RadiusForge

User Guide

A hands-on, step-by-step guide to running RadiusForge — with screenshots

For ISPs & WISPs · Version **2026.10.21** · radiusforge.co.uk

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How to use this guide

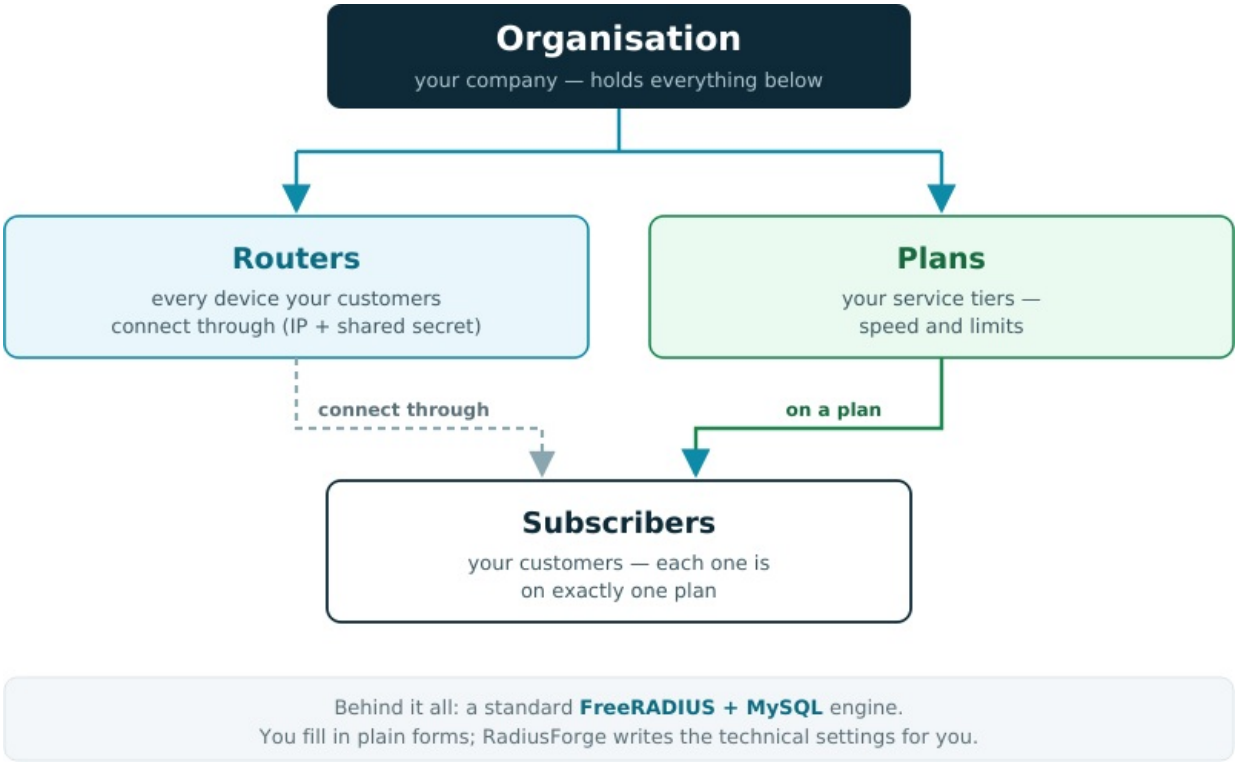
This is a **hands-on, do-it-with-me guide** to running RadiusForge. Each short chapter is one job — "add a router", "suspend a customer", "sell Wi-Fi by the code" — written as numbered steps you can follow with the screen in front of you. You do **not** need to understand RADIUS: you fill in plain forms and RadiusForge does the technical part. If you haven't installed RadiusForge yet, do the **Install Guide** first, then start here at the top.

The one rule that makes everything make sense

You never type technical RADIUS codes by hand. You describe things in ordinary words — "50 megabits down, 10 up", "this customer hasn't paid" — and RadiusForge writes the correct settings behind the scenes. If you ever find yourself hunting for an attribute name, stop: there's a plain-English field for it somewhere.

How RadiusForge fits together

Before the step-by-step chapters, hold one simple picture in your head. RadiusForge has four things, and they stack in a fixed order — each one needs the one before it.



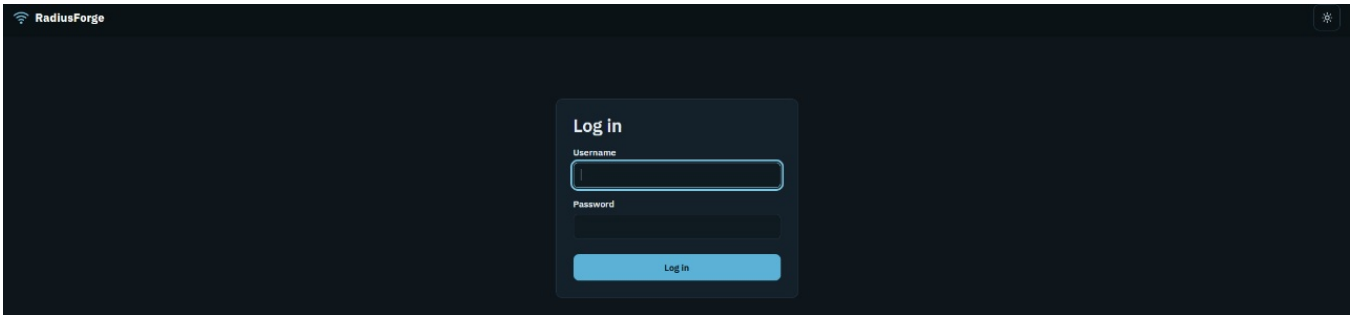
An Organisation holds your Routers and Plans; every Subscriber belongs to one Plan and connects through your Routers.

1. **Organisation** — the top level: your company. Everything you create lives inside it.
2. **Routers** — every router, access point or firewall your customers connect *through*. You register each one so RadiusForge will trust it.
3. **Plans** — your service tiers, like "Home 50/10" or "Business 200/50". A plan sets the speed and any limits.
4. **Subscribers** — your actual customers. Each one is on exactly **one plan** and connects through your **routers**.

So the order you set things up is always: **Organisation → Routers and Plans → Subscribers.** You can't add a customer until there's a plan for them, and a customer can't connect until their router is registered. The chapters below follow that order.

Log in

1. Open your RadiusForge server's web address in a browser (your installer told you what it is — something like `https://radius.yourcompany.com`).
2. Type your **username** and **password** and click **Log in**.
3. If two-factor security is switched on for your account, you'll then be asked for the **6-digit code** from your authenticator app (see *Turn on two-factor security*). Type it and continue.

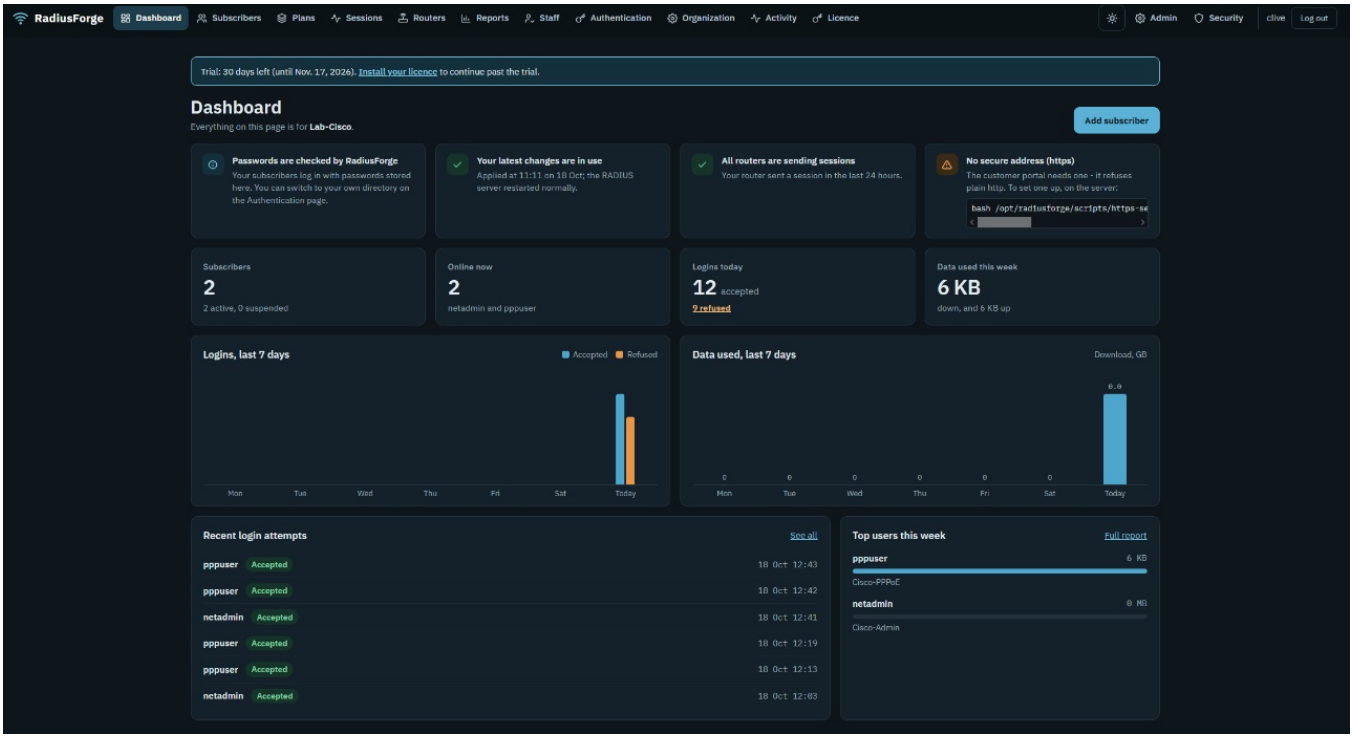


Once you're in, you may see a **trial banner** across the top showing days remaining, and — until you've made your first organisation — a **welcome banner** asking you to create one.

> **If the login says 'Too many attempts'**
>
> After several wrong passwords in a row, RadiusForge locks that login for a few minutes to stop guessing. Wait a few minutes and try again with the correct details — nothing is broken.

Find your way around

The first page after logging in is the **Dashboard** — your at-a-glance health check. There's nothing to set up here; it just shows you how things are. Learning to read it takes a minute and saves you hours later.



- The **menu across the top** is how you move around: Dashboard, Subscribers, Plans, Vouchers (once you turn them on), Sessions, Routers, Reports, and — for Owners — Staff, Authentication, Organisation, Activity and Licence. Your name, **Security**, and **Log out** sit top-right.
- The **headline numbers** show total subscribers, how many are **online right now**, logins today, and data used this week.
- The **status cards** tell you at a glance whether passwords are checked locally or against a directory, whether your last change is live, whether your routers are reporting in, and whether you're on a secure (HTTPS) address.
- The **charts** show logins (accepted vs refused) and data used over the last seven days, and the panels below link to the full reports.

> **'Online now' is only as fresh as your routers**
>
> The online count comes from the messages your routers send. If a router loses power without telling RadiusForge, a session can briefly look "stuck" online — you tidy that up on the **Sessions** page (see *See who's online*).

