

Katauraoi i mwain ao arom nakon te tokobito ae matematen-te-tieweti

Moan boretiana: Tebetemba 2011
Kabanean katamaroa : Maati 2025



Australian Government
Australian Signals Directorate

ASD AUSTRALIAN
SIGNALS
DIRECTORATE
ACSC Australian
Cyber Security
Centre



Te Tira Tiaki
Government Communications
Security Bureau

**National Cyber
Security Centre**
PART OF THE GCSB

Katereana

E karaoaki boretian rongorongo aikai iroun te Australian Signals Directorate (ASD) ni i karekebai ma te New Zealand's National Cyber Security Centre (NCSC-NZ), Akamai Technologies Ltd ao Cloudflare Pty Ltd, ibukin kaitaran rikiraken te kamwarua nte intanete ae aranaki bwa matematen-te-tieweti (DoS) n ara aono. E katauraoi anga ni katauraoi nakoia botaki ae boboto iaon aron taobaran kanganga aika tamaroa riki, ibukin katauraaoia ni kaitarai kanganga aika DoS.

Ti kaungako bwa kona wareki taeka ni ibuobuoki aikai n reitaki ma ASD [Intanete ibukin Bwaai nako](#), ao [Kamanoa am Wi-Fi ao rauta](#) ake a boretiaki. Boreti aikai a buoki ngkami n totokoi ananga ni kabuanibwai nakoimi n ana urubwai DoS aika kona ni manga rotaki iai tabeman.

Ana urubwai DoS bon urubwai nte aonrain ake a karaoaki bwa ana kamangaoui ke kamangori aonrain tieweti n aron uebutiati, imeeri ao Aron Aranakin Tititem (DNS), aonga n aki kona ni kabonganaki. E rereke riki aio man karinan rongorongo aika bati inanon aonrain tieweti, katomatoma ke bubuti aika bati nakon te tieweti nte aro are ena kamangora mwakurina.

Te urubwai ae DoS e kainnanao te kakamwakuri aonrain ae rawata ibukin kakoroan nanona. A moanna n rangi n okioki, tao bon bukin naba kekeraken mwaitin Bwai n Reitaki aika a kai aonikaiki (IoT) aonrain. Bukina bwa taan karaoi IoT a momoan bwaia riki tamaroana nakon kamanoan aia bwai, bwai aika kai rotaki aikai bon bwain nanon auti ake a toma ma te intranet n aron taian TV, ketero, bwai ni kaitiaki ao tititem ni katantan. Bwai aikai a aki toki n tauaki taekaia mai kiraroa irouia taan ioawa aonrain ike a karikaki ni 'botnet' ibukin katirauan kakamwakuri aonrain, are a kona iai mweenga ao botaki aika buburi n akean aia atatai ni kaunga reken te urubwai ae DoS .

E kaotaki n taai aikai ae ngkana taan iowa aonrain aikai a tia n tau taekaia IoT bwai n reitaki, a kona ni manga kabonakoa rinnakon bwai n reitaki nakoia taan ioawa aonrain tabeman ao taan kume aonrain ake a kan karaoi te urubwai ae DoS. Angin te tai, te urubwai n DoS a karaoaki ibukin katamaroan aia waaki ma kauarerekean aia kabanemwane botaki, ke ibukin katikan aia iango aomata. Te kabptau iaon mwakuri aikai a bwabwarabwaraki inanon ASD [Taian tokobeto nakon rauta ao IoT bwai n reitaki ae rekereke iai-Aia Tautaeaka kain China](#) kamatata.

Ngkai kaubwain abara a tabe n kerake rekerekeia ma kombiuta ao a tiraua IoT bwai n reitaki aonrain, urubwai ae DoS a kantaningaki bwa ana kerake mwaitina.

