

# New gTLD Pre-Delegation Testing (PDT)

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# Agenda

- + PDT Overview
- + How to Prepare for PDT
- + Lessons Learned from the PDT Pilot
- + Q & A
- + PDT Tutorial
- + Resources & Information

# Overview

## Where PDT Fits in the New gTLD Process



### Prerequisites for PDT

- + Signed Registry Agreement
- + Production-Ready System & Infrastructure

# Overview

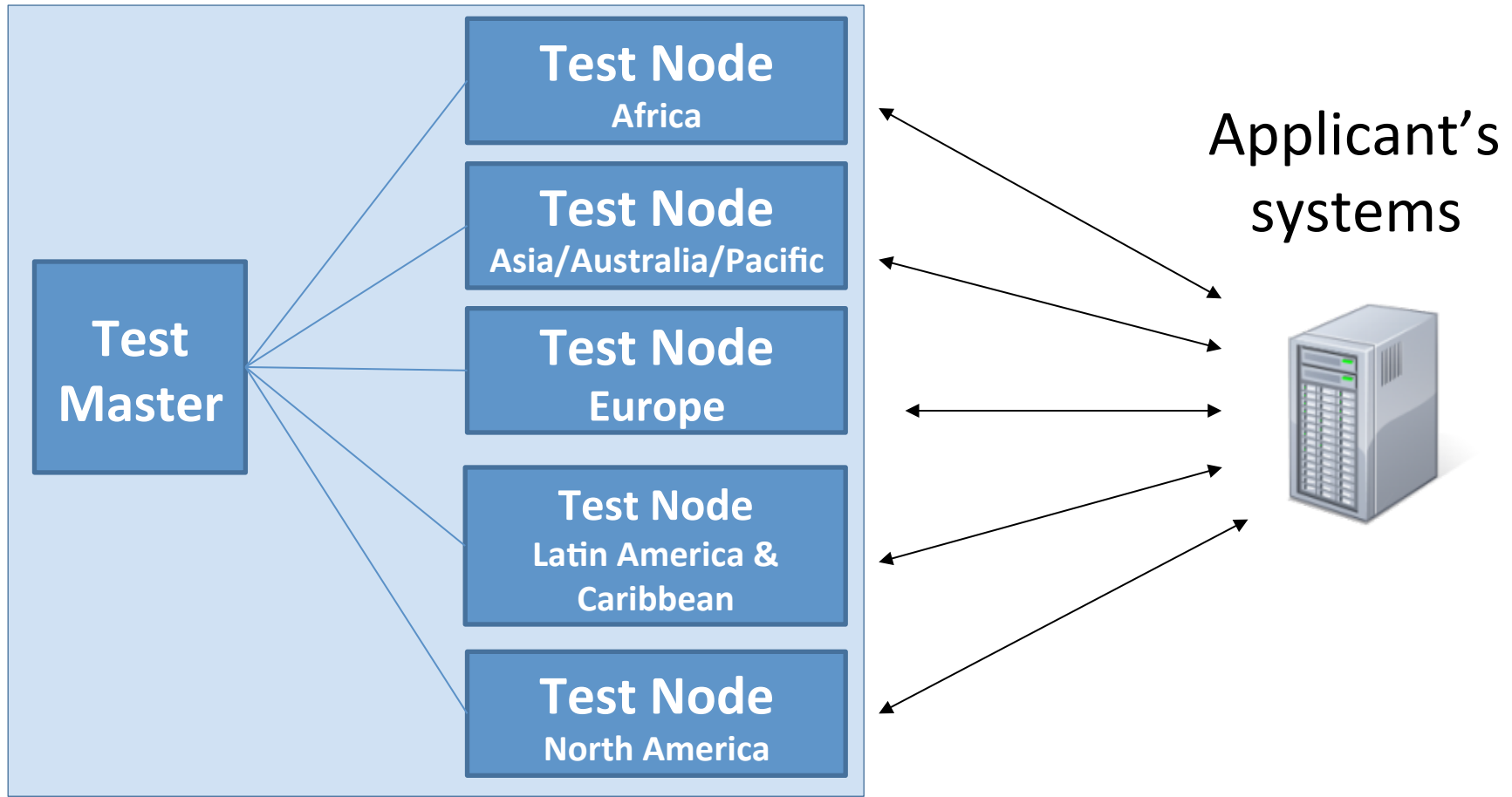
## What is Pre-Delegation Testing (PDT)?

