

RESERVOIR ENGINEERING

The Reservoir Simulation License Playbook

How to right-size tNavigator, RMS, and Petrel, protect long solves, and control pay-per-use agreements with measured usage.

What you will take away

- How to tell a legitimate multi-hour solve from an abandoned modeling seat
- Which harvesting method fits each reservoir tool, and why RMS is different
- How to enter a usage-based vendor agreement with your own data in hand
- A readiness checklist to size the opportunity before you talk to anyone

The challenge

Two usage patterns, one very expensive license

Reservoir engineering runs two different behaviors on the same costly licenses. A tNavigator simulation is checked out and legitimately held for hours or days while it solves. An RMS or Petrel modeling seat is checked out, then left open through meetings and overnight. A license server cannot tell the productive hold from the idle one, so both renew at full price.

The stakes rise as vendors move to usage-based billing. When an agreement bills on actual usage, your metering is no longer just negotiation evidence. It is the number on the invoice. Maersk Oil, now part of TotalEnergies, made exactly this move with Schlumberger, used automated harvesting to stop inactive sessions, and cut one of its most expensive applications by 39 percent. This was presented publicly at conferences and webinars.

The goal of this playbook is to help you separate real work from idle time, apply the right recovery method to each tool, and turn usage data into leverage at renewal.

The framework

Three levels, applied to reservoir engineering

Each level is independently useful, but the full return in reservoir environments comes from moving through all three.

Level 1: Runtime usage	Record concurrent usage, elapsed time, and denials for tNavigator, RMS, OFM, and Techlog at the module level. Your independent record of real demand across 12 months.
Level 2: True active usage	Read CPU and process activity so a running solve registers as genuine work, while an idle modeling seat stands out as a candidate for recovery.
Level 3: Managed usage	Petrel and Landmark support suspend and resume with an autosave step. RMS from Emerson supports warn and terminate only. Open iT applies the method each application actually allows.

The playbook

Six steps to a right-sized reservoir estate

- 1 Inventory the estate.** List every reservoir application and its license manager (for example tNavigator on its own manager, RMS as Sentinel RMS).
- 2 Measure real demand.** Turn on Level 1 to capture concurrency, elapsed time, and denials across a full 12 months.
- 3 Separate solves from idle.** Use Level 2 to distinguish a live solve from a modeling seat left open. Only the idle seats are candidates.
- 4 Match the method to the tool.** Plan suspend and resume with autosave for Petrel and Landmark, and warn and terminate for RMS.
- 5 Instrument pay-per-use.** Where an agreement bills on usage, watch elapsed time and cost build through the month and cut idle time before the vendor report lands.
- 6 Renew on peak demand.** Bring concurrent peak demand to the table and reclaim seats that never justified their cost, which for Petrel can reach around 200,000 dollars per seat per year.

Qualify yourself

Readiness checklist

The more of these that are true, the more you stand to recover. Tick what applies today.

- ☐ We run long simulation solves alongside interactive modeling on the same licenses
- ☐ We cannot currently tell a running solve from an idle, held seat
- ☐ Our estate mixes terminate-only tools (RMS) and suspend-capable tools (Petrel, Landmark)
- ☐ One or more vendors offer or already use usage-based or pay-per-use terms
- ☐ We renew reservoir licenses without an independent 12-month usage record

Your next step

Get a free utilization snapshot of your reservoir estate. Open iT reads your license servers and reports your real idle rate, seat by seat, with no install and no change to how engineers work.

Pair this with the Pay-Per-Use Readiness Calculator to estimate the idle time inflating a usage-based agreement.

Sources: Open iT LicenseAnalyzer Level 3 documentation; LicenseOptimizer Successful Implementations; Supported Application in Level 3. The 39 percent figure is attributed to Maersk Oil / TotalEnergies and is marked as publicly presented; confirm attribution before external citation.