Create your organisation (first run only)

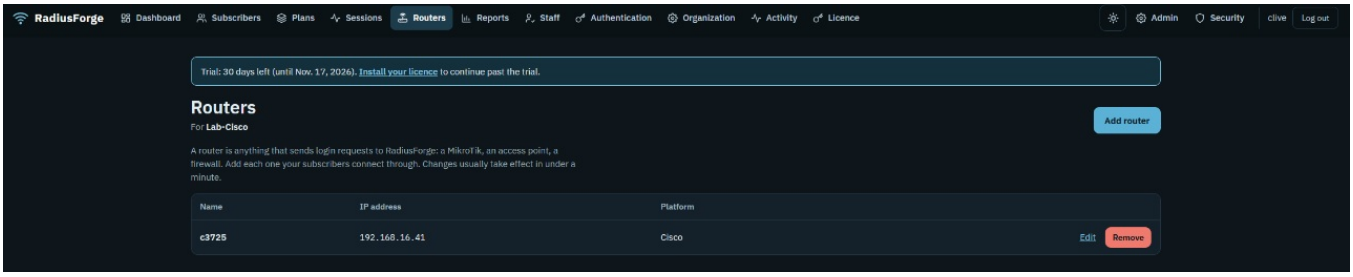
Your organisation is your company — the container everything else lives in. You do this once.

1. Right after your first login, look for the **welcome banner** at the top of the Dashboard and click **Create your organisation** (or go to **Organisation** in the menu).
2. Type your **organisation name** — your company or network name, e.g. "Acme Broadband". This appears on things like printed voucher sheets.
3. Save. The welcome banner disappears and you're ready to add routers and plans.

> **Running more than one network?**
>
> Each business you run is a separate organisation, kept completely apart — one organisation can never see another's customers, routers or reports. Most people only ever need one.

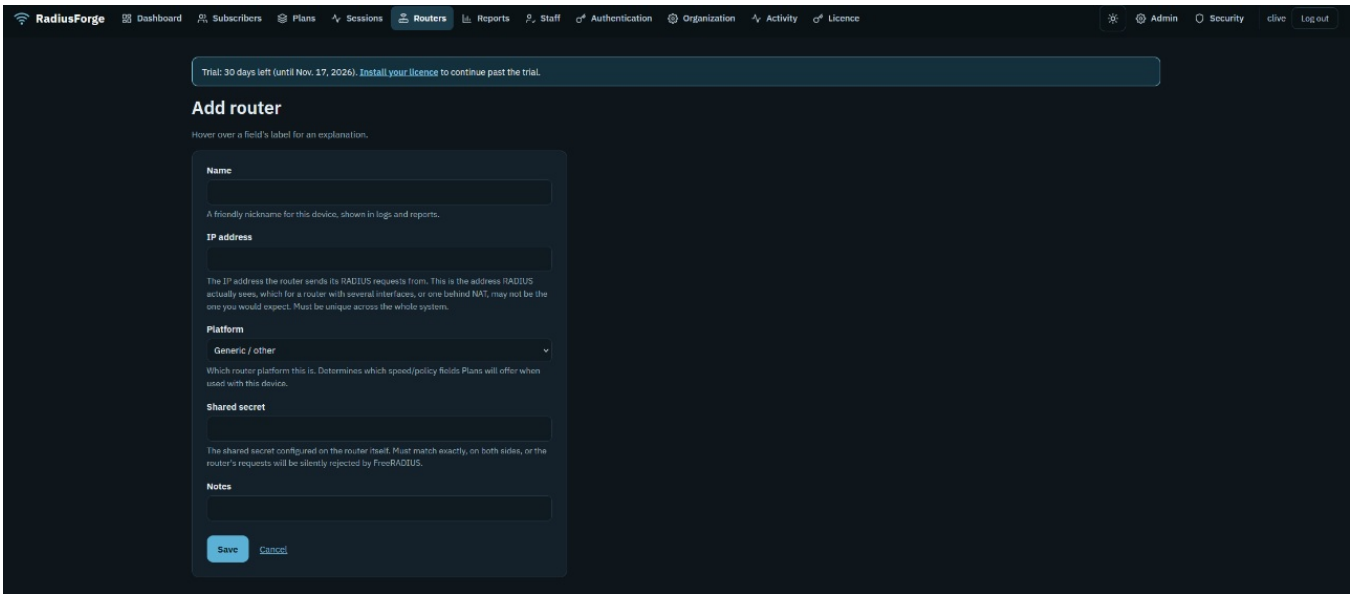
Add a router

A "router" is any device your customers authenticate *through* — a MikroTik, a Cisco BNG, a FortiGate, a Wi-Fi access point. RadiusForge ignores requests from any device it doesn't know, so every one must be registered here first.



To add one:

1. Click **Routers** in the menu, then **Add router**.
2. Fill in the form:



- **Name** — a friendly label like "Main Office MikroTik". Shown in your reports.
- **IP address** — the address the router's login requests actually come *from*. For a device with several links, or one behind NAT, this may not be the address you'd first expect. Each IP can be registered only once across the whole system.
- **Platform** — MikroTik, Cisco, Juniper, Fortinet, or Generic/other. Match what the device really is.
- **Shared secret** — make up a strong, random word or phrase. **Write it down** — you'll type the *exact* same value into the router in the next step.
- **Notes** — anything you want to remember about this device.

3. Click **Save**. It takes effect within a few seconds.
4. **On the router itself**, point its RADIUS settings at your RadiusForge server's address and paste in the **same shared secret**. (Each vendor's exact commands are in that vendor's setup notes; for a MikroTik hotspot, see *Sell Wi-Fi by the*

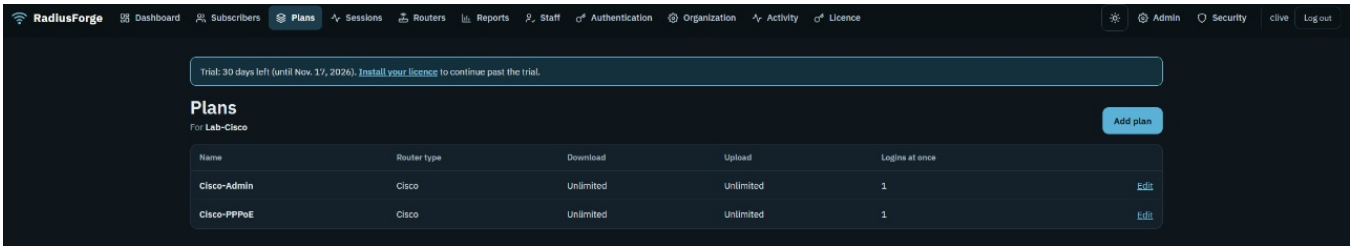
code.)

> **A mismatched shared secret fails silently**
> If the secret isn't *identical* on both sides, the router's requests are simply ignored — no error, nothing in any log. Whenever a router "isn't working", this is the very first thing to check.

To stop trusting a device, open it and **Delete** it (you'll be asked to confirm) — customers can then no longer connect through it.

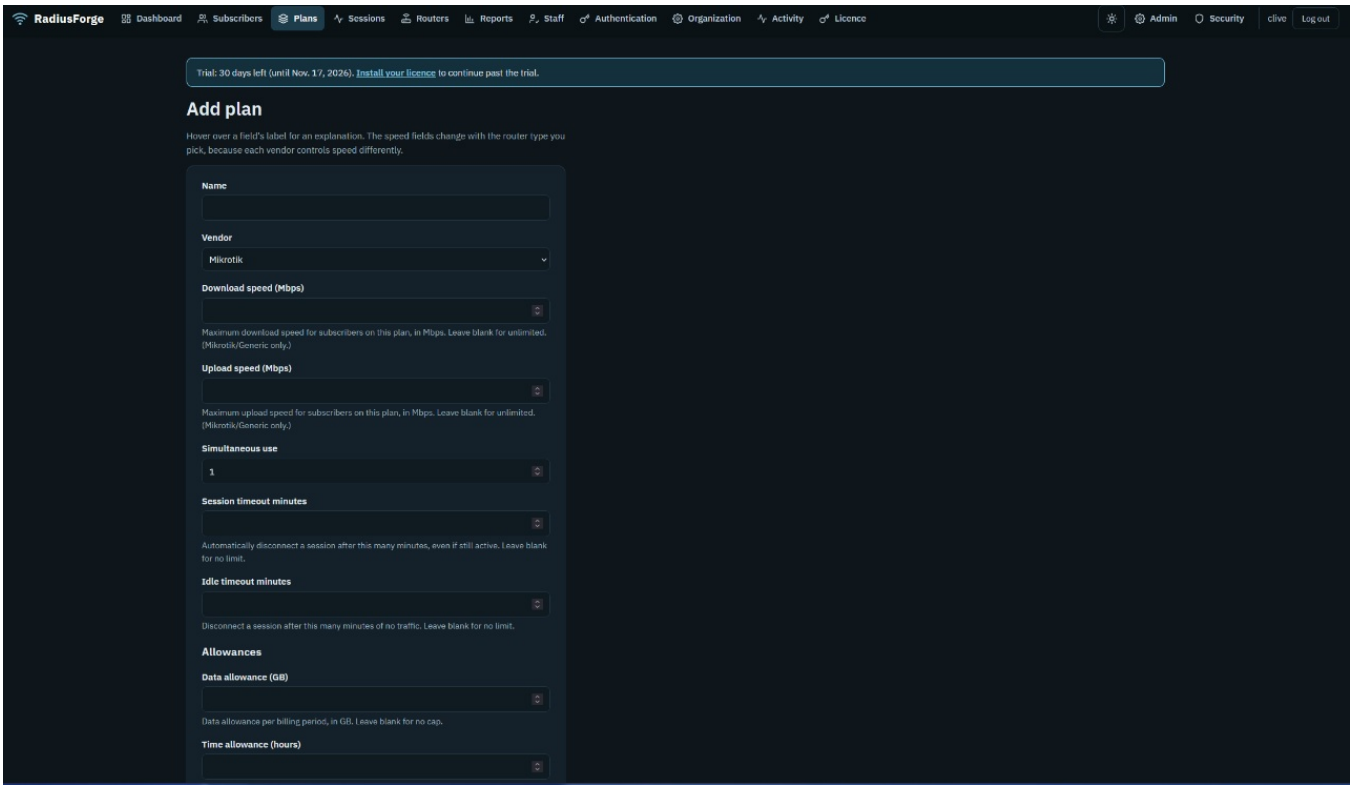
Create a plan

A plan is a package you sell: a name, a speed, and optional limits. Every customer is on exactly one plan, so you need at least one before you can add customers.

