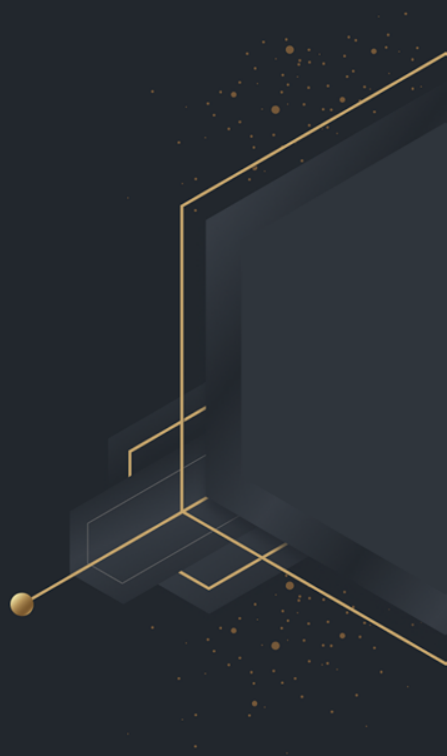




Azure DevOps e Docker Registry



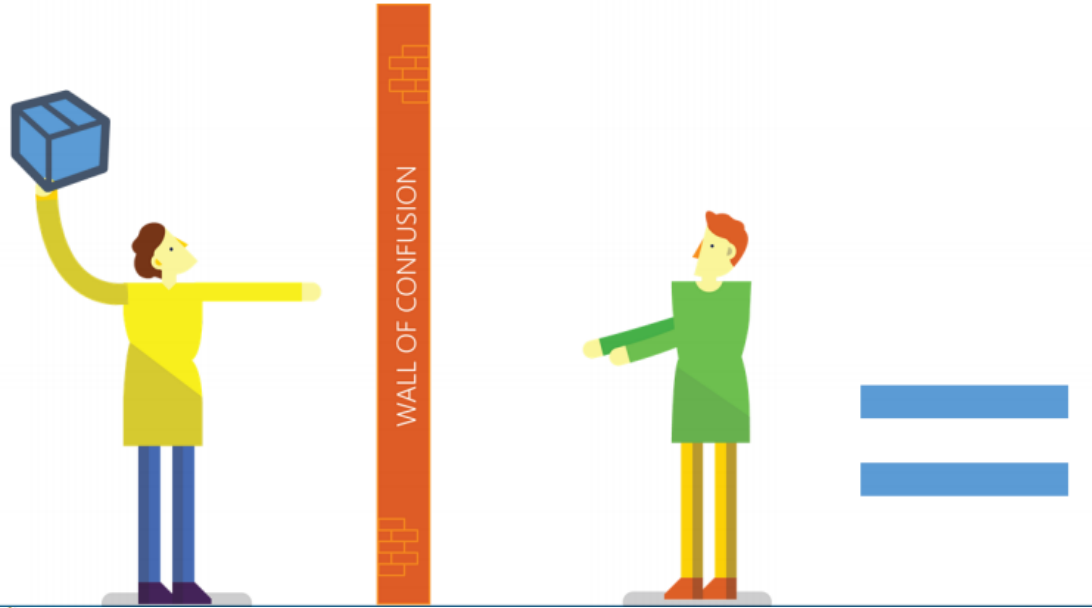


Como era antes do DevOps?



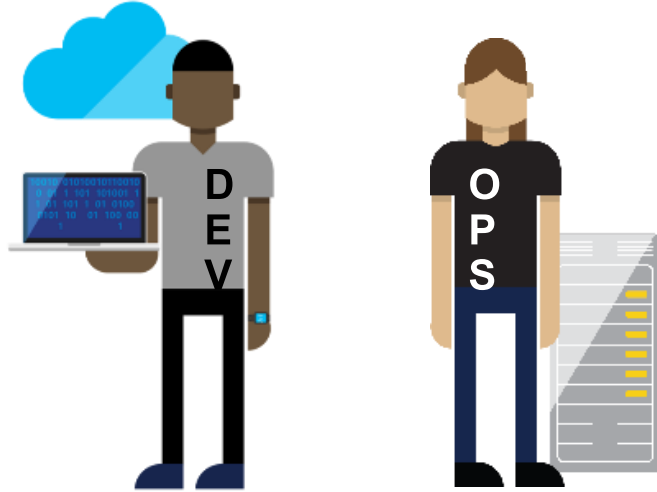


DevOps





DevOps



...fim!

1 | Pessoa





DevOps





Azure DevOps

- Automação do build e release das aplicações
- Controle de versão
- Desenvolvimento ágil
- Gerenciamento de configuração
- Pequenas entregas de forma rápida
- Colaboração entre equipes





Azure DevOps

P

+

Project Settings

Projotos

General

Overview

Teams

Permissions

Notifications

Service hooks

Dashboards

Boards

Project configuration

Team configuration

GitHub connections

Pipelines

Agent pools

Parallel jobs

Settings

Test management

Release retention

Service connections

XAML build services

Repos

Repositories

Artifacts

Storage

Project details

Name

Projotos

Description

Process

Basic

Visibility

Private

This determines who can view this project. [Learn more about project visibility.](#)

Save

Project administrators

Henrique Mauri

henrique@dotcode.com.br

Add administrator

Azure DevOps services

Boards

Flexible agile planning with boards and cross-product issues

On



Azure DevOps

Tasks Variables Triggers Options Retention History | Save & queue ▾ Discard Summary Queue ...

Pipeline

Build pipeline


Get sources

service-backoffice develop


Agent job 1

Run on agent

 Restore
.NET Core

 Build
.NET Core







 Publish
.NET Core

 Publish Artifact
Publish build artifacts

Add tasks | Refresh

Search

All Build Utility Test Package Deploy Tool Marketplace

-  **Azure Key Vault**
Download Azure Key Vault secrets
-  **Azure Monitor alerts (Deprecated)**
Configure alerts on available metrics for an Azure resource (Deprecated)
-  **Azure PowerShell**
Run a PowerShell script within an Azure environment
-  **Azure resource group deployment**
Deploy an Azure Resource Manager (ARM) template to a resource group and manage virtual machines
-  **Azure SQL Database deployment**
Deploy an Azure SQL Database using DACPAC or run scripts using SQLCMD
-  **Azure VM scale set deployment**



Azure DevOps

Pipeline **Tasks** Variables Retention Options History

DEV

Deployment process

Run on agent

Run on agent



Deploy Azure App Service to Slot

Azure App Service deploy



PowerShell Script

Disabled: PowerShell

Add tasks

Refresh

Sea

All Build Utility Test Package Deploy Tool Marketplace



.NET Core

Build, test, package, or publish a dotnet application, or run a custom dotnet command



