

RANSOMWARE EMERGENCY RESPONSE GUIDE

RECOVER FROM A RANSOMWARE ATTACK

cyber.gov.au

-	×	•	٠	4	Ŧ	4	×	*	÷	v			٣	٠	Ŧ		÷	V	•		
	*	÷	*	•	•	4	*	•	•	۳	•	-	v	v	*	٠		▼			
•	•			*	-	•			•		•		•		•	•	•				
•					•			•	•	•	•	•			•			▼	V	▼	

What to do if you're held to ransom

A guide to remove ransomware, recover your files and protect yourself against future attacks.

Ransomware is a common and dangerous type of malware. It works by locking up or encrypting your files so that you can no longer access them.

A ransom, usually in the form of cryptocurrency, is demanded to restore access to the files, or to prevent data and intellectual property from being leaked or sold online.

This guide has simple steps to follow if you are a victim of ransomware. The first section will show you how to respond if one of your devices is infected with ransomware. The second section will help you to recover your files and restore your devices.

NEVER PAY A RANSOM

There is no guarantee your files will be restored, nor does it prevent the publication of any stolen data or its sale for use in other crimes. You may also be targeted by another attack.

Call the Australian Cyber Security Centre 24/7 Hotline on **<u>1300 CYBER1</u>** (1300 292 371) if you need cyber security assistance.

Not all ransomware attacks are the same so some of the steps in this guide may not apply to your situation. Use the actions that best suit your case.

Table of Contents

Here are the simple ways you can remove ransomware, recover your files and protect yourself against future attacks. **If you get stuck, find a professional to help you work through a ransomware attack or call the Australian Cyber Security Centre's 24/7 Hotline on 1300 CYBERI (1300 292 371).**

RESPOND TO A RANSOMWARE ATTACK

STEP 1: RECORD IMPORTANT DETAILS	4
of the ransom note or any new file extensions you have noticed. STEP 2: TURN OFF THE INFECTED DEVICE	5
As soon as you have finished Step I, turn off the infected device by holding down the power button or unplugging it from the wall. This is the best way to stop ransomware from spreading.	5
STEP 3: DISCONNECT YOUR OTHER DEVICES If there are other devices on your network, you should turn them off too. Start with your most important devices that store valuable information such as servers, computers, phones and tablets.	5
STEP 4: CHANGE YOUR IMPORTANT PASSWORDS	5

Some forms of ransomware steal your passwords. As a precaution, you should change the passwords for your online accounts, starting with your most important accounts first.

RECOVER FROM A RANSOMWARE ATTACK

STEP 5: RECOVER YOUR INFORMATION	. 6
Check your backups for use in Step 7. Make sure not to connect your backup to the infected device or	
network. If you think your backups may be infected with ransomware, or you don't have a backup,	
ask an IT professional for support.	

For most people, the best way to remove ransomware is to wipe all infected drives and devices and reinstall their operating systems. We recommend following this step for all drives and devices that were on the same network as the infected device at any point since the infection.

After removing the ransomware in Step 6, it is safe to restore your information. Use the backups from Step 5, but only if you are confident that they are free from ransomware.

If your business holds sensitive information or is part of a government supply chain, you may need to report the incident to regulators. Consult with <u>oaic.gov.au</u>. You should also report the incident to the ACSC through <u>ReportCyber</u> at <u>cyber.gov.au</u>.

PREVENT FUTURE ATTACKS

STEP 9: PREVENT FUTURE ATTACKS	
The ACSC has published advice to help you protect yourself against ransomware attacks,	
available on <u>cyber.gov.au</u> .	

Respond to a ransomware attack

Start here if you are experiencing a ransomware attack.

Work through the steps below as quickly as you can. Acting quickly could stop the ransomware from spreading.

If you get stuck, seek professional help. Ransomware attacks can cause serious damage. It is hard to tackle and overcome them on your own. Consider finding a professional to help you work through a ransomware attack and get back on your feet.

Step 1: Record important details

It is important to record important details about the ransomware attack to help you:

- ask for help from a professional
- make an insurance, bank or legal claim that may follow after the attack
- make a report to the ACSC through <u>ReportCyber</u>
- tell your family, colleagues or authorities that there has been an issue.