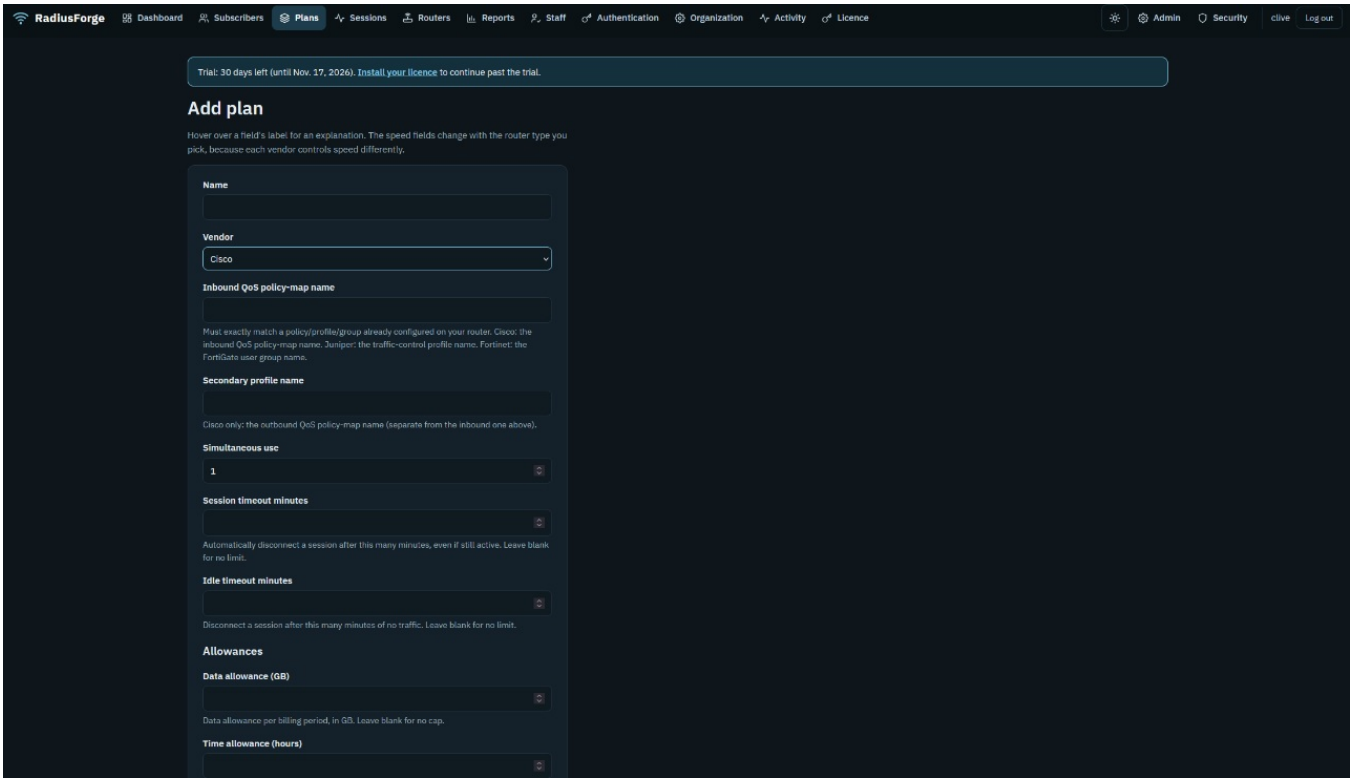


To create one:

1. Click **Plans**, then **Add plan**.
2. **Choose the router platform (vendor) first** — this is the most important choice, because it changes the rest of the form.



- **MikroTik** — the easy case. Just type the **download and upload speeds in plain Mbps** (e.g. 50 and 10). That's it.
- **Cisco / Juniper / Fortinet** — these can't be handed a raw speed over RADIUS. Instead you type the **name of a policy/profile/group that already exists on the router**, and RadiusForge tells the device to apply it (see *Advanced attributes explained*).
- **Generic / other** — for anything else; works like MikroTik with standard attributes.



3. Fill in the rest (all optional):

- **Simultaneous use** — how many devices can be online at once on this plan. Home plans usually use `1`.
- **Session / idle timeout** — leave blank unless you want to force a disconnect after a set time.
- **Data allowance (GB) / Time allowance (hours)** — caps per billing period, if you want them.
- **When an allowance is used up** — **Slow down** (stay online at a reduced speed) or **Cut off** (block until it resets). If you pick Slow down, set the slowed speeds too.
- **Billing day** behaviour and **Active** — untick **Active** to retire a plan later without deleting it.

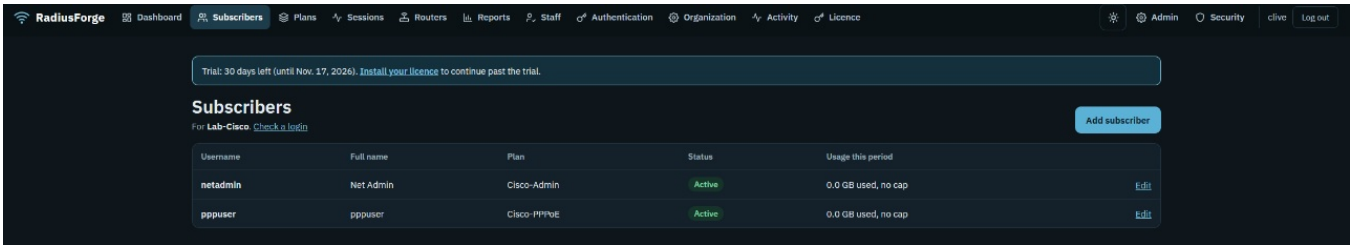
4. Click **Save**.

> **All MikroTik? You're done in two numbers**
>
> If every device you run is MikroTik, choose MikroTik, type the two speeds, save, and ignore everything else on this page. You never need the other vendors or advanced attributes.

> **'Slow down' is MikroTik-only (for now)**
>
> Reducing speed when an allowance runs out uses MikroTik's live rate-limit, so it's only offered on MikroTik plans. On other platforms, choose **Cut off**.

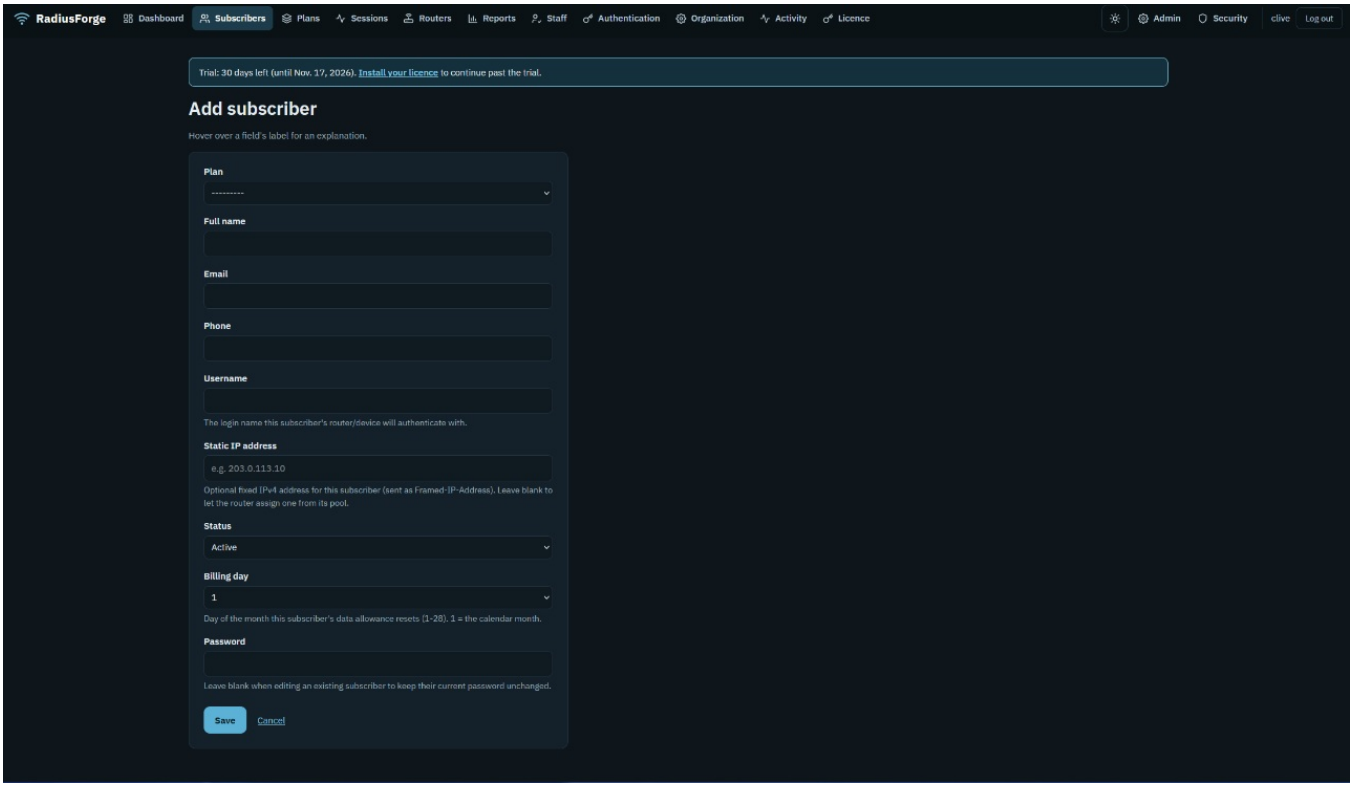
Add a customer

A subscriber is one customer login. This is the screen you'll use most.



To add one:

1. Click **Subscribers**, then **Add subscriber**.
2. Fill in the form:



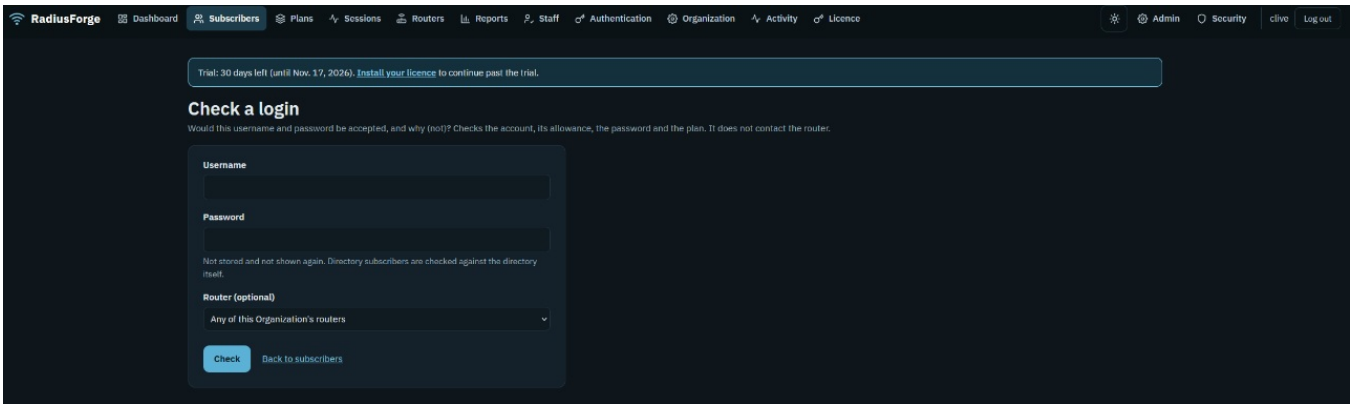
- **Plan** — the service tier they're on. (This is why a plan has to exist first.)
- **Username / Password** — what the customer's router or device uses to **connect to your network**. This is **not** a RadiusForge login — customers never log into RadiusForge itself.
- **Full name / Email / Phone** — for your own reference. (Email is also where usage-alert messages go, if you turn those on.)
- **Static IP address** — optional; a fixed IPv4 address for this one customer. Leave blank to let the router hand out one from a pool.
- **Status** — **Active**, **Suspended** or **Cancelled**. New customers are Active.
- **Billing day** — the day of the month their data allowance resets.

3. Click **Save**. The customer can connect within a few seconds — but test it first (next chapter).

> **The username is locked once saved**
>
> The username is the customer's RADIUS login, so you can't change it later. If you need a different one, add a new subscriber. (You can only *delete* a subscriber after setting them to **Cancelled**, and even then their connection history is kept.)

Test a login before you tell the customer

Before you hand over a username and password — or whenever a customer says "it's not working" — use **Check a login** to see whether that login *would* be accepted, and exactly why or why not, **without touching a router**.



1. Open the customer's record (or find **Check a login** on the Subscribers area).
2. Type the **username** and **password** you want to test.

3. Click **Check**. RadiusForge checks everything on its side — the account status, the allowance, the password and the plan — and gives you a **plain-English answer**: accepted, or the specific reason it was refused.

> **This is your fastest troubleshooting tool**
> A green "would be accepted" means the problem is on the network side (usually the router's shared secret or IP). A red answer tells you exactly what to fix in RadiusForge — wrong password, suspended account, allowance used up, and so on.