Android signing

Sign and align Android APK files



Ant

Build with Apache Ant



App Center distribute

Distribute app builds to testers and users via Visual Studio App Center



App Center test

Test app packages with Visual Studio App Center



Archive files

Compress files into .7z, .tar.gz, or .zip

LUIS_DEV




Azure DevOps

Extensions for Azure DevOps

Search Azure DevOps extensions




Featured




Retrospectives

Microsoft DevLabs 11.3K
★★★★★ FREE




Timetracker

7pace 11.2K
★★★★★ FREE TRIAL




Azure Cost Insights

Kees Schollaart 2.2K
★★★★★ FREE




Code Quality NDepend

ndepend 1.2K
★★★★★ FREE TRIAL



Bravo Notes

Agile Extensions 419
★★★★★ FREE TRIAL




Azure Boards Slack app

Microsoft 26
★★★★★ FREE


Most Popular

[See more](#)




Test & Feedback

Microsoft 131K
★★★★★ FREE




Code Search

Microsoft 126K
★★★★★ FREE




Azure DevOps Open in

Microsoft DevLabs 79.9K
★★★★★ FREE




Analytics

Microsoft 34.2K
★★★★★ FREE TRIAL



SonarQube

SonarSource 34K
★★★★★ FREE

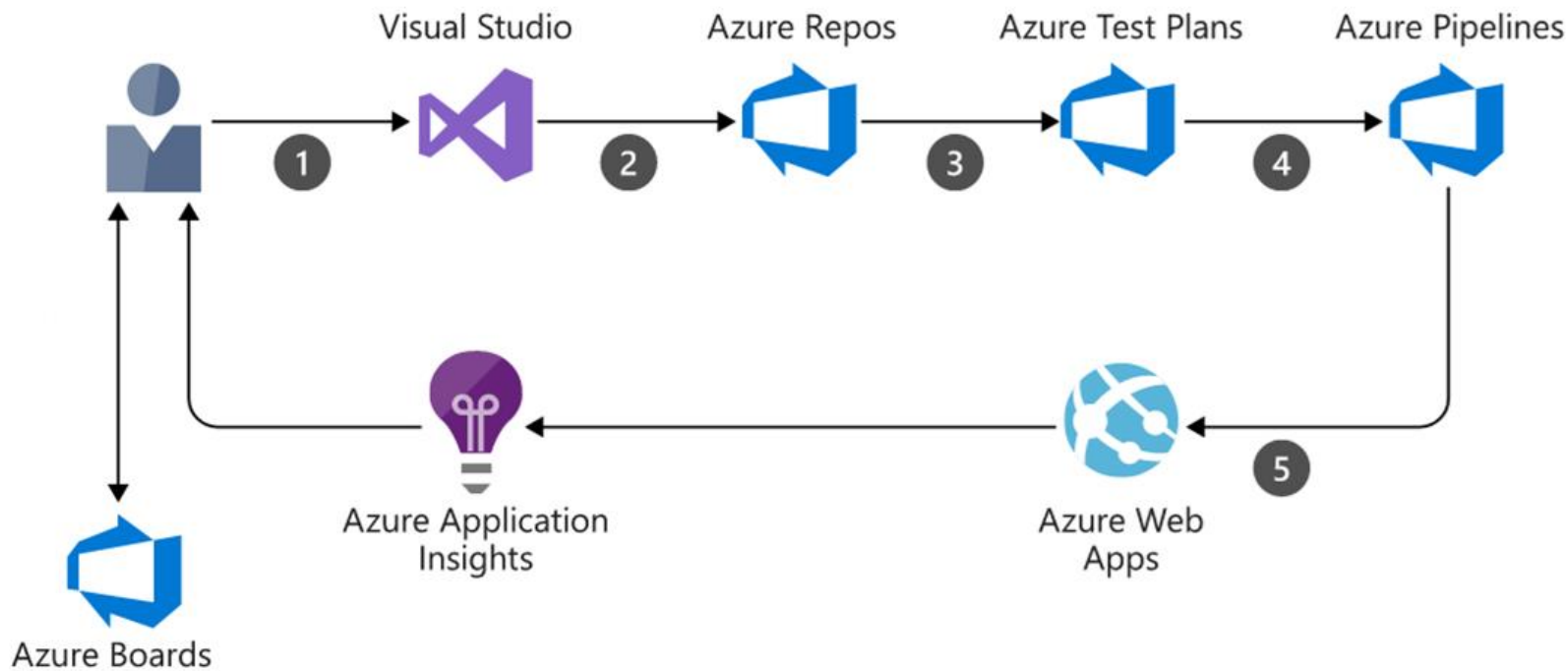


Slack Integration

Microsoft 31.5K
★★★★★ FREE



Azure DevOps





Visual Studio Partners and Extensions

65

Visual Studio Code
Extensions

5,910

Visual Studio
Gallery Extensions

90

Visual Studio
Sim-Ship Partners

48

VS Team Services
Extensions





E porque utilizar containers?





Containers

- Mesmas expectativas de ambiente
- Substituição das limitações da plataforma
- Melhor desempenho (implante apenas o que você precisa)
- Entrega mais rápida aos clientes



Hospedagem tradicional de aplicações

Physical Server (Host OS)

