Server Segmentation (Web / Mail / DNS tiers)

PUQ Web Hosting module **WHMCS**

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One server or many?

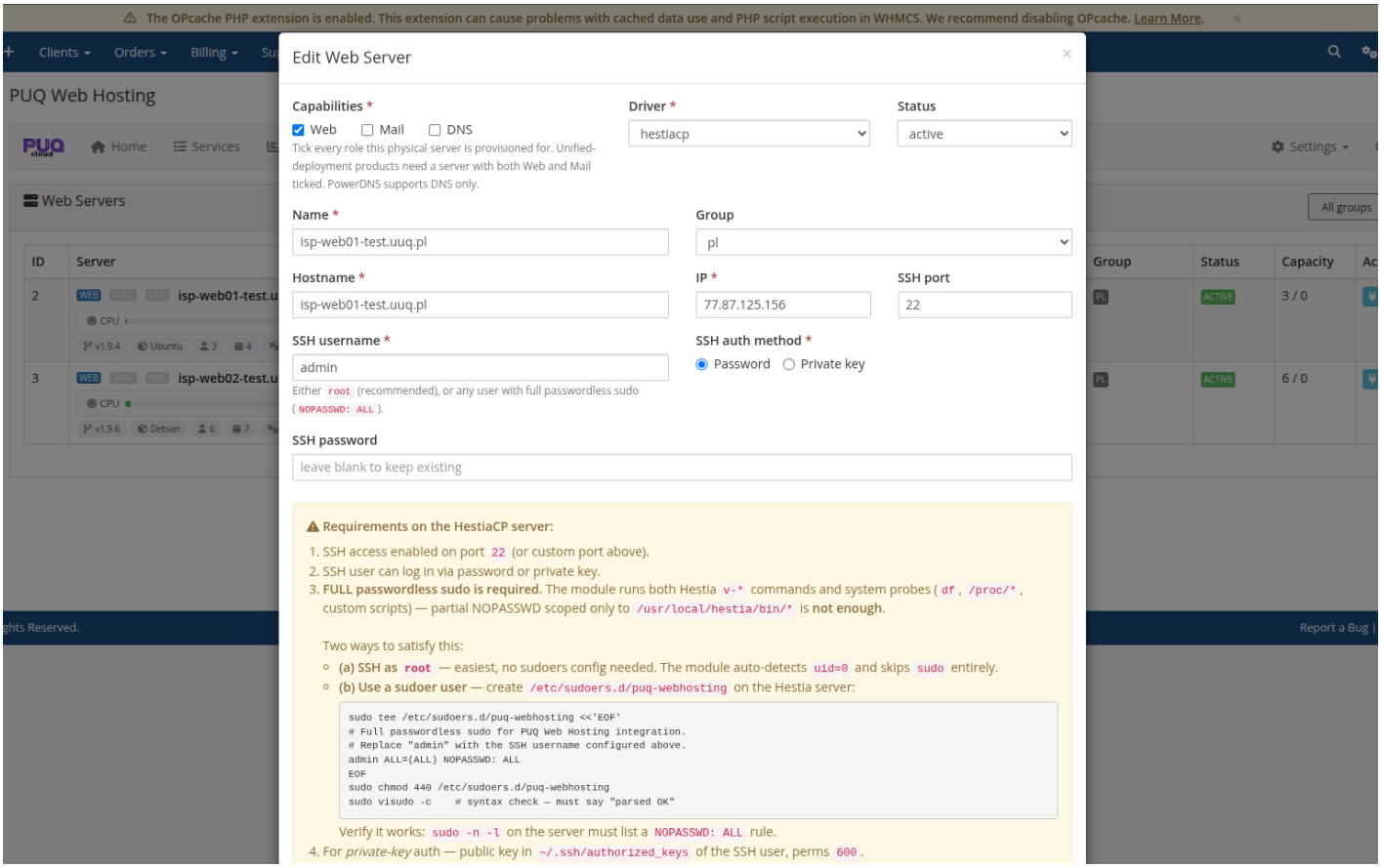
You can run the whole module on a **single** HestiaCP node that does everything. That is perfect for getting started, for small offers, and for testing.

