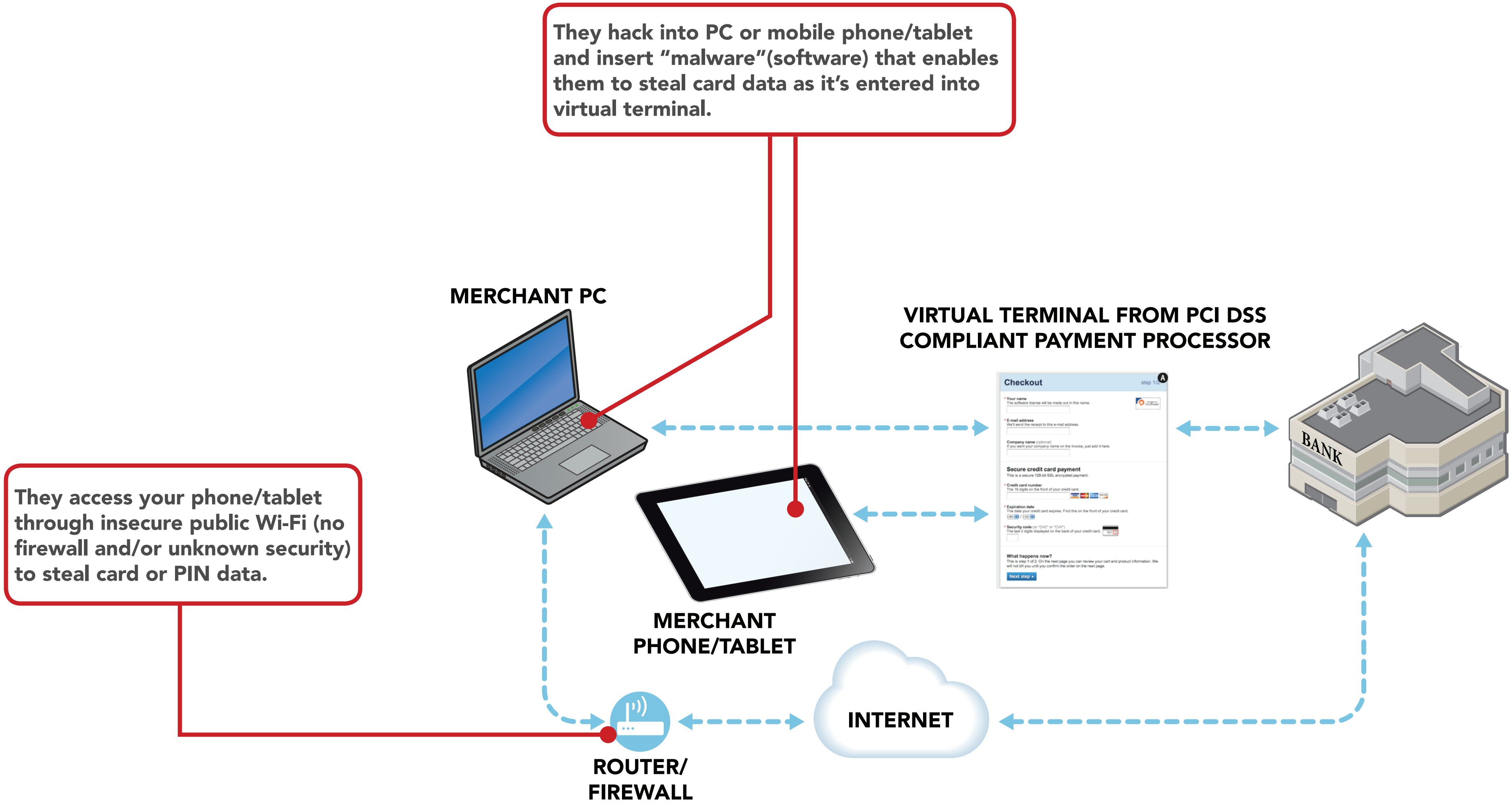
Virtual payment terminal accessed via merchant Internet browser. Payments sent via Internet.

RISK PROFILE

LOWER

TYPE 14 OVERVIEW | TYPE 14 RISKS | TYPE 14 THREATS | TYPE 14 PROTECTIONS

How do criminals get your card data?



They hack into PC or mobile phone/tablet and insert "malware"(software) that enables them to steal card data as it's entered into virtual terminal.

They access your phone/tablet through insecure public Wi-Fi (no firewall and/or unknown security) to steal card or PIN data.

MERCHANT PC

MERCHANT PHONE/TABLET

VIRTUAL TERMINAL FROM PCI DSS COMPLIANT PAYMENT PROCESSOR

Checkout step 1/2

* Your name
The software license will be made out in this name.

* E-mail address
We'll send the receipt to this e-mail address.

Company name (optional)
If you want your company name on the invoice, just add it here.

Secure credit card payment
This is a secure 128-bit SSL encrypted payment.

* Credit card number
The 16 digits on the front of your credit card.

* Expiration date
The date your credit card expires. Find this on the front of your credit card.

* Security code (or "CVC" or "CVV")
The last 3 digits displayed on the back of your credit card.

