



INFORMATION-TECHNOLOGY PROMOTION AGENCY, JAPAN

The Current State of Vulnerability Reporting

**JVN(Japan Vulnerability Note)
JVN iPedia**

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November 13, 2012

- **About IPA?**
- Web site vulnerability
- JVN(Japan Vulnerability Note) state
- JVN iPedia state

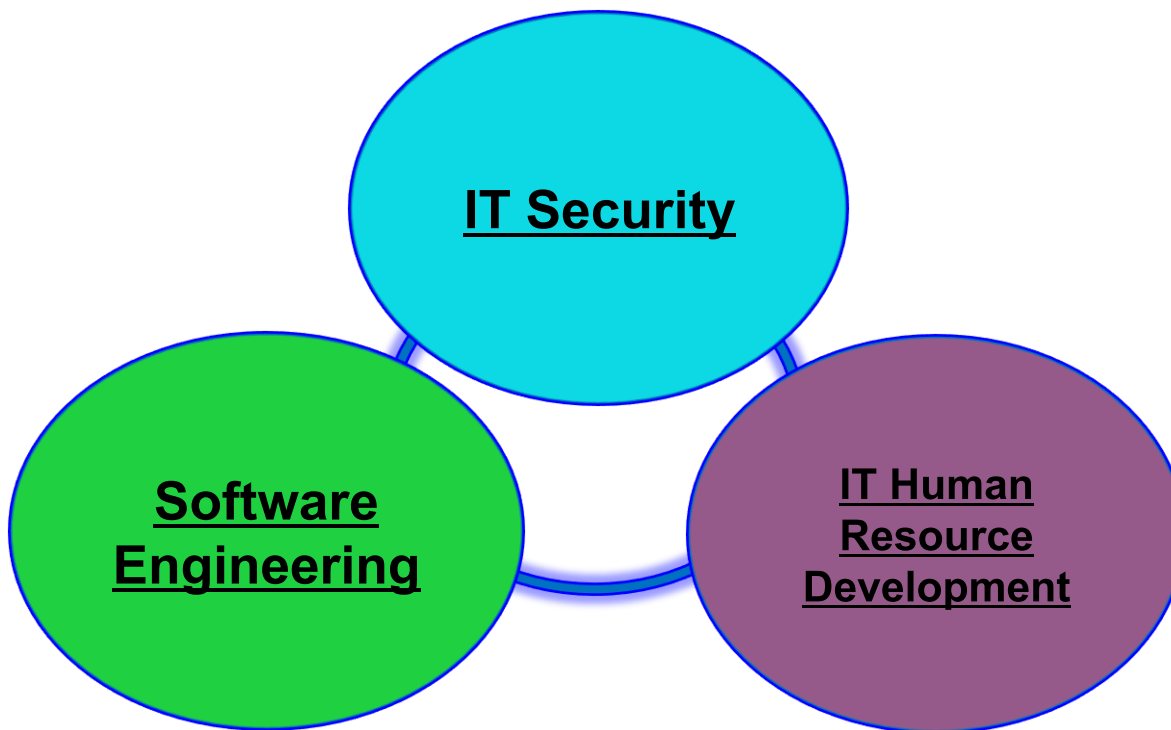


About IPA

<http://www.ipa.go.jp/index-e.html>

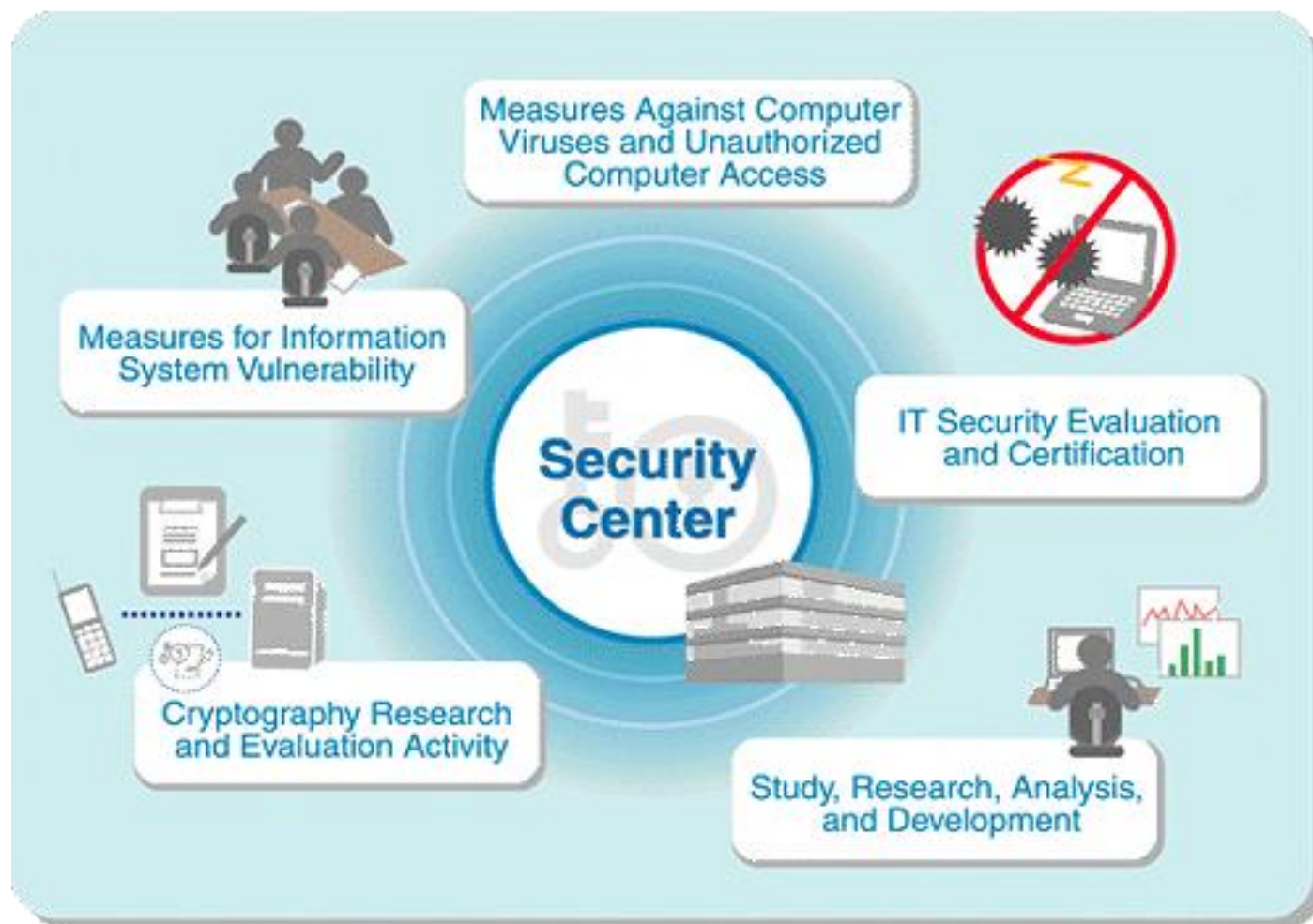


- **I**nformation–technology **P**romotion **A**gency, Japan (IPA)
- A government-affiliated agency to promote IT



About IPA

<http://www.ipa.go.jp/index-e.html>



Publications in IT Security field