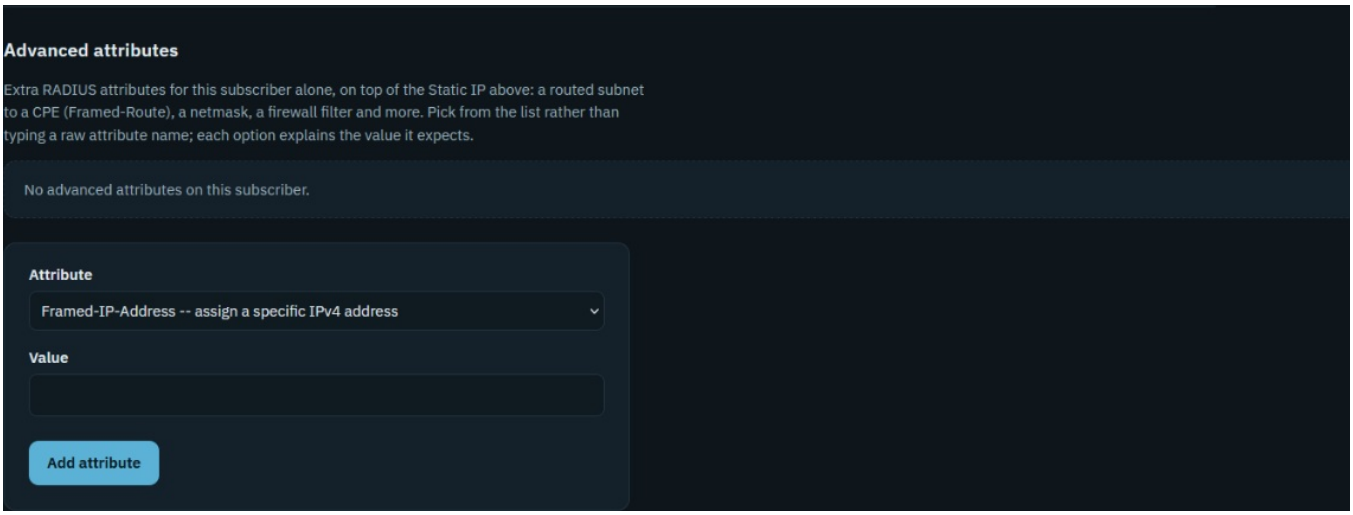
Suspend, reactivate, or change a customer

Everyday customer changes all start the same way: **Subscribers → click the customer → make the change → Save.**

To suspend a customer who hasn't paid:

1. Open the customer and set **Status** to **Suspended**, then Save. They're blocked from connecting immediately — **nothing is deleted**.
2. When they pay, set **Status** back to **Active**. Everything returns exactly as it was.

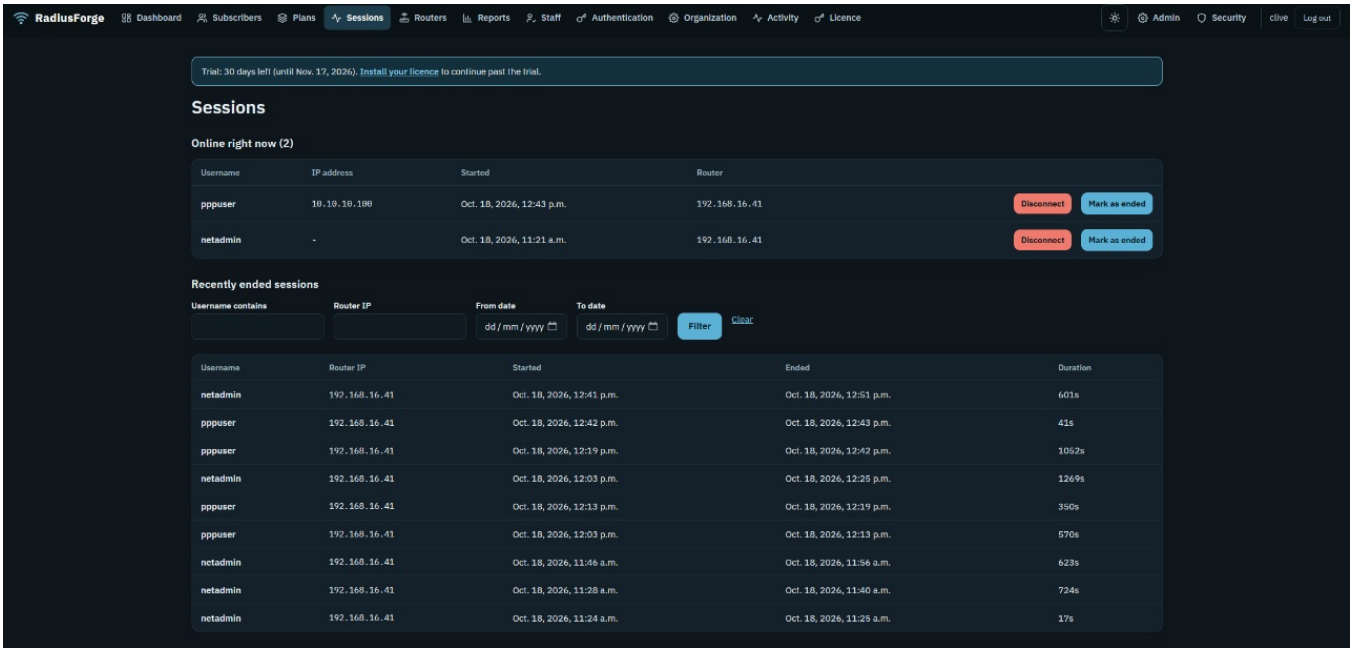
To change their plan, password or details: open the customer, change the field, and Save. A plan change takes effect on their next login (or immediately if they're online and your settings act on live sessions).



> **'Suspended' is your non-payment button**
> Suspend is instant and completely reversible — far safer than deleting. If "Act on people who are online" is switched on in your Organisation settings, suspending also disconnects them on the spot.

See who's online, and disconnect someone

Sessions shows everyone connected right now, with a searchable history underneath.



Each live session has two buttons — and the difference matters:

- **Disconnect** — actually drops the connection *now* (RadiusForge tells the router to end it). The customer has to log in again. Use this to kick off a device for real.
- **Mark as ended** — only tidies up RadiusForge's own records; it does **not** drop a live connection. Use it for a session that's wrongly showing online because a router lost power without sending its "stopped" message.

The lower section, **Recently ended sessions**, is searchable by username, router IP, or date range.

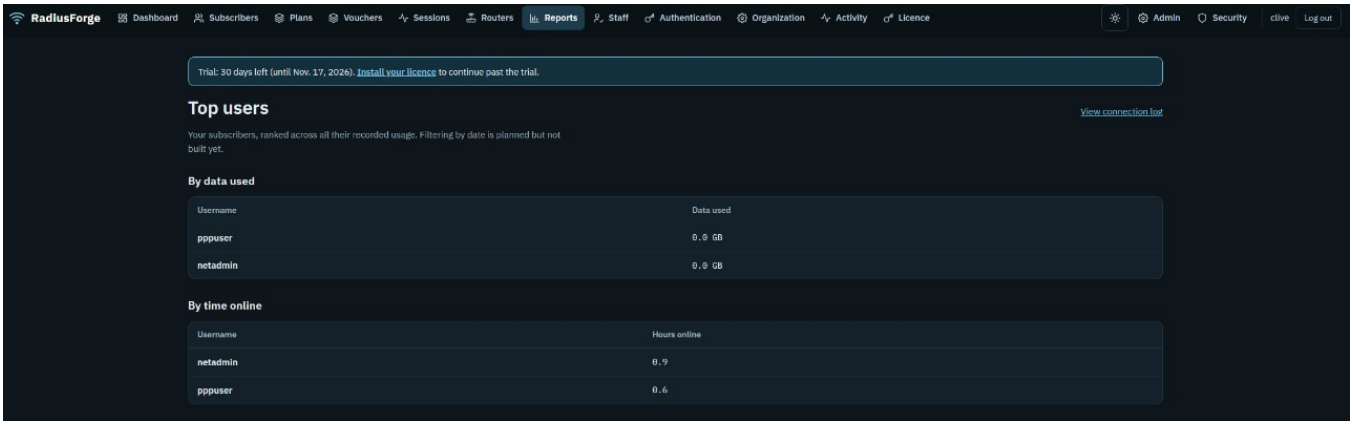
When a customer can't connect: how to diagnose it

Work through these in order — it finds almost every problem in a minute or two:

1. **Use Check a login** (above) with the customer's username and password. - **Refused, with a reason** — fix exactly what it says (wrong password, suspended, allowance used up). Done. - **Would be accepted** — the problem is on the network side, so carry on.
2. **Check the router's shared secret and IP.** On the **Routers** page, confirm the router's IP matches the address its requests actually come from, and that the shared secret is *identical* on both sides. A mismatch fails silently and is the most common cause.
3. **Look at the Connection Log** (**Reports → Connection Log**). Every attempt is listed newest-first with a plain-English reason. If the customer's attempts aren't appearing at all, the router isn't reaching RadiusForge (back to step 2); if they appear as refused, the reason tells you why.
4. **Check Sessions** to see whether they're connecting but dropping, versus never getting on at all.

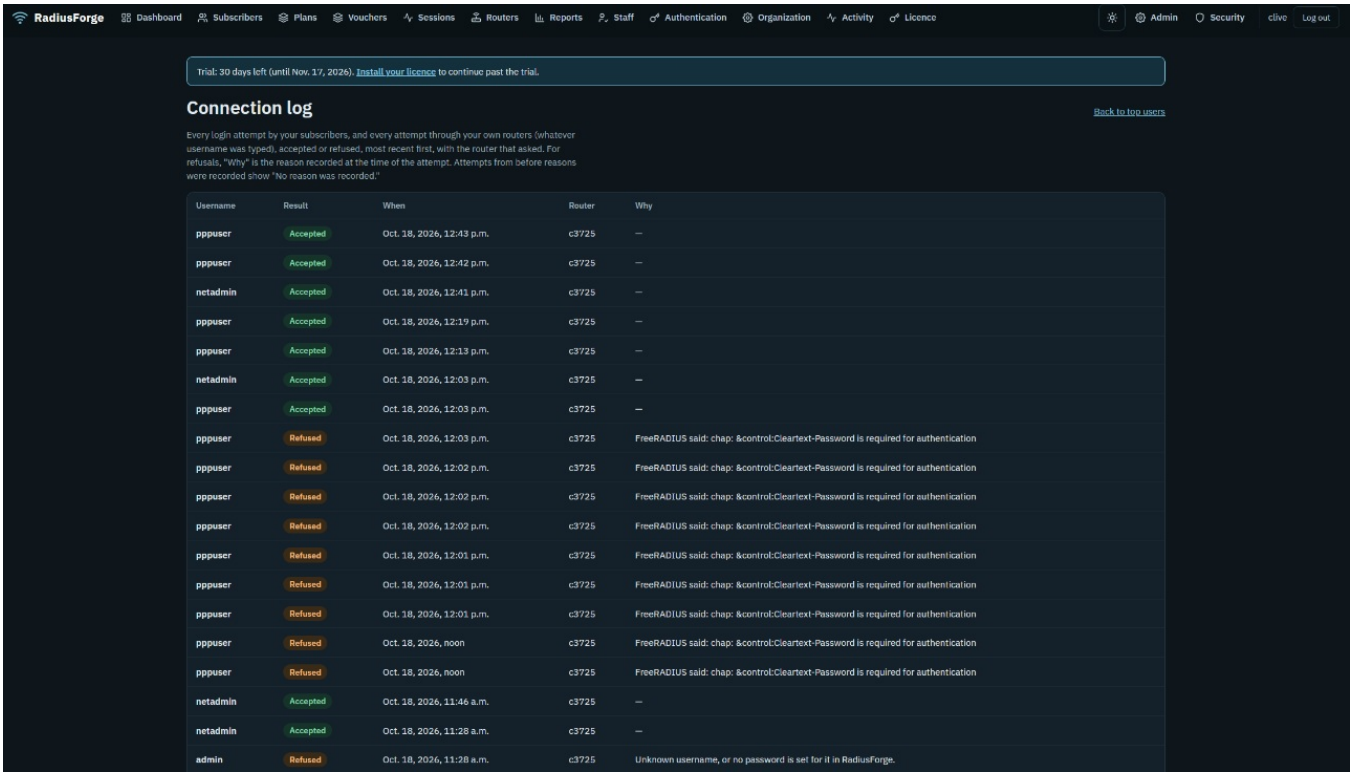
Read the reports

Two straightforward reports live under **Reports**.