- + Verification step to ensure registry ready for production
- + Verifies documentation
- + Tests the production registry systems

### PDT Elements

- DNS
- WHOIS
- EPP
- Data Escrow
- IDN

# Overview The PDT System



**Applicant's system will tested from all nodes**

# Overview PDT Process

## + Preparation Activities

- + Set up a test appointment with ICANN
- + Identify a PDT Contact with ICANN
- + Submit PDT Input Data to PDT System

## + Testing

- + Expected to be complete in 2 Weeks
- + May require 1 week extension to remedy errors

## + Results Communicated by ICANN

# Overview

## Follow Up Questions

- + All questions will be sent through the PDT system messaging tool
- + Input data questions
  - + Issued at the end of the first week
- + Connectivity & minor protocol questions
  - + Must be resolved during the test window

# How to pass Pre-Delegation Testing

Jakob Schlyter & Fredrik Ljunggren  
Kirei





# What is Production-Ready?

- + The very same systems that will be used for production will be tested.
- + PDT is a final quality check before the application can proceed to delegation.
- + Test, check and check again before submitting your data to avoid unnecessary delays.

# What data is required for PDT?

- + Parameters for DNS, EPP & Whois
- + IDN tables
- + Self-certification documentation
- + DNSSEC Practice Statement (DPS)
- + Data escrow agreement
- + Sample data escrow deposit

# In what format is data submitted?

- +DNS/EPP/Whois parameters as XML
  - +XML schemas provided
- +Machine parsable IDN tables as TXT
  - +RFC 4290/3743 preferred
- +All other documentation as PDF/A

# DNS – Name Servers

- + Make sure all name servers responds correctly:
  - + IPv4 and IPv6
  - + UDP and TCP
  - + [dnscheck.iis.se](http://dnscheck.iis.se) may be useful to check delegation and name server configuration
- + Check the IANA technical requirements for authoritative name servers.

# DNS – Anycast Name Servers

- + As stated in the AGB, all anycast nodes (locations) must be declared and will be tested.
- + Although direct instance queries are preferred, query via proxy is allowed.
- + Performance (latency/query rate) will not be tested against individual anycast nodes.
- + Listed locations will be cross-referenced with the application.

# Whois – Reachability

## + Verify that whois.nic.TLD responds:

- + Whois (port 43)

- + HTTP (port 80 and optional port 443)

- + Both IPv4 and IPv6

## + nic.TLD must be delegated

- + AGB 2.2.3.3 TLD Zone Contents

# Whois – Services

- + Check New gTLD Agreement SPECIFICATION 4 for data format
  - + Use standard key words and formats
  - + Don't forget the legal disclaimer
- + Searchable Whois will be tested if asserted in the original application.

# EPP

- + Verify that the PDT Service Provider is allowed to connect to the EPP servers.
- + Check that all required extensions are provided.
- + If CREATE commands requires manual confirmation, respond promptly during the weeks of testing.
  - + Whitelisting may be applicable



# IDN

- + Include the IDN tables provided in the application question 44
  - + Machine parsable IDN tables as TXT
- + Verify IDN tables before submission
  - + [github.com/dotse/idn-properties](https://github.com/dotse/idn-properties) may be used to verify tables

# Self-Certification Documentation

- + Please use the provided templates to ensure that the documentation is complete.
  - + Examples are provided in the templates
- + Performance should be measured against the systems used in production.

# DNSSEC Practice Statement (DPS)

- + DPS that will be in place for production launch
- + Must conform to RFC 6841
- + Clearly describe the signing-scheme in use & critical controls for key management
- + In section 2.2 (Publication of public keys) please outline the process for publishing the DS record(s) in the root zone

# Data Escrow Deposit

- + One full deposit in XML or CSV format
  - + All files signed by registry & encrypted to the PDT Service Provider
  - + Data escrow profile not needed as it can be derived from the actual deposit
  - + Check the AGB for specific requirements!

# Data Escrow Release

## + Data Escrow Agreement

- + Ensure your Data Escrow Agent is able to release the deposit as part of PDT

# Lessons learned from the PDT Pilot

Mats Dufberg

.SE (The Internet Infrastructure Foundation) – PDT Service Provider



# Lessons Learned from the PDT Pilot

- + We want to thank the applicants and backend providers that participated in the PDT Pilot!
- + We have gained valuable experience and feedback.
- + The pilot confirmed that the PDT System works but there are areas for improvement.

