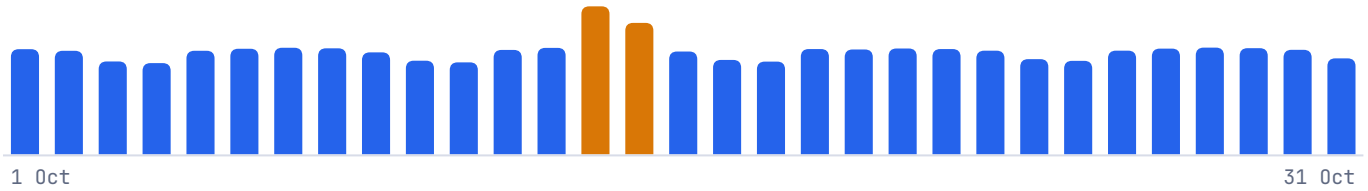
Organization engineering report

Northwind Logistics

Organization, October 2026, compared with September 2026

$61,216

spent in October 2026. 6.7% more than September, +$3,857



Daily spend, 1–31 Oct. Amber: 14–15 Oct, unusual days.

+6.7%

$3,857 more than September

Page 3

$17,262

requested but not used, 28% of spend

Page 5

$12,719

a month at most, in 41 recommendations open on 2 November

Page 6

$58,400

expected for November 2026

Page 12

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01 The month at a glance

Steady, except 14–15 October

Daily spend held between $1,735 and $2,030 on the other 29 days. 14–15 October came in at $2,814 and $2,500.

Mon	Tue	Wed	Thu	Fri	Sat	Sun
			1 $2,000	2 $1,969	3 $1,766	4 $1,735
5 $1,970	6 $2,008	7 $2,027	8 $2,016	9 $1,939	10 $1,781	11 $1,749
12 $1,986	13 $2,025	14 $2,814	15 $2,500	16 $1,955	17 $1,796	18 $1,764
19 $2,002	20 $1,994	21 $2,013	22 $2,002	23 $1,972	24 $1,810	25 $1,778
26 $1,972	27 $2,011	28 $2,030	29 $2,019	30 $1,988	31 $1,825	

$1,700–$1,849 $1,850–$2,049 Unusual days

1. 14–15 Oct: $2,814 and $2,500, against a typical $1,986.
2. Weekdays averaged $1,995, weekends $1,778: weekends ran 11% cheaper.

