



# Community DNS

## Shared AnyCast Service to TLD Registries

	<b>Managed/Shared CommunityDNS service</b> <a href="http://CommunityDNS.eu">http://CommunityDNS.eu</a>	<b>Traditional DNS Approach (In-house)</b>
<b>Security</b>	<ul style="list-style-type: none"> <li>• Super fast resolution for DDoS mitigation</li> <li>• Each server is locked read-only and Zone data stored on the server is encoded</li> <li>• No public access to Source Code</li> <li>• No recursion</li> <li>• No bulk data access (AXFR etc)</li> </ul>	BIND – popular multi-service platform. <ul style="list-style-type: none"> <li>• Limited resolution rates</li> <li>• Prone to DNS hijacking and spoofing</li> <li>• With recursion on, risk of cache poisoning</li> <li>• Multiple functionality, creates multiple vulnerabilities</li> </ul>
<b>Stability</b>	<ul style="list-style-type: none"> <li>• Each Registry controls its own zones and data</li> <li>• Input to server is restricted via Triple DES Encrypted VPN from Community DNS data centre, server to server</li> <li>• AnyCast from multiple nodes, clustering and load balancing</li> </ul>	<ul style="list-style-type: none"> <li>• Grace and favour secondary service frequently limits Registry control of its data and zones</li> <li>• No AnyCast</li> <li>• No clustering</li> <li>• No load balancing making the system vulnerable to DDoS attacks</li> </ul>
<b>Software</b>	<ul style="list-style-type: none"> <li>• Designed specifically for TLD Registries</li> <li>• Fully compliant with RFC 1035, RFC 2136 and RFC 2845</li> <li>• Custom database design and management</li> <li>• Fast, efficient real-time updates</li> </ul>	<ul style="list-style-type: none"> <li>• Open Source creates peer review but also hacker opportunities requiring regular maintenance</li> <li>• Slow</li> <li>• Inefficient memory consumption</li> <li>• Does more than what TLD registries require</li> </ul>
<b>Performance</b>	<ul style="list-style-type: none"> <li>• Updates take less than 5 seconds between Registry and Community DNS resolution nodes</li> <li>• Each server can handle 8+ billion queries per day</li> <li>• Capacity per server is 500 million names</li> <li>• Minimum capacity of 100,000 queries per second per node</li> <li>• Optimised response times to customer</li> <li>• Fast disaster recovery – 1 million+ names per minute database reload</li> </ul>	<ul style="list-style-type: none"> <li>• Long time to load changes, round-robin selection of Name Server</li> <li>• Routing path to DNS server not optimised</li> <li>• Updates take much longer than 24 hours</li> <li>• Limited and slow disaster recovery</li> <li>• Continuity of service</li> </ul>
<b>Quality of Service</b>	<ul style="list-style-type: none"> <li>• SLA with 100% network uptime guarantee</li> <li>• 24x7x365 monitoring and support</li> </ul>	<ul style="list-style-type: none"> <li>• No SLA</li> <li>• Best efforts support</li> <li>• Downtime hard to manage remotely</li> </ul>
<b>Return on Investment</b>	<ul style="list-style-type: none"> <li>• Cost effective; affordable pricing</li> <li>• Community DNS manages system maintenance and operational performance; system upgrades and expansion</li> <li>• Business continuity assurance</li> </ul>	<ul style="list-style-type: none"> <li>• Staffing issues</li> <li>• Investment in purchasing, developing and deploying hardware/software; ongoing costs for upgrades and expansion</li> <li>• Costly network maintenance and continuity of service challenges</li> </ul>
<b>Scalability</b>	<ul style="list-style-type: none"> <li>• Servers tested to 500 million names</li> <li>• Strategically placed server nodes, efficient cluster (up to 250 servers per cluster) management</li> <li>• Easy upscale path</li> </ul>	<ul style="list-style-type: none"> <li>• Limits on scalability</li> <li>• Registry must make ongoing financial and human investment meet increasing demands</li> </ul>
<b>Support</b>	<ul style="list-style-type: none"> <li>• 24x7 hardware and software support by Community DNS staff</li> <li>• Manufacture support contracts at each data centre/server node location</li> </ul>	<ul style="list-style-type: none"> <li>• No support included as standard</li> <li>• Burden to install and maintain security</li> <li>• Upgrades/bug patches rest with Registry/ISP.</li> </ul>