Hypervisor

VM 1

Windows OS

App 1

VM 1

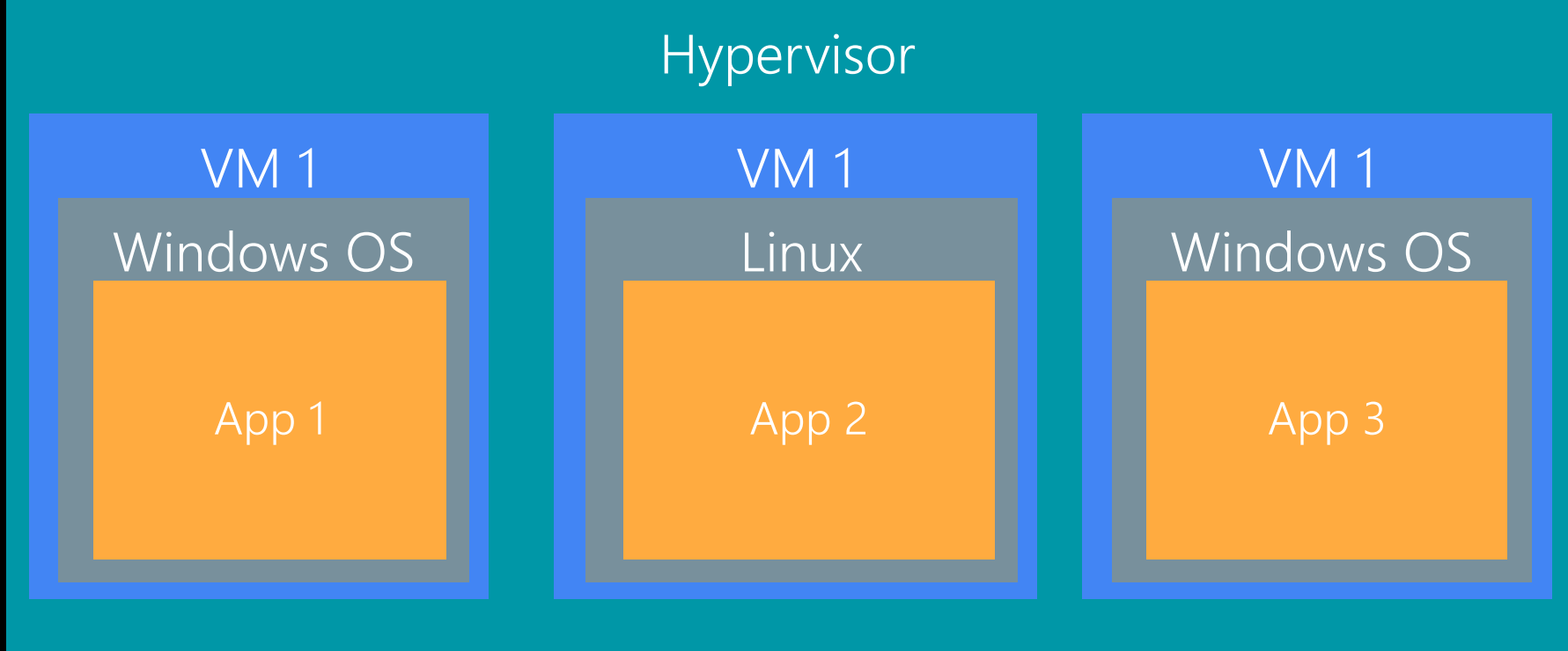
Linux

App 2

VM 1

Windows OS

App 3





Hospedagem em Containers (Docker)

Physical Server (Host OS)

Hypervisor

VM 1

Windows OS

Docker Engine

App 1

App 2

App 3

App 4

VM 1

Linux

Docker Engine

App 5

App 6

App 7

App 8

VM 1

Windows OS

Docker Engine

App 9

App 10

App 11

App 12



Containers no Azure



Azure App Service



Azure Service Fabric



Azure Container Registry



Azure Container Service

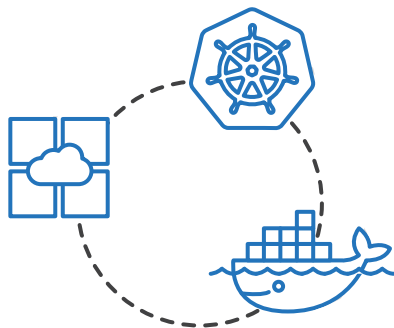


E o que é Azure Container Registry?

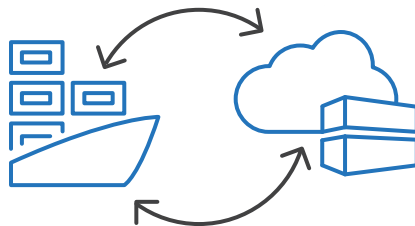




Azure Container Registry



Gerencie imagens para
todos os tipos de
containers



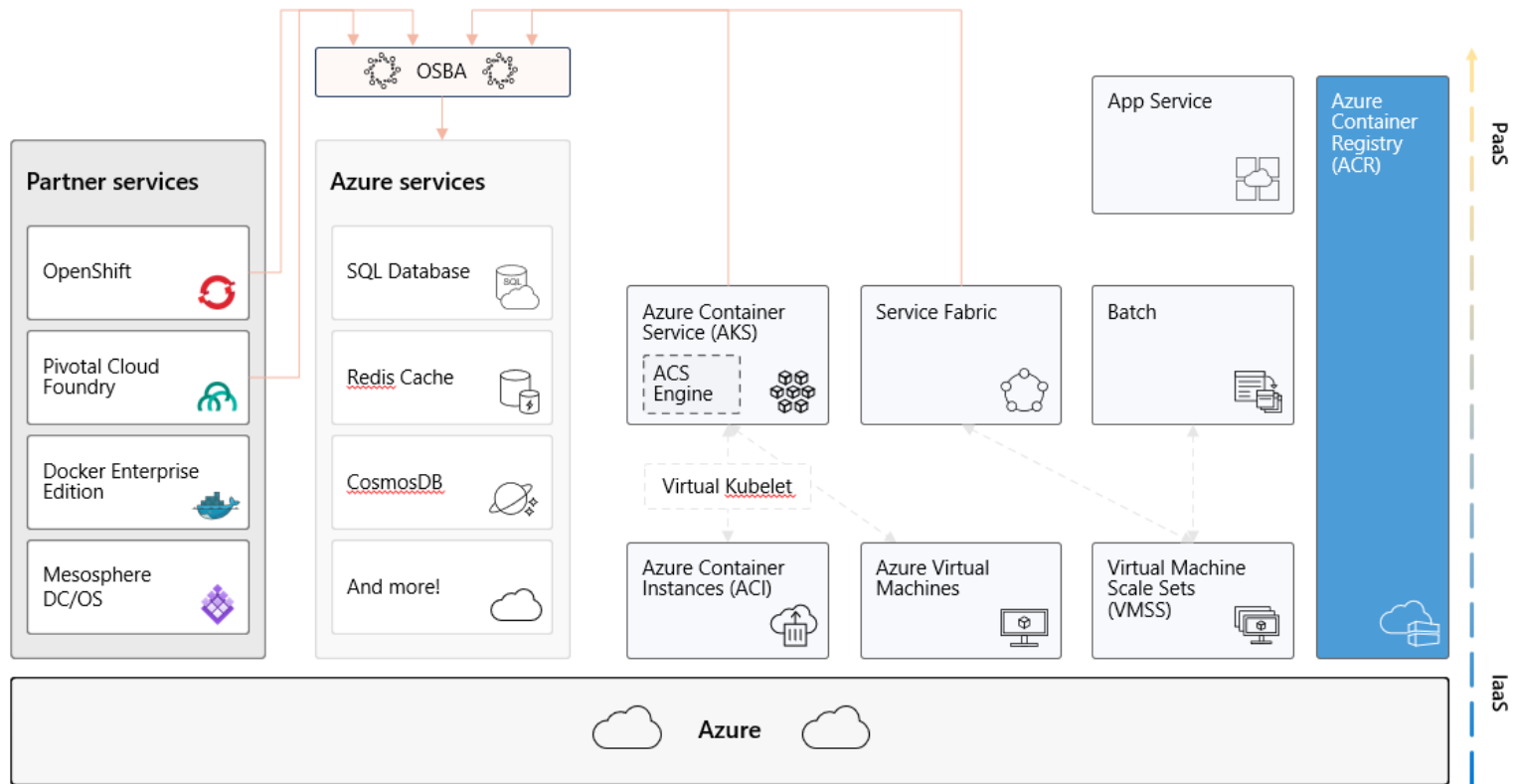
Use ferramentas
familiares do Docker
CLI de código aberto



