

# Recorded Future Research Concludes Chinese Ministry of State Security Behind APT3

 [recordedfuture.com/chinese-mss-behind-apt3/](https://recordedfuture.com/chinese-mss-behind-apt3/)

5/17/2017

## The Recorded Future Blog

Posted in

- [Cyber Threat Intelligence](#)

by Insikt Group on May 17, 2017

This is the first time researchers have been able to attribute a threat actor group with a high degree of confidence to the Ministry of State Security.

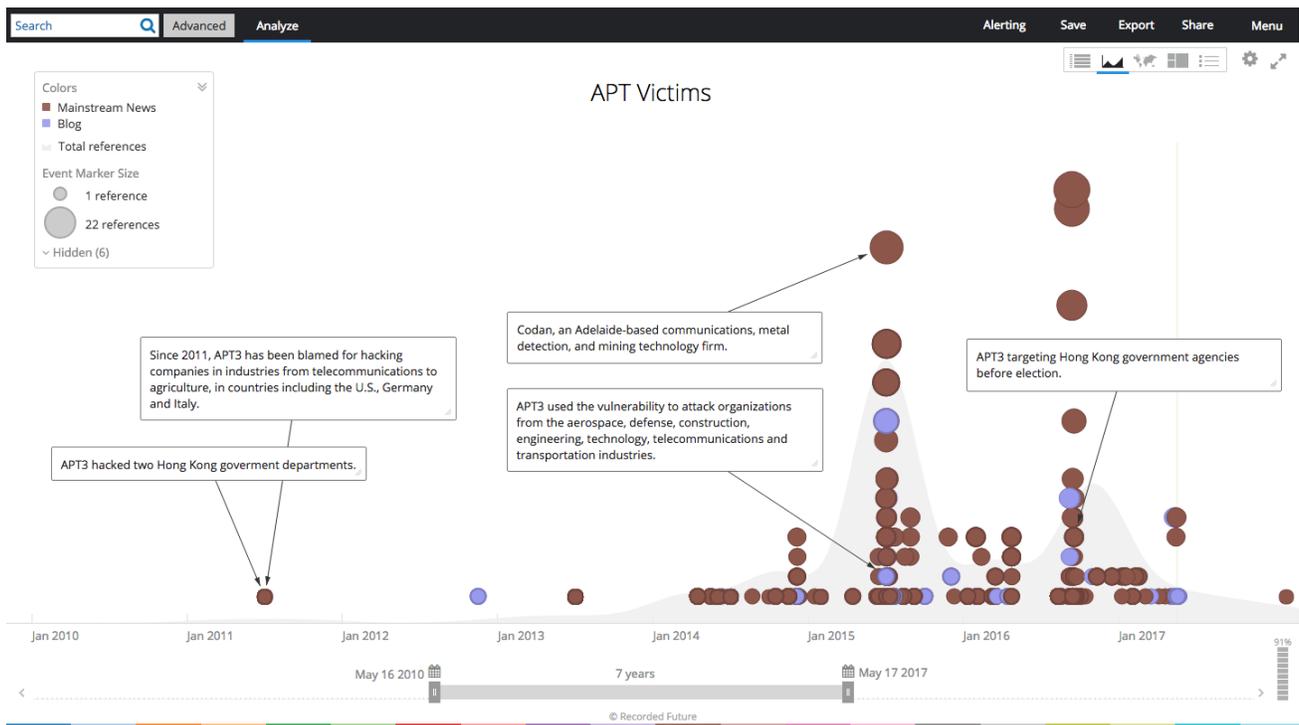


### Key Takeaways

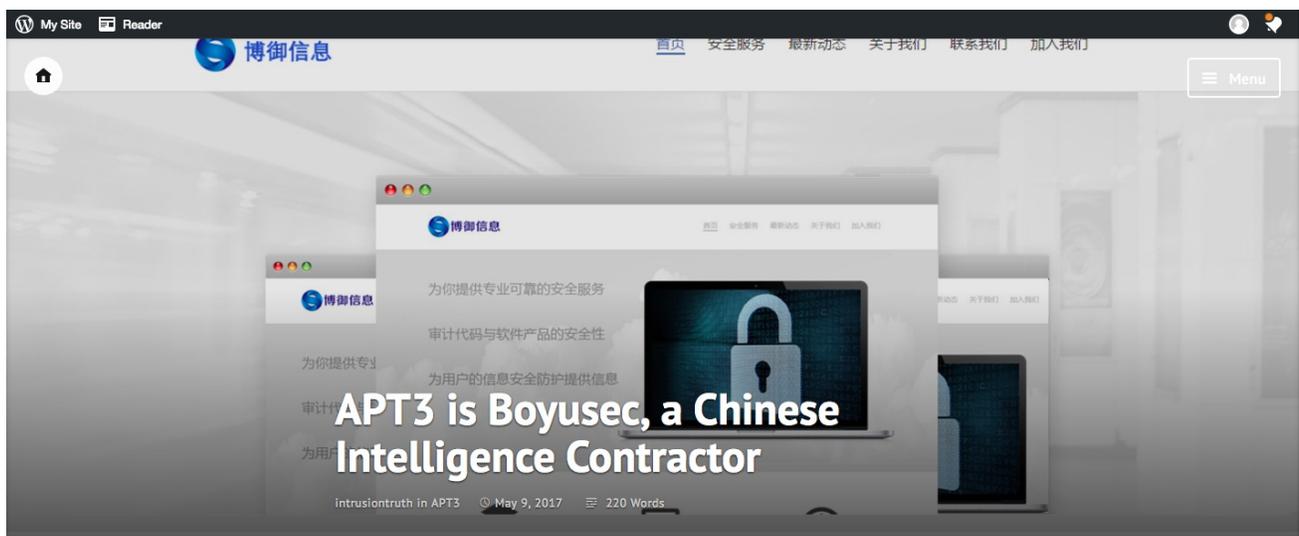
- APT3 is the first threat actor group that has been attributed with a high degree of confidence directly to the Chinese Ministry of State Security (MSS).
- On May 9, a mysterious group called “intrusiontruth” attributed APT3 to a company, Guangzhou Boyu Information Technology Company, based in Guangzhou, China.
- Recorded Future’s open source research and analysis has corroborated the company, also known as Boyusec, is working on behalf of the Chinese Ministry of State Security.
- Customers should re-examine any intrusion activity known or suspected to be APT3 and all activity from associated malware families as well as re-evaluate security controls and policies.

### Introduction

On May 9, a mysterious group calling itself “[intrusiontruth](#)” identified a [contractor](#) for the Chinese Ministry of State Security (MSS) as the group behind the APT3 cyber intrusions.



Recorded Future timeline of APT3 victims.



In our last three posts we introduced you to APT3 and identified two individuals responsible for purchasing their domain names – Wu Yingzhuo and Dong Hao. An IP addresses in Guangdong, China was associated with some of the domains.

