stern Multi-pod Kubernetes logs

CONCEPTS

stern tails many pods and containers at once, one colour per pod, and picks up new or restarted pods automatically. The query is a regular expression on the pod name, not a glob.

Pod query regex or kind/name
↓ -n -l --node
Pods namespaces, labels
↓ -c -E --container-state
Containers init, ephemeral
↓ -i -e --since
Log lines merged stream
↓ -o --template
Output colour, JSON, custom

Default is all pods you can see in the current namespace and context; --since defaults to 48h and --tail to all lines, so busy pods print a lot at start.

SELECTING PODS

stern *<query>*
Tail pods whose name matches regex

stern .
Tail every pod in the namespace

stern *<kind>*/*<name>*
Exact resource, e.g. deployment/nginx

-n *<ns>* / **--namespace** *<ns>*
Namespace, repeat or comma-separate

-A / --all-namespaces
Every namespace

-l *<selector>* / **--selector**
Filter by label selector

--field-selector *<expr>*
Filter by field, e.g. spec.nodeName=<node>

--node *<name>*
Pods on one node

--exclude-pod *<regex>*
Skip pods matching regex

--condition *<name[=value]>*
Pods by condition, e.g. ready=false

SELECTING PODS (cont.)

-p / --prompt
Pick app.kubernetes.io/instance interactively

CONTAINERS

-c *<regex>* / **--container**
Only containers matching regex

-E *<regex>* / **--exclude-container**
Skip containers, e.g. istio-proxy

--container-state *<state>*
running, waiting, terminated or all

--init-containers=false
Leave out init containers

--ephemeral-containers=false
Leave out ephemeral containers

TIME AND VOLUME

--tail *<n>*
Last n lines per container

-s *<dur>* / **--since** *<dur>*
Logs newer than e.g. 15m or 2h

--no-follow
Print and exit, do not stream

-t / --timestamps
Prefix timestamps

--timestamps=short
Shorter timestamp format

FILTERING LINES

-i *<regex>* / **--include**
Show only matching lines

-e *<regex>* / **--exclude**
Hide matching lines

-H *<regex>* / **--highlight**
Highlight matches, keep all lines

--only-log-lines
Drop the pod/container prefix noise

OUTPUT AND COLOUR

-o raw
Message text only, no prefix

-o json
One JSON object per line

OUTPUT AND COLOUR (cont.)

--template '*<go-template>*'
Custom line format

-T *<file>* / **--template-file**
Template read from a file

--color auto|always|never
Force or disable colour

-d / --diff-container
Separate colour per container

CLUSTER AND CONFIG

--context *<name>*
Use another kubeconfig context

--kubeconfig *<path>*
Use another kubeconfig file

--config *<path>*
Config file, default ~/.config/stern/config.yaml

--completion bash|zsh|fish
Print shell completion code

-v / --version
Print version

kubectl krew install stern
Install as kubectl plugin

Put defaults such as tail: 10 or timestamps: short into the config file as flag-name: value pairs.

RECIPES

Errors across a deployment, recent

```
stern deployment/api -n prod --since 15m -i 'error|panic' -e healthcheck
```

Pretty JSON logs through jq

```
stern api -n prod -o raw --tail 0 | jq -R 'fromjson? | select(.level=="error")'
```

Debug a rollout, new lines only

```
kubectl rollout restart deploy/api -n prod
stern api -n prod --tail 0 -t=short -E istio-proxy
```

Custom line with namespace and pod

```
stern . -A -l app=web --template '{{.Namespace}}/{{.PodName}} {{.Message}}{{"\n"}}'
```