<http://www.ipa.go.jp/security/english/third.html>

- **Information Security White Paper Part 2, "10 Major Security Threats"**

- What threat strikes you most?
- What threat do you think has a significant impact on the society?

For the Year 2012

10 Major Security Threats

~ Changing and Growing Threats! ~



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March 2012

- **How to Secure Your Website**

- A guideline for web site developers and administrators to implement appropriate security into their web site.

How to Secure your Website

4th Edition

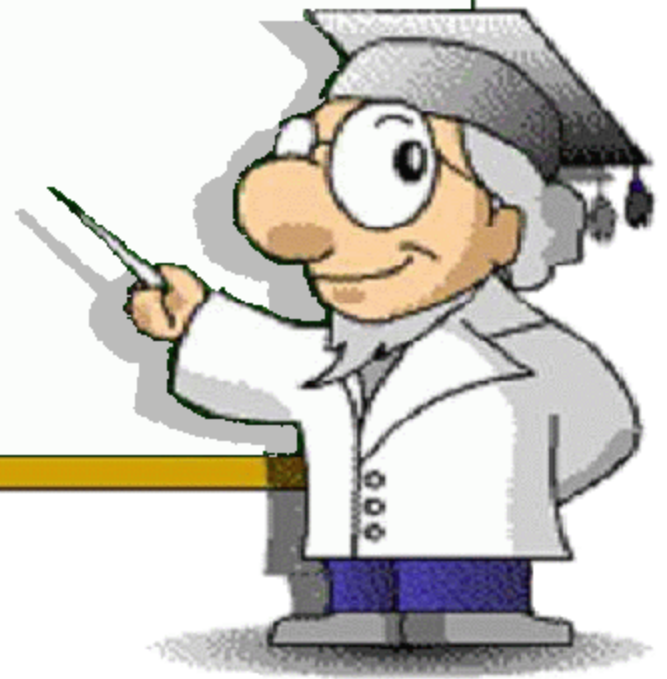
Approaches to Improve
Web Application and Web Site Security