Both individuals have a long history of purchasing APT3 infrastructure. Who do they work for and where do their orders come from?

Screenshot of a blog post from “intrusiontruth in APT3.”

“Intrusiontruth” documented historic connections between domains used by an APT3 tool called Pirpi and [two shareholders](#) in a Chinese information security company named Guangzhou Boyu Information Technology Company, Ltd (also known as Boyusec).

DOMAINTOOLS

IP Address **112.74.87.60**  
 Co-Hosting 1 other domains hosted on same IP  
 Registrant bo yu information technology  
 Registered Domains Registrant has 1 domains  
 Registrant Address dong hao, bo yu information technology, GuangZhou TianHe, guangzhou, BJ, 510000, CN  
 Domain Reputation Risk Score 33.05

**Domain Reputation Risk Reasons**  
 registrant

**Website**  
 Website Title  
 HTTP Response Code 200  
 Web Server Type Microsoft-IIS/6.0  
 Created on Nov 23, 2013  
 Registrar bizcn.com, inc.

**History**  
 Hosting History 1 events in 1 years  
 IP History 1 events in 1 years

**Historic IPs**  
**112.74.87.60**  
 Registrar History 1  
 Whois History 86 records have been archived since 2013-11-23

**Contact Email(s) and related domains**  
 Email **198834@qq.com**  
 # of Domains linked to this email 1  
 Domains linked to this email (max 20 listed)

**Name servers**  
**ns3.yovole.com**  
**ns4.yovole.com**  
 Screenshots [Browse screenshot history](#)

Registration information for a domain linked to the malware Pirpi. The details show the domain was registered to Dong Hao and Boyusec.