# Lessons Learned from the PDT Pilot

## + Better instructions

Improved clarity & detail

## + Improved templates

More explanations within the templates

## + More examples

Increased variations of data

## + New HOWTOs

How to perform self-tests prior to PDT

## + Extended Customer Support Hours

To provide coverage to more time zones



# Lessons Learned from the PDT Pilot

## What You can do

- + Ensure that the PDT system gets all of the required credentials
- + Ensure your systems and firewalls are open for the PDT Test Nodes
- + Check that your EPP system is fully EPP compliant
- + Keep headers in document templates
- + Review the FAQ when preparing your data

# Questions?




# PDT Tutorial

Mats Dufberg  
.SE (The Internet Infrastructure Foundation) – PDT Service Provider



# Login to PDT System



## ICANN Pre-Delegation Testing System

**Login:**

Please log in using the e-mail address associated with your application.

<b>E-mail:</b>	<input type="text"/>
<b>Password:</b>	<input type="password"/>

[Password Reset](#)

# User's view in PTD System

The screenshot shows the ICANN Pre-Delegation Testing System interface. At the top left is the ICANN logo. The main header is blue with the text "ICANN Pre-Delegation Testing System". Below the header are two tabs: "My Page" and "Applications". On the right, it says "Logged in as username3" with a "Logout" button. The main content area is divided into two sections: "User Information:" and "Applications Information:". The "User Information:" section contains a table with the following data:

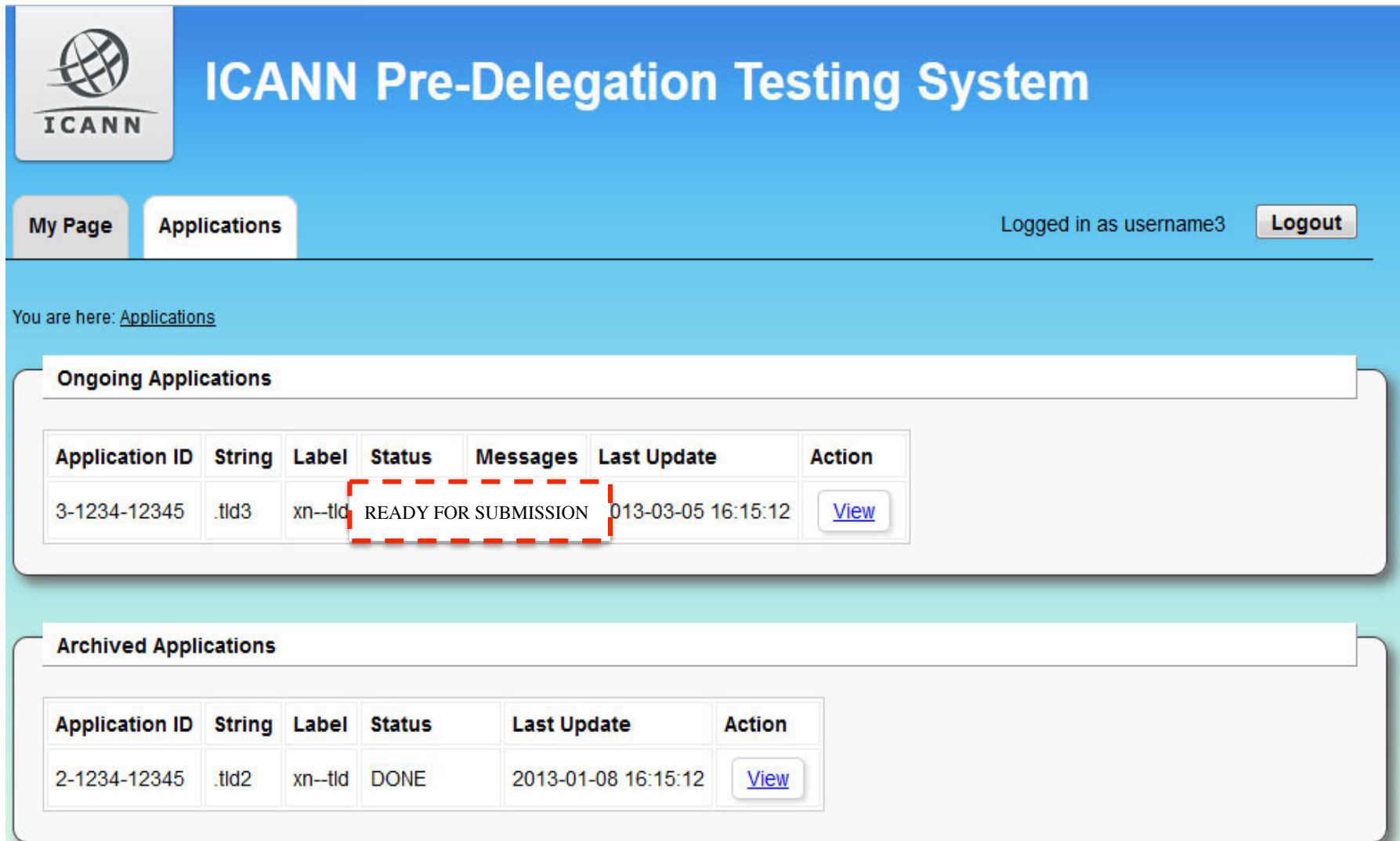
Username:	username3
Email:	user3@localhost
Fullname:	User Three