Ibukin kamangaoan ao kamangoran ana aonrain tieweti te botaki teuana, taan ioawa aonrain a kabonganai anga aika mwaiti, n aron:

- kainetan kakamwakuri aonrain aika aki raraoi nakon aonrain tieweti nte iango are ena kabonganai ni kabane ana korakoran butin te tieweti
- kainetan kakamwakuri aonrain aika barongaki ni kaitarai aonrain tieweti nte iango are ana kabanea karakoran aia kombiuta
- kabonganai kombiuta aika tiraua, IoT bwai n reitaki ao bwai ake a toma ma-intanete ibukin kanakoan kakamwakuri aonrain nakon aonrain tieweti man taboo aika kakaokoro ao man tiraua, aio karinanin te urubwai ae DoS ao e kinaki n arana ae Dos (DDoS) urubwai ae barongaki
- tauan taekan aran te botaki ae kinaki iai ke DNS tiewa nte iango are ara kabwakei kawaia taan kabonganai aia tieweti nakon taabo i tinanikun ana aonrain tieweti te botaki anne.

Botaki aki kona ni katibanakoa kuakia nte urubwai ae DoS, ma iai anga ae a kona ni iri nanoia boboti nako ni katauraaoia e aonga ni uarereke ana urubwai nakoia. Te kakatauraoi imwain te urubwai ae DoS imwain rikiia bon te anga ae boan baan te tamaroa, ibukina bwa man akean te kakatauraoi, ao ena bon kanganga man aki manena kaitaran DoS.

E ngae ngke boboti a rangi ni moanibwaia kamanoaia man te urubwai ae DoS, a riai naba ni karaoi kawai ake ana totokoi reken ioawa nakoia te koraki ake a kakabonganai aia aonrain tieweti ao bwai n reitaki ake toma ma-intanete.

Kakatauraoi imwain te urubwai ae DoS

N aron teina ae ngkai ae tabe n rikirake mwaitin te urubwai ae te DoS n ara aono, ao i mwain mwakurian anga nako n totokoa te urubwai ae te DoS, ao am boboti e riai moa n rinanoi ana waaki ni bitiniti ao n taraia bwa engang ana aonrain tieweti ae riai n tiku ni maiu n tain ana urubwai te DoS ke ni kataua bwa e raoiroi irouna maten ana tieweti nte tai moa anne.

Ngkana am boboti e tangiria ni kakorakorai ana anga n kaitarai te urubwai nte DoS, ao ko riai ni moantai ni mwakuri anga, ake a riai man kona ni karaoaki, imwain rokon te urubwai ae DoS.

- Ngkana am boboti e kabonganai tiewa aika mwaiti (CDN), ko riai ni mwakuri riki aikai, ngkana e riai ke kona ni karaoaki.
 - Kataia ni kabongana te CDN ae iai ana konaa n kamanoa am tiewa are mena iai am tieweti man bwain kombiuta aika marau ao urubwai aika kauatao – tabeua CDN a kona ni iai irouia anga n kamano aikai ae mena inanon te o te ai mai moa.
 - Totokoi aroaro aika kona ni kaota Atakin Nnem (IP) Aonrain iaon te intanete, ao ko raia ni koaua bwa ngkana a ana oti nakoia aomata a riai no mano man te urubwai ae DoS.
 - Totokoa kabonganai nnen am IP are n am tiewa nte aro are ana kona taaiowawa aonrain ni kataunaria, te katoto, kaotan nnen ana IP am tiewa are e mena iai am tieweti ao n tiewa ake tabeua ke n taboo ake a kona n nooria aomata.
 - Kabonganai aron barongan te rinnako (n aron te o te ai) nte aro are ti te CDN ma kain am boboti ake iai kariakaia n rinnako nte tiewa are mena iai am tieweti ti ngaia aika kona n rin.
 - Ko kona naba ni kabonganai anga n katomatoma ake tabeua, n aron aia katomatoma aomata, bwa ana katoma are boton am tiewa ma are e katauraaoia te CDN, aio ngkana ko kainanoa kamanoan an boto n tiewa ae tamaroa riki.
 - Karaoa te CDN, am boto n tiewa ao ai ana HTTP am katitamwa bwa ana aki nang kana marurungin am tiewa.
 - Ko kona naba ni kakamaenakoi am boto n tiewa nte aro are kamanenana irouia IP aika rau a mwakuriaki ni kaokoroaki ma kamanenana irouia IP aika aki rau, aio ngkana ko tangiria bwa ena uki man tatauraoi am tiewa.