APT3 has traditionally targeted a wide-range of companies and technologies, likely to fulfill intelligence collection requirements on behalf of the MSS (see research below). Recorded Future has been closely following APT3 and has discovered additional information corroborating that the MSS is responsible for the intrusion activity conducted by the group.

## APT3 UPS (Gothic Panda, TG-0110) – Threat Actor [↗](#)

1 000+ References to This Entity

First Seen Oct 29, 2014

Last Seen May 10, 2017

Country China

★ Curated Entity

🏢 Category China Nation State Sponsored, Nation State Sponsored

🖨️ Print

📄 Request Data Review

📋 Add to List

EXPORT ENTITIES

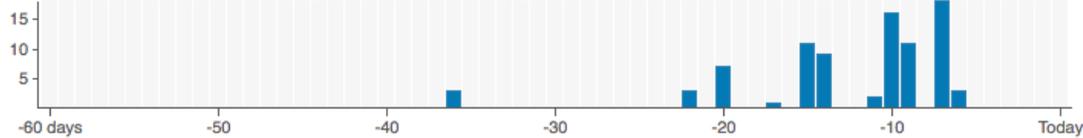
Show all events involving APT3 UPS in [Table](#) | [▼](#)

### Total Reference Count

2 149 Total References  
84 In the Last 60 Days  
3 In the Last 7 Days  
0 References Today

### References Breakdown

909 In Social Media  
459 From Information Security Sources  
570 Including Malicious Language



Show recent events in [Table](#) | [▼](#)

Recorded Future Intel Card for APT3.

## Background

APT3 (also known as UPS, Gothic Panda, and TG-011) is a sophisticated threat group that has been active [since at least 2010](#). APT3 utilizes a broad range of tools and techniques including spearphishing attacks, zero-day exploits, and numerous unique and publicly available remote access tools (RAT). Victims of APT3 intrusions include companies in the defense, telecommunications, transportation, and advanced technology sectors — as well as government departments and bureaus in Hong Kong, the U.S., and several other countries.

## Analysis

On Boyusec's website, the company explicitly identifies two organizations that it cooperatively partners with, [Huawei Technologies](#) and the Guangdong Information Technology Security Evaluation Center (or [Guangdong ITSEC](#)).



