公共基础设施威胁与安全

AhnLab EPS

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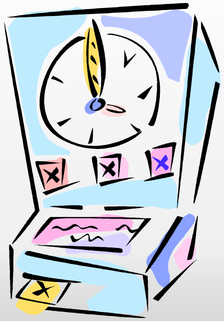
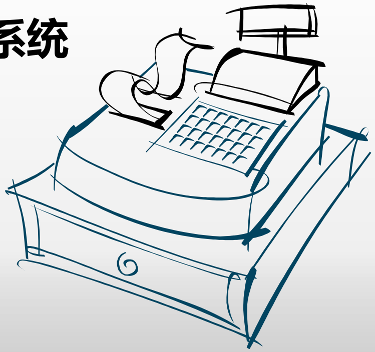
方便有效率的专用终端

- 产业系统
  - 公共基础设施
  - 工厂设备



- 金融系统
  - POS
  - ATM



- KIOSK
  - 机场
  - 商场
  - 活动场所

- 封闭网 业务领域

为什么专用终端很危险?

升级困难

如AV这样占容量大的安全解决方案难以适用.

各种各样的人员来经营

网络连接松懈

中断困难.

专用终端的维护和保护工作难进行。

错误的观念

封闭的网络
免疫恶意代码威胁

不使用外置储存
设备等于安全

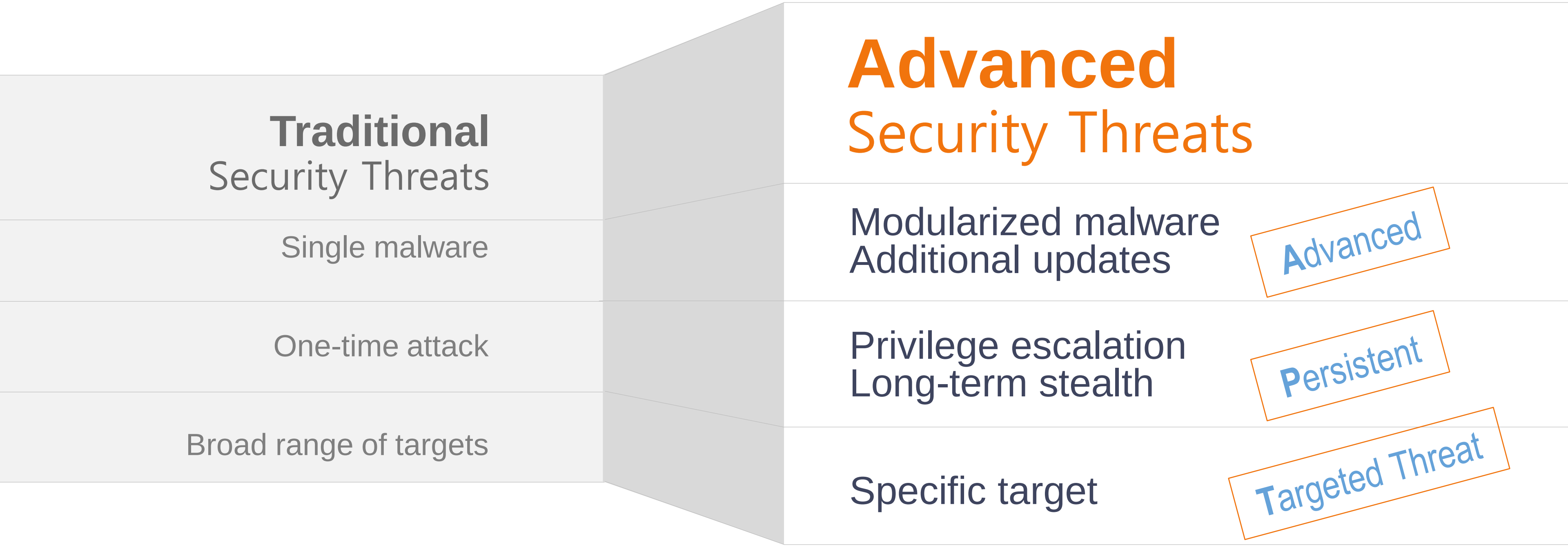
拦截未经许可的
程序执行等于安全

只要限制网络连接
即可以防止侵入

从无法预测的路径感染的恶意代码会破坏系统，造成信息泄露

完全改变的攻击方式

高级持续性威胁 - APT (Advanced Persistent Threat)