What it was spent on

By resource

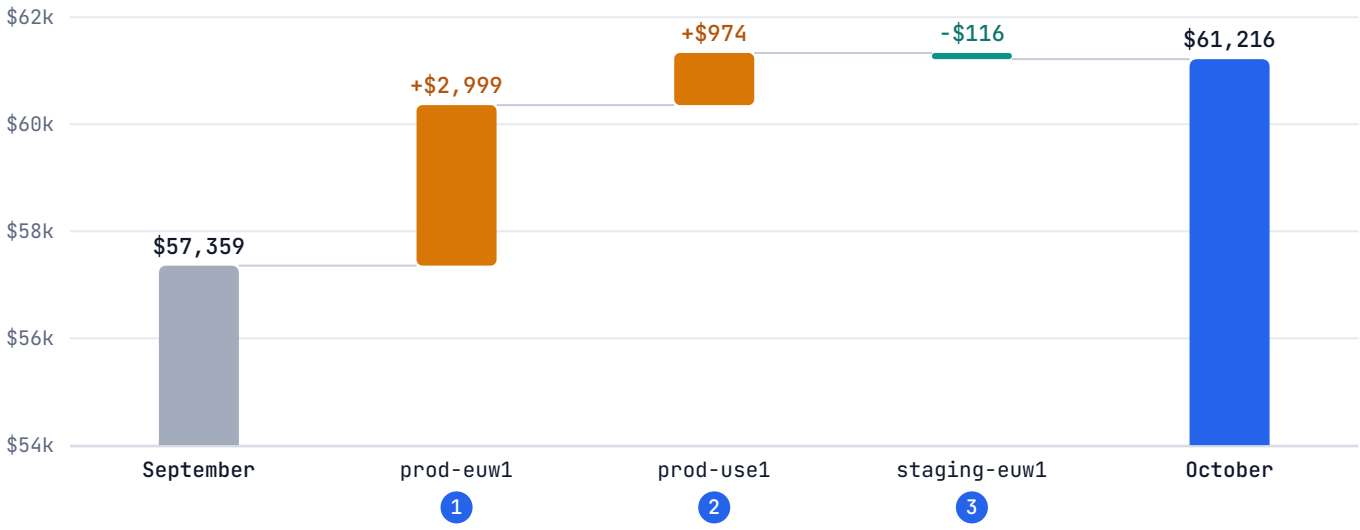


Resource	Previous	Spend	Change	Share
CPU	$28,351	$30,635	+8.1%	50%
Memory	$14,772	$15,664	+6%	26%
Network	$8,288	$8,771	+5.8%	14%
Storage	$5,627	$5,814	+3.3%	9.5%
Management and other	$321	$332	+3.3%	0.5%
Total	**$57,359**	**$61,216**	**+6.7%**	**100%**

02 What changed

$3,857 more than September

prod-euw1 explains most of the increase, +$2,999. Decreases in one cluster took $116 off.



Axis starts at $54k so the changes can be seen.

Why each one moved

By cluster

1	prod-euw1	+$2,999	Up 8.7% on September. Led by search +$1,554, checkout +$384 and orders +$378.
2	prod-use1	+$974	Up 4.9% on September. Led by checkout +$207, orders +$206 and search +$151.
3	staging-euw1	-$116	Down 3.6% on September. Led by search -$37, payments -$29 and platform -$25.

Inside the largest movers

The parts that moved most

In prod-euw1	Change
search	+$1,554
checkout	+$384
orders	+$378

In prod-use1	Change
checkout	+$207
orders	+$206
search	+$151

03 Where the money goes

prod-euw1 is 61% of the spend

prod-use1 is next at 34%. prod-euw1 grew the most, +$2,999 on September.

By cluster



prod-euw1 $37,380 61% prod-use1 $20,755 34% staging-euw1 $3,082 5%

Largest clusters

Cluster	Spend	Change vs September	Share
prod-euw1	$37,380	+$2,999	61%
prod-use1	$20,755	+$974	34%
staging-euw1	$3,082	-$116	5%

Largest namespaces

Namespace	Spend	Change vs September	Share
search prod-euw1	$8,649	+$1,554	14%
orders prod-euw1	$5,595	+$378	9.1%
checkout prod-euw1	$4,950	+$384	8.1%
platform prod-euw1	$4,118	+$225	6.7%

Other namespaces: $29,302; persistent volumes: $5,303; not attributed to any namespace: $3,298.

Largest workloads

Workload	Spend	Change vs September	Share
elasticsearch-data search (prod-euw1)	$3,936	+$112	6.4%
checkout-api checkout (prod-euw1)	$3,193	+$299	5.2%
kafka platform (prod-euw1)	$2,454	+$162	4%

Other workloads: $43,032; persistent volumes: $5,303; not attributed to any workload: $3,298.

04 Efficiency and risk

$17,262 (28% of spend) was requested but not used

On average the organization used 55% of the CPU and 77% of the memory it requested. Unused CPU accounts for $13,687 of the unused requests, memory for $3,575.

CPU used of requested

55%

528 of 958 cores used

Memory used of requested

77%

2,523 of 3,281 GiB used

Unused requests by namespace



Spend on requested CPU and memory that went unused, in October 2026, for the namespaces where it was largest.

Where requests went unused

Averages over the period, summed over pods; arrows read requested → used

Workload	CPU (cores)	Memory (GiB)	Unused	Spend
`checkout-api` checkout on prod-euw1	56 → 23	112 → 72.8	$1,302	$3,193
`checkout-api` checkout on prod-use1	36 → 13.3	72 → 42.1	$810	$1,795
`elasticsearch-data` search on prod-euw1	48 → 33.6	384 → 324	$778	$3,936
`search-indexer` search on prod-euw1	32 → 10.4	64 → 76.8	$725	$1,524

Uses more memory than it requests

Eviction risk, summed over pods

When a node runs short of memory, the workloads using most beyond their request are evicted first.