But the module is designed so you can **segment** your fleet as you grow: put **websites** on one set of servers, **mailboxes** on dedicated **mail (MX)** servers, and **DNS** on separate **nameservers**. Each role then scales on its own hardware, and a busy mail queue or a heavy website can't starve the others.

The mechanism that makes this possible is **server capabilities** + **server groups**.

Capabilities — what a node is allowed to host

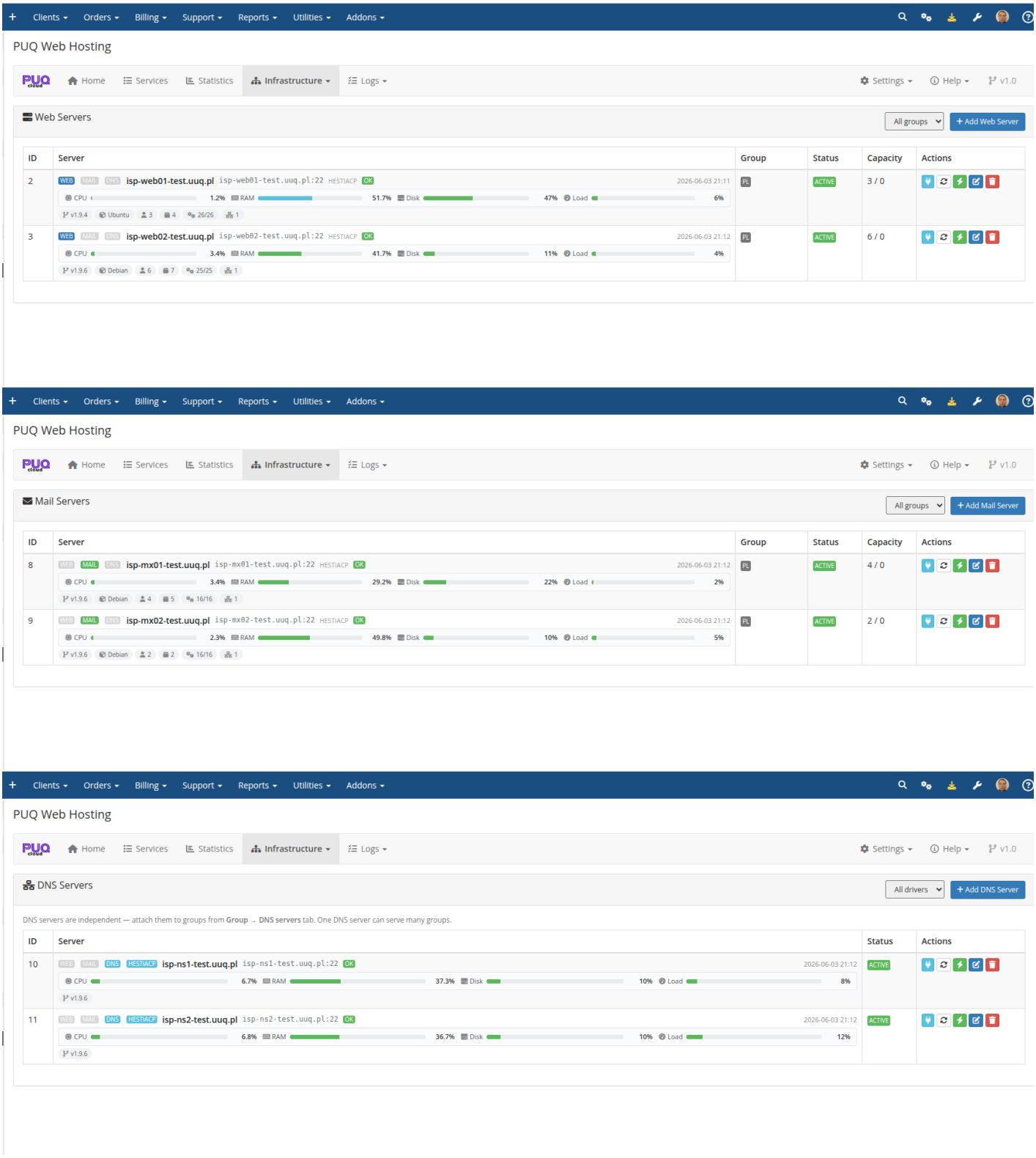
Each server you add (Infrastructure → *Web / Mail / DNS Servers*) has three capability flags: **Web**, **Mail**, **DNS**. You tick them when you add or edit the node. A node can carry one role, two, or all three.