- **Top Users** — who used the most data and the most connected time, across your recorded history. Handy for spotting

heavy users or fair-use breaches.



- **Connection Log** — every login attempt, successful or failed, newest first, each with a plain-English reason recorded at the moment it happened. This is your audit trail for "did this customer actually get on, and when?".

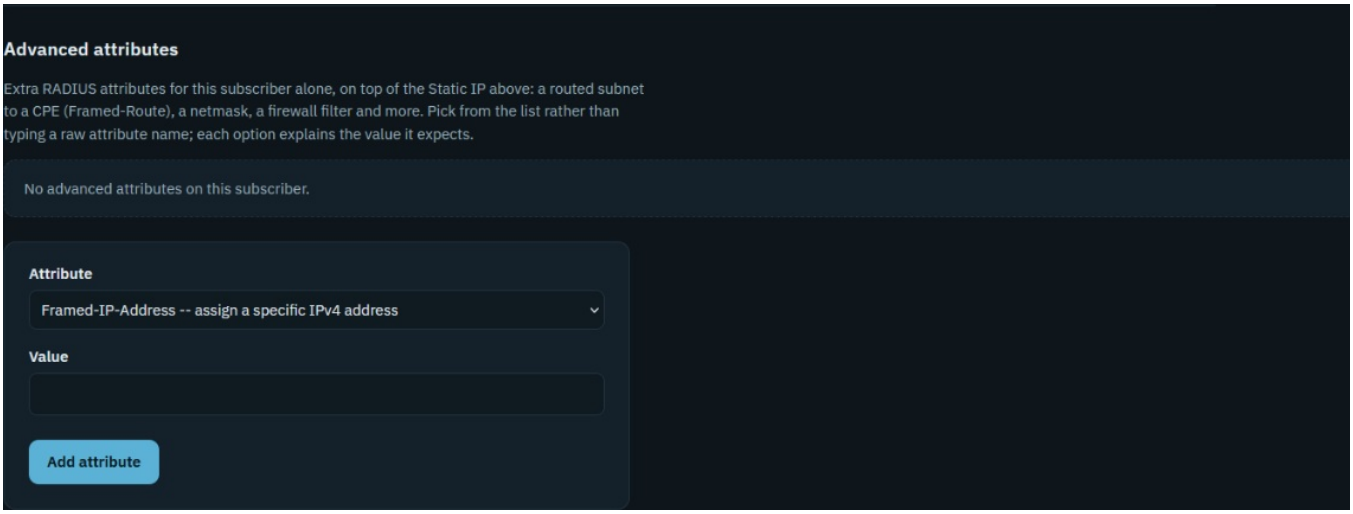
Give a customer a fixed IP or a routed subnet

Two common per-customer extras:

A single fixed IP address: open the customer and fill in the **Static IP address** field (on the main subscriber form). That's the whole job — a fixed address belongs to one customer, so it lives on the subscriber, not the plan.

A routed subnet (e.g. a `/29` routed to a business customer's own router):

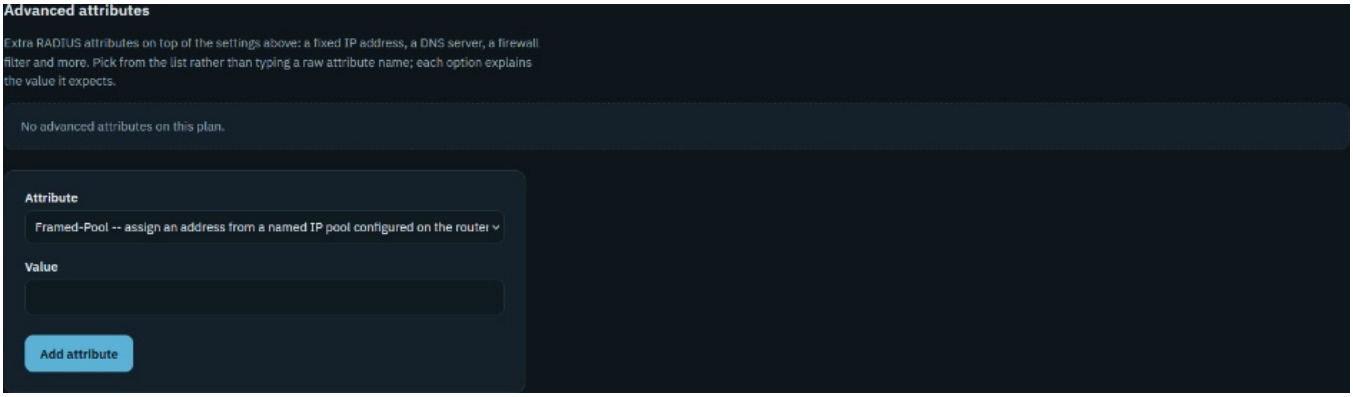
1. **Save the subscriber first**, then open them again.
2. In **advanced attributes**, add a **routed subnet / Framed-Route** and type the subnet.
3. Save. RadiusForge sends it to the router whenever that customer connects.



> **Single IP = on the customer; a pool = on the plan**
>
> One address for one customer goes in the **Static IP** field on the subscriber. If you want *many* customers to draw from a range, put an address **pool** on the **plan** instead (that's why single-IP options don't appear in a plan's list).

Advanced attributes explained (when you need them)

Most people never open this — but it's where RadiusForge's real power sits. An **advanced attribute** (a "VSA") is an extra instruction attached to a plan or a customer: a DNS server, an address pool, a routed subnet, a QoS policy to apply, and many more. Instead of memorising codes, you pick from a **friendly dropdown, grouped by vendor**.



There are two places to add them, and the difference matters:

- **On a Plan** — applies to **every** customer on that plan (e.g. a DNS server, or an address pool for the whole plan).
- **On a Subscriber** — applies to **that one customer** (e.g. a single fixed IP, or a routed subnet).

What each vendor group does, in plain terms:

Platform	What a plan sends	What you must do on the router first
MikroTik	the speed, as a rate-limit	nothing — it just works
Cisco	the name of an inbound/outbound QoS policy	create that `policy-map` on the router
Juniper	the name of a traffic-control profile	create that profile on the router
Fortinet	the name of a user group	bind the shaping policy to that group

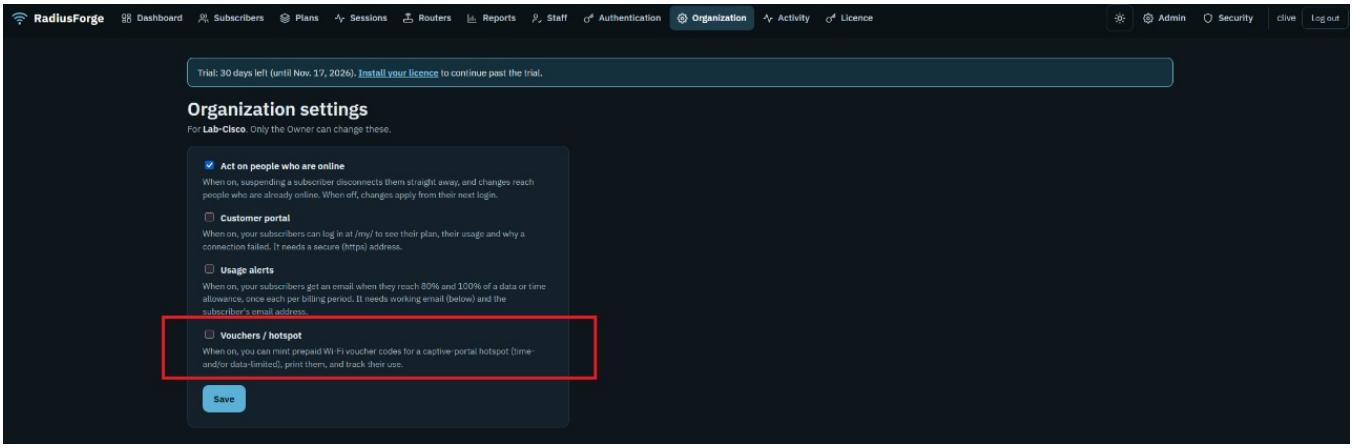
> **The rule for Cisco / Juniper / Fortinet**
> RadiusForge can only *name* a policy that already exists on the device — it can't create it remotely. Set the policy up on the router first, then type its exact name into the plan. (Cisco has friendly helpers that build the correct `Cisco-AVPair` for you — e.g. "Admin privilege level" becomes `shell:priv-lvl=15`.)

Turn on vouchers and create a batch

Vouchers let you sell or hand out Wi-Fi as one-off codes that expire by time or data — perfect for campsites, hotels, cafés and marinas. RadiusForge issues and enforces the codes; your **MikroTik hotspot hosts the login page**, so there's no portal for you to build.

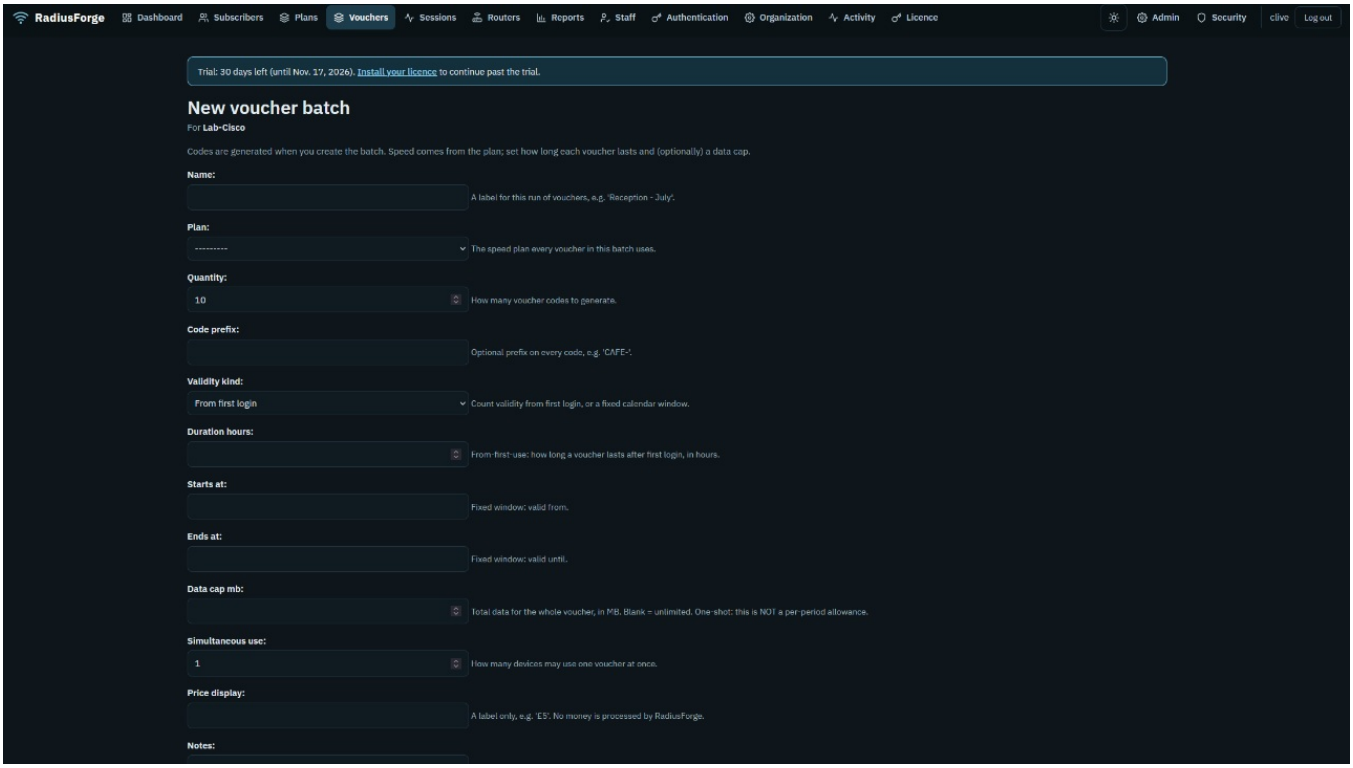
First, turn vouchers on (Owner, once):

1. Go to **Organisation** settings and switch on **Vouchers / hotspot**.
2. A **Vouchers** item now appears in the menu. (An organisation that never turns this on behaves exactly as before.)