Workload	Requested	Used	Over its request
`kafka` platform on prod-euw1	144 GiB	170 GiB	+26.1 GiB
`search-indexer` search on prod-euw1	64 GiB	76.8 GiB	+12.8 GiB

05 Savings

Up to $12,719 a month in 41 open recommendations

Open on 2 November 2026, when this report was generated. Evidence is high for 23, medium for twelve and low for one; five are not rated.



Kind of recommendation	Open	Up to, a month	Share	Page
Rightsizing	22	$4,737	37%	7
Spot capacity	6	$2,989	23%	8
Unused resources	8	$520	4.1%	9
Node pools	3	$3,676	29%	9
Network routing	2	$798	6.3%	In the app
All recommendations	41	$12,719	100%	

The evidence behind them

Open, and up to a month



High, 23 $4,461 · Medium, 12 $3,767
Low, 1 $18 · Not rated, 5 $4,474

Where they are

By namespace, up to a month



How to read these savings

As of — These are the recommendations open on 2 November 2026, when this report was generated, not a result of the period it covers. Each rests on usage measured in the days before it was last checked, seven days unless your rightsizing settings say otherwise.

Estimates — Amounts are estimates at current prices for a 730-hour month. They change as usage, prices and workloads change, and a recommendation can stop applying.

Overlap — Resizing a node pool, rightsizing its workloads and moving them to spot act on the same capacity, so applying one lowers the others. Read the total as an upper bound.

Evidence — Evidence says how much stands behind a recommendation (hours of usage observed, or how safe a removal is), not how exact the dollar amount is.

06 Rightsizing

Rightsizing 22 workloads could save up to $4,737 a month

Ordered by saving. The five largest are 39% of it; requests come down where workloads use much less than they ask for. Evidence is high for 18 of 22.



Each part is one workload's saving, largest first; grey is the other 17.

	Workload	CPU (cores)	Memory (GiB)	Evidence	Up to, a month
1	checkout-api checkout on prod-euw1	2 → 1.3	4 → 3.5	High	$529
2	search-indexer search on prod-euw1	4 → 2	–	High	$394
3	checkout-api checkout on prod-use1	2 → 1.2	4 → 3.5	High	$355
4	feature-store data on prod-euw1	4 → 1.8	32 → 18.5	High	$296
5	redis-cache platform on prod-euw1	2 → 0.45	16 → 13	Medium	$288
6	orders-api orders on prod-euw1	1.5 → 0.85	3 → 2.5	High	$283
7	search-api search on prod-euw1	2 → 1.4	8 → 7	High	$253
8	payments-gateway payments on prod-euw1	1.5 → 0.65	3 → 2.5	High	$226
9	orders-api orders on prod-use1	1.5 → 0.75	3 → 2	High	$201
10	search-indexer search on prod-use1	4 → 1.8	–	High	$201
11	feature-store data on prod-use1	4 → 1.7	32 → 16.5	High	$199
12	redis-cache platform on prod-use1	2 → 0.45	16 → 11.5	Medium	$196
13	cart-service checkout on prod-euw1	1 → 0.5	2 → 1.5	High	$195
14	payments-gateway payments on prod-use1	1.5 → 0.6	3 → 2	High	$188
15	search-api search on prod-use1	2 → 1.3	8 → 6.5	High	$164

Continued on the next page.