This is how you decide your topology. Typical patterns:

Pattern	Web nodes	Mail nodes	DNS nodes
All-in-one	one node ticks Web + Mail + DNS	(same node)	(same node)
Web / mail split	nodes tick **Web** only	dedicated **Mail** nodes (your MX)	nodes tick **DNS** only
Full three-tier	Web pool	Mail pool	Nameserver pool (e.g. `ns1`, `ns2`)

In the Infrastructure pages the same physical servers appear under **Web Servers**, **Mail Servers** and **DNS Servers** filtered by their capability — so a mail-only node only shows up under Mail:

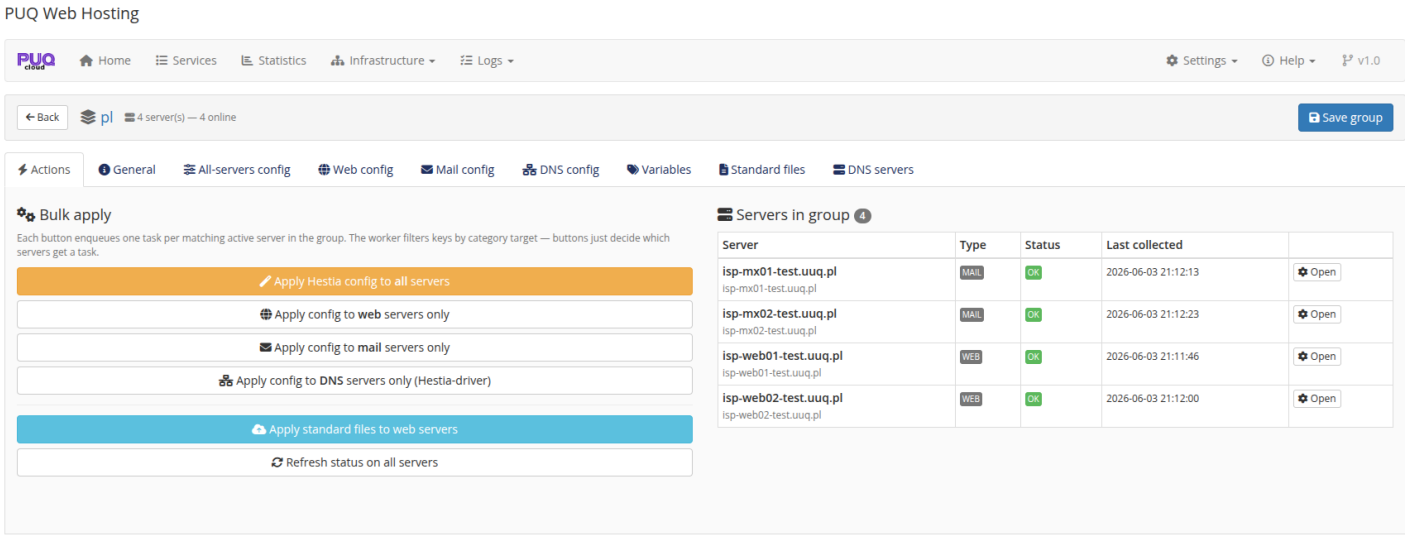


When a **Split** service is provisioned, the module places each role on a **least-loaded active node that has the matching capability**: the web user lands on a Web node, the mailbox on a Mail node, the DNS zone on the group's DNS nodes. That is the load balancing — it is **by role and by capacity**, automatically.

Server groups — the unit you sell

from

A **server group** ties a set of nodes together and is what a product points at (the product's *Server Group* dropdown). Open a group to manage it.