The "Applications Information:" section contains a table with the following data:

READY FOR S	1
REVIEW	0
TESTING	0
DONE	1

Below the table is a blue link labeled "List Applications".

# Applications (gTLD's)



The image shows a screenshot of the ICANN Pre-Delegation Testing System interface. At the top left is the ICANN logo. The main header reads "ICANN Pre-Delegation Testing System". Below the header, there are navigation tabs for "My Page" and "Applications", and a user status indicator "Logged in as username3" with a "Logout" button. The breadcrumb trail shows "You are here: Applications".

**Ongoing Applications**

Application ID	String	Label	Status	Messages	Last Update	Action
3-1234-12345	.tld3	xn--tld	READY FOR SUBMISSION		2013-03-05 16:15:12	<a href="#">View</a>

**Archived Applications**

Application ID	String	Label	Status	Last Update	Action
2-1234-12345	.tld2	xn--tld	DONE	2013-01-08 16:15:12	<a href="#">View</a>

# Application (gTLD) Status Page

My Page Applications Logged in as username3 Logout

You are here: [Applications](#) > [Application 3](#)

### Application

Test Appointment ID:	6534-345-123-45
Application ID:	3-1234-12345
Applicant:	Applicant Company 3 Inc.
String:	.tld3
Label:	xn--tld
Contact:	Mr. Contact Person 3
Email:	email3@to.someone
Phone:	+3-123-12345-13
Status:	<b>READY FOR SUBMISSION</b>
Last Update:	2013-03-05 16:15:12

### Application Data

Title	Status	Action
Data Escrow	INCOMPLETE	<a href="#">View</a>
DNS	INCOMPLETE	<a href="#">View</a>
Documentation	INCOMPLETE	<a href="#">View</a>
EPP	INCOMPLETE	<a href="#">View</a>
IDN	INCOMPLETE	<a href="#">View</a>
Whois	INCOMPLETE	<a href="#">View</a>

# File input page (DNS)

My Page Applications Logged in as username1 Logout

You are here: [Applications](#) > [Application 1](#) > [Data](#) > [DNS](#)

**DNS**

**Status:** INCOMPLETE

**Upload file:**  No file chosen

No Application Data Files for DNS uploaded yet.

All information shall be supplied in an XML file formatted according to the schema mentioned below. The schema can be downloaded in several formats, and for your convenience a template XML file is provided that you can download and fill out with your own data.

Your XML file will be validated against the schema after uploading and you will be notified immediately if there are any errors. However, for better error reporting you are encouraged to validate your XML yourself before uploading.

- [DNS RELAX NG Schema](#)
- [DNS RELAX NG Compact Schema](#)
- [DNS XML Schema Definition](#)
- [DNS Example XML](#)