Complete this step as quickly as possible, as the ransomware could still be spreading through your device and network.

What to record

The details you should try to record are:

- if the files that have been affected by ransomware have a new extension
- the name of any new file extension
- \cdot the ransom note
- anything else that has changed since the attack.

A quick way to record the information you need is to take a photo of your screen. It's okay if you can't record everything, but you should try to capture as much as possible, as quickly as you can.



Step 2: Turn off the infected device

As soon as you have recorded details about the ransomware attack, turn off the infected device by holding down the power button or unplugging it from the wall. For most people, this is the best way to stop the ransomware from spreading.

Step 3: Disconnect your other devices

Ransomware can spread across networks. If there are other devices on your network, you should turn them off too. Start with the devices that are most important to you. Important devices typically include things like Network Attached Storage (NAS) devices, servers, computers, phones, tablets, and any other devices that store valuable information.

Step 4: Change your important passwords

Some forms of ransomware steal your passwords. It can be difficult to know what information ransomware has accessed so, as a precaution, you should change the passwords for your accounts as soon as possible. Start with your most important accounts first.

What's important will be different for everyone, but important accounts typically include:

- cloud storage accounts
- email accounts
- bank accounts
- business accounts.

The ACSC has published <u>guidance on using</u> <u>password managers</u> and <u>guidance on creating</u> <u>passphrases</u> (a strong type of password). These resources are available at **cyber.gov.au**/ **passphrases**.

As you change your passwords, consider enabling multi-factor authentication on supported accounts. Multi-factor authentication makes it harder for cybercriminals to get access to your accounts. The ACSC has published guidance on <u>enabling multi-factor authentication</u>. This is available at **cyber.gov.au/mfa**.



Recover from a ransomware attack

Now that you've responded to a ransomware attack, it's time to recover your information, restore your infected devices and report the incident.

Note: At the end of this guide, you will be given guidance on reporting the incident. In some cases you may need to make reports urgently, for example, to meet obligations to your customers or your insurance company. Consider if you have any urgent reporting requirements before you begin the next step.

Step 5: Recover your information

Check your backups

The ACSC recommends you <u>keep backups</u> of your information as a precaution against things like ransomware attacks.

If you have backups, make sure they are free from ransomware to avoid re-infecting your device. Your backups may be infected with ransomware if they are saved on your infected device or were on the same network as your infected device at any point since the infection. Your backups should be secure if they were never connected to the infected device or to the same network as the infected device.

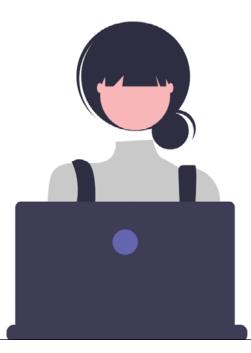
If you think your backups may be infected with ransomware, don't try to access them, ask an IT professional for support.

If you have backups that are free from ransomware, make sure you don't connect them to your infected device or network. Remove the ransomware from the infected device or network first using the guidance in Step 6.

What to do if you don't have a secure backup of your information

If you do not have a secure backup, it may still be possible to recover your information but you will likely need professional help. Consider how important the affected information is to you and how much you are willing to pay for professional help to restore it.

Remember, never pay a ransom. There is no guarantee your files will be restored, nor does it prevent the publication of any stolen data or its sale for use in other crimes. You may also be targeted by another attack.



Step 6: Remove ransomware from affected drives and devices

Ransomware can be difficult to remove. For most people, the best way to remove ransomware is to wipe all infected drives and devices and reinstall their operating systems. **Be aware that this step will permanently delete all of your information so make sure you've completed Step 5 and recovered what information you can first.**

Remember that ransomware can spread across a network. We recommend following this step for all drives and devices that were on the same network as the infected device at any point since the infection.

The steps to wipe your drives and devices vary across manufacturers. The manufacturer of your drive or device will have guidance on their website. We've listed some resources below.