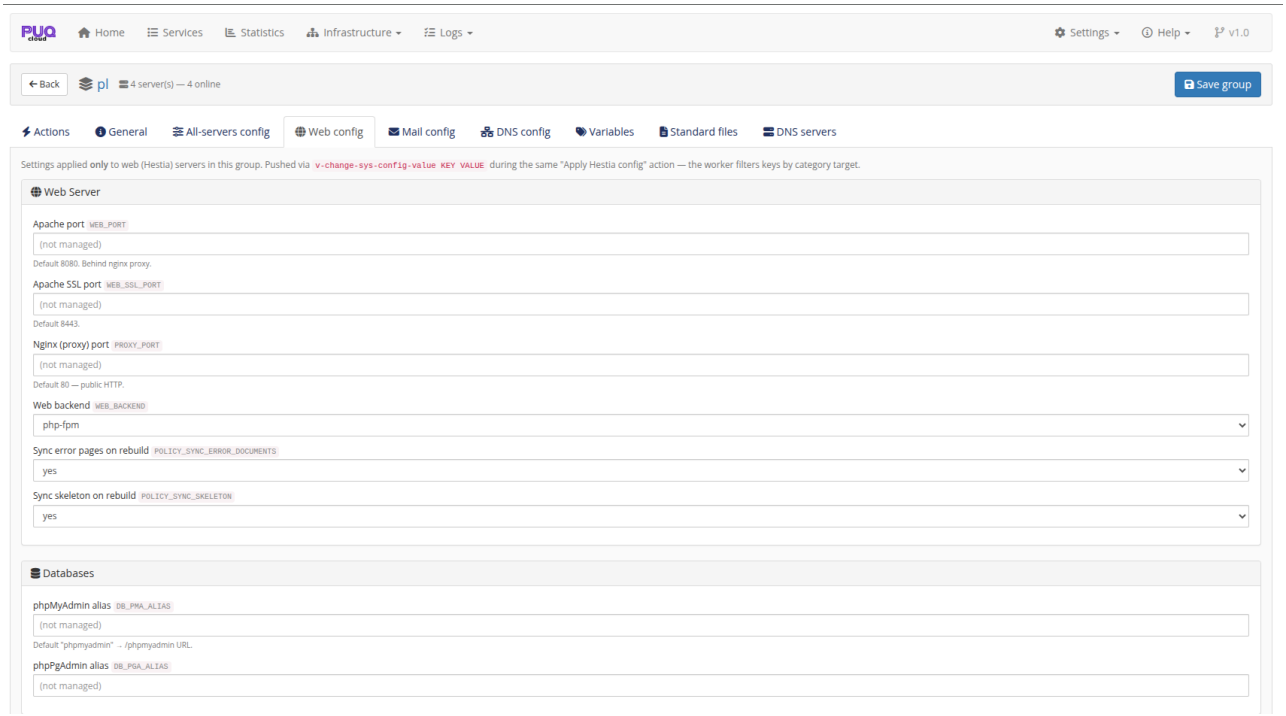


The group's **Actions** tab shows the members with their **Type** (WEB / MAIL) and lets you push configuration to **all servers**, **web servers only**, **mail servers only** or **DNS servers only**. That last point is the key to safe segmentation: a web-specific setting is **never** applied to a mail node and vice-versa.