# Check of uploaded file

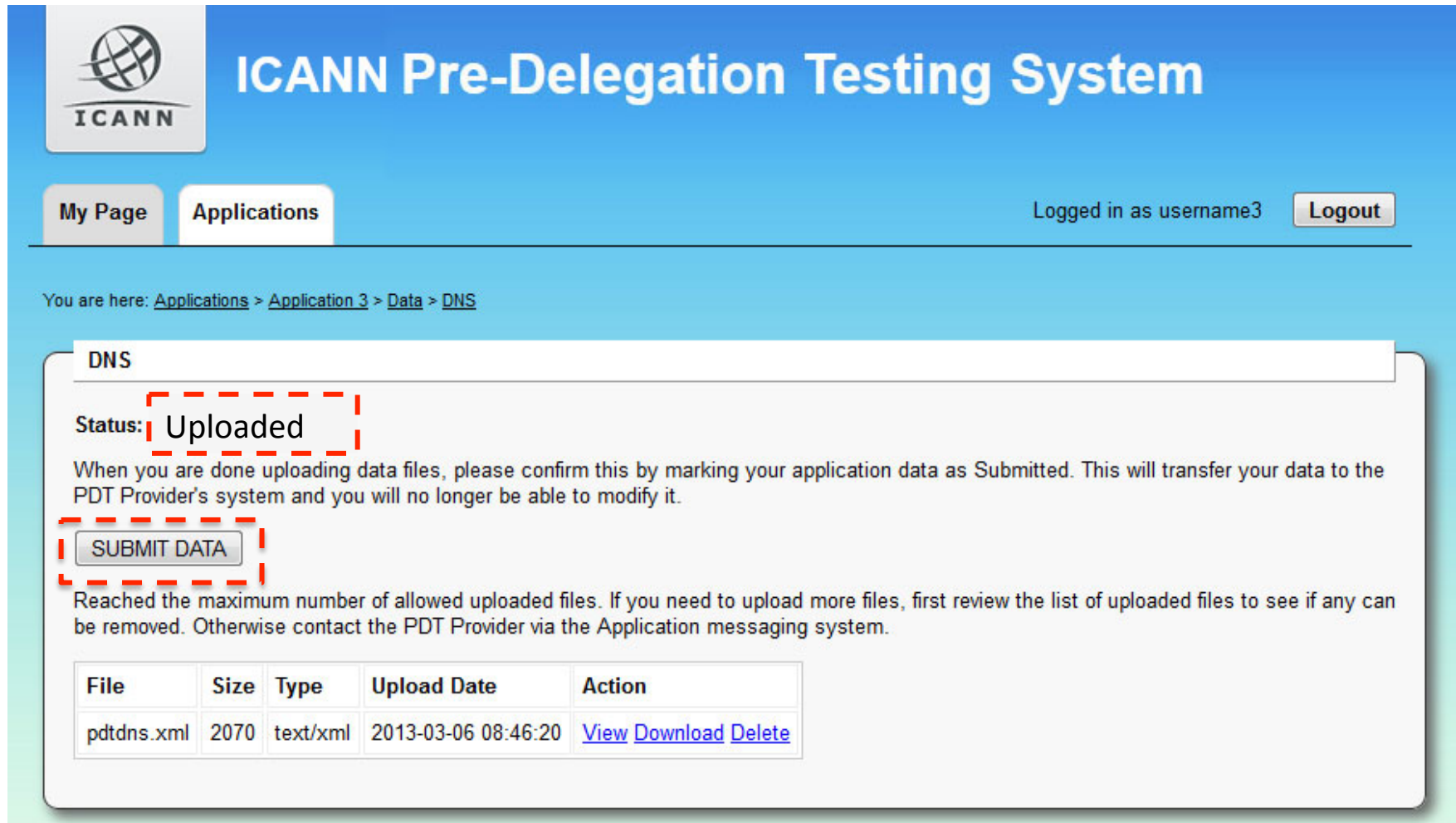
+ At upload, a basic file scan is performed


The image displays two screenshots of a web application interface, likely for managing DNS records. Both screenshots show a user logged in as 'username3' and navigating to 'Applications > Application 3 > Data > DNS'. The interface includes a 'Logout' button and a breadcrumb trail.

**Top Screenshot:** The 'DNS' section shows a status of 'INCOMPLETE'. A red dashed box highlights an error message: 'Wrong file type uploaded for pdt-detaljer.txt, must be one of the following: text/xml, application/xml'. Below the message is an 'Upload file:' field with a 'Bläddra...' button and an 'UPLOAD' button. At the bottom, it states 'No Application Data Files for DNS uploaded yet.'

**Bottom Screenshot:** The 'DNS' section shows a status of 'INCOMPLETE'. A red dashed box highlights an error message: 'Error validating application data file ptdns-ERR.xml! Please validate it locally before uploading!'. Below the message is an 'Upload file:' field with a 'Bläddra...' button and an 'UPLOAD' button. At the bottom, it states 'No Application Data Files for DNS uploaded yet.'

# Uploaded files to be submitted



 **ICANN Pre-Delegation Testing System**

**My Page** **Applications** Logged in as username3 **Logout**

You are here: [Applications](#) > [Application 3](#) > [Data](#) > [DNS](#)

**DNS**

Status: **Uploaded**

When you are done uploading data files, please confirm this by marking your application data as Submitted. This will transfer your data to the PDT Provider's system and you will no longer be able to modify it.