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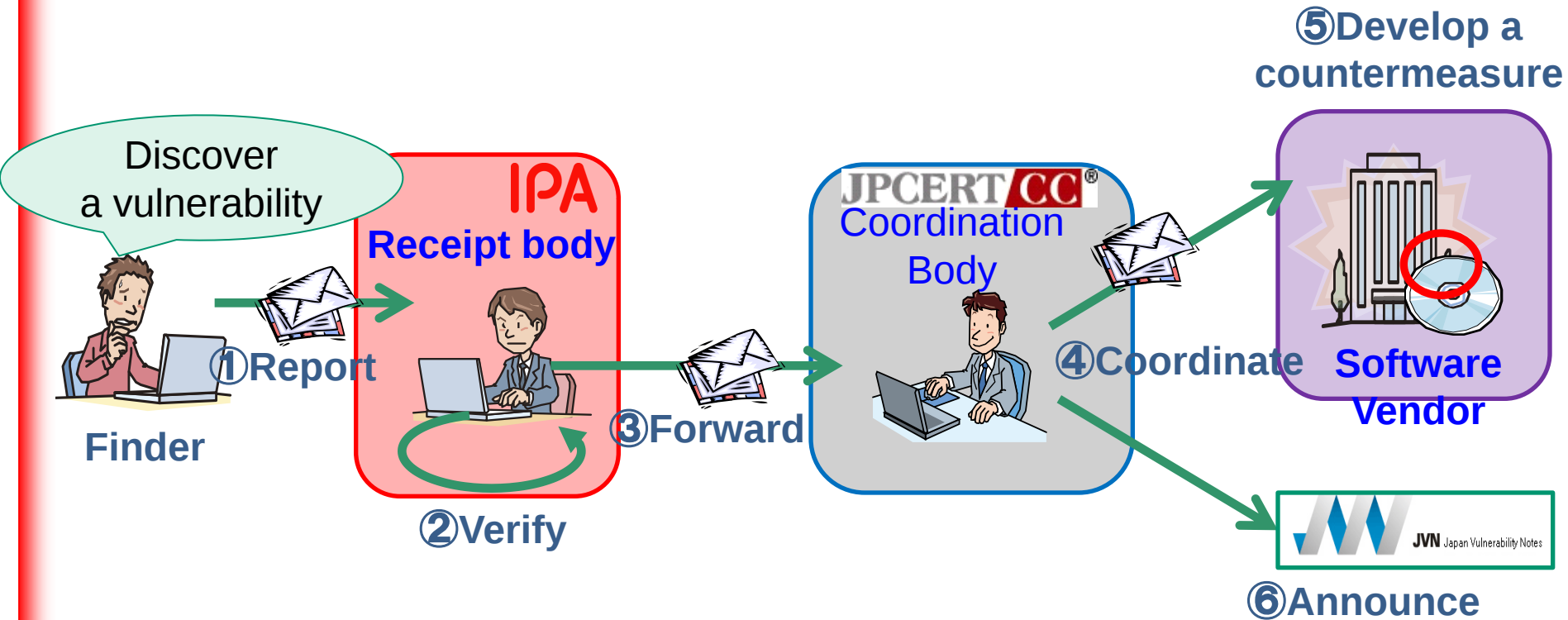
June 2010

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Vulnerability information handling framework in Japan

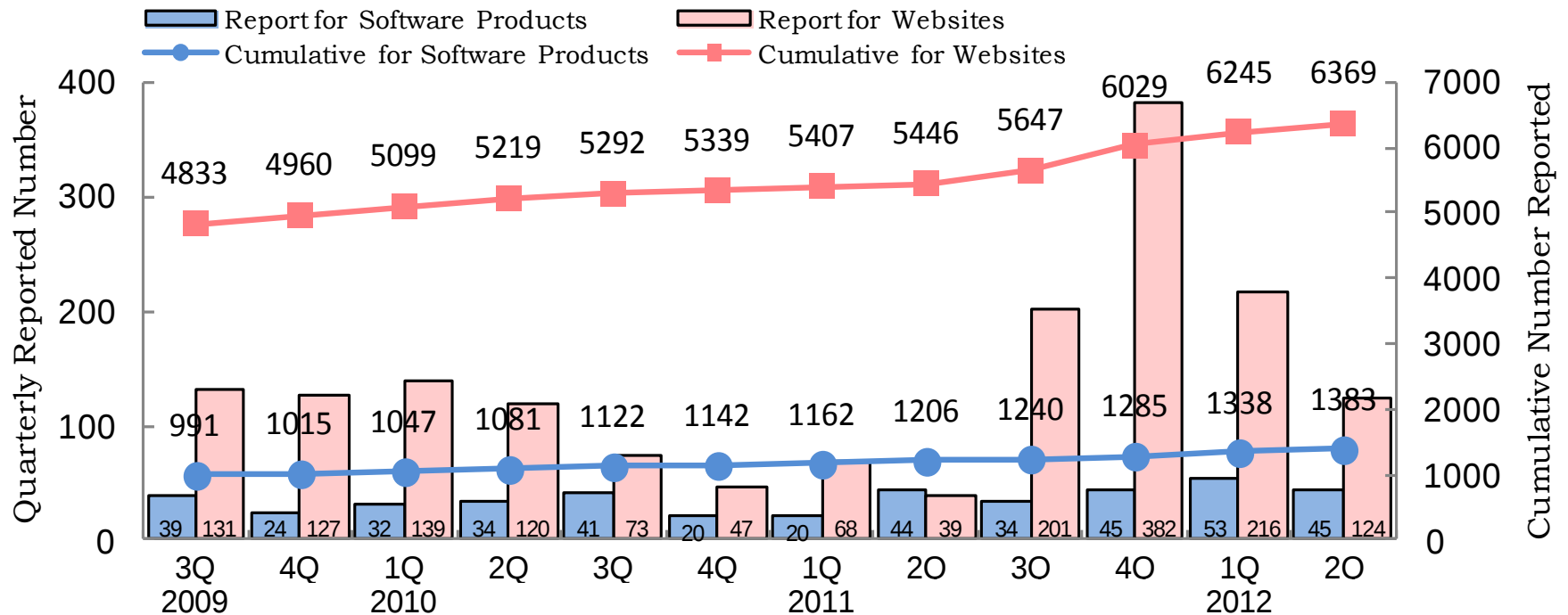
<http://jvn.jp/en/>



- IPA and JPCERT/CC operate the vulnerability information handling framework. (Early Warning Partnership)
- JVN is a portal DB to announce security countermeasure to public.
- We aim to promote security countermeasure through this scheme.