Replicação geográfica
dos containers do Azure

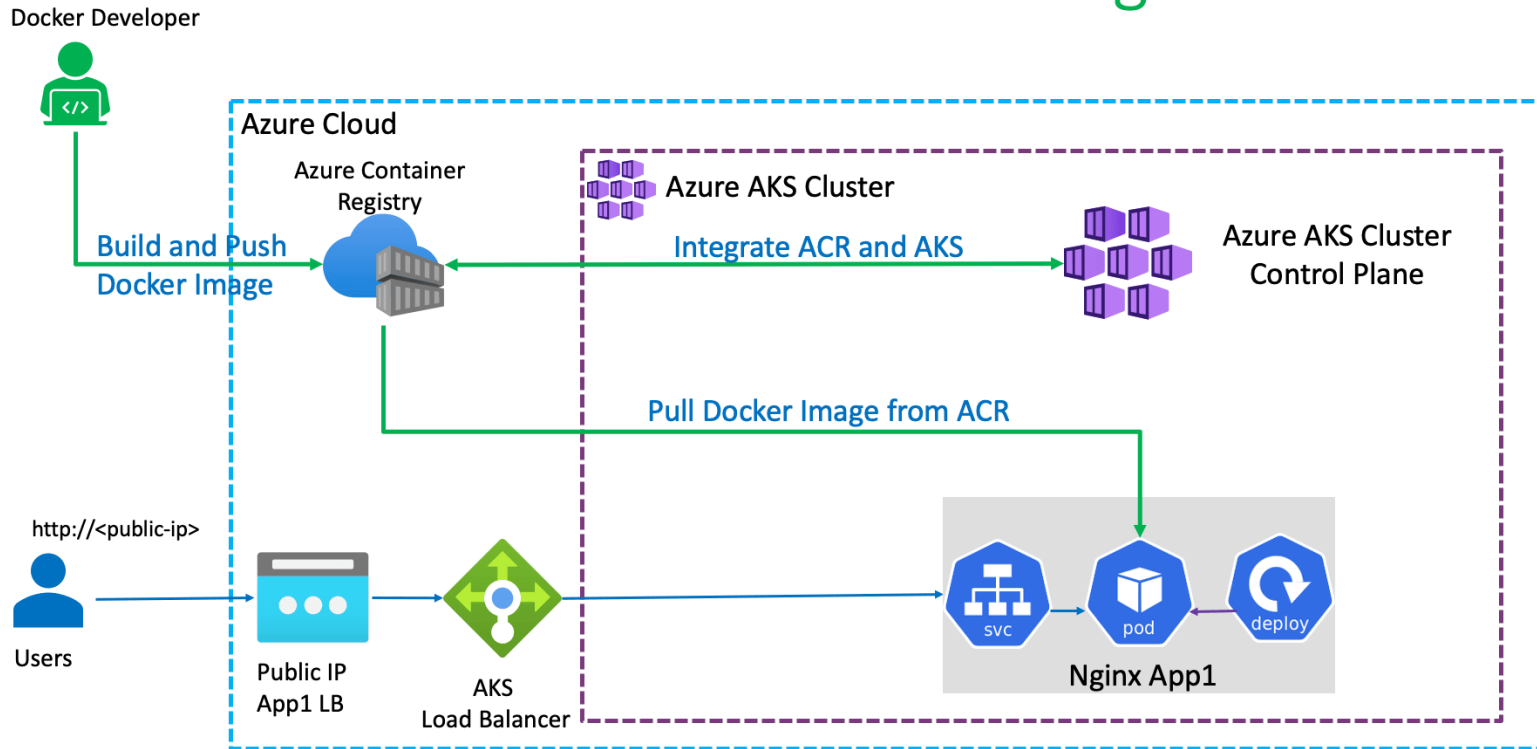


Azure Container Registry

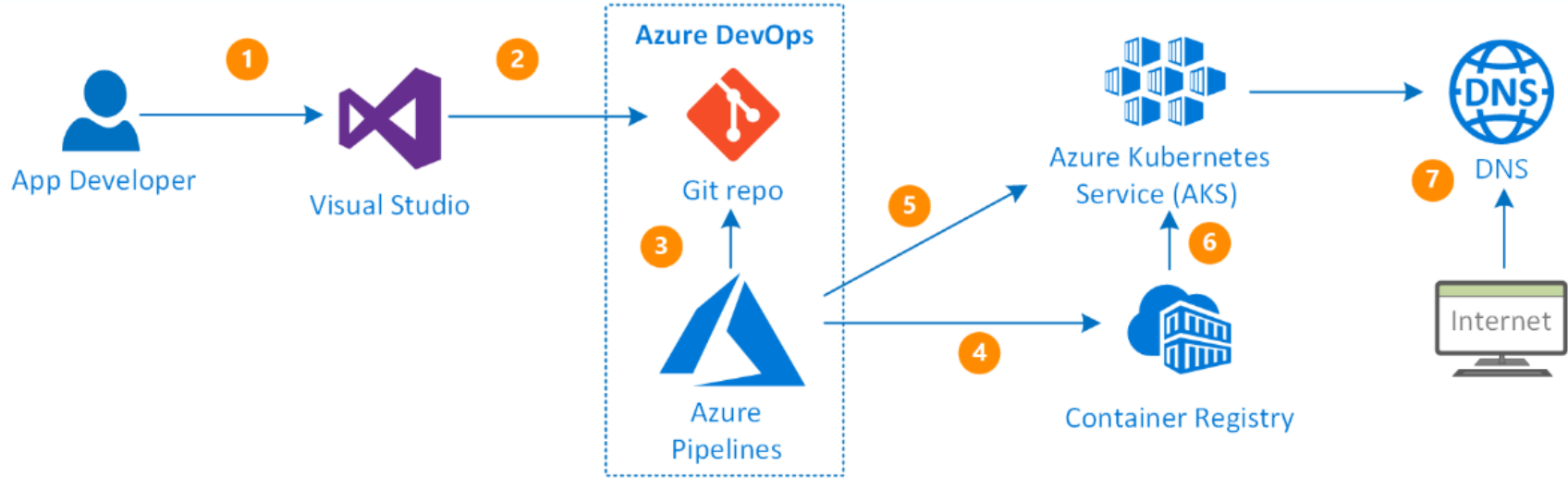


Azure Container Registry

Azure ACR and AKS - Integration



Azure Container Registry





Azure Container Registry

```
$ az acr create --resource-group myResourceGroup --name myContainerRegistry --sku Basic
```

Comandos

```
$ az acr login -n myacr
```

```
$ docker pull myacr.azurecr.io/hello-world
```

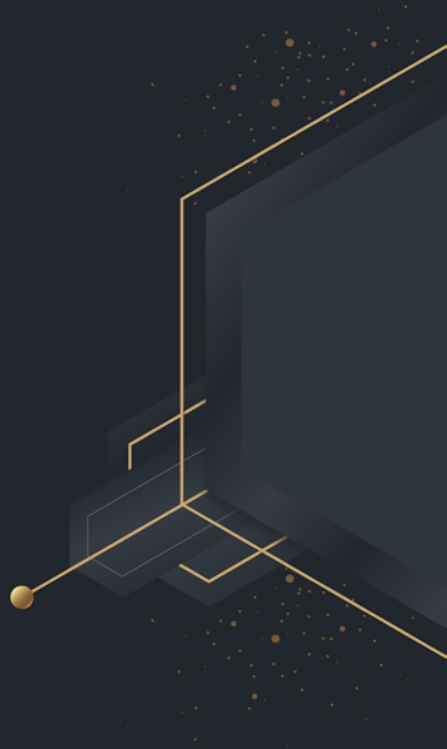
```
$ docker push myacr.azurecr.io/hello-world
```

```
$ docker rmi myacr.azurecr.io/hello-world
```



