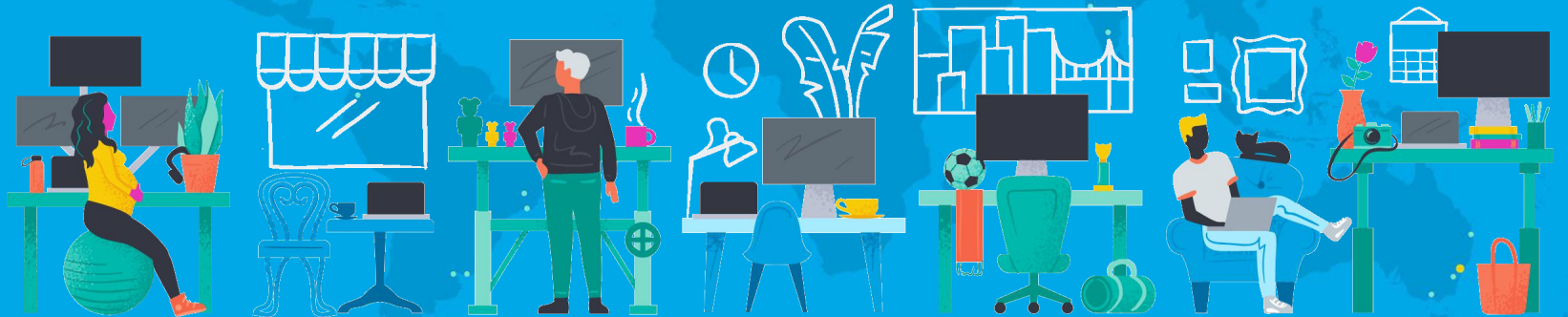




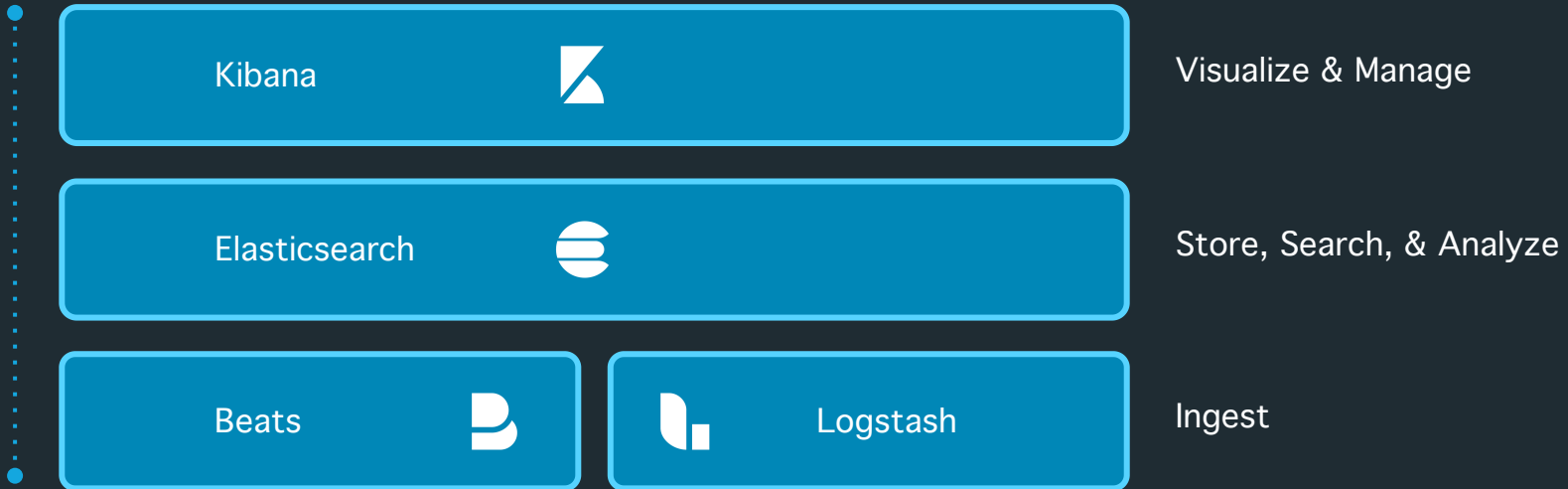
Elasticsearch 数据迁移 与 ESM 工具介绍

Medcl

Elastic is a Search Company!