06 Rightsizing

Rightsizing, continued

	Workload	CPU (cores)	Memory (GiB)	Evidence	Up to, a month
16	`ingress-nginx-controller` ingress on prod-euw1	2 → 1.4	4 → 2.5	High	$158
17	`cart-service` checkout on prod-use1	1 → 0.45	2 → 1.5	High	$126
18	`ingress-nginx-controller` ingress on prod-use1	2 → 1.3	4 → 2.5	High	$123
19	`auth-service` platform on prod-euw1	1 → 0.45	2 → 1.5	High	$122
20	`fluent-bit` observability on prod-euw1	0.2 → 0.1	–	Medium	$94
21	`auth-service` platform on prod-use1	1 → 0.4	2 → 1.5	High	$91
22	`fluent-bit` observability on prod-use1	0.2 → 0.1	–	Medium	$55
	Total rightsizing				**$4,737**

Spot candidates

	Recommendation	What changes	Evidence	Up to, a month
1	Move to spot `orders-worker` orders on prod-euw1	Run it on spot nodes; it is eligible and was rated low risk.	Medium	$809
2	Move to spot `demand-forecast` data on prod-euw1	Run it on spot nodes; it is eligible and was rated low risk.	Medium	$653
3	Move to spot `search-indexer` search on prod-euw1	Run it on spot nodes; it is eligible and was rated low risk.	Medium	$539
4	Move to spot `orders-worker` orders on prod-use1	Run it on spot nodes; it is eligible and was rated low risk.	Medium	$436
5	Move to spot `demand-forecast` data on prod-use1	Run it on spot nodes; it is eligible and was rated low risk.	Medium	$302
6	Move to spot `search-indexer` search on prod-use1	Run it on spot nodes; it is eligible and was rated low risk.	Medium	$249

07 Node pools and unused resources

Resizing three node pools could save up to $3,676 a month

These node pools are larger than their workloads need.

Node pool changes

	Recommendation	What changes	Evidence	Up to, a month
1	Resize pool `general` Node pool on prod-euw1	Run 13 m6i.4xlarge nodes in place of 16 m6i.4xlarge.	Not rated	$1,875
2	Resize pool `compute` Node pool on prod-use1	Run 9 c6i.4xlarge nodes in place of 6 c6i.8xlarge.	Not rated	$1,489
3	Resize pool `general` Node pool on staging-euw1	Run 3 m6i.2xlarge nodes in place of 4 m6i.2xlarge.	Not rated	$312

Unused resources

	Recommendation	What changes	Evidence	Up to, a month
1	Delete `data-kafka-9` platform on prod-euw1	Delete the unattached volume (1500 GB, gp3).	High	$132
2	Delete `data-elasticsearch-data-12` search on prod-euw1	Delete the unattached volume (1200 GB, gp3).	Medium	$106
3	Delete `data-elasticsearch-data-8` search on prod-use1	Delete the unattached volume (1200 GB, gp3).	High	$96
4	Delete `prometheus-db-prometheus-2` observability on prod-euw1	Delete the unattached volume (750 GB, gp3).	High	$66
5	Delete `data-kafka-3` platform on staging-euw1	Delete the unattached volume (500 GB, gp3).	High	$44
6	Delete `data-feature-store-2` data on prod-use1	Delete the unattached volume (500 GB, gp3).	Medium	$40
7	Delete `legacy-tracking-lb` orders on prod-euw1	Remove the load balancer; nothing routes traffic to it.	High	$18
8	Delete `pgdata-orders-migration-0` orders on staging-euw1	Delete the unattached volume (200 GB, gp3).	Low	$18

08 Node pools

17 node pools and 71 nodes

37% of CPU and 47% of memory was in use when the report was generated.