**SUBMIT DATA**

Reached the maximum number of allowed uploaded files. If you need to upload more files, first review the list of uploaded files to see if any can be removed. Otherwise contact the PDT Provider via the Application messaging system.

File	Size	Type	Upload Date	Action
pdt dns.xml	2070	text/xml	2013-03-06 08:46:20	<a href="#">View</a> <a href="#">Download</a> <a href="#">Delete</a>

# Submitting uploaded files

The screenshot shows the ICANN Pre-Delegation Testing System interface. At the top left is the ICANN logo. The main header reads "ICANN Pre-Delegation Testing System". Below the header are navigation tabs for "My Page" and "Applications", and a user status "Logged in as username3" with a "Logout" button. The breadcrumb trail indicates the current location: "You are here: Applications > Application 3 > Data > DNS".

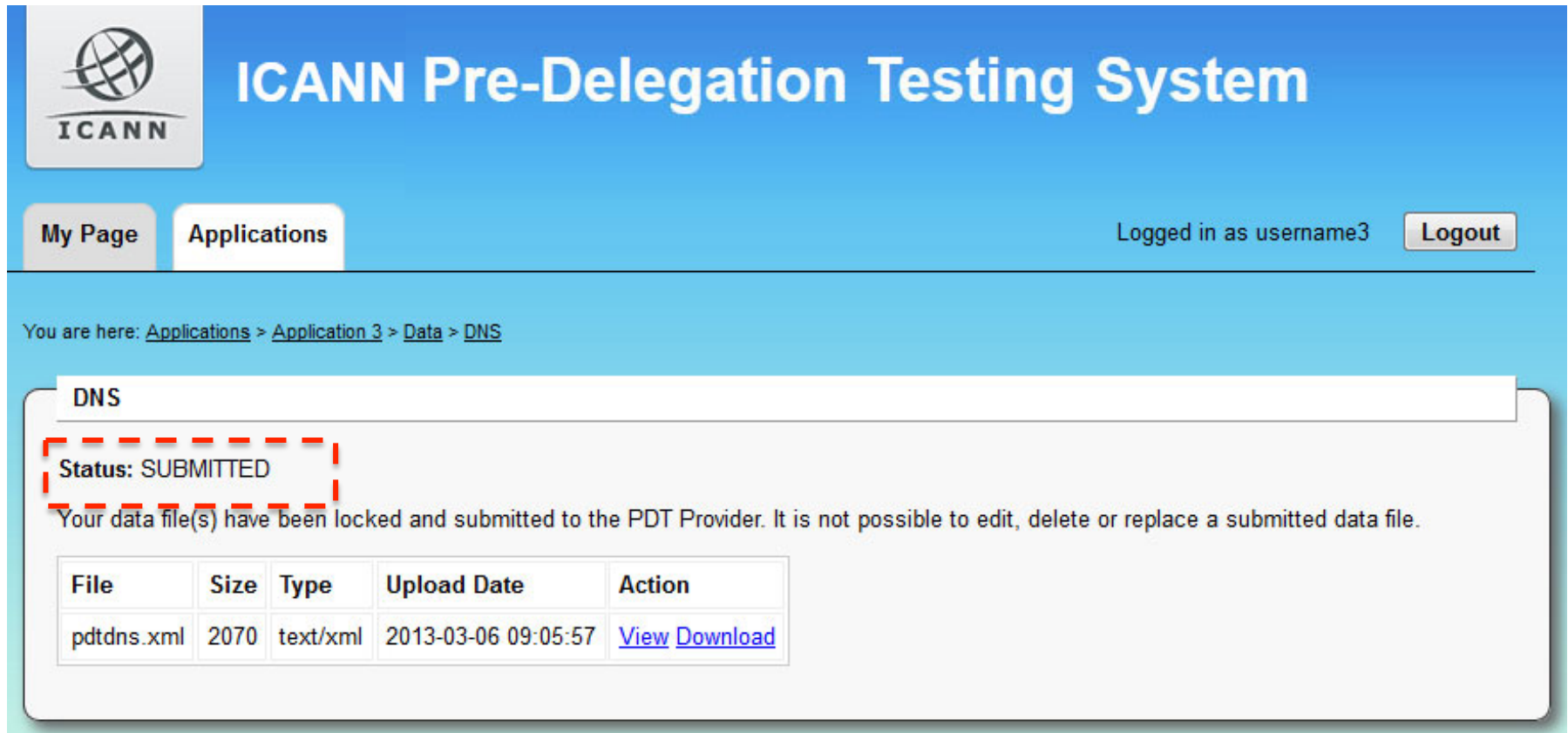
The main content area is titled "DNS" and shows a "Status Uploaded" message. Below this is a "SUBMIT DATA" button. A message states: "Reached the maximum number of allowed uploaded files. If you need to upload more files, first review the list of uploaded files to see if any can be removed. Otherwise contact the PDT Provider via the Application messaging system."