- langoia bwa tera aron mwakurin ao tamaroan am tieweti ae e riai ibukia taan kabongana am aonrain tieweti, tera am anga ni kateimatoai aron mwakurina akanne, ao anga am tieweti aika aki kainnanoaki n tain te urubwai ae DoS.
- Karekei ao kabonganai tieweti ibukin kauarerekean te urubwai ae DoS ake inanon-tiewa.
- Ko kona naba ni kauarerekea angan urubwai nakon am boboti man:
 - kabongan anrain tieweti aika bobonga raoi (n aron te DNS) nakoia taan karauroa te tieweti anne aika kinaki ao man kona n kaitaraii ana urubwai te DoS
 - kamaenakoan aonrain tieweti aika kakawaki (n aron imeeri) ma aonrain tieweti ake tabeua ake a taketenaki riki (a aron uebutiaiti)
 - kakoauan ae taan taobarai ana urubwai DoS ena ti kariaia rinia taan kabongana man te aonrain tieweti are ake a toma ma am boto n tiewa.
- Maroro ma taan katauraoi tieweti aikai rongorongon nako aroia n totokoi ana urubwai te DoS ao aia anga ni manga kaoka arona mai mwaina, moarara riki aia:
 - konabwai ae ataaki bwa e kona ni kaitarai ana urubwai te DoS man konan te aonnaba
 - kaota aroia n karaoa ana urubwai te DoS ma aroia ae kariaiakaki n tutuoa ana urubwai te DoS
 - konabwai ae mwakuri irouna ni kaoki mwin ana urubwai te DoS ae akea irekerekea iai aomata, n aron manga kamatenwaia taan kakamwakuri aonrain
 - aroia ni kateiboa aia tieweti, n aron taran kanoan boong bwa e titabo iai aia tiaati ke bibitaki nakon mwaitiia tan kakamwakuri aonrain ao tera bwaain kombiuta aika a kabonganai, ao ngkana ko kona ni katea am tia ni boo
 - tian aia tieweti imwain ae a kamatei aia aonrain tieweti ngkana e tabe ni urubwai DoS
 - mwakuri aika a kaman-kariaiakaki aika kona ni karaoaki ngkana ea tabe ni urubwai DoS
 - aia boraraoi ma taan katauraoi tieweti ibukin totokoan te urubwai ae DoS.
- Mwakurian anga ni kona n atai ana urubwai DoS, n aron taratakin urubwai nte tai naba-arei ao kakauongo tauraoi aia tititem, te kakamwakuri aonrain, ao bwain kombiuta aika kabonganai.
- Katauroa katoton am uebutiaiti ae aki nang kana karakoram te intanete e aonga n reitinako te tieweti ngkana ea urubwai te DoS.
- Kaboi ao kabonganai aonrain tieweti aika a rangi ni matoa man bubura karakoran aia intanete, kombiuta aika a tau korakoraia, nnen am tiewa ae maenako ao ai anga n kanakoi kakamwakuri aonrain aika aki rau – aio are irekereke ma kabongan CDN aika a kinaki man kona n ikoikoti kanoan am uebutiaiti ao man kona n kamanoa am boto n tiewa man kakamwakuri aonrain aika aki kainnanoaki.
- Kamanoa aran ao boboti ao n rokanna nte tabo are ko kaboa iai, kakoaua raoi bwa aron reitakim ao rongorongon riki tabeua bwa ana eti raoi, ao iri nanon kairi ake a koreaki inanon ASD's [Tititem ni kamano ibukin Aran Tomein ibukia taan bwaibwai](#) boretiaki.
- Kawakini rongorongom ibukin te reitaki aika eti-man-koaua ibukia taan katauraoi tieweti ao angania rongorongom ibukin reitakimi, kaetia raoi bwa rongorongom akanne ana eti raoi ni kaineti ma ana kainibaire am booti, 24 te aoa n tebongina, 7 te bong nte wiki.
- Katauraoi aron te reitaki nakon am boboti i tinanikun-te-tai ibukin te reitaki bwa ena anaki nte onimakinaki nakoia taan katauroa te tieweti, ngkana arona bwa aki mwakuri anga n reitaki ake tabeua.
- Karioi, mwakurii ao kateimatoai babaire ibukin ribotinan kanganga nakon anga ni kamano nte intanete, man aekakin nako ana urubwai nakon am aonrain tieweti ake a riai n aki rotaki iron DoS, ao kakaraoia ni katoa ririki.
- Tein karaoaan bwain kombiuta ana kamanoi mwakurina ake ana kona n takakaronaki ao man karawata ana mwakuri te kombiuta ke ni kububurai kabanemwane (n aron takaroan kanakoan SMS).
 - Te kamanomano ena ikoti tian kabanemwane irouia taan kabongana ao man kona ni kamatoa raoi bwa a bon kabonganaki irouia aomata.
 - Karaoi tuoan korakoran ana urubwai te DoS n tuoi mwakurina nakon maiun am tieweti.
 - Karaoi tutuoaan aekakin nako te DoS ko kaonga ni kinai ao ni kaetii.

