



Taiwan Routing table statistics – a new service in TWNIC

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Outline

- TWNIC member services
- Taiwan Routing Table Statistics query system
 - Work flow of the generation of the routing table statistics
 - Statistics items
 - Demonstration of the system result
- Conclusions and suggestions

TWNIC member services

- Activities in 2005
 - 2 TWNIC member meetings
 - **2 Open Policy Meetings on 29-30, June and 17-18, Nov**
 - 3 member training courses, including IP policy and request tutorial, IPv6, VoIP seminar, and 1 APNIC training course
 - 2 network workshops – security and QoS workshops conjunction with CISCO Taiwan
 - 5 IP-Committee meetings



TWNIC member services(cont.)

- Service systems
 - RMS (Resource Management System)
 - Looking glass system
 - **Bandwidth connectivity survey system**
 - **Taiwan routing table statistics query system**
- Print & Research
 - 2005 Taiwan ISP Directory
 - **Taiwan Internet History project**
(<http://www.nethistory.org.tw/>)

2005 Taiwan ISP Directory

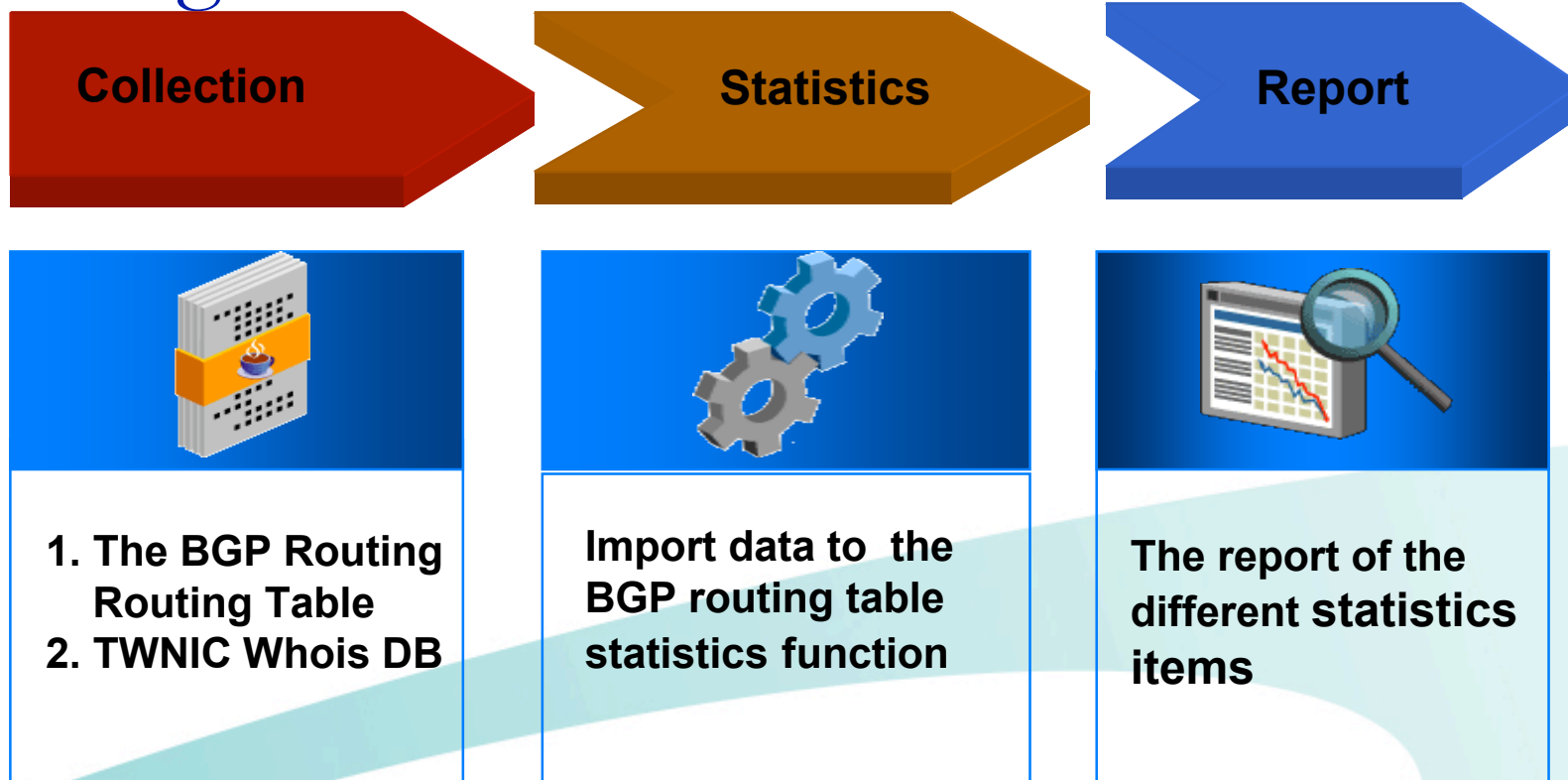
- 2005 Taiwan ISP Directory will be published in March.