Elastic Stack





Elastic Stack



Application Search	Site Search	Enterprise Search	Logging	Future
Metrics	APM	Business Analytics	Security Analytics	


Solutions


Kibana 

Visualize & Manage

Elasticsearch 

Store, Search, & Analyze

Beats 


 Logstash

Ingest



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SaaS		Self Managed	
 Elastic Cloud		 Elastic Cloud Enterprise	 Standalone

Deployment

历经千辛万苦，
ELASTICSEARCH 上线了！



升职加薪，当上总
经理，赢取白富
美，走上人生巅峰。



哦豁，
新版本发
布了。

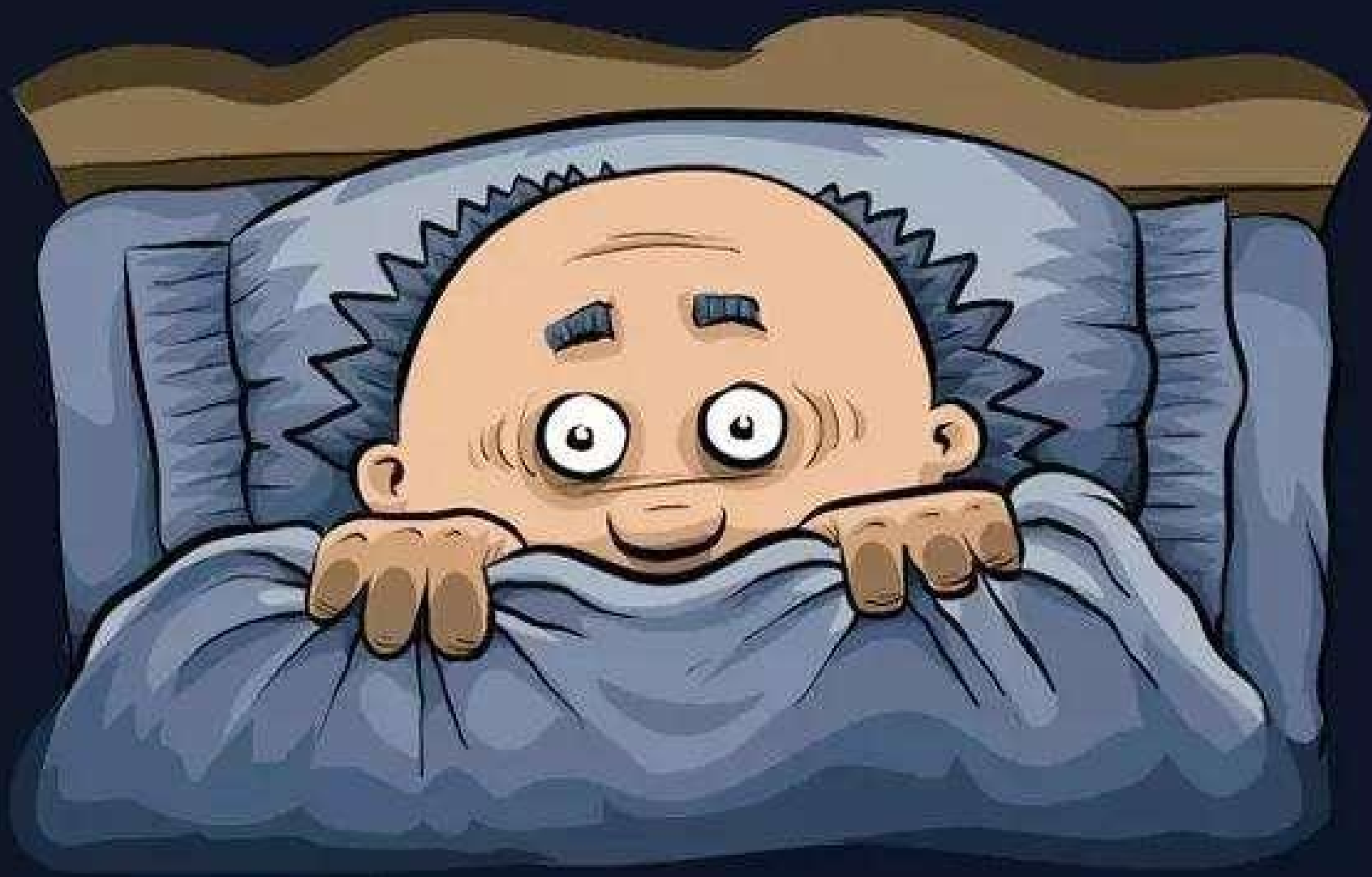
耶耶耶

新版本
好!