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## 合作伙伴

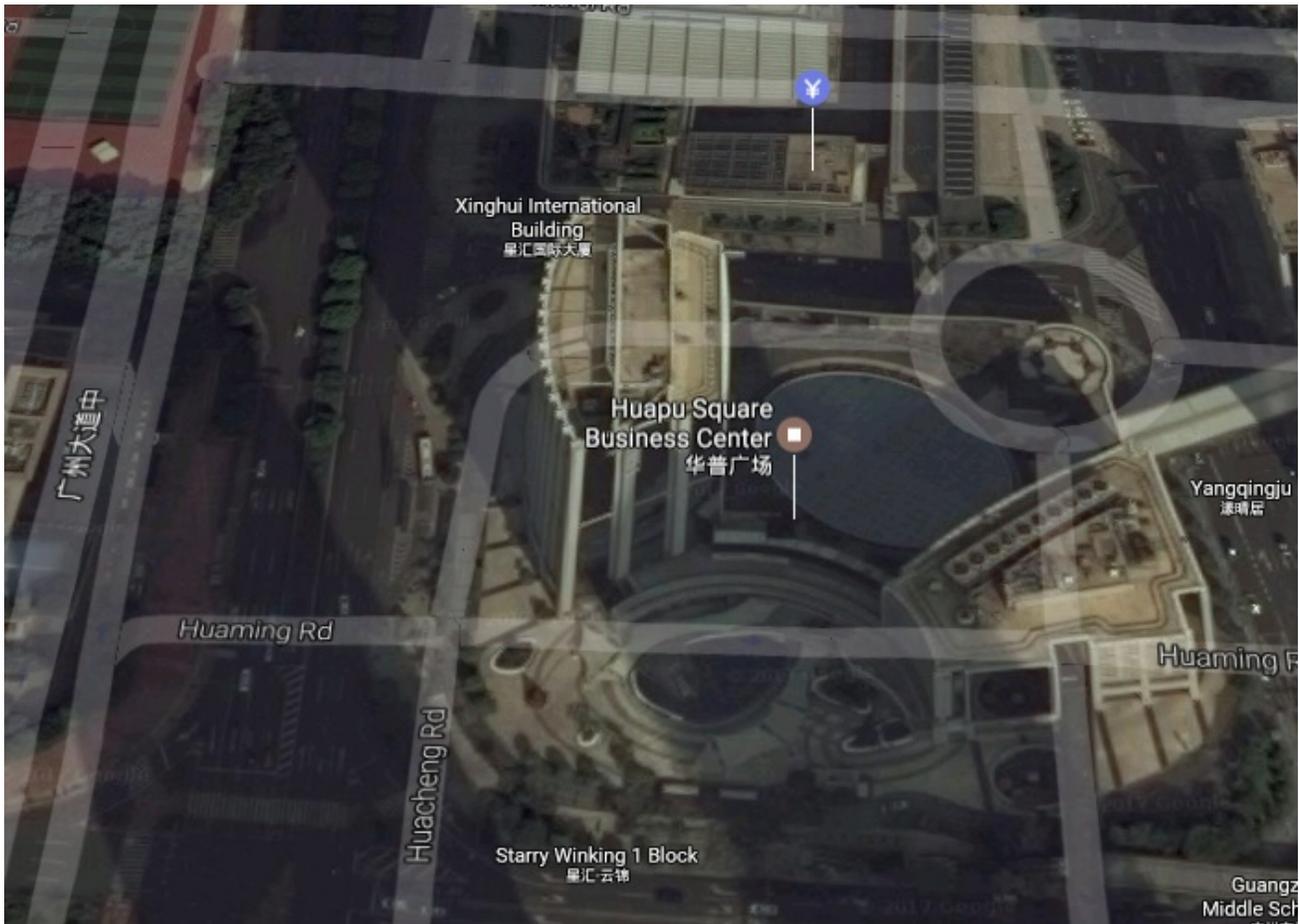


广东省信息安全测评中心  
GUANGDONG INFORMATION TECHNOLOGY SECURITY EVALUATION CENTER

粤ICP备16034899号

Screenshot of Boyusec's website where Huawei and Guangdong ITSEC are identified as collaborative partners.

In November 2016, the *Washington Free Beacon* reported that a [Pentagon internal intelligence report](#) had exposed a product that Boyusec and Huawei were jointly producing. According to the Pentagon's report, the two companies were working together to produce security products, likely containing a backdoor, that would allow Chinese intelligence "to capture data and control computer and telecommunications equipment." The article quotes government officials and analysts stating that Boyusec and the MSS are "closely connected," and that Boyusec appears to be a cover company for the MSS.



Imagery ©2017 DigitalGlobe, Map data ©2017

Boyusec is located in Room 1103 of the Huapu Square West Tower in Guangzhou, China.

Boyusec's work with its other "cooperative partner," Guangdong ITSEC, has been less well-documented. As will be laid out below, Recorded Future's research has concluded that Guangdong ITSEC is subordinate to an MSS-run organization called China Information Technology Evaluation Center (CNITSEC) and that Boyusec has been working with Guangdong ITSEC on a joint active defense lab since 2014.

Guangdong ITSEC is one in a nation-wide network of security evaluation centers [certified](#) and administered by CNITSEC. According to Chinese [state-run media](#), Guangdong ITSEC became the sixteenth nationwide branch of CNITSEC in May 2011. Guangdong ITSEC's site also lists itself as CNITSEC's [Guangdong Office](#) on its header.

According to [academic research](#) published in *China and Cybersecurity: Espionage, Strategy, and Politics in the Digital Domain*, CNITSEC is run by the MSS and houses much of the intelligence service's technical cyber expertise. CNITSEC is used by the MSS to "conduct vulnerability testing and software reliability assessments." Per a [2009 U.S. State Department cable](#), it is believed China may also use vulnerabilities derived from CNITSEC's activities in intelligence operations. CNITSEC's Director, Wu Shizhong, even self-identifies as MSS, including for his work as a deputy head of China's [National Information Security Standards Committee](#) as recently as January 2016.