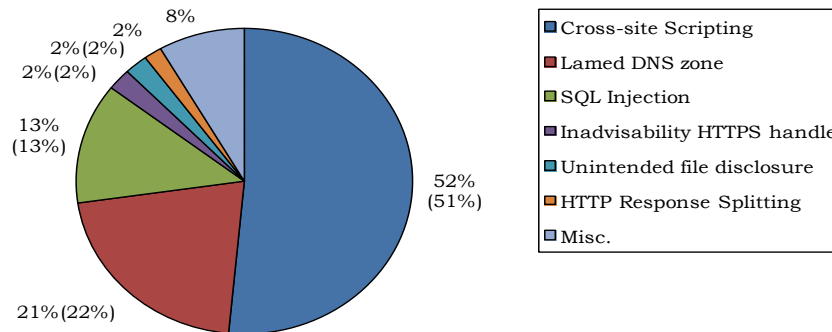
Number and Handling Status of Reports:

- We handle two types of vulnerability - Website and Software Products.
- Over 6,000 websites were reported with vulnerability, and about 4,000 websites were fixed.



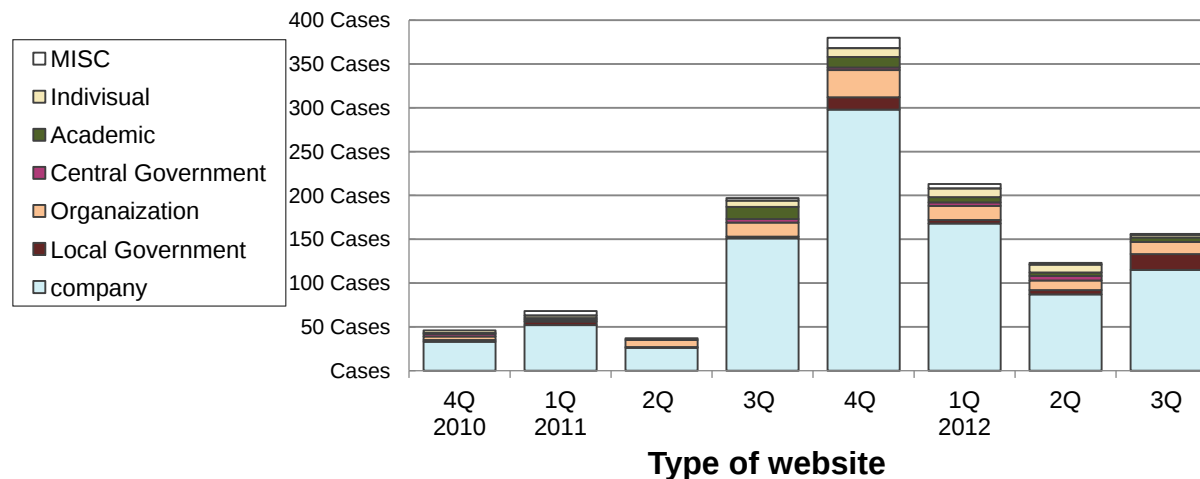
Features of reported website vulnerability

- Cross-site Scripting accounts for 50% of total.



Handling of Vulnerability-related Information on Websites

- The most reported types of website was corporate website. Next is Japanese local government website.