Traditional Security Threats	**Advanced** Security Threats	
Single malware	Modularized malware Additional updates	Advanced
One-time attack	Privilege escalation Long-term stealth	Persistent
Broad range of targets	Specific target	Targeted Threat

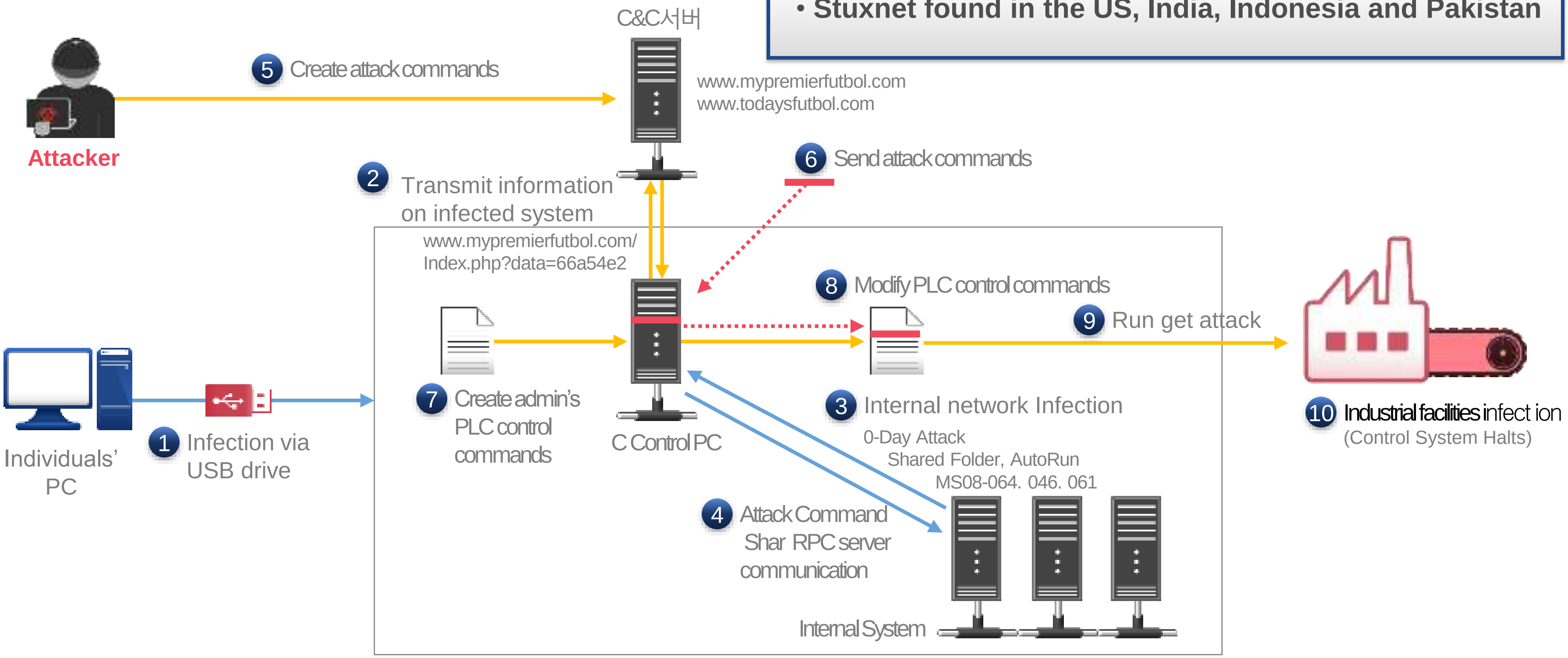
StuxNet证明了这些.

Stuxnet; targeting industrial systems

Stuxnet is specially-designed malware to target the SCADA system.
While other targeted attacks are usually geared towards financial gain, Stuxnet is designed to infect only the SCADA control system[1] to run out of control.

Incidents caused by Stuxnet

- **Iran's SCADA-controlled nuclear facilities attacked** (Jan. to Sep. '10)
  - Stuxnet penetrated Iran's nuclear facility to sabotage the country's uranium enrichment program
- **Stuxnet wreaked havoc in China** (Jul. '10)
  - 6 million PC in China infected by Stuxnet
- **Stuxnet found in the US, India, Indonesia and Pakistan**



Stuxnet is a sophisticated worm that infiltrates even "closed" networks to inflict severe damages to specific industrial control systems.