Recorded Future research identified [several job advertisements](#) on Chinese-language job sites such as jobs.zhaopin.com, jobui.com, and kanzhun.com since 2015, Boyusec revealed a collaboratively established joint active defense lab (referred to as an ADUL) with Guangdong ITSEC in 2014. Boyusec stated that the mission of the joint lab was to develop risk-based security technology and to provide users with innovative network defense capabilities.

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- 3) 法定带薪年假;
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#### 公司简介

广州博御信息技术有限公司是一家从事信息安全领域服务、咨询、评估与测评相关工作的综合服务商。团队技术实力雄厚，面向国内大中型企事业单位提供信息安全一体化解决方案。2014年，广州博御信息技术有限公司与广东省信息安全测评中心紧密合作，成立主动防御联合实验室（ADUL）。实验室研究发展基于风险的安全技术。为用户提供创新的网络防御能力。

我们是安全业内的精英团队，聚集了一批优秀的人一起战斗！

我们是刚成立起来的公司，虽然人数不多，但都是业界里的佼佼者！

你不需要具有很牛逼的技术,但只要你有扎实的基础,满怀的激情,以及远大的理想,你就是我们要找的人才！

工作地点：广州天河区华普广场西塔华明路9号

Job posting where Boyusec highlights the joint lab with Guangdong ITSEC. The translated text is, “In 2014, Guangzhou Boyu Information Technology Company and Guangdong ITSEC cooperated closely to establish a joint active defense lab (ADUL).”

## Conclusion

The lifecycle of APT3 is emblematic of how the MSS conducts operations in both the human and cyber domains. According to [scholars of Chinese intelligence](#), the MSS is composed of [national, provincial, and local elements](#). Many of these elements, especially at the provincial and local levels, include [organizations with valid public missions](#) to act as a cover for MSS intelligence operations. Some of these [organizations](#) include think tanks such as [CICIR](#), while others include [provincial-level governments](#) and [local offices](#).

In the case of APT3 and Boyusec, this MSS operational concept serves as a model for understanding the cyber activity and lifecycle:

- While Boyusec has a website, an online presence, and a stated “information security services” mission, it cites only two partners, Huawei and Guangdong ITSEC.
- Intrusiontruth and the *Washington Free Beacon* have linked Boyusec to supporting and engaging in cyber activity on behalf of the Chinese intelligence services.
- Recorded Future’s open source research has revealed that Boyusec’s other partner is a field office for a branch of the MSS. Boyusec and Guangdong ITSEC have been documented working collaboratively together since at least 2014.
- Academic research spanning decades documents an MSS operational model that utilizes organizations, seemingly without an intelligence mission, at all levels of the state to serve as cover for MSS intelligence operations.
- According to its website, Boyusec has only two collaborative partners, one of which (Huawei) it is working

with to support Chinese intelligence services, the other, Guangdong ITSEC, which is actually a field site for a branch of the MSS.



Graphic displaying the relationship between the MSS and APT3.

## Impact

The implications are clear and expansive. Recorded Future's research leads us to attribute APT3 to the Chinese Ministry of State Security and Boyusec with a high degree of confidence. Boyusec has a [documented history](#) of producing malicious technology and working with the Chinese intelligence services.

APT3 is the first threat actor group that has been attributed with a high degree of confidence directly to the MSS. Companies in sectors that have been victimized by APT3 now must adjust their strategies to defend against the resources and technology of the Chinese government. In this real-life David versus Goliath situation, customers need both smart security controls and policy, as well as actionable and strategic threat intelligence.

APT3 is not just another cyber threat group engaging in malicious cyber activity; research indicates that Boyusec is an asset of the MSS and their activities support China's political, economic, diplomatic, and military goals.

The MSS derives [intelligence collection requirements](#) from state and party leadership, many of which are defined broadly every five years in official government directives called Five Year Plans. Many APT3 victims have fallen into

sectors highlighted by the most recent [Five Year Plan](#), including green/alternative energy, defense-related science and technology, biomedical, and aerospace.