Then create a batch of codes:

1. Click **Vouchers**, then create a batch.



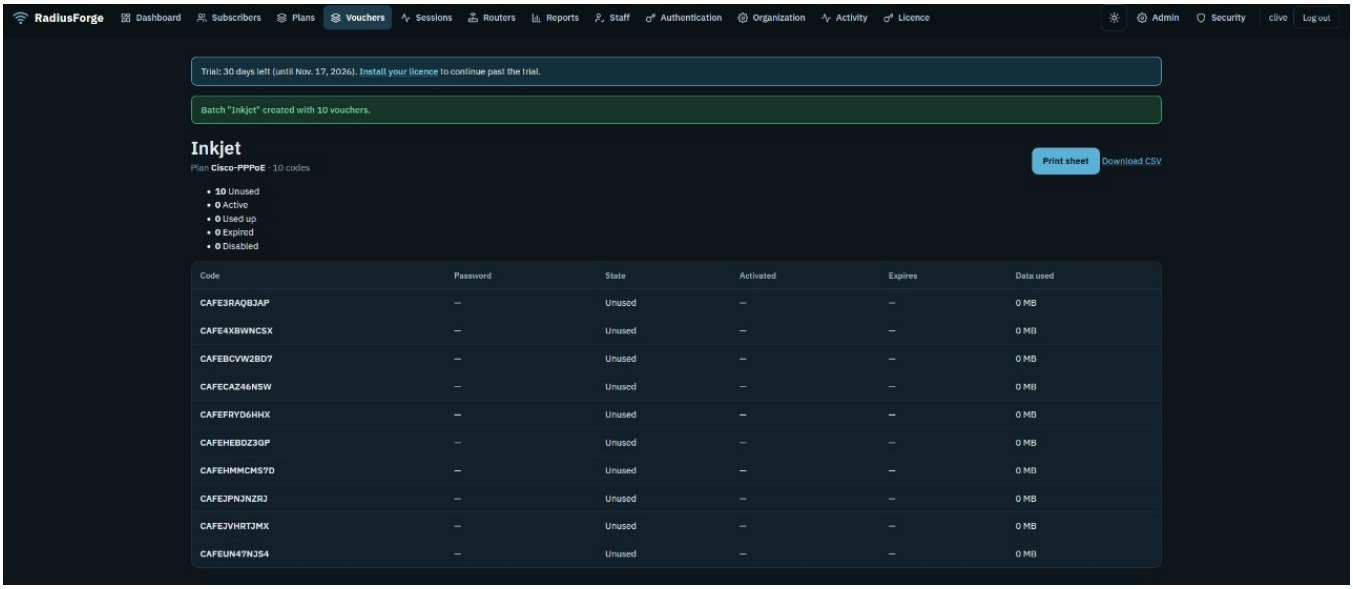
2. Fill in:

- **Plan** — the speed the vouchers get (reuse a normal plan, e.g. "Hotspot 10/5").
- **Quantity** — how many codes to generate.
- **Code prefix** — a short label in front of each code, e.g. `CAFE-`, so a glance tells you which batch it's from. (Letters, numbers, hyphen or underscore only — no spaces.)
- **Validity** — **from first login** ("valid 24 hours / 7 days from first use" — how most hotspots sell), or a **fixed date window**.
- **Data cap** — optional total data before the code stops (a one-off total, not per period).
- **Simultaneous use** — devices per code (usually 1).
- **Price label** — a printed label only, e.g. `£5`. RadiusForge processes no money.

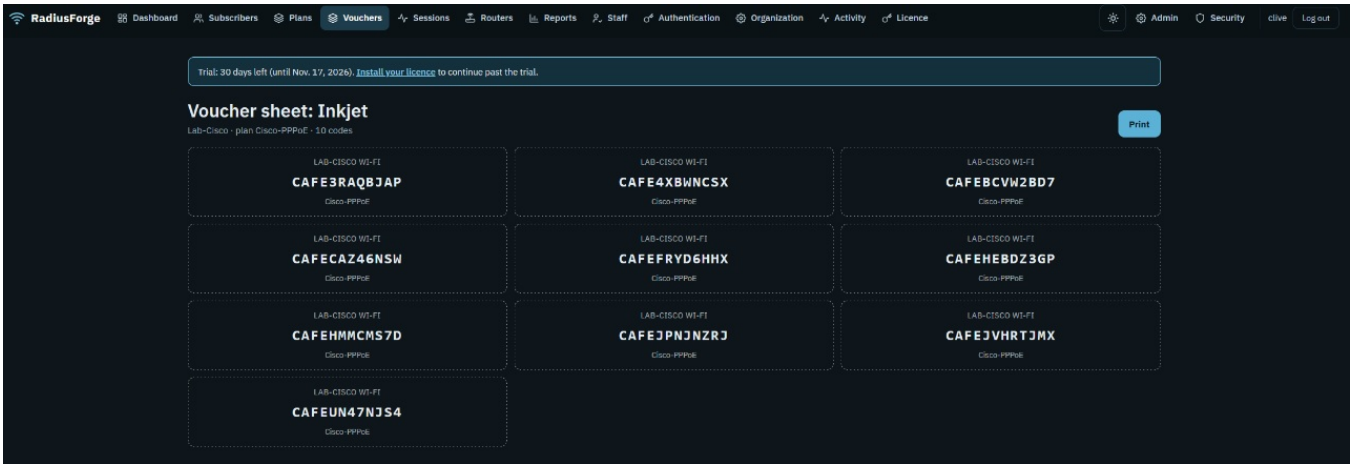
3. Click **Create**. The codes are generated using an unambiguous alphabet — no look-alike `0/O` or `1/I/L` — and each is globally unique.

Hand out and track vouchers

1. Click a batch to open it and see **live counts** — unused, active, expired, used-up — plus who's online on a voucher and how much data they've used.



2. Click **Print sheet** for a tidy, ready-to-cut sheet of cards — each showing your network name, the code, the plan and the price — or **Download CSV** for your records.



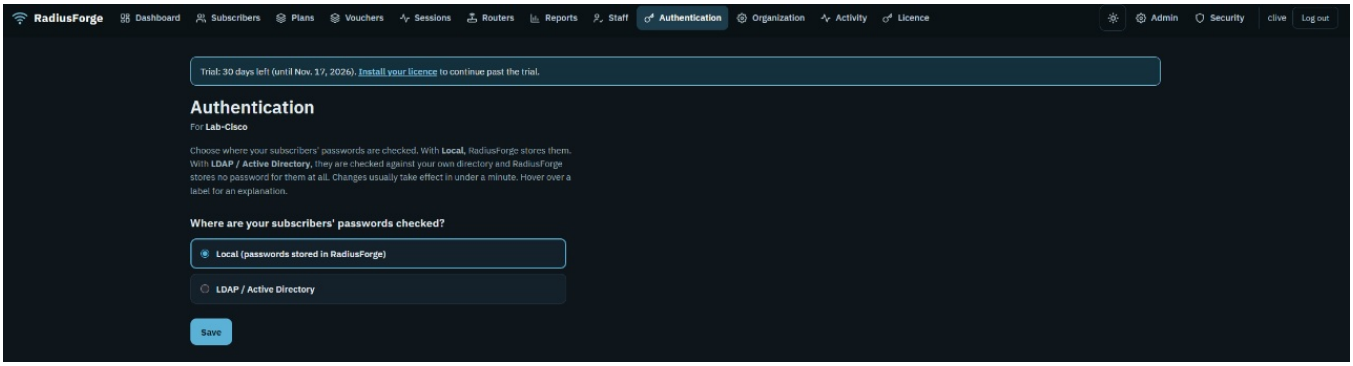
How a voucher behaves:

- It starts **unused**. On the customer's **first successful login**, RadiusForge stamps it active and (for "from first use" codes) starts the clock from that moment.
- While active, the customer gets the plan's speed, and data counts against the cap.
- When it **expires** or **hits its cap**, RadiusForge stops it and disconnects any live session on it. A used-up or expired code can't be reused.

> **Why 'from first use' matters**
>
> A guest who buys a 7-day voucher on Monday but first logs in on Wednesday should get until the *following* Wednesday — not quietly lose two days. "From first use" does exactly that, which cheaper tools often get wrong.

Check passwords against your directory (LDAP / Active Directory)

By default RadiusForge stores each customer's password itself. If you'd rather check passwords against your existing **LDAP or Active Directory**, an Owner sets it up under **Authentication**.

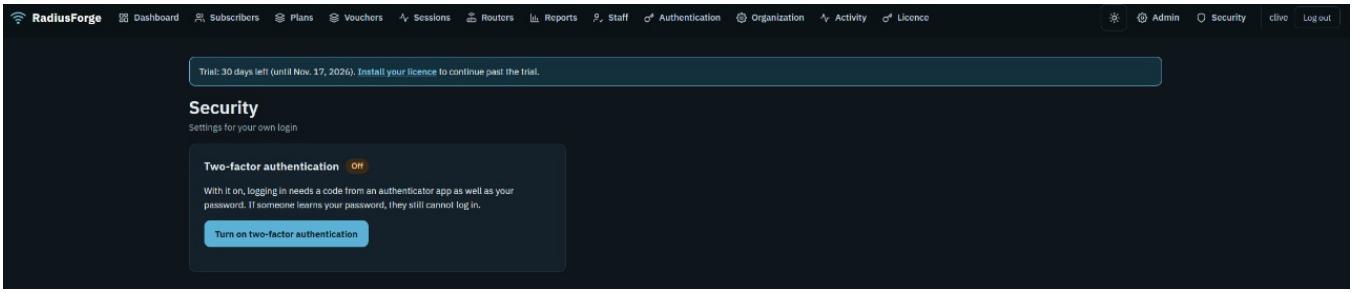


1. Click **Authentication** and choose **LDAP / Active Directory**.
2. Enter the directory's connection details: its **host name** and **port**, the **security** (LDAPS or StartTLS), a **read-only search account**, **where to look** for users, and **which attribute holds the username** (`uid`, or `sAMAccountName` on Active Directory).
3. Save.

> **What changes with a directory**
>
> Directory customers don't have a password stored in RadiusForge, so per-customer extras (like a fixed IP) don't apply to them — plan-level settings still do. Directory logins must use **PAP** on the router.

Turn on two-factor security for your login

Two-factor security adds a one-time code from an authenticator app on top of your password. It's **per person** — you turn it on for your own login under **Security** (top-right).