Node pools

In use when the report was generated

Pool	Instance type	Nodes	CPU in use	Memory in use	Spot	A month
general prod-euw1	m6i.4xlarge	16	39%	45%	0%	$9,998
compute prod-euw1	c6i.8xlarge	9	44%	40%	0%	$9,587
compute prod-use1	c6i.8xlarge	6	41%	36%	0%	$5,957
general prod-use1	m6i.4xlarge	10	37%	42%	0%	$5,606
stateful-1a prod-euw1	r6i.4xlarge	3	37%	69%	0%	$2,470
stateful-1b prod-euw1	r6i.4xlarge	3	34%	66%	0%	$2,470
stateful-1c prod-euw1	r6i.4xlarge	2	39%	71%	0%	$1,647
stateful-1a prod-use1	r6i.4xlarge	2	35%	72%	0%	$1,472
stateful-1b prod-use1	r6i.4xlarge	2	31%	68%	0%	$1,472
general staging-euw1	m6i.2xlarge	4	34%	45%	0%	$1,250
spot-batch prod-euw1	m6i.4xlarge	3	55%	52%	100%	$857
stateful-1c prod-use1	r6i.4xlarge	1	38%	74%	0%	$736
spot-batch staging-euw1	m6i.2xlarge	3	31%	42%	100%	$522
system prod-euw1	m7g.xlarge	2	17%	31%	0%	$266
system staging-euw1	m7g.xlarge	2	19%	30%	0%	$266
spot-batch prod-use1	m6i.4xlarge	1	58%	49%	100%	$256
system prod-use1	m7g.xlarge	2	16%	29%	0%	$238

09 How to apply

How to apply each change

Steps for each kind of recommendation in this report, with the risks recorded against them. Nothing changes in your clusters until someone applies it.

Rightsizing

22 recommendations, up to $4,737 a month

1. Review the proposed CPU and memory requests against the workload's busiest hours in Kubeadapt.
2. Change the requests in the workload's manifest or Helm values; keep limits at or above the new requests.
3. Roll out during normal traffic and watch restarts, CPU throttling and latency for a few days.
4. Apply the changes with high evidence first; review medium and low ones with the team that owns the workload.

Recorded risks. A large cut: review it before applying.

Spot capacity

Six recommendations, up to $2,989 a month

1. Check the workload tolerates interruption: more than one replica, a disruption budget, and a clean shutdown within two minutes.
2. Add spot capacity to a node pool and let the workload schedule there with a node affinity or toleration.
3. Keep on-demand capacity as a fallback so the workload still schedules when spot capacity is short.

Recorded risks. Spot nodes can be reclaimed at short notice.

Unused resources

Eight recommendations, up to $520 a month

1. Check that no workload, backup or DNS record still refers to the volume or load balancer.
2. Snapshot any volume you may need later, then delete the resource.

Recorded risks. It holds recent data; take a snapshot before deleting it.

Node pools

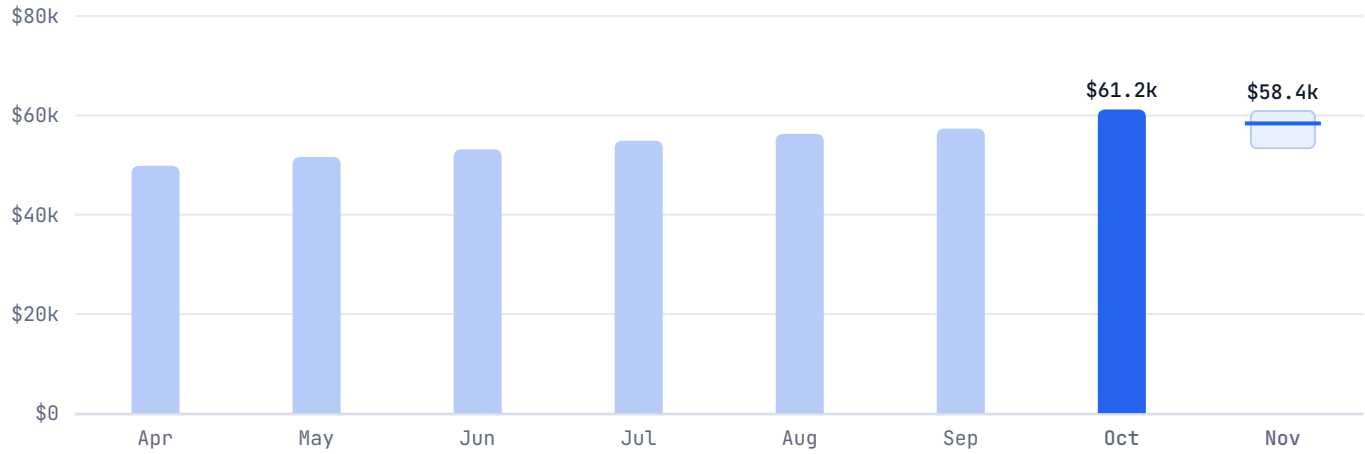
Three recommendations, up to $3,676 a month