Totokoan ana urubwai DoS

Ngkana am boboti e aki tauraai imwain ana urubwai DoS, kataia ni mwakuri tabeua mai buakon angan totokoan ana urubwai DoS akana i eta, e ngae ngke ana aki nang kamano raai ao ni kana te tai mwakuriaia, nte aro are am boboti ea memere aron ana totoko.

E riai am boboti ni mwakuri anga aika i nano n tain ana urubwai te DoS.

- Karaai am anga n totoko nakon kanganga nte kamano nte intanete
- Titirakiniia am taan katauraai am tieweti ngkana a kona ni karini anga n totoko - ngkana ko tuai ni maroro ma ngaiia iaon anga n totoko, e kona n reke ae aki kona ke a bon rawa n totoko ke ni kabuburai riki boon aia tieweti.
- Kamatei mwakurina ake aki-kainanoaki ke kanakoi kanoana ake aki-kainnanaaki man am aonrain tieweti ake a kona ni kakorakora te urubwai ae DoS, te katoto, kamaiua katoton am tomain ae akea te kakae iai, tamnei aika kakamwakuri ke kanoana ake a bubura.
- Kateimatoa am reitaki ma am katitamwa ao taan katauraai tieweti ibukim, n aroia taan taobarai ana urubwai DoS, ao kateimatoa tatauraoin am onrain tieweti.
- Ko kona naba ni bita tein ana IP am boto n tiewa ngkana ea bon taketenaki naba, ao totokoi kaotakin am IP ae boou ngkana akea angan kamanoana ae tauraai.
- Ribotini ana urubwai DoS nakoia ake tabeia, n ai aron ASD ao NCSC-NZ n aron ane oti aia 'Rongorongo ibukin reitaki' nte boreti aio.

Totokoan boutokan ana urubwai DoS

E riai am boboti ni mwakuri anga aikai ibukin totokoan kakorakoran ana urubwai DoS ae na kona n rotia tabemwang n akean am atatai.

- Kamanoi raai am tieweti, bwai n reitaki (IoT) aonrain ma kombiuta ake a toma ma-intanete ma aki kainnanaaki moa, ake a tuai raai tia kamanoaia ao ake tuai raai tia katamaroia.
- Kamanoi raai, katamoai ao tutuoi tieweti, ma IoT bwain reitaki ma kombiuta ake toma ma-intanete ma aki tan man te intranet.
 - Kairi riki tabeua ibukia butiniti aika uarereke e tauraai inanon ASD [Intanete ibukin Bwai n aonrain](#) ao [Kamanoi am Wi-Fi ao rauta](#) boreti.

Ngkana am boboti e maiu ana aonrain tieweti, ko riai ni karaai anga riki n totoko aikai.

- Moanibwaia tataran aron mwakuri ake a oti n Kamanoan te Intanete ao ai kombiuta iaon Amerika (CISA) [UDP-Based Amplification Attacks](#) kamatata.
- Taratarai raai anga ni urubwai aika boou n taia are a kuneaki iai ao kamanoi am aonrain tieweti irouia.
- Karaai ni kauoua aron te rinnako ao te otinako n am tieweti ni kauarerekei aron rinnakoan am aonrain tieweti ao ai am boboti.
- Buraokina te rinnako n aki akaka nakon am aonrain tieweti ake a kai-rootaki ngkana aki moa kainanoaki.
- Kataia ni karaoa tian-kabanemwane ni kauarerekea te kabanemwane man kabonganan buaka te tieweti, ngkana arona bwa buraokinakia ke tataua mwiin rinnakoia e aki kona ke aki riai.