Apple iPhone, iPad or iPod:	support.apple.com/HT201252
-----------------------------	----------------------------

Apple Mac devices: support.apple.com/HT212749

<u>Microsoft Windows devices:</u> support.microsoft.com (Search for the article "Recovery options in Windows")

Samsung phones: samsung.com/au/support/mobiledevices/factory-data-reset-samsung-phone/

Google Pixel phones: support.google.com/pixelphone/ answer/4596836



Step 7: Restore your information

Now that you have removed the ransomware from affected drives and devices, it is safe to connect them to your backups and restore your information. Remember the guidance in Step 5; only restore information from a backup if you are confident that it is free from ransomware.

The ACSC's <u>guidance on backups</u> includes information on restoring your information. This is available at **cyber.gov.au/backups**.

Step 8: Notify and Report

Report the incident to the ACSC through <u>ReportCyber</u> at **cyber.gov.au/acsc/report**. Submitting a report helps to disrupt cybercrime operations and make Australia the most secure place to connect online. Include the information you recorded in Step 1.

Additional reporting responsibilities for businesses

If you're a business, depending on the severity of the ransomware compromise, you may have to notify your customers of the attack.

If your business holds sensitive information (such as financial or personally identifiable information), or is part of a government supply chain, you may also need to report the incident to regulators.

If you think you need to make a report, consult with the <u>Office of the Australian Information</u> <u>Commissioner</u> at **oaic.gov.au** or seek legal or government support.

Prevent future attacks

Step 9: Prevent future attacks

Take some time to consider how your device was infected with ransomware so you can prevent the same thing from happening again. The ACSC has published advice to help you protect yourself against ransomware attacks at **cyber.gov.au/ransomware**.

This advice outlines precautions you can take to reduce the impact of ransomware attacks or prevent them from happening in the first place.