What happens now?
This is step 1 of 2. On the next page you can review your cart and product information. We will not bill you until you confirm the order on the next page.

Next step »

INTERNET

ROUTER/ FIREWALL

PCi Security Standards Council®

TYPE 14

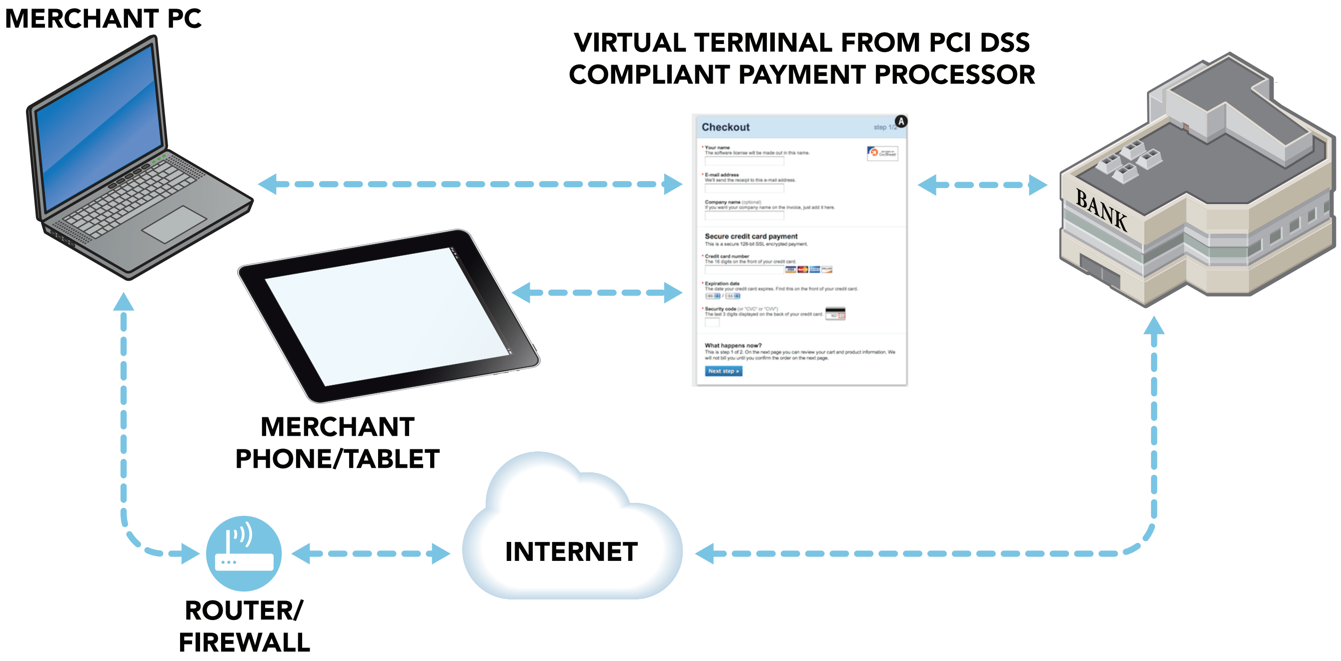
Virtual payment terminal accessed via merchant Internet browser. Payments sent via Internet.

RISK PROFILE
LOWER

TYPE 14 OVERVIEW | TYPE 14 RISKS | TYPE 14 THREATS | TYPE 14 PROTECTIONS

How do you start to protect card data today?*

- Use strong passwords
- Use anti-virus software
- Install patches from your payment terminal vendor
- Get regular vulnerability scanning
- Ask your vendor partners for help if you need it
- Use a firewall (or personal firewall software if using public Wi-Fi)
- Limit remote access for your vendor partners - don't give hackers easy access



Checkout step 1/2

* Your name
The software license will be made out in this name.

* E-mail address
We'll send the receipt to this e-mail address.

Company name (optional)
If you want your company name on the invoice, just add it here.

Secure credit card payment
This is a secure 128-bit SSL encrypted payment.

* Credit card number
The 16 digits on the front of your credit card.

* Expiration date
The date your credit card expires. Find this on the front of your credit card.

* Security code (or "CVC" or "CVV")
The last 3 digits displayed on the back of your credit card.

What happens now?
This is step 1 of 2. On the next page you can review your cart and product information. We will not bill you until you confirm the order on the next page.

Click on the icons above for the Guide to Safe Payments and information about these security basics.

PCI Security Standards Council®

Resources

PCI Small Merchant Documents

Resource	Link	URL
Guide to Safe Payments	*Guide to Safe Payments*	*https://www.pcisecuritystandards.org/pdfs/Small_Merchant_Guide_to_Safe_Payments.pdf*
Small Merchant Questions for Vendors	*Small Merchant Questions for Vendors*	*https://www.pcisecuritystandards.org/pdfs/Small_Merchant_Questions_To_Ask_Your_Vendors.pdf*
Small Merchant Glossary	*Small Merchant Glossary*	*https://www.pcisecuritystandards.org/pdfs/Small_Merchant_Glossary_of_Payment_and_Information_Security_Terms.pdf*