Taiwan Routing Table Statistics query system

- Motivation & Purpose
 - ❑ In TWNIC 4th OPM, a project to analyzing the BGP routing table in Taiwan was proposed by TWNIC.
 - ❑ This project aims to analyze the BGP routing table and Whois DB that belongs to Taiwan LIRs, which will provide us the current usage status of LIRs in the IPv4 address and AS number.
 - ❑ The query system has been developed by the cooperation between TWNIC and some members, including Hinet, seednet, and APTG.

Work flow of the generation of the routing table statistics



The statistics query system of the BGP Routing Table in Taiwan

Statistics items

- The statistics of routing aggregation
 - No. of unique prefixes and no. of maximum aggregation
- The statistics of IP address/ASN by routing entries
 - No. of route entries, No. of span prefixes, and Average prefix average
- The statistics of ASN in Routing Table
 - No. of ASes, **origin-only ASes**, origin ASes announcing only one prefix, **transit AS**, transit-only AS, distinct AS paths, AS path length, and Max AS path length visible
- The comparison on WHOIS DB and Routing Table
 - **Total IP address in Taiwan, total ASN in Taiwan, *Prefixes from unregistered ASNs***, no. of special use prefixes, no. of prefixes smaller than registry allocations, and ***prefixes being announced from unallocated address space.***
- The statistics of prefix
 - Prefix length distribution

Demonstration of the system result

- The statistic of the routing table has been shown in the web site, <http://trace.twnic.net.tw/routing> .



台灣地區
網際網路路由統計查詢

緣起
為瞭解台灣地區的路由狀況，於94年6月「第四屆TWNIC IP位址政策暨資源管理會議」中，提出以台灣地區的路由資料來進行統計分析。

目的
◎藉由路由統計分析可呈現出目前台灣地區IP位址及自治號碼實際的使用狀況
◎由實際使用的路由表資訊對照 Whois 資料庫，可防止一些不正常使用的IP位址及自治號碼
◎記錄實際路由狀況可為未來留下歷史見證

路由表資料統計項目查詢

| 單位中文名稱 | 單位英文名稱 | AS號碼 | 檢視路由統計 |
|----------------------------|--------|---------|---------------------|
| 亞太交換中心 | EBIX | AS17709 | 請點選 |
| 台灣網際網路交換中心 | TWIX | AS7481 | 請點選 |

路由統計查詢開發單位：亞太電信(APTG)、中華電信(HiNet)、數位聯合電信(Seednet)、台灣網路資訊中心(TWNIC)

Summaries and suggestions

- Taiwan routing table statistics query system is a new service in TWNIC.
- The statistics is updated every Monday.
- The practical usage of the IP resource can be aware for NIR's interest.
- The following task is to developing the statistics diagram to show the trend of different query items, respectively.
- If any NIR has the interest to establish your own query system for your domestic routing table, we are glad to share our experience and mechanism.

Thank You