[1] Siemens WinCC/Step7 system

对公共基础设施的攻击比电影更危险

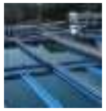
核电站

火力发电厂

水库

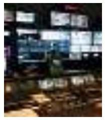
交通系统

防灾系统


自来水设施

监控

军事系统


电视台

通信设施

最近的攻击在一般PC上也几乎不可防御

- 在使用中的 AV 测试后以无法感知的方式攻击

- 虽有以与Anti-Exploit相同的方式来阻止，但由于使用于多种用途会影响性能

专用系统反而可以防御

Attack Surface Reduction

攻击表面最小化

- 程序弱点防御
- 外部储存设备管理
- 除允许的 IP/端点外全部阻止

Malware Prevention

恶意代码诊断

- 服务器为基础通过AV的终端恶意代码诊断

Restricted Applications

只可以执行允许的程序

- 阻止不被允许的程序执行

为了这些工作能有效化而开发

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Whitelist-based Hybrid Solution, AhnLab EPS

1 Malware Detection & Prevention

2 Application Whitelisting

3 Easy Control & Manage

4 Centralized Management

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EPS

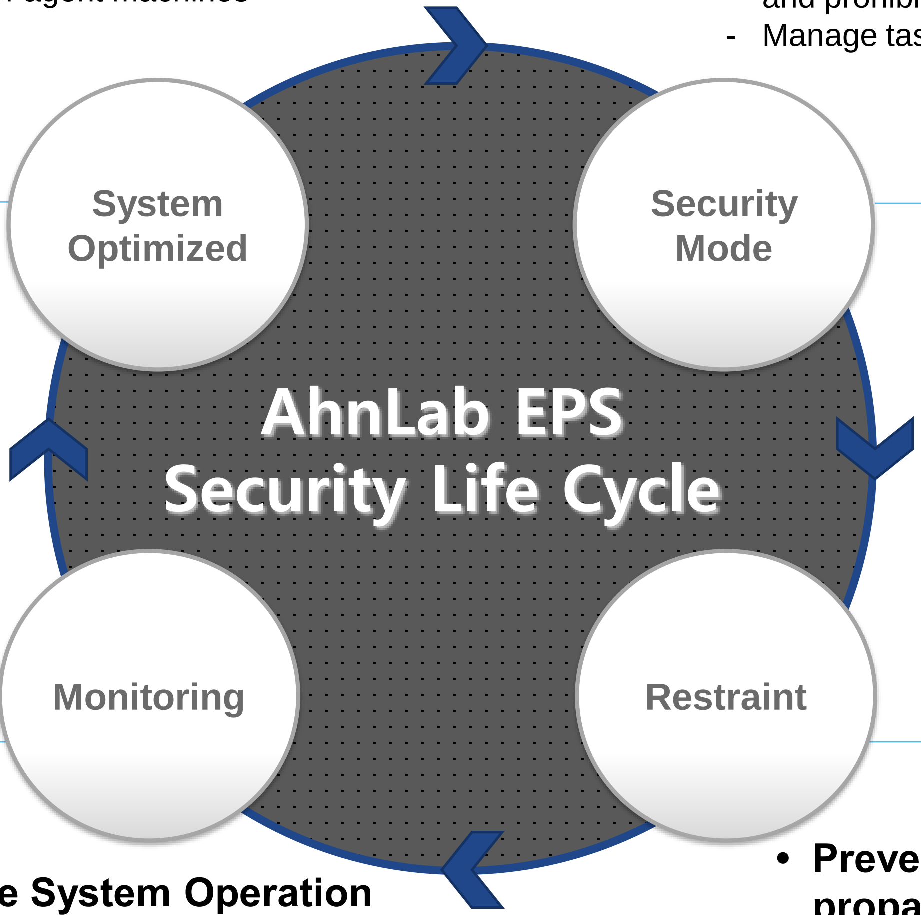
AhnLab EPS的业务流程

- **System Optimization**

- Analyze system operation
- Control non-grouped and non-agent machines
- Optimize system
- Repair malware

- **Manage and Control system**

- Manage system based on whitelist
- Manage external drive control, remote control and prohibited program execution
- Manage tasks using account privileges



- **Analyze and Manage System Operation**

- Monitor all groups and agents
- Manage group/agent logs
- Respond promptly to issues via intuitive screen

- **Prevent and control malware propagation**

- Scan and control malware in real-time
- Block ARP spoofing and network attacks
- Block network IPs and ports