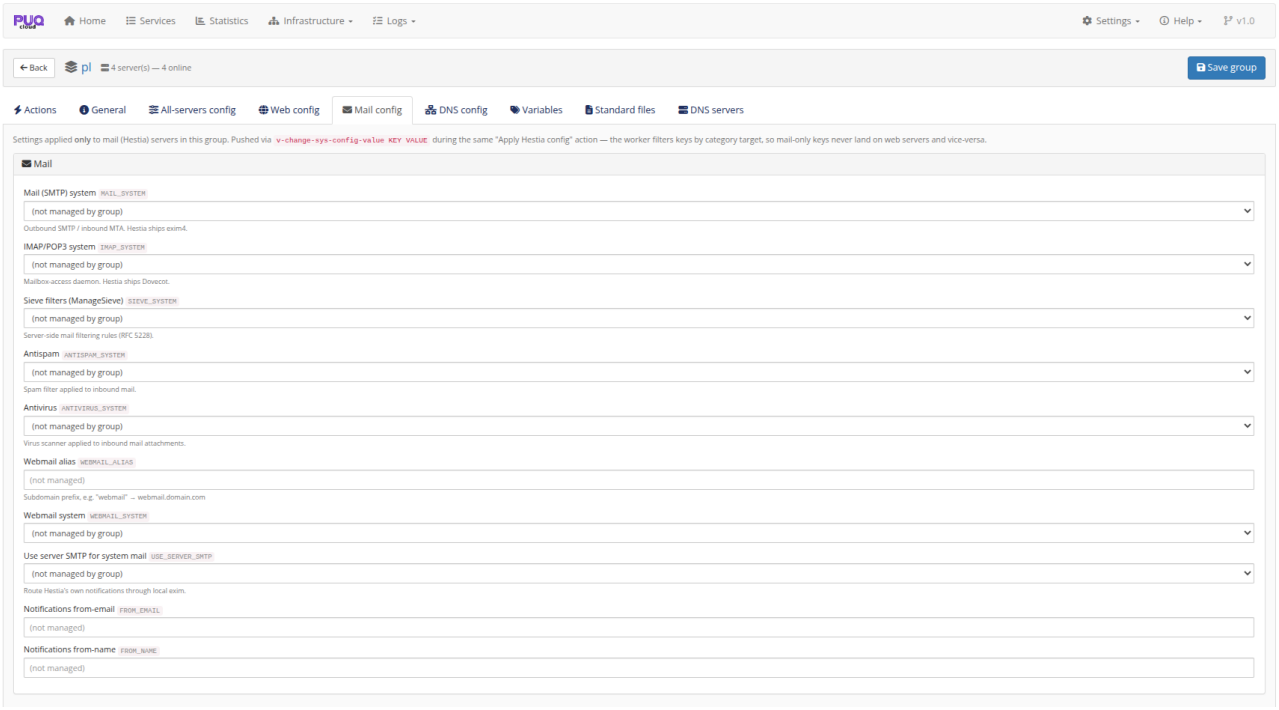
Role-targeted configuration

The group editor has separate config tabs whose values are pushed **only** to nodes of that role during *Apply Hestia config*:

- **All-servers config** — keys applied to every node (language, theme, security/API, user policies…).
- **Web config** — web-only keys (Apache/Nginx ports, web backend, phpMyAdmin alias…).



- **Mail config** — mail-only keys (SMTP/IMAP system, antispam/antivirus, webmail, notification from-address…).