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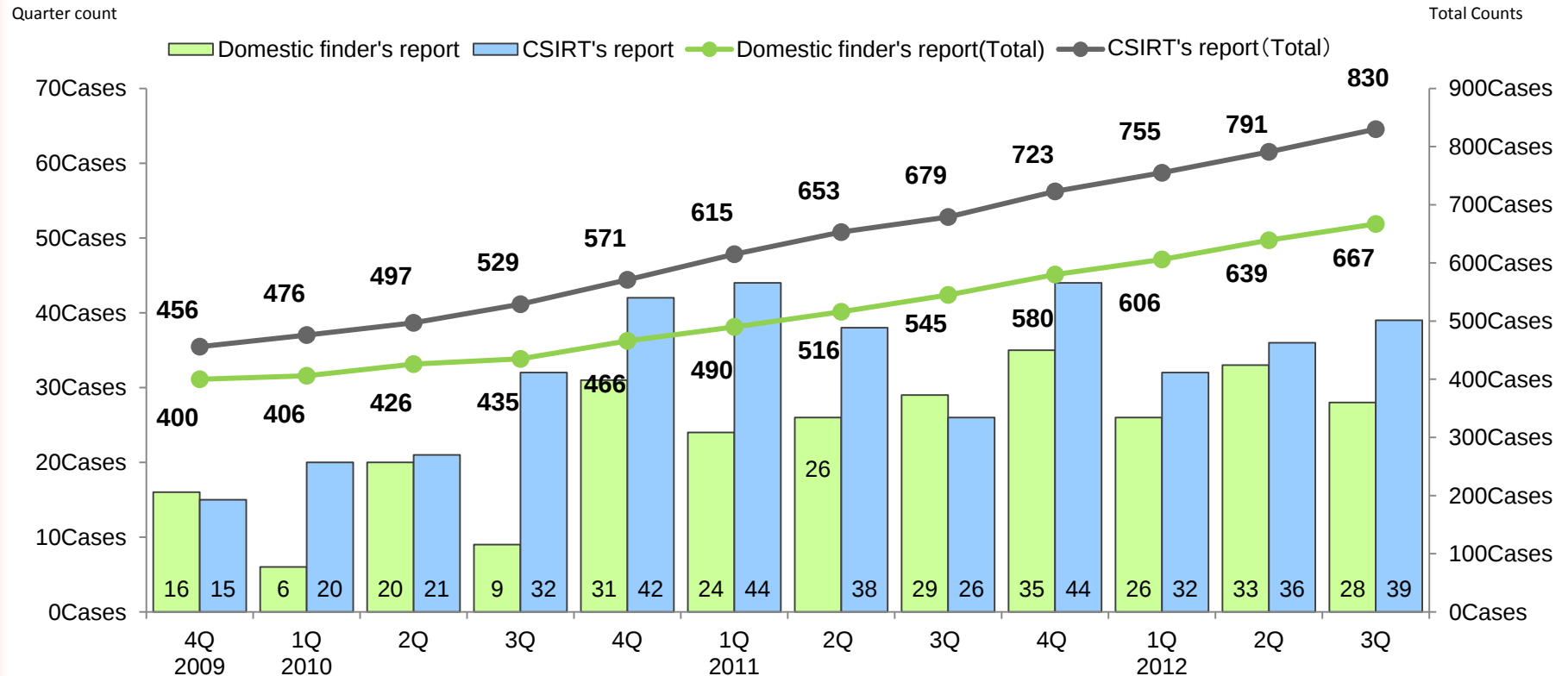
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States of registered vulnerability in JVN

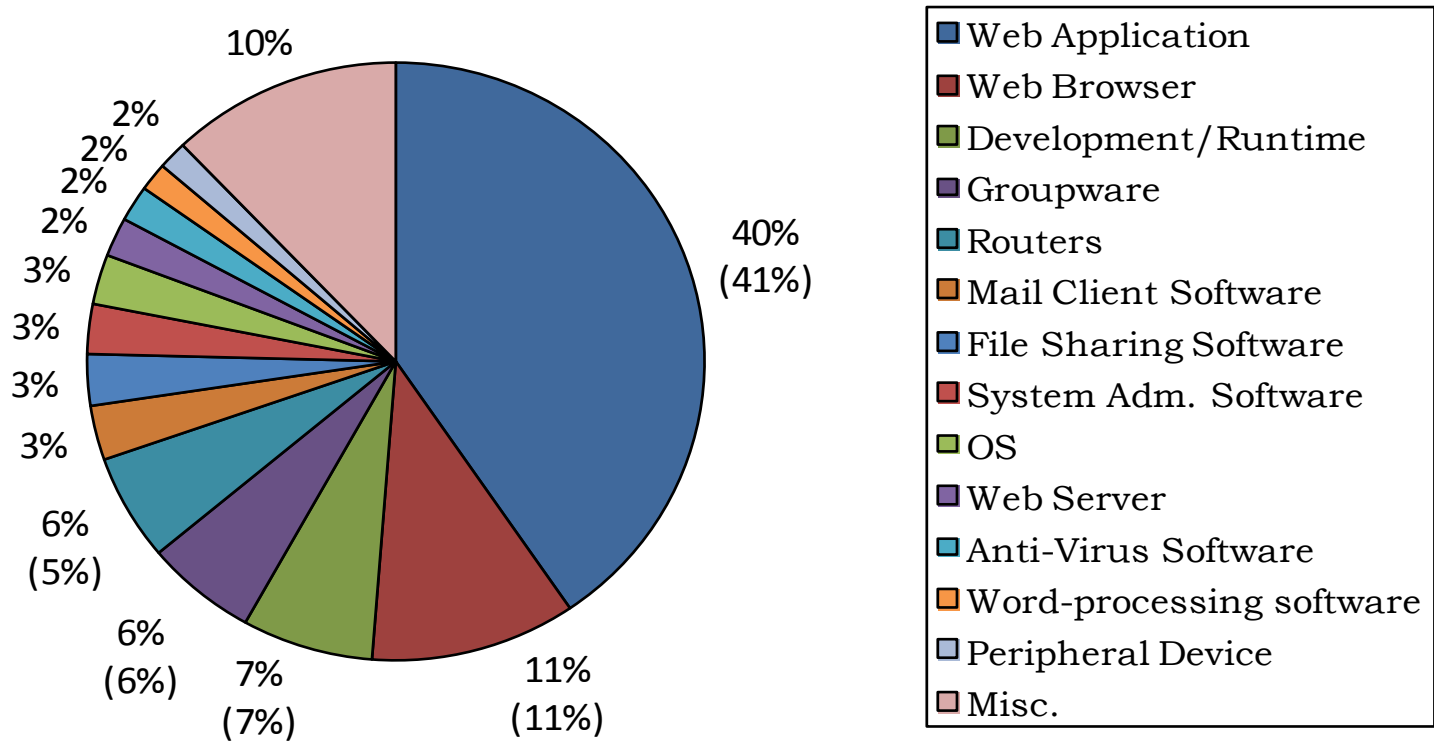


- JVN was launched in 2004 at the same time as the vulnerability reporting scheme.
- Approximately 1,500 cases have been registered in 8 years.