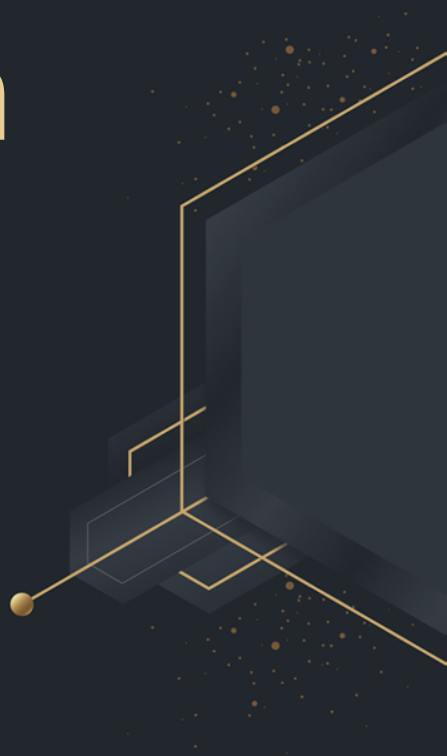


Demo





Observabilidade com Elastic APM





E o que significa “APM”?

- Monitoramento de desempenho de aplicações
- Monitoramento e logs de erros, alertas e informações
- Análise da infraestrutura
- Análise e auditoria das transações comerciais
- Experiência do usuário final





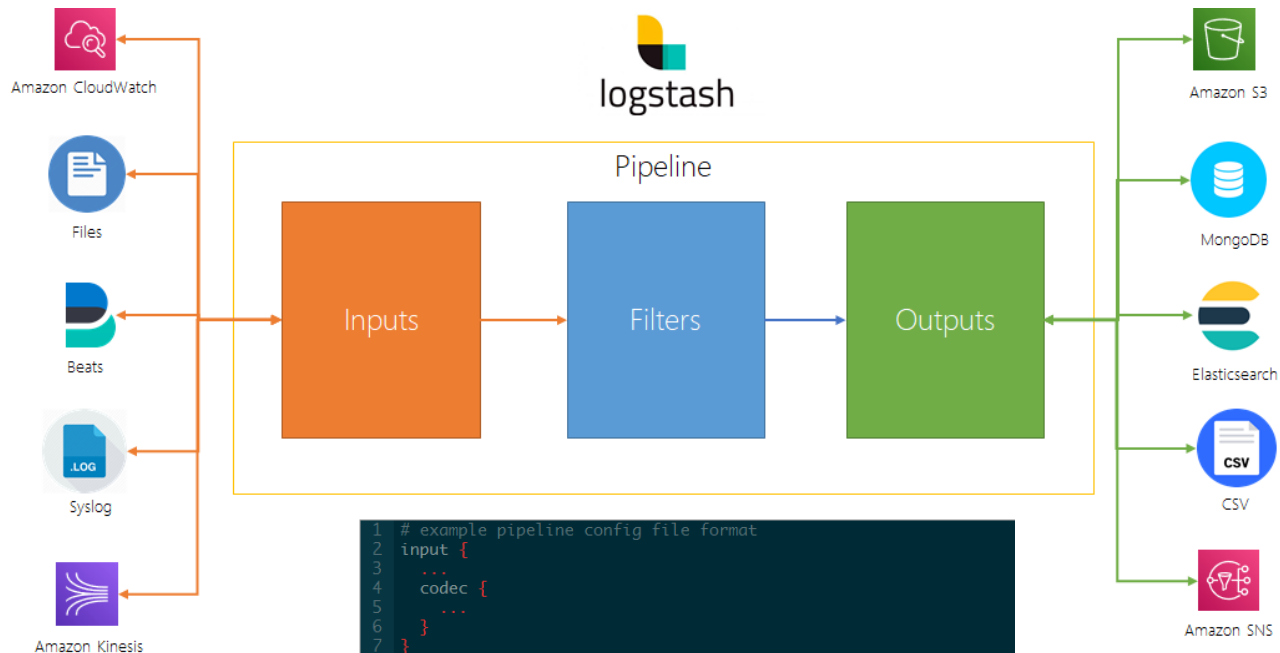
Elastic Stack

- **Elasticsearch:** Mecanismo de pesquisa RESTful distribuído responsável pelo armazenamento de documentos (JSON) com especialidade em busca Full-text.
- **Logstash:** Componente de processamento de dados do Elastic Stack que recebe, transforma e envia dados para o Elasticsearch.





Elastic Stack



```
1 # example pipeline config file format
2 input {
3   ...
4   codec {
5     ...
6   }
7 }
8 filter {
9   ...
10 }
11 output {
12   ...
13   codec {
14     ...
15   }
16 }
```