1. Add the new nodes first, then cordon and drain the old ones one node at a time.
2. Keep PodDisruptionBudgets in place so each workload keeps enough replicas running while its pods move.
3. Check that the new instance type allows as many pods and IP addresses per node as the pods it will run.
4. Keep the nodes spread across zones, and keep one node of headroom for a failure or a rollout.

10 Outlook, network and carbon

November expected 4.6% lower

About $58,400, based on the last seven days of October. Between $53,400 and $60,900 if every day were like the lowest or the highest recent day.



Monthly spend. The pale box runs from the lowest to the highest recent day carried over the month; the line inside it is the expected amount. The rate counts compute and storage.

Expected for November 2026
$58,400

Lowest to highest recent day
$53,400–$60,900

Rate on 2 Nov 2026, 06:12 UTC
$50,774 a month

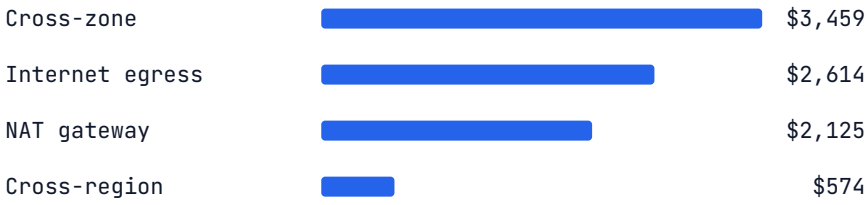
How the outlook is made
The average daily spend of the last 7 days of October 2026, over the 30 days of November 2026. The range assumes every day costs as little as the cheapest of those 7 days, or as much as the costliest.

Network

By billing class

Network spend
$8,771

Change
up 5.8% on September



Carbon

Estimated

1,353 kg CO_2e

Estimated from energy use and the grid intensity of each cluster's region, 7.1% more than September.

11 About these numbers

How these numbers were made

Period	1–31 October 2026, in UTC. Compared with September 2026, the previous calendar month.
What is included	Every cluster connected to Kubeadapt in Northwind Logistics: prod-euw1, prod-use1 and staging-euw1.
How costs are measured	Costs come from the same measurements and prices as the Kubeadapt app: what each workload requested and used, priced with the rates the app uses for the organization. The numbers were frozen when the report was generated; opening the report again later does not change them.
Savings	Savings are the recommendations open on 2 November 2026, when the report was generated, not a result of the period. Each rests on usage measured in the days before it was last checked, seven days unless your rightsizing settings say otherwise, and stays listed for up to seven days after that check. Amounts are estimates for a 730-hour month at current prices. Applying one recommendation can change or remove another, so the total is an upper bound, not an amount to plan on.
Currency and rounding	All amounts are in US dollars (USD), shown to the dollar, and to the cent below $10. Totals are added before rounding, so a column can differ from the sum of its rounded rows by a dollar or two.
Coverage	Node pool figures are as they are at the time of this report, not averages over the period.

Terms

Unused requests	Spend on CPU and memory that workloads requested but did not use.
Rate on 2 Nov 2026, 06:12 UTC	Hourly cost of what was running when the report was made, scaled to a 730-hour month. Compute and storage only.
Evidence	How much stands behind a recommendation: the hours of usage observed, or how safe a removal is. Not how exact its dollar amount is.
Lowest to highest recent day	The outlook if every day were like the lowest, or the highest, of the days it reads. Not a statistical interval.
CO_2e	Carbon dioxide equivalent, estimated from energy use and grid intensity.
Not attributed	Spend in the scope that no workload owns.