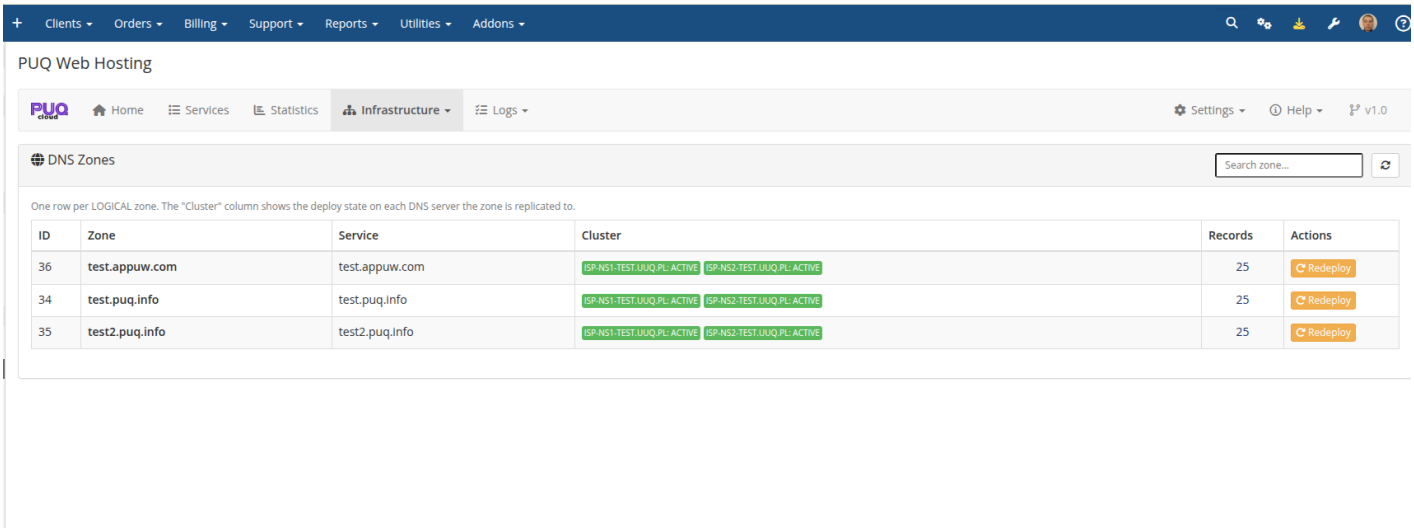


- **DNS config** — DNS-only keys (DNSSEC, DNS cluster). PowerDNS nodes have no `hestia.conf` and are skipped automatically.

The worker filters every managed key by its category target, so "mail-only keys never land on web servers and vice-versa". This means you can, for instance, enable ClamAV/SpamAssassin only on your mail tier without touching the web tier.

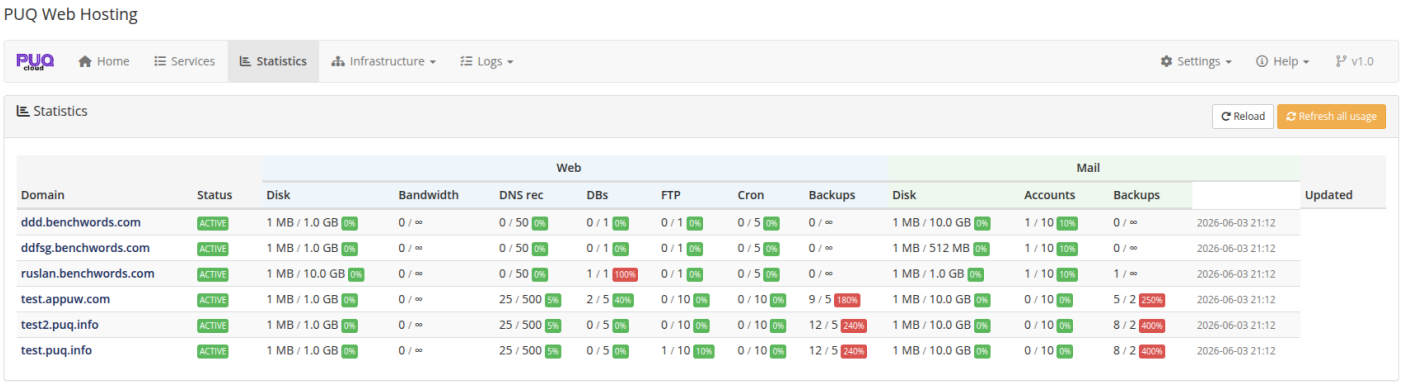
DNS is active-active across the tier

DNS servers are **independent** — you attach them to a group on the group's **DNS servers** tab, and **one DNS server can serve many groups**. When a zone is created it is **replicated to every attached DNS node**, so you get an active-active nameserver cluster out of the box. The **DNS Zones** page shows the per-server deploy state for each logical zone:



Watching the balance

The addon **Statistics** page reports usage **per domain, split into Web and Mail columns**, so you can see at a glance how load is distributed and when a tier needs another node:



The Home dashboard's **Server capacity** table lists each node by type with its capacity and last sync time — a quick health view of every tier.

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> **Why segment?** Mail and web have very different load profiles. Keeping them on separate, capability-tagged tiers lets you scale each independently, isolate failures, and apply role-specific tuning — while the module's per-capability placement spreads new accounts across the least-loaded node automatically.

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