AhnLab EPS 配置和部署

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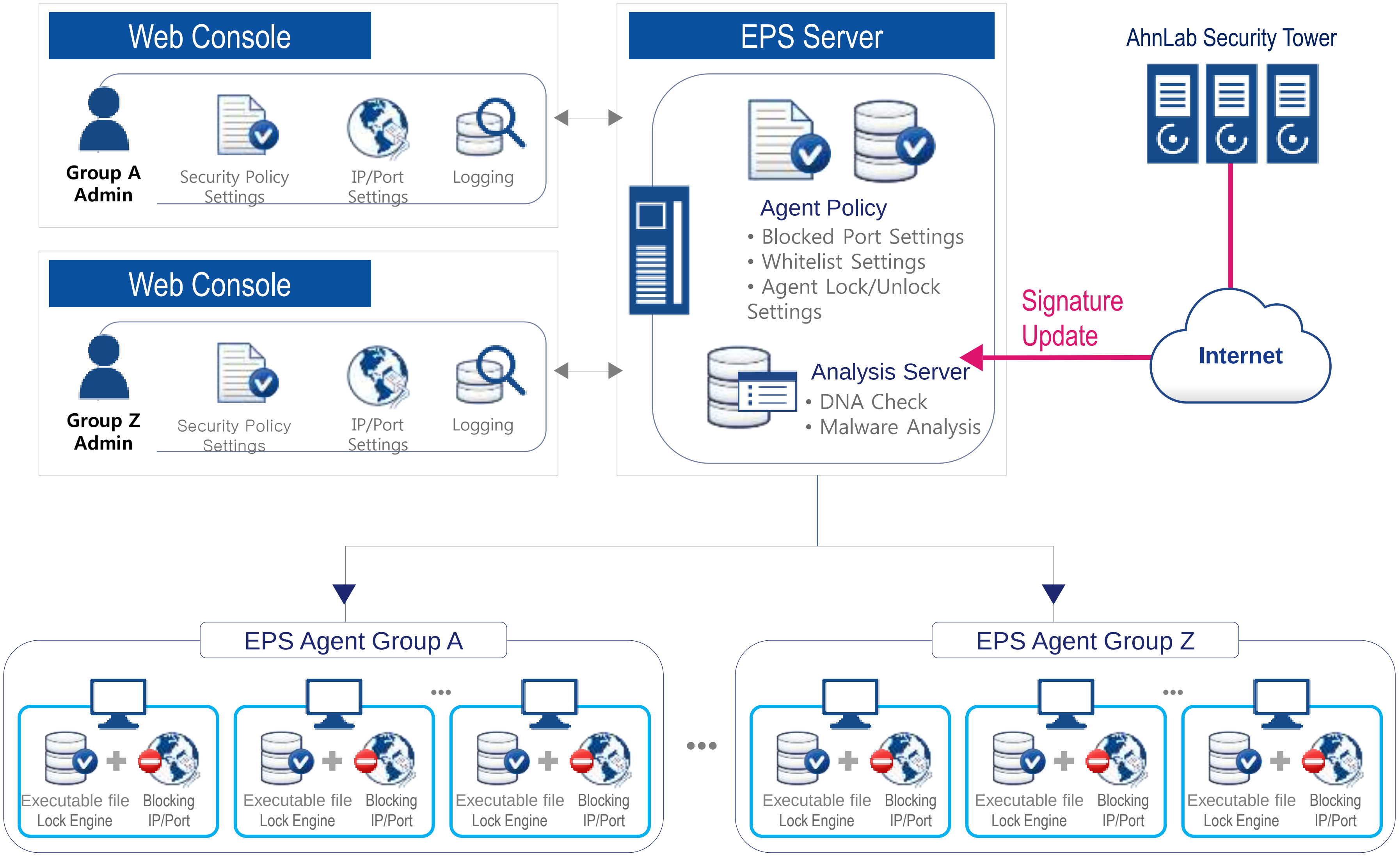

AhnLab EPS 优点

01 在不影响系统资源和业务连续性的前提下控制恶意代码

02 限制非业务活动，提高生产线效率

03 阻止恶意代码或员工引起的数据流出

04 便利的远程管理系统

05 通过灵活的策略配置，进而有效管理

06 预防感染引起的系统中断

AhnLab EPS 会不断的进化

Thank you.

DESIGN YOUR SECURITY

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