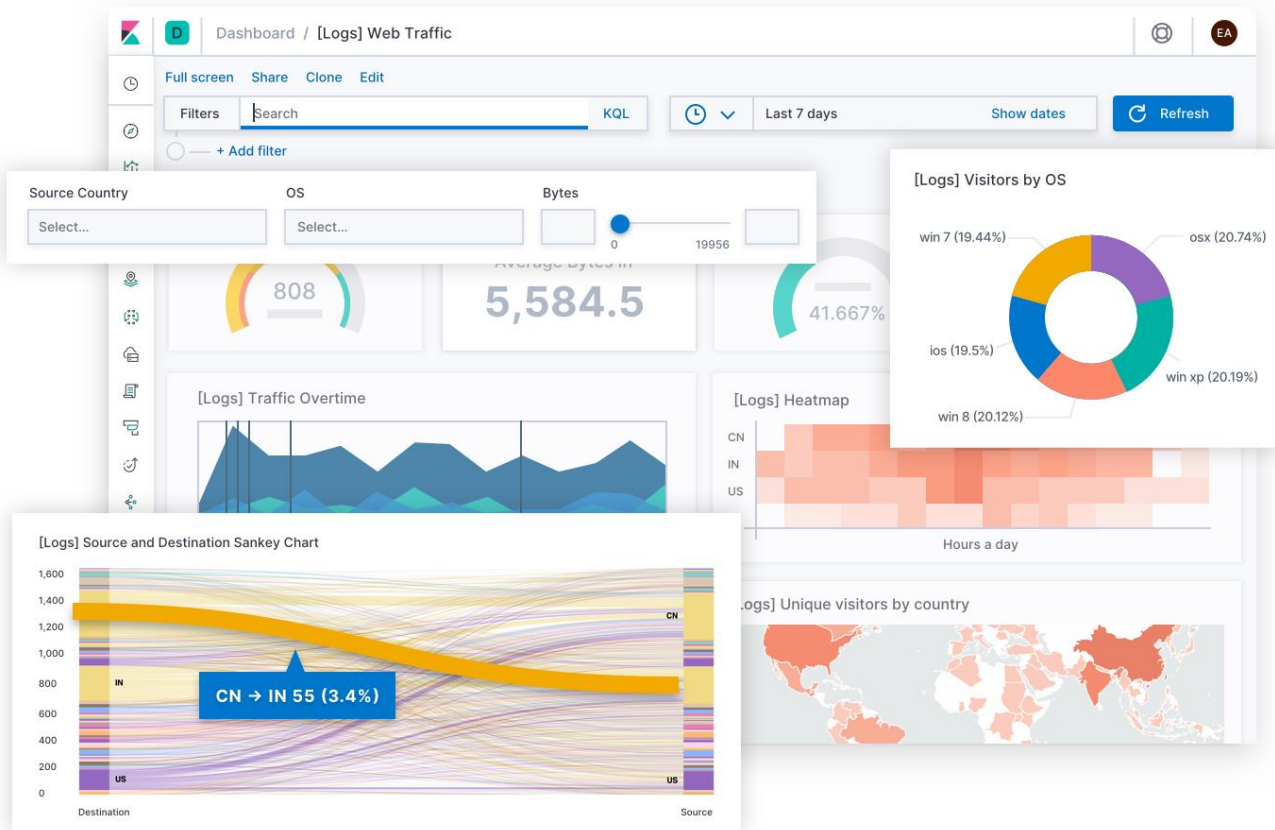
Elastic Stack

- **Elasticsearch:** Mecanismo de pesquisa RESTful distribuído responsável pelo armazenamento de documentos (JSON) com especialidade em busca Full-text.
- **Logstash:** Componente de processamento de dados do Elastic Stack que recebe, transforma e envia dados para o Elasticsearch.
- **Kibana:** Interface web para pesquisa, criação e visualização de gráficos/dashboards (Canvas) e configuração de alertas.





Elastic Stack





Elastic Stack

- **Elasticsearch:** Mecanismo de pesquisa RESTful distribuído responsável pelo armazenamento de documentos (JSON) com especialidade em busca Full-text.
- **Logstash:** Componente de processamento de dados do Elastic Stack que recebe, transforma e envia dados para o Elasticsearch.
- **Kibana:** Interface web para pesquisa, criação e visualização de gráficos/dashboards (Canvas) e configuração de alertas.
- **Beats:** Plugs de dados leves e de propósito único que podem enviar dados de centenas ou milhares de máquinas para o Logstash ou para o Elasticsearch.





Elastic Stack



Filebeat

Log Files



Metricbeat

Metrics



Packetbeat

Network Data



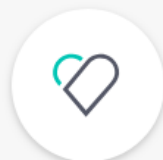
Winlogbeat

Windows Event Logs



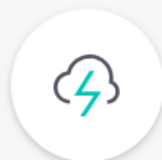
Auditbeat

Audit Data



Heartbeat

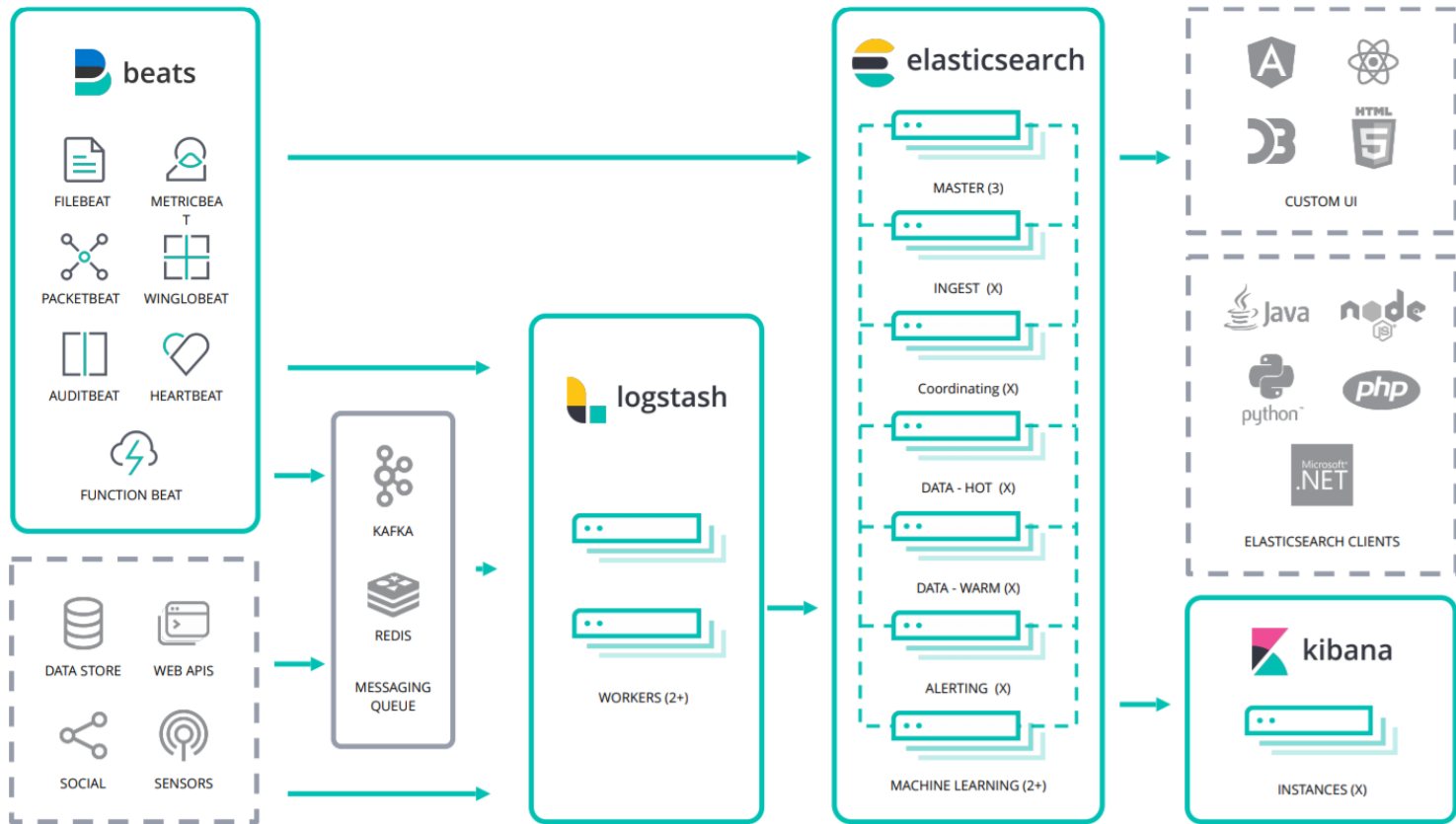
Uptime Monitoring



Functionbeat

Serverless Shipper

Elastic Stack





Elasticsearch

- Banco de dados não relacional e orientado a documentos
- Armazena / busca / analisa grandes volumes quase que em tempo real
- De novo: É extremamente rápido
- Escalável horizontalmente
- API Rest