File	Size	Type	Upload Date
pdt dns.xml	2070	text/xml	2013-03-06 09:10

A "Verify submission" dialog box is overlaid on the interface. It contains a warning icon and the text: "This will transfer your data to the PDT Provider's system and you will no longer be able to modify it!". The dialog has "Cancel" and "Submit" buttons.

Below the table, there is text explaining that the PDT Provider will verify the applicant's DNS infrastructure and that tests will be carried out for both IPv4 and IPv6. It also mentions that for DNS tests, the applicant should supply the following [EXPECTED INPUT] and that all DNS test data must be entered into a single XML file, formatted according to the schema linked below.

# File or files are submitted



The screenshot shows the ICANN Pre-Delegation Testing System interface. At the top left is the ICANN logo. The main header is "ICANN Pre-Delegation Testing System". Below the header, there are navigation tabs for "My Page" and "Applications". On the right, it says "Logged in as username3" with a "Logout" button. A breadcrumb trail reads "You are here: Applications > Application 3 > Data > DNS". The main content area is titled "DNS" and contains a message: "Status: SUBMITTED" (highlighted with a red dashed box) and "Your data file(s) have been locked and submitted to the PDT Provider. It is not possible to edit, delete or replace a submitted data file." Below this is a table with the following data:

File	Size	Type	Upload Date	Action
pdt dns.xml	2070	text/xml	2013-03-06 09:05:57	<a href="#">View</a> <a href="#">Download</a>

# PDT Status Page

My Page Applications Logged in as username3 Logout

You are here: [Applications](#) > [Application 3](#)

### Application

Test Appointment ID:	6534-345-123-45
Application ID:	3-1234-12345
Applicant:	Applicant Company 3 Inc.
String:	.tld3
Label:	xn--tld
Contact:	Mr. Contact Person 3
Email:	email3@to.someone
Phone:	+3-123-12345-13
Status:	READY FOR SUBMISSION
Last Update:	2013-03-05 16:15:12

### Application Data

Title	Status	Action
Data Escrow	INCOMPLETE	<a href="#">View</a>
DNS	SUBMITTED	<a href="#">View</a>
Documentation	INCOMPLETE	<a href="#">View</a>
EPP	INCOMPLETE	<a href="#">View</a>
IDN	INCOMPLETE	<a href="#">View</a>
Whois	INCOMPLETE	<a href="#">View</a>