哇塞，这
个好!

升升升

新版本
赞!



好了你不要再说了



没特殊需求能不能不升级 ...

运维哥哥

集群升级的几个套路

- 原地升级程序新版本
- 滚动升级程序新版本
- 在线迁移数据新版本

升级需要考虑的事项

- 备份
- 还原
- 回滚
- 切换
- 兼容
- 停机时间
- 一致性



升级有风险，
运维需谨慎！

法海

Elastic 商业服务

咨询、产品、培训、售后服务

- 提供完整的商业解决方案
- 提供行业应用的最佳实践
- 完善的产品售后支持服务
- 提供全方位产品培训
- 专家上门的顾问咨询服务
- 长期的战略规划与顾问服务
- 7x24小时的及时响应
- 主动预警与应急补丁

<https://www.elastic.co/cn/contact>





那还是聊聊数据迁移吧

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迁移工具一览

- Reindx
- Logstash
- Elasticsearch-Hadoop
- Snapshot & Restore
- Elastic-dump
- elasticsearch-exporter
- ...

- 分布式、离线的方式咱们暂不聊



ESM

- <https://github.com/medcl/esm>

Features

- No dependency
- Cross version migration supported
- Overwrite index name
- Copy index settings and mapping
- Support http basic auth
- Support dump index to local file
- Support loading index from local file
- Support http proxy
- Support sliced scroll (elasticsearch 5.0 +)
- Support run in background
- Generate testing data by randomize the source document id
- Support rename filed name
- Support unify document type name
- Support specify which _source fields to return from source
- Support specify query string query to filter the data source

3*c5d.4xlarge, 16C, 32GB, 10Gbps

3 个 Elasticsearch 节点, v7.9.0

1 千万 kibana_sample_data_logs 样本数据导入导出只需 55s

```
[12-19 06:29:40] [INF] [main.go:537,main] data migration finished.
root@ip-172-31-13-181:/tmp# ./esm -s https://localhost:8000 -d https://localhost:8000 -x logs1kw -y logs122 -m elastic:medcl123 -n elastic:medcl123 -w 40
--sliced_scroll_size=60 -b 5 --buffer_count=2000000 --regenerate_id
Scroll 1367104 / 1 [=====] 136710400.00% 2562047h47m16s
logs1kw
[12-19 06:31:20] [INF] [main.go:506,main] start data migration..
Scroll 10064570 / 10064570 [=====] 100.00% 55s
Bulk 10062602 / 10064570 [=====] 99.98% 55s
[12-19 06:32:15] [INF] [main.go:537,main] data migration finished.
```

Basic Usage

- Copy index `index_name` from `192.168.1.x` to `192.168.1.y:9200`
`./bin/esm -s http://192.168.1.x:9200 -d http://192.168.1.y:9200 -x index_name -w=5 -b=10 -c 10000`
- copy `index_src_index` from `192.168.1.x` to `192.168.1.y:9200` and save with `dest_index`
`./bin/esm -s http://localhost:9200 -d http://localhost:9200 -x src_index -y dest_index -w=5 -b=10`
- support Basic-Auth
`./bin/esm -s http://localhost:9200 -x "src_index" -y "dest_index" -d http://localhost:9201 -n admin:111111`

Cross Version Migration

```
./esm -s http://localhost:9201 -x "source_index"  
-y "target_index" -d https://localhost:9200 --  
rename="_type:type,age:myage" -u "_doc"
```

Offline Migration

- `./esm -s https://192.168.3.98:9200 -m elastic:password -o json.out -x kibana_sample_data_ecommerce -q "order_date:[2020-02-01T21:59:02+00:00 TO 2020-03-01T21:59:02+00:00]"`
- `./bin/esm -i json.out -d http://localhost:9201 -y target-index1`

Incremental Migration

- `./esm -s https://192.168.3.98:9200 -m elastic:password -o json.out -x kibana_sample_data_ecommerce -q "order_date:[2020-02-01T21:59:02+00:00 TO 2020-03-01T21:59:02+00:00]"`

Load Generation

- `./bin/esm -i input.json -d http://localhost:9201 -y target-index1 --regenerate_id --repeat_times=1000`



可以开始 *Demo* 了么？

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Questions?





Thank You

- Web : www.elastic.co
- Products : <https://www.elastic.co/products>
- Forums : <https://discuss.elastic.co/>
- 中文社区: <https://elasticsearch.cn/>