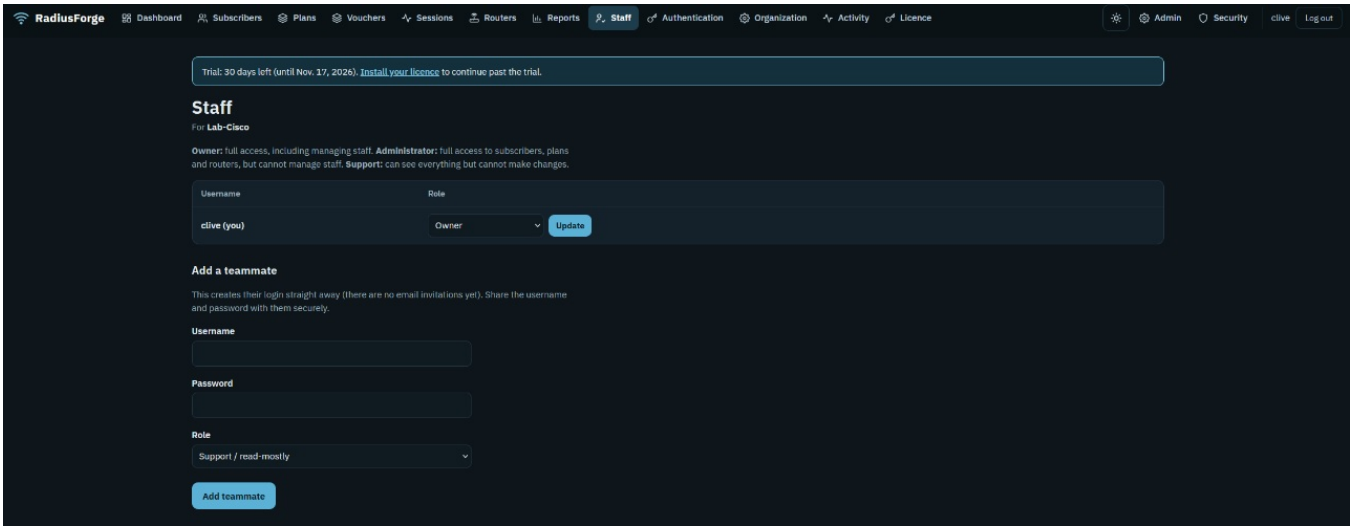


1. Click **Security**, then **Turn on two-factor authentication**.
2. In your authenticator app (Google Authenticator, Microsoft Authenticator, Authy, or most password managers) choose **"enter a setup key manually"** and type in the **setup key** shown on screen.
3. The app starts showing a **6-digit code**. Type that code back into RadiusForge to prove it works, and confirm.
4. From now on, logging in needs that code as well as your password.

> **Keep a backup of your authenticator**
>
> If you lose access to your authenticator app, an Owner currently can't reset two-factor for you from the console. Back up your authenticator, or keep its own recovery option set up, so you can't lock yourself out.

Add staff and set what they can do

An Owner adds teammates under **Staff**, each with their own login and a role that decides what they can touch.



1. Click **Staff**, then add a person with a **username**, an **initial password**, and a **role**:

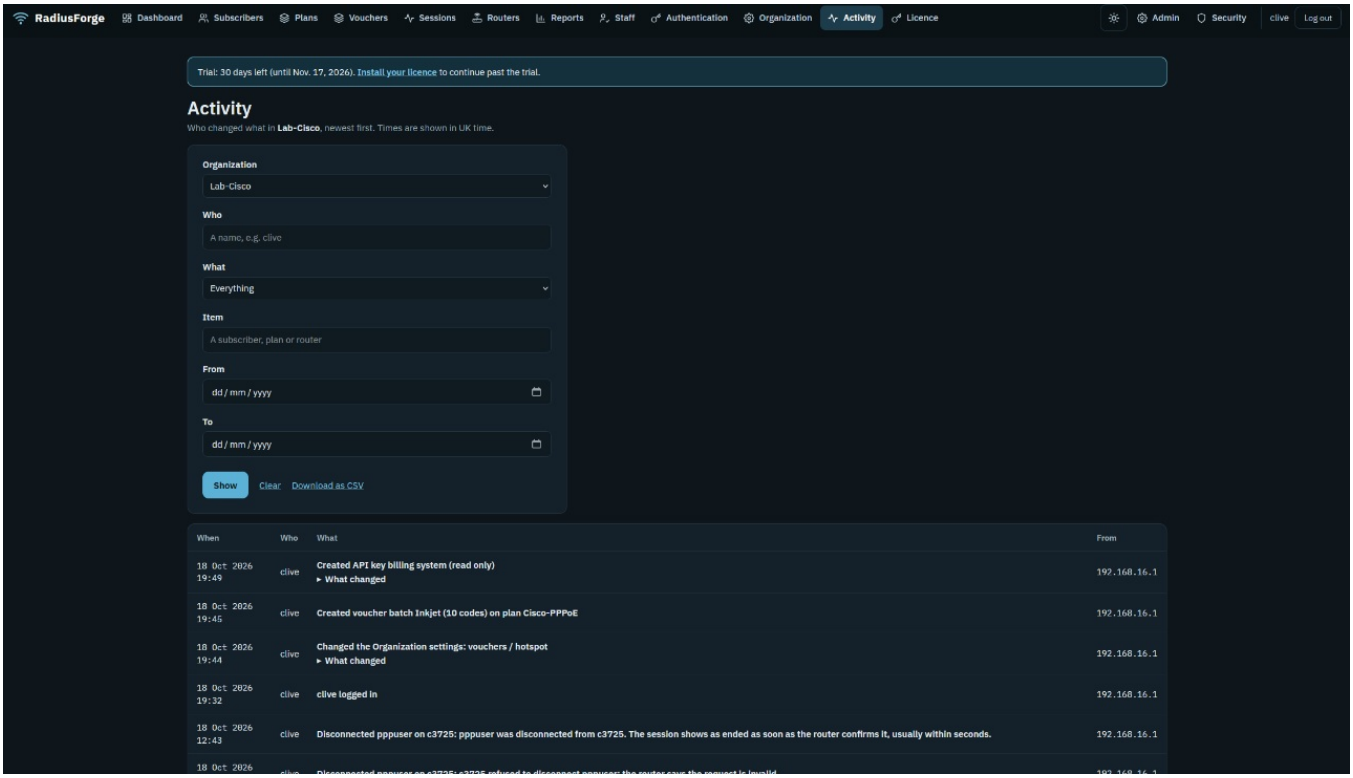
- **Owner** — full access, including Staff, Authentication, Organisation settings, Licence and the Activity log.
- **Administrator** — full day-to-day access, but **can't** manage staff or those Owner-only pages.
- **Support** — can **view** every page, but every Add / Edit / Save / Remove button is blocked. Ideal for a support contractor.

2. Give them their username and password to log in with (they can turn on their own two-factor afterwards).

> **Guardrails**
> An organisation always keeps at least one Owner, and you can't remove your own access — so nobody can accidentally lock everyone out.

See who changed what (Activity log)

Activity (Owners only) is a read-only record of who changed what, and when — down to the old and new values, with passwords and secrets shown only as "(changed)". Filter it, or export to CSV. It's the first place to look to answer "who changed this, and when?".

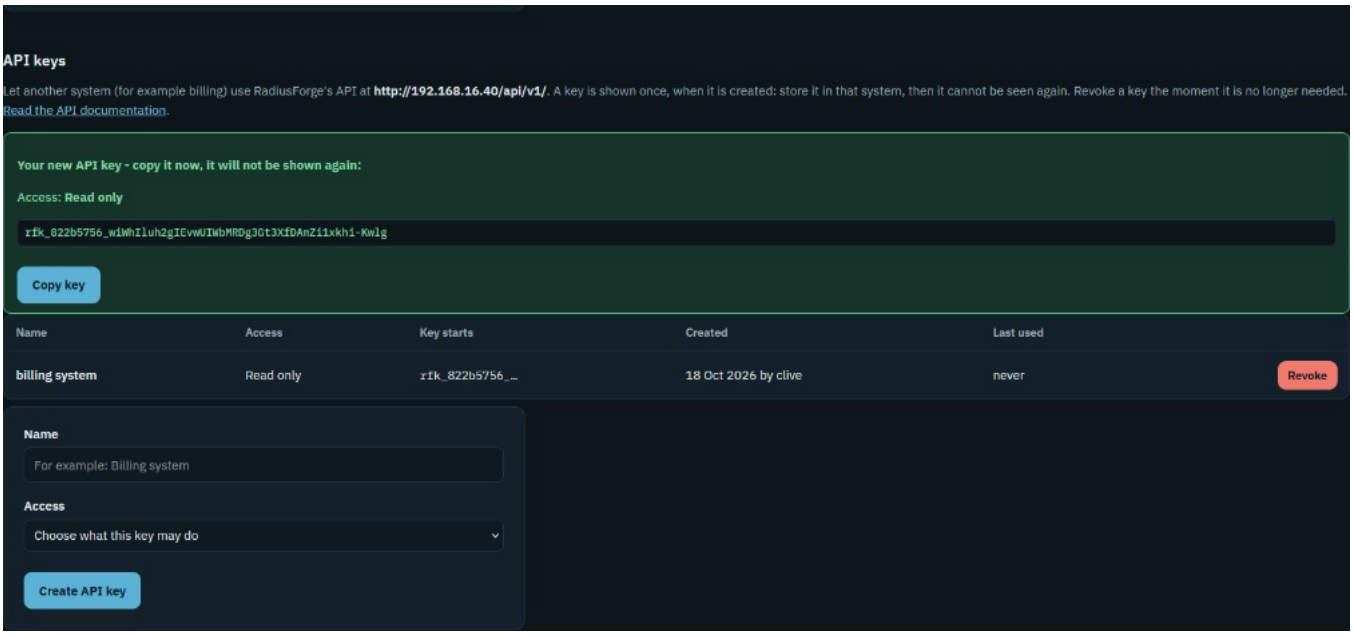


Connect your billing system (the API)

RadiusForge has a full HTTP API, so your billing system or your own scripts can drive it — create a customer when an invoice is paid, suspend one when it isn't, pull usage for billing.

First, get a key (Owner):

1. Go to **Organisation settings → API keys**.



2. Give the key a **name** and a **scope** — *Read only* or *Read and write* — and create it.
3. **Copy the key immediately** — it's shown **once** and never again. A key only ever sees its own organisation.