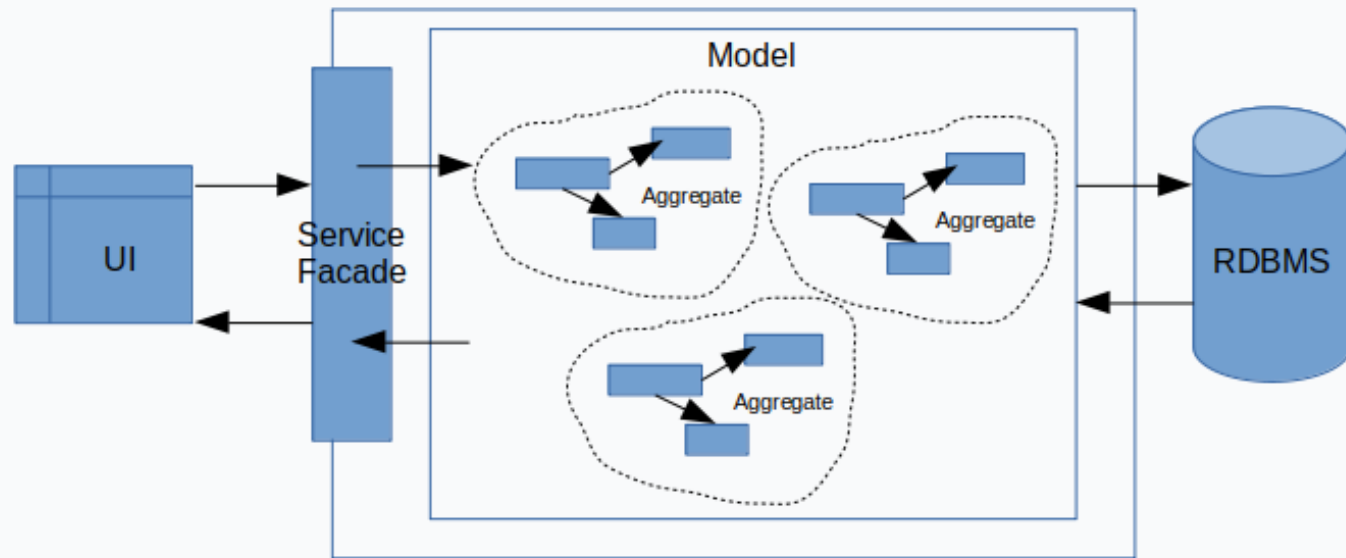


Quando utilizar o Elasticsearch?

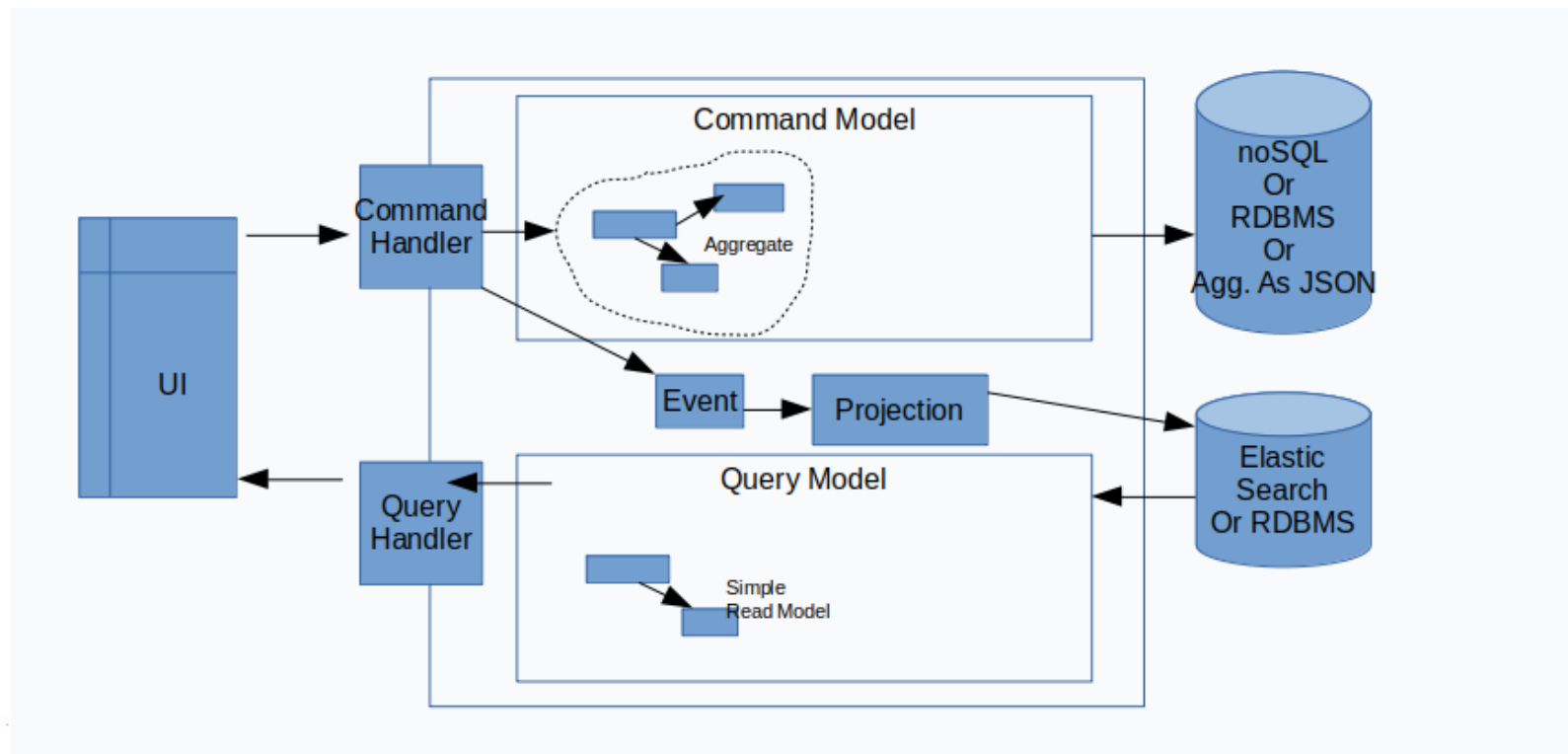
- Aumentar a velocidade de resposta em buscas textuais
- Relevância de resultados
- Busca com geolocalização
- Centralização dos logs
- Isolar o banco transacional
- Trabalhar com CQRS



Quando utilizar o Elasticsearch?



Quando utilizar o Elasticsearch?





Quando não utilizar o Elasticsearch?

