Root Zone Management Updates
APTLD, Busan, August 2011

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Background

- ICANN, VeriSign and NTIA have deployed a new system to manage the DNS root zone.

- A multi-year collaborative effort between the three organisations to develop and test the system.
What does the system do?

- Three piece system (one at each organisation) for replacing the current manual workflow.
- Retains the same workflow, but automates many of the processing steps.
- Communication between ICANN and VeriSign conducted via EPP removing risk from the current process.
- More immediate feedback to TLD managers on problems with requests.
- Automating aspects like obtaining confirmations and performing technical checks should decrease end-to-end processing times.
Development history

- Work on this project began in 2006, following discussions particularly between ICANN and ccTLD Managers.
- Initially an ICANN-only project, scope was expanded to include VeriSign and later systems for NTIA also. End product now covers the whole workflow.
- Using EPP proved to be a challenge for an asynchronous workflow.
- DNSSEC impacted roll-out schedule.
- Development substantially done by mid-2010. Since then, cautious and careful testing program has been conducted.
Highlights of the system

- Provides a new optional web interface for TLD managers. Change requests can be lodged through web interface with immediate feedback. Status of change requests can be monitored in real time.

- Steps that have been automated include contact confirmation process, technical check process, verification process and the general processing and status update notifications.

- There is still manual review by all three parties of every request. This ensures adequate safeguards are retained.
Testing

- Three types of testing: internal, OT&E (integration) and parallel operations
- Most interesting is parallel operations: for the last six months, all root changes we've processed have been done twice - in manual process, and in the automation system.
- We made sure the output of both processes were consistent to consider the system to be working correctly.
- To qualify the system for deployment, formal error free period starting 11 April, with a time and count threshold
We formally passed the testing programme today

Sign off by all three parties

System will now be accepted into production.

All TLD managers will be issued with credentials to the system as part of the roll-out
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>21 June 2011</td>
<td>‣ System passes testing programme</td>
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<td>‣ All three parties agree it is ready</td>
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<td>‣ Commence notification process</td>
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<td>21 July 2011</td>
<td>‣ Root zone now comes from management system</td>
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<td></td>
<td>‣ TLD confirmations and notifications come from system, not manual staff email</td>
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<tr>
<td>Aug-Oct 2011</td>
<td>‣ Induction of TLDs to web interface</td>
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Induction process

- Three month roll-out of usernames and passwords to TLD managers
- Approximately 20% of TLD managers have been invited to retrieve credentials so far
- All credentials to be issued by ICANN Dakar meeting
Key take-aways

- For TLD managers, nothing changes if you don't want it to. Continue to submit requests as normal.
- Once inducted into the system, you'll have an additional choice in how to submit requests, and the ability to review and check requests.
- Overall end-to-end processing times will improve, although not drastically.
  - Much of the work to optimise the process was done in the past few years in the manual process.
Future work

‣ Our main focus has been a correctly functioning system for first version.
  ‣ Limited “new” functionality to avoid scope creep.

‣ Current version only supports “routine” changes from credentialed users. Look into supporting requests such as adding a new TLD in the future.

‣ Take feedback from the community on new features and refining the interface.
Thanks!

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