American Government /_CSC Generative Generat	Ransomware Prevention Guide	Ransomware Prevention Guide
	A V B V B B B B B B B B B B B B B B B B	Use anti-virus software Turn on multi-factor
	Secure your devices	Anti-virus software can help to prevent, detect and remove ransomware on your device. Make
	to stop ransomware	sure you turno nyour anti-ivinus software and keep iii up to dent. The ACC has published guident and the software on <u>theorem on thirms software</u> . Nou may also denoty how an and the software how may also denoty how an and the software how may also denoty how and with as both any and with a both any and with denoty how and with as both any and with a both any and with denoty how and with as both any and with a both any and with denoty how and with as both any and with a both any and with any any any any also any
	attacks	a built-in anti-virus tool called Windows Security. time, effort, and resources to get into your device
	Regularly update your devices Implement access controls	Waterer end visuo juo ducas, ser econnecti familiaria you ducas, ser econnecti veningo local list. Secontina vestalaria ad gibi en o hampi local list. Secontina vestalaria ad gibi en b hampi last. Para secontina vestalaria ad gibi and hampi last. Para seconti da list. Para seconti da l
	Cybercriminds use known weaknesses to hout. Controlling who can access what an your devices your devices. Updates have security upgrades so known weaknesses can't be used to hout. do so famil the amount of data that reasonware.	you a take warming to kry and get you to clack on a harmful link. If you know what your anth- virus warming look like, you can avoid the harmful link.
	you. You should always uppoting you synteem and applications when proprietal You can delabel that you can delabel the applications when proprietations and that updates happen without your input.	Turn on ransomware protection something a user has (smartcard, physical token), or
	Read our advice on updates for more information, These are two herest of excessible way see set up to be	Some anti-vice products offer remsionware protection. Make sure you enable this function to protect your devices.
	induting how to update your Windows, Apple and Andreid devices. This can be found at cyber.gov.ou update.	For Microsoft Windows devices, you can enable controlled folder access within Windows for more information. This can be found at
	If you have a construct Network Allock and Streams There who a and to should have an extension proto-	Security. This will prevent designated files on your device from being encrypted by manomwore. For more information visit <u>Microsoft's website</u> Use unique passphrases
	(NK3) divoice in your retriever, make user threy one regularly updated for the line user and the line set of the set of t	Disable macros If your accounts do not have multi-factor
	Set up and perform regular backups If you use a Windows device, fotow <u>Microsoft's</u> guidance on adding a new account. Once you be an adding a new account once you be adding a ne	Discription matcros Mensiof Office applications sen execute macros Mensiof Office applications sen execute macros a unique passiphrose. Never route a passiphrose to automative animitation and the set of base a base used with coulins. It have a set of the participation that match and that participation that match and the participation that match and the participation that match and the participation that match and that participation that match and that participation that match and that participation that participation that participation that match and that participation tha
RANSOMWARE	A backup is a digital copy of your most important information (e.g. photos, customer information or financial recordal that is stored to an activation and the recordance recordance in the term the	If you don't need to run macros, it is best practise to disable them. If you do need to run macros,
PREVENTION GUIDE	storage device or to the cloud. (b) and the cloud of the cloud of the cloud of the cloud. The best recovery method from a ranking the cloud of the c	consider preventing macros from running automatically and restricting which macros con run.
PROTECT YOURSELF AGAINST RANSOMWARE ATTACKS	olitack is to realize throm on undhetled backup. Negularly tocchup your files to an external strature of the strategies and the strategies and the strategies and the strategies and the strategies are service over, occess controls might be managed by your If provider of If staff. backups naster your files addres proces of them files your ensure have have for the staff.	Microsoft hos published guidance on, configuring mocros settings on their support witholine support, microsoft.com.
	There are an unitiesr for wrays to back up space of units. Speek to them if you are unsure how to action devices. Refer to are <u>drivise for hostings</u> for more information. This available of	The ACSC has published guidence to help, organizations with Menager College means providy on cybergrowaniase Cive and
cyber .gov.au	more information. This is available at cyber.gov.au/backups.	content publications microsoft-office- macro-security.
· · · · · · · · · · · · · · · · · · ·		
	Romonwave Prevention Guide	Rominerous President Guiler 😵 💷
	• • • • • • • • • • • • • • • • • • • •	
Ransomware Prevention Guide	Ransomware Prevention Guide	Ransomware Prevention Guide
Extra measures for small	Understand how to	Prepare for a
business or advanced	prevent ransomware	ransomware attack
home networks	attacks	Complete the ransomware prevention checklist the set of
Secure your servers If you need help to secure your NAS or server, including specific mitigation advice, speak to	Check messages you receive Avoid links that ask you to	
	Coherent and and the measure to the log in or reset your password	Prevention Checklist that you can complete.
If you use 0 NAS or other server in your home or business, faide and care to secure them. These devices are common targets for cybercriminals devices are common targets for cybercriminals	Cyberceinineak will send you foka messages to try and get you to be served action. For sending, they night ask you to cick on in, downtood of the prohom parameter amond information function.	<u>Bioversities</u> (Deviating theory by case completes. The checklish helps you to confirm that up a hove taken the right steps to prevent or manameters effects from hoppening or reduce it is impact.
If you use 0 MS or other server in your hom or balances, take end roor to be search tham. These devices are common targets for cyberrained because they detrive second that (search that are they perform important functions.	and get you to take some action. For example, they registrative, to take some action. For example, the source of the source of the source of the source of the source of the constance on example that you version the source of the example on example that you version the source of the source of the source on example that you version the source of the so	Description Classified in the year to an order the sectors The character Classified in the year to an order the sectors actuals from hoppening or reduce its impost. Sign us to get a dark through the text <u>Sectors actuals from hoppening and the sectors Backeup and Response Register </u>
If you use 0 MS or other server in your hom or balances, take end roor to be search tham. These devices are common targets for cyberrained because they detrive second that (search that are they perform important functions.	and girt you to take some action. For sample, they might asky to take it, downtools of the argine amy your particule information. Finally, the trafficts amy your particule information. Finally, the trafficts amy for a particular information. Finally, the first amy for a particular information info	Prepare your Ransomware when a new cyber threat is identified.
Approximate MAS of other memory important memory importent memory important memory important memory importent memory i	and girt you to take some action. For sample, they might asky to take it, downtools of the argine amy your particule information. Finally, the trafficts amy your particule information. Finally, the trafficts amy for a particular information. Finally, the first amy for a particular information info	Prepare your Ransomware Bockup and Response Register The XSC has publied expensioned before
If protates thild or other mere in types them are the system term in the protocol in the system term is types of the system term is types of the system term is types of the system term is the system term is types of the syste	and grap us to that are starting for sampling in the provide strain starting for sampling in the provide strain strain for strain strai	Prepare your Ransomware Bockup and Response Register The XSC has publied expensioned before
Figure are bit Mod on the more in space for an impact of the more instance in the more instance in the more instance instan	and grappus bits and such for free integrations of the such such as the such a	Prepare your Ransomware Bockup and Response Register The XSC has publied expensions flokup.
<text><text><text><text><text></text></text></text></text></text>	<text><text><text><text><text></text></text></text></text></text>	Prepare your Ransomware Bockup and Response Register The XSC has publied expensions flokup.
<text><text><text><text><text><text><text></text></text></text></text></text></text></text>	<text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text>	Prepare your Ransomware Bockup and Response Register The XSC has publied expensions flokup.
<text><text><text><section-header><section-header><section-header><text><text><text></text></text></text></section-header></section-header></section-header></text></text></text>	<text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text>	Prepare your Ransomware Bockup and Response Register The XSC has publied expensions flokup.
<text><text><text><section-header><section-header><section-header><section-header><section-header><text><text><text><text></text></text></text></text></section-header></section-header></section-header></section-header></section-header></text></text></text>	<text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text>	Prepare your Ransomware Bockup and Response Register The XSC has publied expensions flokup.
<text><text><text><text><text></text></text></text></text></text>	<text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text>	Prepare your Ransomware Bockup and Response Register The XSC has publied expensions flokup.
<text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text>	<text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text>	Prepare your Ransomware Bockup and Response Register The XSC has publied expensions flokup.
<text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text>	<text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text>	Prepare your Ransomware Bockup and Response Register The XSC has publied expensions flokup.