Must be submitted before: 2013-03-15 00:00:00

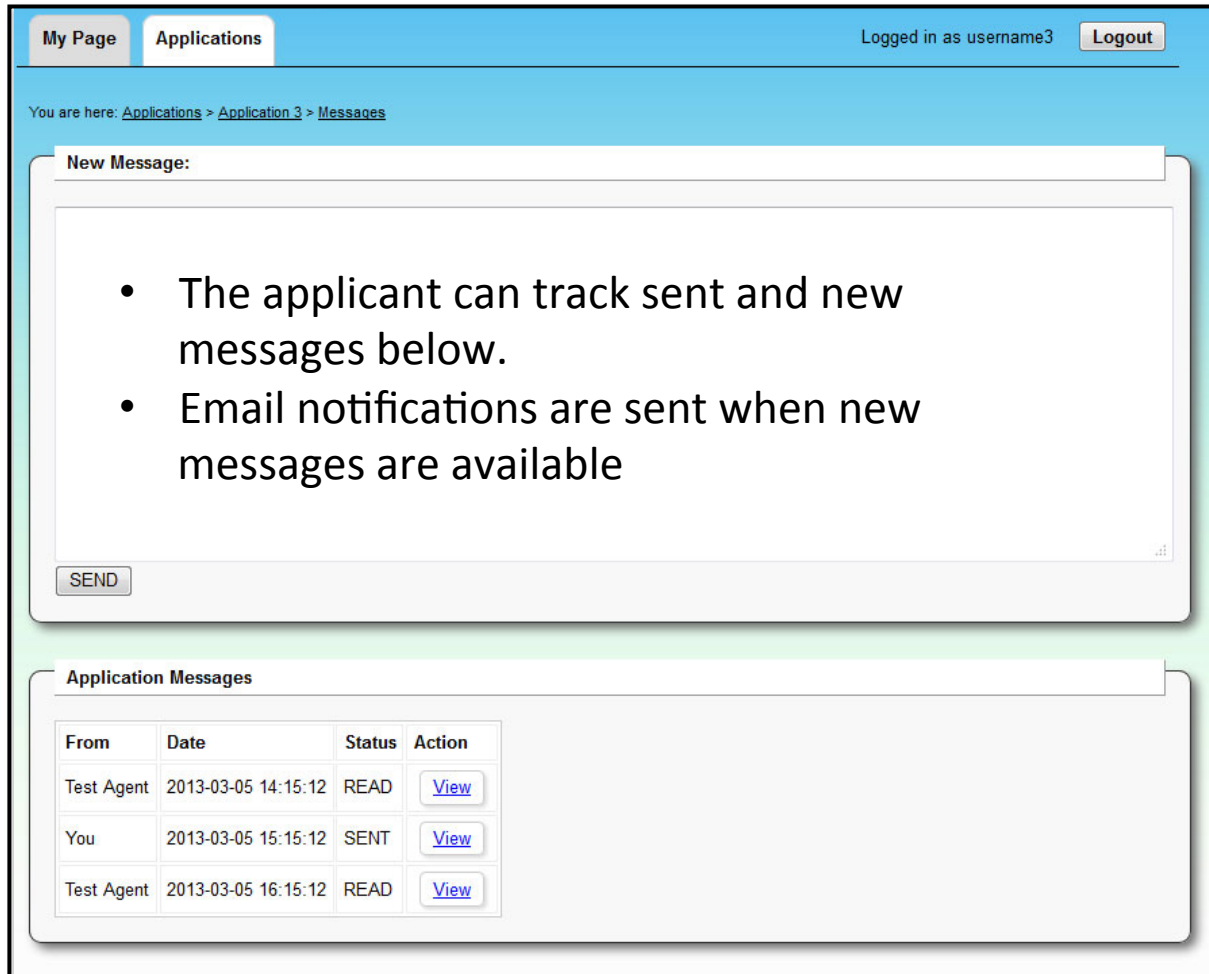
# Status during review and testing

Application	
Test Appointment ID:	5534-345-123-45
Application ID:	2-1234-12345
Applicant:	Applicant Company 2 Inc.
String:	.tld2
Label:	xn--tld
Contact:	Mr. Contact Person 2
Email:	email2@to.someone
Phone:	+2-123-12345-13
Status:	REVIEW
Last Update:	2013-01-08 16:15:12

Application	
Test Appointment ID:	5534-345-123-45
Application ID:	2-1234-12345
Applicant:	Applicant Company 2 Inc.
String:	.tld2
Label:	xn--tld
Contact:	Mr. Contact Person 2
Email:	email2@to.someone
Phone:	+2-123-12345-13
Status:	TESTING
Last Update:	2013-01-08 16:15:12

# Communication

- + Use the messaging tool in the PDT System for all communication



The screenshot displays the PDT System messaging interface. At the top, there are navigation tabs for 'My Page' and 'Applications', and a user status indicator 'Logged in as username3' with a 'Logout' button. Below the navigation, a breadcrumb trail reads 'You are here: Applications > Application 3 > Messages'. The main content area is divided into two sections. The first section, titled 'New Message:', contains a text input field with a list of bullet points: 'The applicant can track sent and new messages below.' and 'Email notifications are sent when new messages are available'. A 'SEND' button is located at the bottom left of this section. The second section, titled 'Application Messages', contains a table with the following data:

From	Date	Status	Action
Test Agent	2013-03-05 14:15:12	READ	<a href="#">View</a>
You	2013-03-05 15:15:12	SENT	<a href="#">View</a>
Test Agent	2013-03-05 16:15:12	READ	<a href="#">View</a>

# Preparation Resources Available

Russ Weinstein  
ICANN





# Resources Available on the micro-site

<http://newgtlds.icann.org/en/applicants/pdt>

- + Test Specifications
- + Instructions for Data Preparation
  - + Templates & Examples
- + Frequently Asked Questions (new)
- + Query by Proxy Approach for PDT (new)

# Questions?