Types of Software registered in JVN

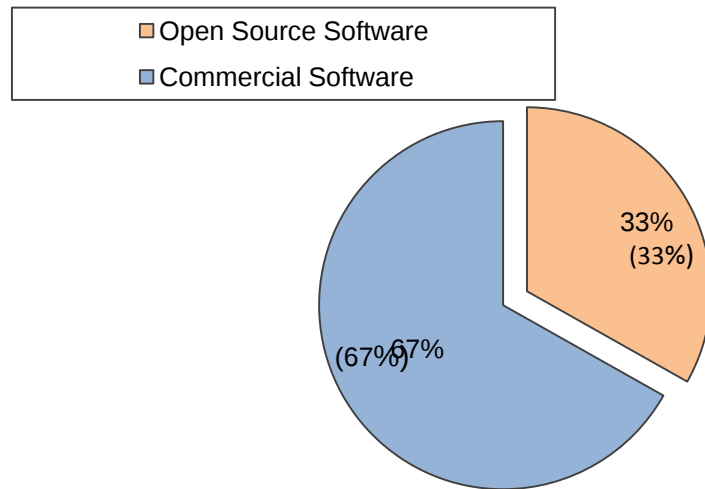
- Web Application (like a httpd server etc) is the most-reported software type for having vulnerabilities.



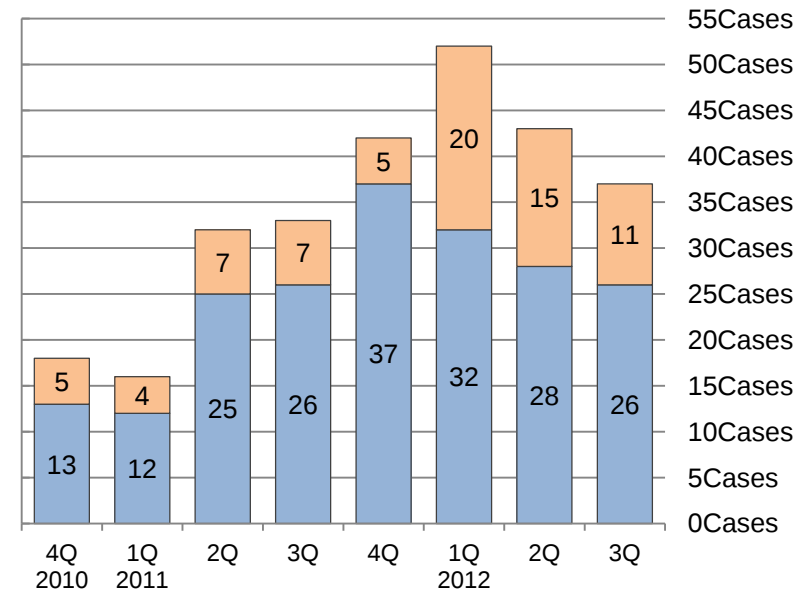
Categorized in Software Products

Open source? or Commercial software ?

- Open source software accounts for one-third of total vulnerabilities.
- Recently, the percentage of open source software is increasing a little bit.



Percentage of Open Source Software



Quarterly change

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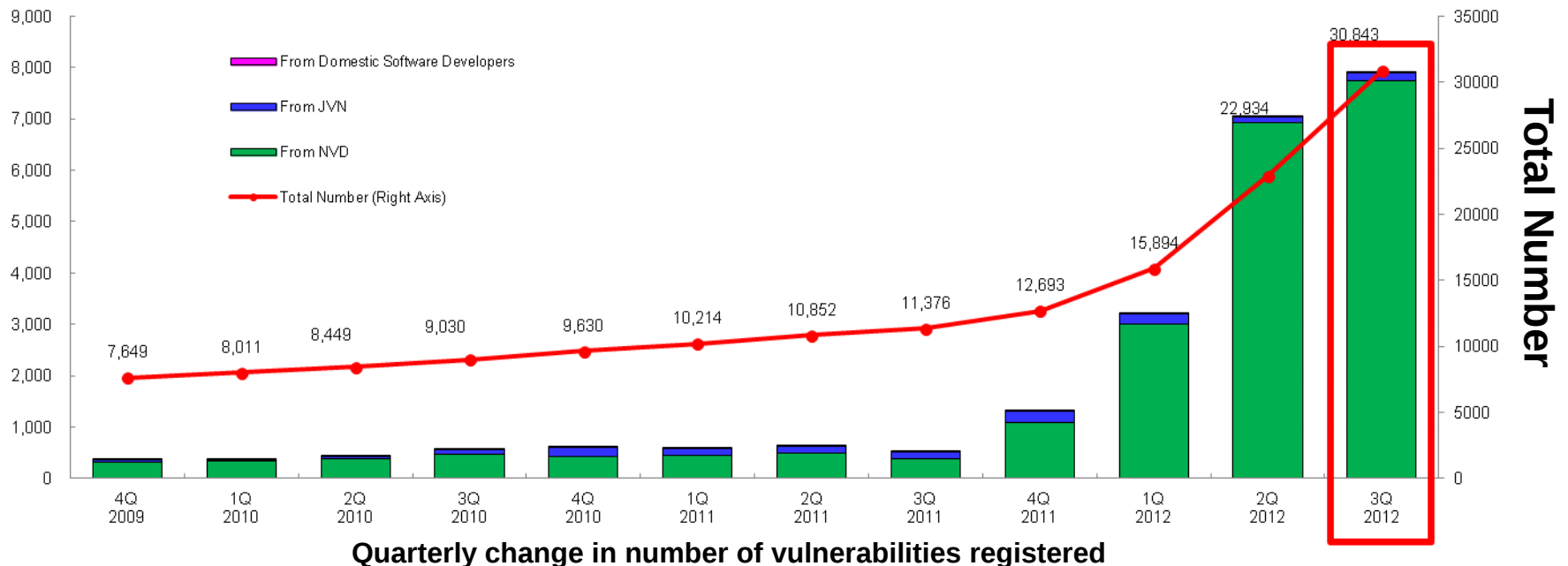
- JVN iPedia