	•	•	*	1	12	*	•	*	*	•	•	•	•	•		•	•	•		
¥	÷	+	÷				*	•	*	•			•	•	٠		•			
R		ware									•	•	*	1		•			•	
	•	te									•									
	U		5																	

.

	٠	•	•	×	•	•	•	•		•	*	*	•	*	1	•	•	•	•	*	2	*	٠
			•		٠	•	×		×	•	*	*	*	•			•	•	÷	÷	٣	٠	×
•		R	lans	om	ware	e En	nerg	jenc	y Re	spo				•	•	•	•	•	•	-	-	•	×
	▼ ▲	► ▲						۶ ۲	v														

10	Ransomware Emergency Response Guid	de
----	------------------------------------	----

	•	•	*	1	12	*	•	*	*	•	•	•	•	•		•	•	•		
¥	÷	+	÷				*	•	*	•			•	•	٠		•			
R		ware									•	•	*	1		•			•	
	•	te									•									
	U		5																	

.

Disclaimer

The material in this guide is of a general nature and should not be regarded as legal advice or relied on for assistance in any particular circumstance or emergency situation. In any important matter, you should seek appropriate independent professional advice in relation to your own circumstances.

The Commonwealth accepts no responsibility or liability for any damage, loss or expense incurred as a result of the reliance on information contained in this guide.

Copyright

© Commonwealth of Australia 2022

With the exception of the Coat of Arms and where otherwise stated, all material presented in this publication is provided under a Creative Commons Attribution 4.0 International licence (www.creativecommons.org/licenses).

For the avoidance of doubt, this means this licence only applies to material as set out in this document.



The details of the relevant licence conditions are available on the Creative Commons website as is the full legal code for the CC BY 4.0 licence (www.creativecommons.org/licenses).

Use of the Coat of Arms

The terms under which the Coat of Arms can be used are detailed on the Department of the Prime Minister and Cabinet website (www.pmc.gov.au/government/commonwealth-coat-arms).

For more information, or to report a cyber security incident, contact us: cyber.gov.au | 1300 CYBER1 (1300 292 371)



Australian Government Australian Signals Directorate