Tabeua riki rongorongona

ASD's [Te manuo ibukin Kamanoan rongorongo](#) bon te bwai ni kamano ae a kona boboti ni kabongana ibukin kamanoaia ma aia tititem man uribwai nte intanete. Taeka ni bau aikai [Aroaro ibukin kauarerekean kanganga nte kamano nte intanete](#), ni ikotaki ma [Waniua bwaai](#), aika boutoka aron mwakuri aikai.

Ana [Boki Niu Tiran ibukin Kamano Aonrain!](#) bon ana boki te tautaeka n Niu Tiran ibukin kaotam n aron te kabonganana bwai no kamano aonrain. Bon aia manuo nake a kakaraoi aron waaki ni kamano ao e karaoaki ibukin kainnanaoia boboti ao taan kabobwai, taan kateitei ao taan ibuobuoki ake a kakatauraoi aia tieweti nakoia boboti.

Rongorongo riki iaon ana urubwai riki DoS e tauraai inann CISA [DDoS Kairi ae Tawe](#) ao [Aron atakin ao Totokoan ana urubwai Matematen-te-Tieweti](#). boreti

Rongorongo ibukin reitaki

Ko mena i Aotiteria, ngkana iai am titiraki ibukin te kairi aio [koroboki nakon ASD](#) ke tareboniia 1300 CYBER1 (1300 292 371).

Iaon New Zealand, ao ibukin ribotinan kanganga nte intanete imeeri nakon incidents@ncsc.govt.nz ke kawara NCSC-NZ's [Ribootina te kanganga](#), uebubeiti.

Otanga

Kanoan te kamata e bon kabuta ao n aki taraki bwa taian ibuobuoki nakon te tua ke n rangi kabotoaki bwa ngaia buokam inanon te tai are e kainanoaki iai ke inanon te karina. E kakawaki, bwa ko bon riai ni ukeuke ni kakae nako nakoia ake a mwatai ibukin aia ibuobuoki ni kaineti ma kainanom.

Te Kaomwanwareta e aki kataua bwa ngaia ae na bukinaki n reken uruaki, ni buan ke n reken kabanemwane aika ana kaoti ae riki man kamananaan rongorongon ake inanon te kaita aio.

Kaobiraita

© Te Komonwareta n Aotiteria 2025

Man are e aki oti bwa kanoan Kanikinaean Boboti ao n te tabo are e na oti iai, ni kabane rongorongon ake a boretiaki a katauraaki iaan te [Creative Commons Attribution 4.0 Raitinti nte Aonnaba](https://creativecommons.org/licenses/by/4.0/) | www.creativecommons.org.

Ibukin kauarerekean te mangaongao, ae nanonaki ibukin te raitienti e ti kaineti nakon bwai ake a bon oti inanona.



Ni kabwarabwaran raitienti ake a bon kaineti nakon kabonganakia a bane n reke n te uebutiati Creative Commons iaan [Te tua ibukin te CC BY 4.0 raitinti](https://creativecommons.org/licenses/by/4.0/) | creativecommons.org.

Kabongan Kanikinaean Boboti

Taian kainibaire ake a bwaka iaan Kanikinaean Boboti a kona ni kamanenaki ni kabwarabwarana ae oti n ana uebutiati te Ana Aobiti te Buraim Minitita ao an Tomain Kaebineti [Kanikinaean Boboti Rongorongon ao Kainibaire](https://pmc.gov.au) | pmc.gov.au.

Ibukin rongorongona riki, ke ibukin ribotinan kanganga n te kamano aonrain, reitaki nakoira:

cyber.gov.au | 1300 CYBER1 (1300 292 371)

Te number aio e ti kona ni kabonganaki iaon Aotiteria.

ASD AUSTRALIAN
SIGNALS
DIRECTORATE

ACSC Australian
Cyber Security
Centre