ccNSO Tech Day

Balance your Technical Needs and Investment

By BRENT LEE
RegistryASP
You are running a ccTLD.
You think Your extension can sell 100k names
You have 3000 domains now

What kind of investment is required?

What if my registry has 100k names now
Why infrastructure is EXPENSIVE?

- Hardware
- Applications
- Services
- HA
- Security
- Redundancy
- Backup
- Monitoring
Do I Need These?

Answer is

YES

Question:
Do you have any legacy services?
But how much should I invest?
Can I implement in stages?
IDEAL SETUP

Browsers

Smart Phones

High Availability
Load Balancer
Firewall
IPS

External Monitoring
Redundant Site
Multiple Providers
AnyCast DNS
Multiple ISPs

HA Web Servers
HA EPP Servers
HA Enterprise Bus
HA WHOIS Servers
Internal Monitoring
Clustered Database Servers
Fiber Connected SAN Storage
Data Backup

HA HelpDesk Servers
HA CRM Servers
Business Intelligence

Data Center

Office
Actual Setup for small ccTLD

- Browsers
- Smart Phones
- Firewall
- Web Server
- EPP + WHOIS Server
- Database Server
- Opensource HelpDesk
- Multiple Providers
- AnyCast DNS
- Single ISP line
- Internal Monitoring
Myth

The more domain names in the system, the more investment is required

TRUE ..... PARTIALLY

Every system has a maximum capacity

Primary factor is the risk

more domains, more risk
Risk Assessment

Risk for Small ccTLD and Large ccTLD is actually **EQUAL**

Under same rules and policies

Tough to be small ccTLD administrator
Data Collection and Insights

- Collect data from multiple sources to assess risk
- Present data in KPI format
- Set alert for risk threshold
Intelligent Alert

Based on Data Loaded, Alerts can be generated on records of certain pattern.
## Dash Board

### Operational Statistics at a Glance

<table>
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<tbody>
<tr>
<td>CUSTOMER</td>
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<tr>
<td>Average Length of Stay (ays)</td>
<td>2.9</td>
<td>2.3</td>
<td>2.47</td>
<td>2.47</td>
<td>2.49</td>
<td>-4.5%</td>
<td>2.49</td>
<td>2.38</td>
<td>0.1</td>
<td>4.3%</td>
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<tr>
<td>Inpatient Admissions</td>
<td>750</td>
<td>100</td>
<td>1.8</td>
<td>1.8</td>
<td>1.9</td>
<td>3.5%</td>
<td>1.9</td>
<td>1.3</td>
<td>0.6</td>
<td>14.2%</td>
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<tr>
<td>Inpatient Discharges</td>
<td>750</td>
<td>100</td>
<td>6.0</td>
<td>6.0</td>
<td>6.1</td>
<td>-1.7%</td>
<td>6.1</td>
<td>5.9</td>
<td>0.2</td>
<td>12.2%</td>
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<tr>
<td>Inpatient Deaths</td>
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<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Average IP Bill</td>
<td>2000</td>
<td>500</td>
<td>52.45</td>
<td>51.97</td>
<td>53.65</td>
<td>1.3%</td>
<td>53.65</td>
<td>51.85</td>
<td>1.8</td>
<td>31.5%</td>
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<td>Number of Repeat Visits</td>
<td>2500</td>
<td>150</td>
<td>5.274</td>
<td>5.634</td>
<td>5.084</td>
<td>-6.4%</td>
<td>5.084</td>
<td>5.43</td>
<td>-347</td>
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<tr>
<td>No. of New Cases</td>
<td>500</td>
<td>50</td>
<td>535</td>
<td>521</td>
<td>495</td>
<td>-4.2%</td>
<td>495</td>
<td>475</td>
<td>-20</td>
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<td>Emergency</td>
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<td>DEPARTMENT ORDERS</td>
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<td>General</td>
<td>1500</td>
<td>100</td>
<td>1.460</td>
<td>1.371</td>
<td>1.375</td>
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<td>1.14</td>
<td>0.23</td>
<td>18.4%</td>
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<td>Diagnostic and Imaging</td>
<td>400</td>
<td>50</td>
<td>282</td>
<td>274</td>
<td>274</td>
<td>0%</td>
<td>274</td>
<td>274</td>
<td>0</td>
<td>0%</td>
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<td>Pharmacy</td>
<td>2000</td>
<td>100</td>
<td>360</td>
<td>360</td>
<td>367</td>
<td>-2.1%</td>
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<td>-0</td>
<td>0%</td>
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<tr>
<td>Laboratory</td>
<td>13000</td>
<td>1000</td>
<td>10.692</td>
<td>12.812</td>
<td>12.760</td>
<td>-0.3%</td>
<td>12.760</td>
<td>13.064</td>
<td>-304</td>
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<td>Nursing</td>
<td>2500</td>
<td>500</td>
<td>2.367</td>
<td>2.335</td>
<td>2.309</td>
<td>-1.5%</td>
<td>2.309</td>
<td>2.335</td>
<td>-26</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

### Graphs

- **Full Blood Count Test for Dengue Fever Patient**
- **Graph 1**: Green - Good, Red - Repeat Case, Yellow - New Case
- **Graph 2**: Green - Good, Red - Non-Case

Processing complete.
Conclusion

Collect Data, Identify Risk, Analyze Priority, Upgrade
AROC, SROC
consultancy from the fundamental
Implement the right tools

Justify for the funds required
Management
Government
Grants

Apply to be identify as Critical infrastructure
About Us

We Work Harder | Adaptive, Secured, Proven

Registrar | ccTLD Registries | gTLD Registries

Backend Solution | Outsourcing Services | Technical, Policy & Marketing Consultancy | Customized Programming | Sponsorship

"We Work Harder" | "Adaptive, Secured, Proven"
Thank You
Questions and Answers

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