- JVN iPedia (aka. Vulnerability Archiving DB) focuses on regional vulnerabilities (which depend on IT market) in Japan.
- The Vulnerability Archiving DB stores summary and countermeasure information on vulnerabilities in Japanese software and other products posted on JVN.



Quarterly changes in number of vulnerabilities registered

- Quarterly changes in the count of vulnerabilities
The vulnerability countermeasure information registered from April 25, 2007 to the 3rd Quarter of 2012 (July 1, 2011 to Sep 30, 2012) to the Japanese version of JVN iPedia.
- Now, JVN iPedia covers the NVD data of past 3 year (from 2010 to 2012).



Quarterly changes in number of vulnerabilities registered

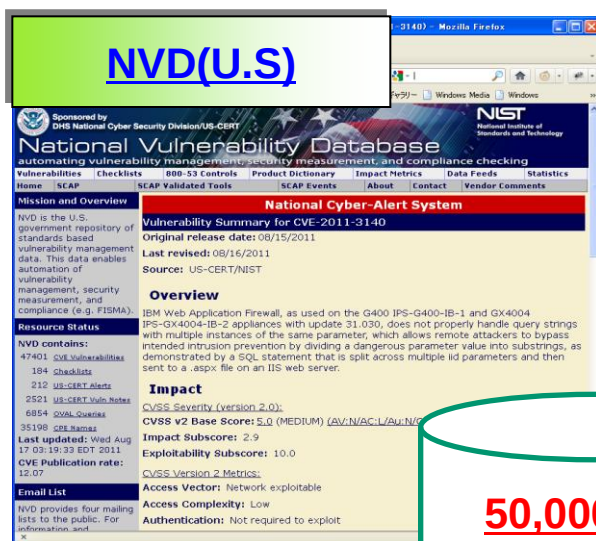
- JVN iPedia (Vulnerability Archiving DB)
JVN iPedia focuses on regional vulnerabilities (which depends on IT market) in Japan.
 - The number of registered cases in JVN iPedia surpasses 30,000

	Source	2012 4Q	Total
Japanese Version	Domestic Developers	2	135
	JVN	171	2,179
	NVD	7,736	28,529
	Total	7,909	30,843
English Version	Domestic Developers	2	135
	JVN	28	682
	Total	30	817

JVN iPedia

Vulnerability data is imported from NVD translated English to Japanese

- JVN iPedia (Vulnerability Archiving DB)



50,000 cases



30,000 cases

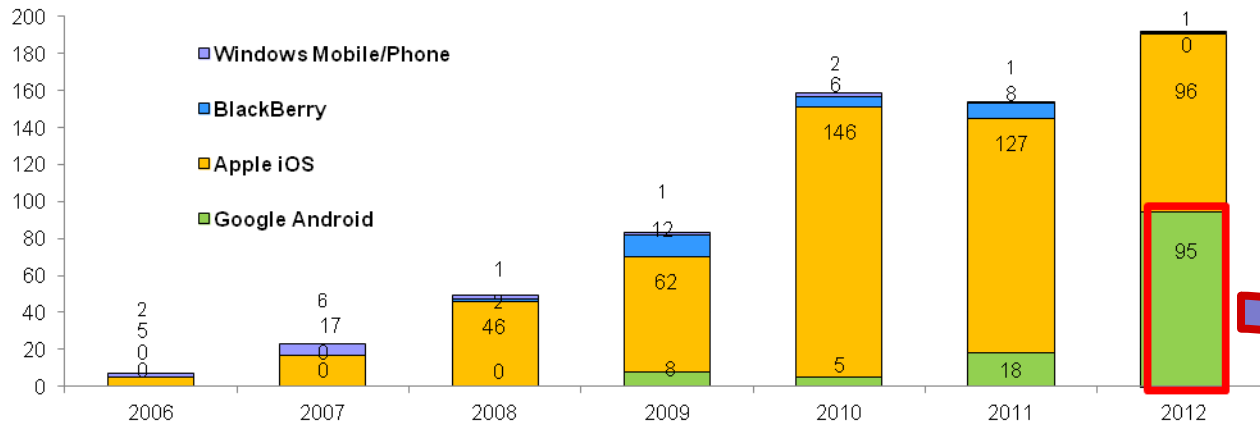
Translated into
Japanese

- Now, we try to synchronize JVN iPedia with NVD.
- JVN iPedia plans to increase its contents to 35,000 cases by December.