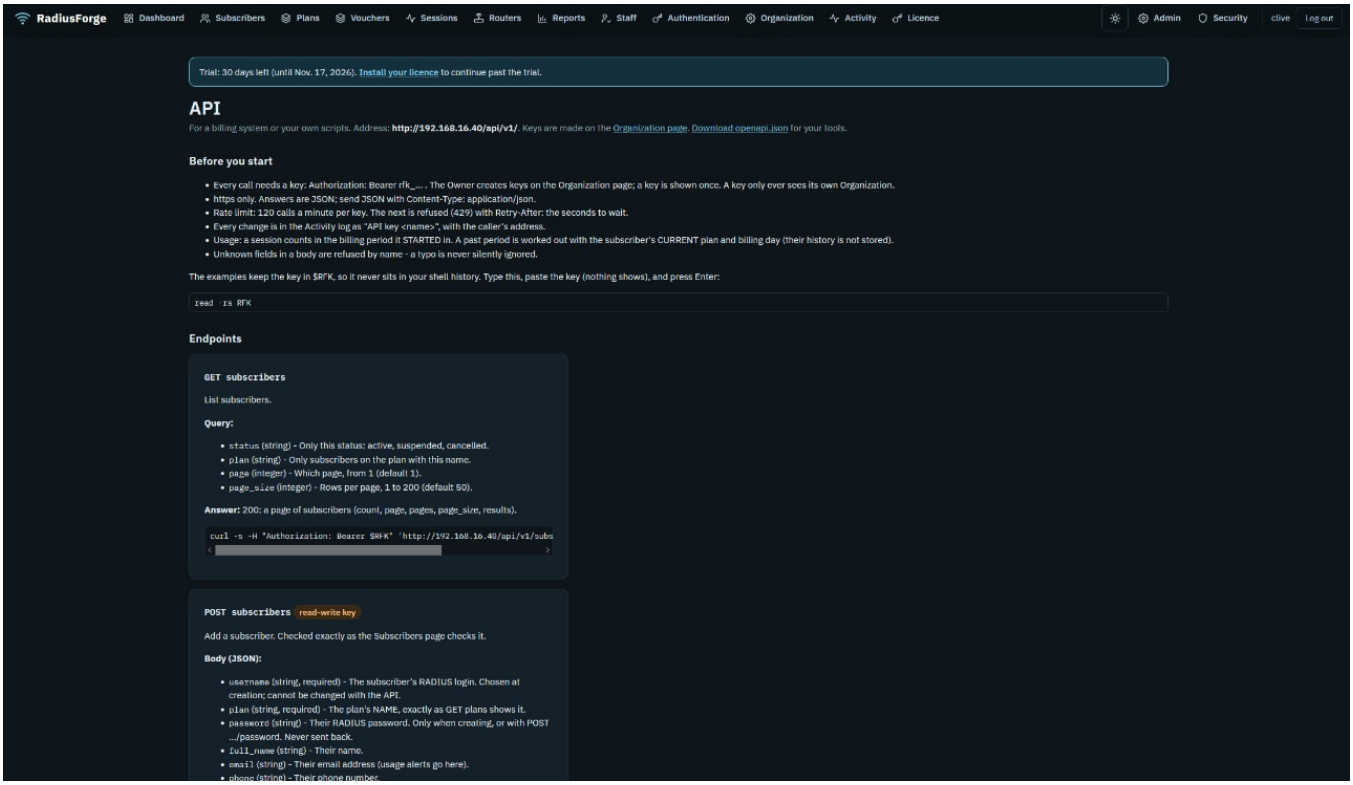
Then use it — send the key as a Bearer token over HTTPS:

```
curl -s -X POST \
  -H "Authorization: Bearer rfk_xxxxxxxx_xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx" \
  -H 'Content-Type: application/json' \
  -d '{"username":"jsmith","plan":"Home 50/10","full_name":"Jo Smith","password":"a-strong-password"}' \
  https://your-server/api/v1/subscribers
```

The main endpoints:

Method & path	Scope	What it does
`GET /subscribers`	read	List subscribers (filter by status, plan)
`POST /subscribers`	write	Add a subscriber
`GET /subscribers/{username}`	read	One subscriber, with usage
`PATCH /subscribers/{username}`	write	Change plan, status, contact details
`DELETE /subscribers/{username}`	write	Delete a cancelled subscriber
`POST /subscribers/{username}/suspend`	write	Suspend (disconnects if online)
`POST /subscribers/{username}/reactivate`	write	Reactivate
`POST /subscribers/{username}/password`	write	Set a new password
`POST /subscribers/{username}/disconnect`	write	Drop their live sessions now
`GET /plans`	read	List plans
`GET /sessions`	read	Who's online now
`GET /usage`	read	Everyone's usage for a billing period

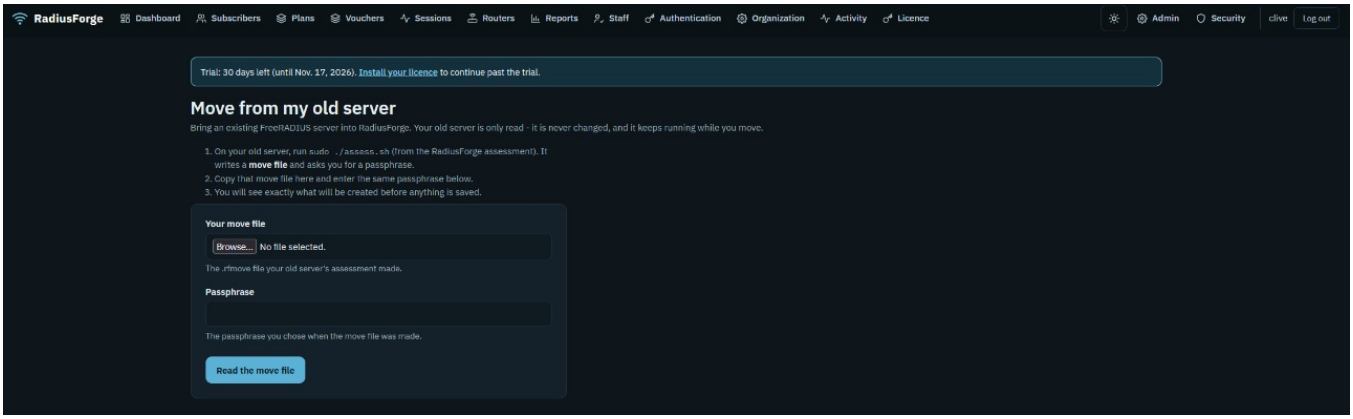
There's a complete, copy-paste reference built in — every field and error — at `/api/v1/docs` on your own server.



> **A few API rules**
>
> Keys work as a Bearer token over HTTPS only; unknown fields in a request are refused by name (so a typo is never silently ignored); passwords are never returned; and there's a limit of 120 calls per key per minute. The write API uses exactly the same checks as the web pages, so the two can never disagree.

Move from an existing RADIUS server

Already running FreeRADIUS? RadiusForge can read your old server and bring everything across — plans, customers and routers — in a guided three-step flow under **Import** (for the main administrator).

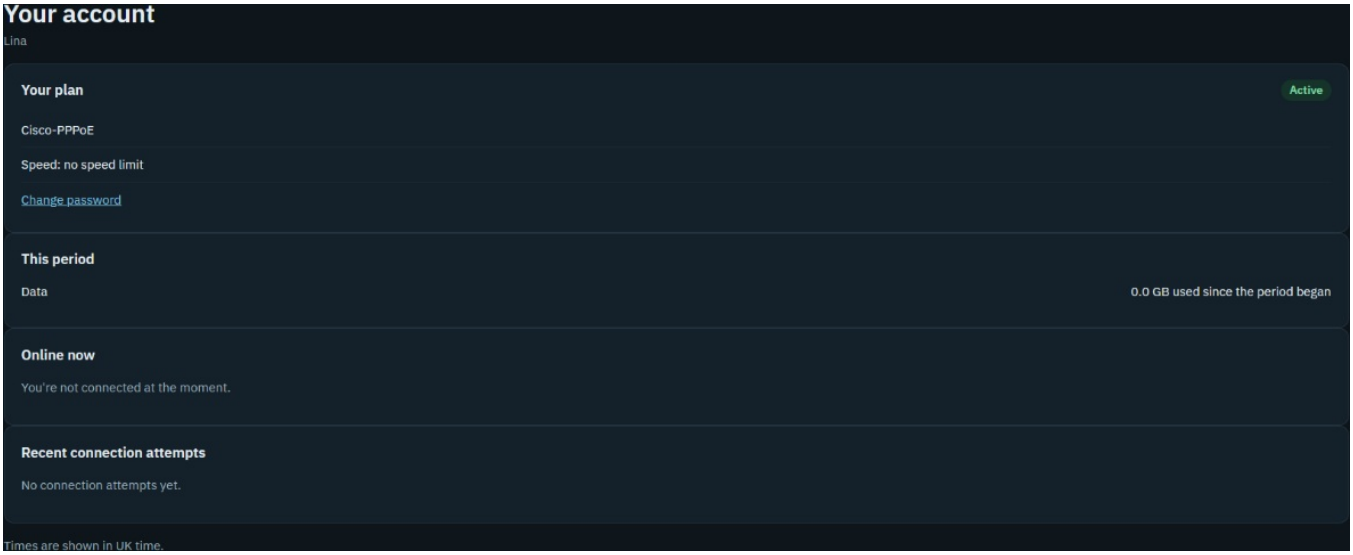


1. **Point it at your old server** and let it read. The read is **read-only** — your old server keeps serving customers, unchanged, the whole time.
2. **Review** what it found — the plans, customers and routers it will create — and adjust if needed.
3. **Import.** Everything is created in RadiusForge, ready to test with *Check a login* before you cut over at your own pace.

> **No lock-in, and no rush**
>
> There's no cut-over deadline: run both side by side until you're happy. And underneath, RadiusForge is a standard FreeRADIUS + MySQL back-end, so you're never trapped.

Let customers see their own account (the portal)

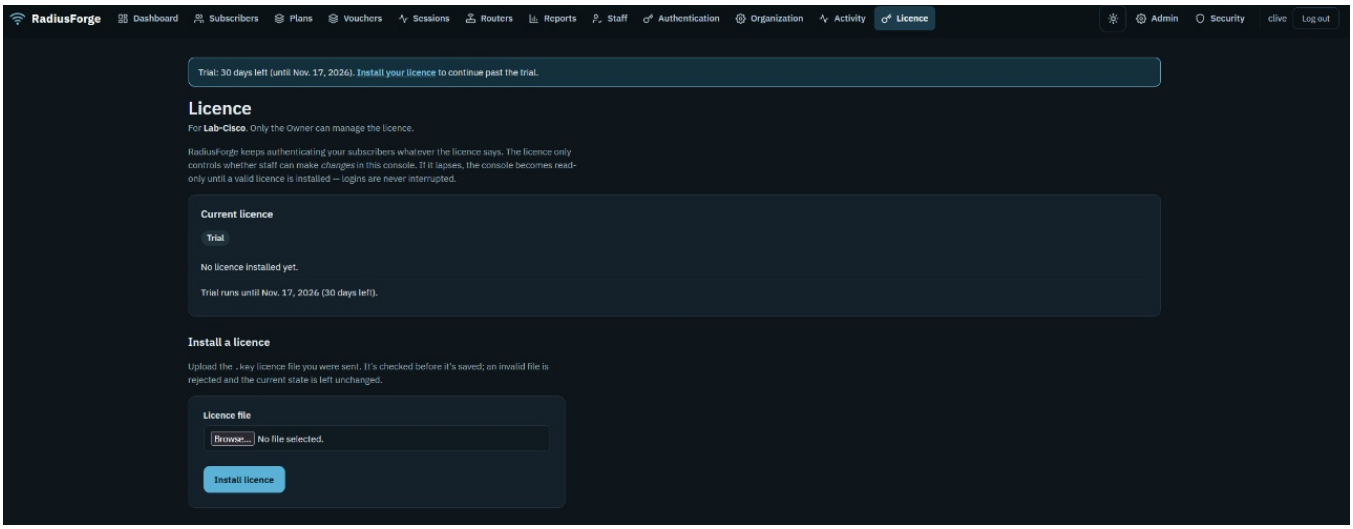
You can optionally let customers see their own plan and usage and change their own password, at `/my/` on your server.



1. An Owner turns it on under **Organisation settings → Customer portal** (it needs a secure HTTPS address).
2. Customers log in at `/my/` with their **normal connection username and password**.
3. They see only their own details — plan, usage this period, whether they're online, and recent login attempts. They can never reach any staff page.

Licence and trial

Licence shows your licence status and days remaining, and is where an Owner uploads a new licence file.



RadiusForge starts with a **30-day free trial**. When a trial or licence lapses, the console becomes **read-only** — but **your customers keep being authenticated the whole time**; only *changes* in the console are paused until you install a licence.

Stuck, or planning a migration? **info@radiusforge.co.uk**