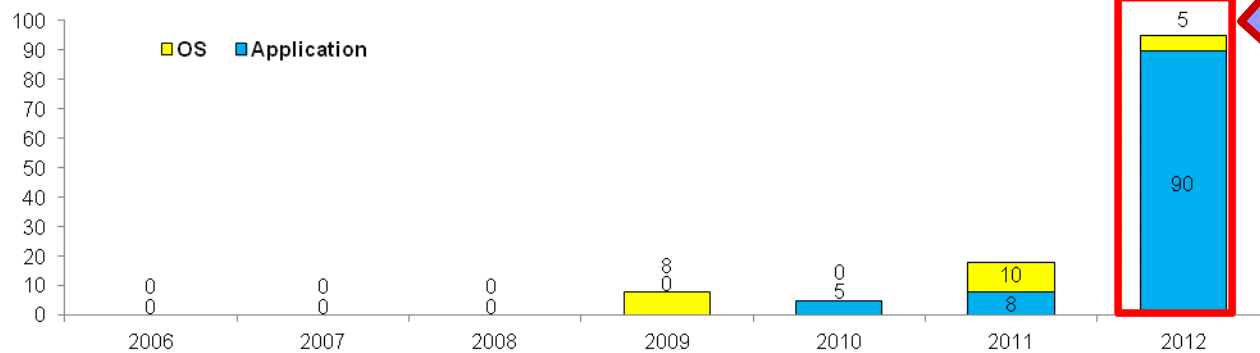
Feature of vulnerability

Smartphones

- JVN iPedia (Vulnerability Archiving DB)
 - Android Platform vulnerabilities (mostly Android applications) are increasing this year.



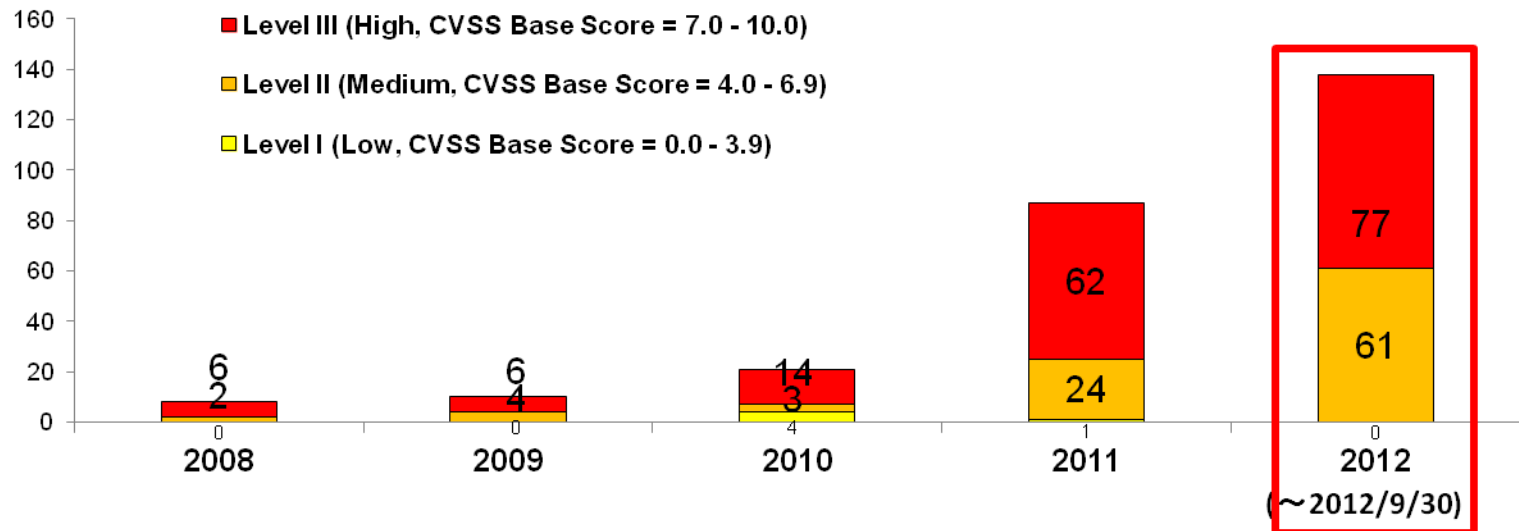
Vulnerabilities in Smartphone Applications by OS Platform



Number of Vulnerabilities in Android OS Software by Software Type

Feature of vulnerability Control System

- Status of Control System Registration
 - The number of control system vulnerabilities is increasing in the past 2 years.
 - The percentage of critical vulnerabilities is high.



Number and Severity of Vulnerabilities in Industrial Control System Software

Thank you

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