- Ambientes com alta escrita de dados
- Operações transacionais
- Fonte primária de armazenamento



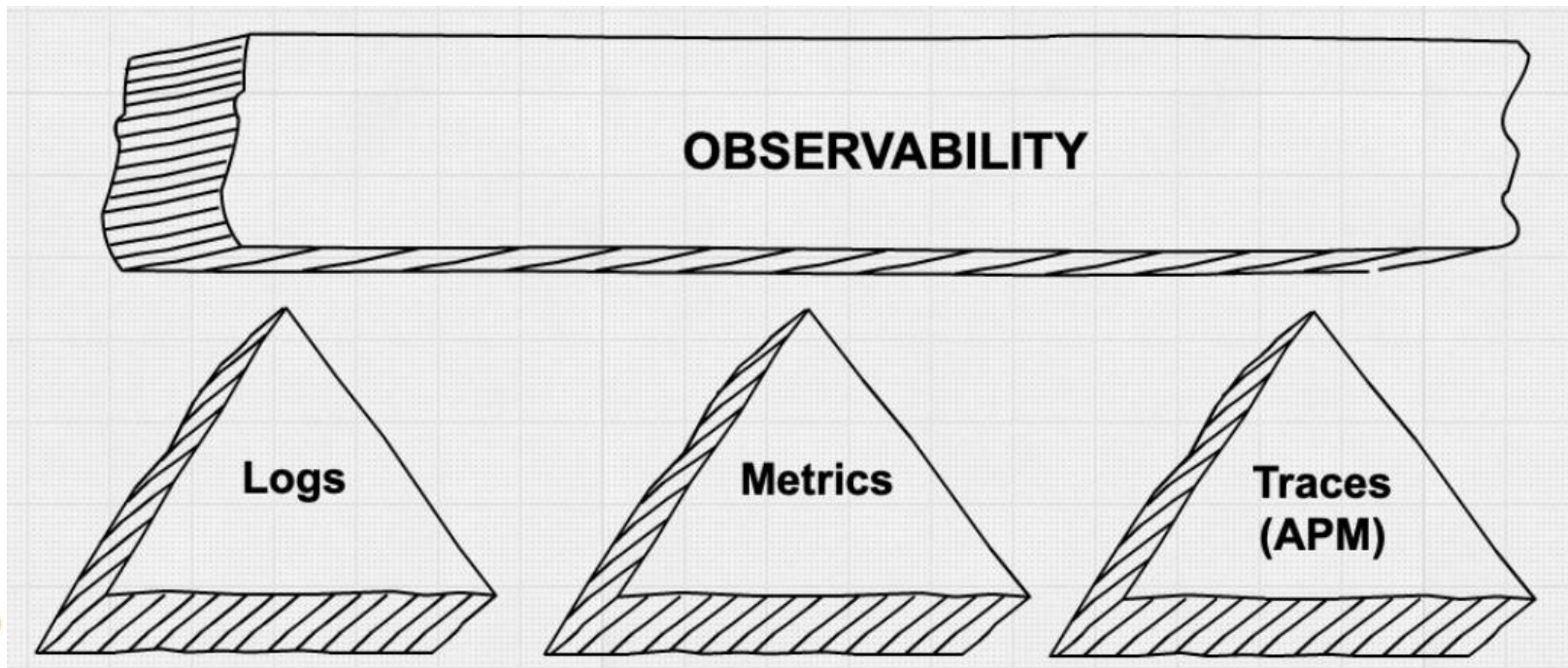


Elastic APM

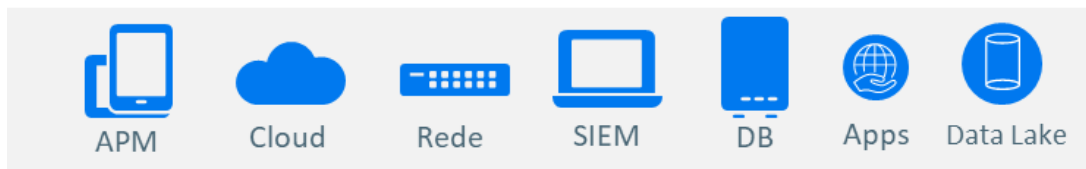
- Monitora o comportamento de todas aplicações de forma transparente
- Monitora os acessos externos da sua aplicação (SQL, Redis, Elasticsearch, APIs de terceiros...)
- Criação de alertas com base em métricas
- **Log** – Registro textual de eventos que ocorrem no sistema (Elastic Stack, Loki, GreyLog)
- **Métrica** – Representação numérica baseado em uma linha do tempo (Elastic Stack, New Relic, Data Dog)
- **Trace** – Rastreamento de todo fluxo de uma requisição, correlação entre as requisições (Elastic Stack, Jaeger, Grafana)



Elastic APM



Elastic APM





The screenshot shows the Windows Task Manager Performance tab. The 'System' section is selected, and the 'Memory' section is expanded. A table displays various memory-related settings:

| Name | Value | Default | Owner |
|--------------------------------|---------|---------|-------|
| Anonymous MemoryUsage | | No | |
| BufferCache/LowMemory | 20000 | No | |
| BufferCache/HighMemory | 95 | 50 | No |
| BufferCache/Per InterruptsOnly | 50 | 50 | No |
| BufferCache/DirtyOnly | 15 | 15 | No |
| CIRC/CachedData/Threshold | 400 | 400 | No |
| CIRC/DirtyData | 32768 | 32768 | No |
| CIRC/DirtyData/MaxInterval | 10 | 10 | No |
| CIRC/Lease | None | None | No |
| DirtyData/Quota/MaxInterval | disable | disable | No |
| DirtyData/Quota/MaxInterval | disable | disable | No |

The 'System' section is highlighted in blue. The 'Memory' section is expanded, showing the table. The 'System' section is highlighted in blue.

```

2018-03-13T13:50:37.5268632 [Debug] [moud] Creating a new session table
2018-03-13T13:50:37.9292822 [Debug] [moud] Setting file */tmp/* size to 32 Mb. Physically writing the
File full. Please wait
2018-03-13T13:50:37.9575782 [Notice] [moud] File */tmp/* size is now 32 Mb
2018-03-13T13:50:37.9574812 [Notice] [moud] 96 round backlog segment(s) found, 96 round backlog segment(s)
2018-03-13T13:50:37.9678386 [Notice] [moud] 32 non-round backlog segment(s) are active.
2018-03-13T13:50:37.9683762 [Notice] [moud] Loading for purge to start
2018-03-13T13:50:37.9688332 [Notice] [moud] 1, 1-23, 23-24, 24-25, 25-26, 26-27, 27-28, 28-29, 29-30, 30-31, 31-32, 32-33, 33-34, 34-35, 35-36, 36-37, 37-38, 38-39, 39-40, 40-41, 41-42, 42-43, 43-44, 44-45, 45-46, 46-47, 47-48, 48-49, 49-50, 50-51, 51-52, 52-53, 53-54, 54-55, 55-56, 56-57, 57-58, 58-59, 59-60, 60-61, 61-62, 62-63, 63-64, 64-65, 65-66, 66-67, 67-68, 68-69, 69-70, 70-71, 71-72, 72-73, 73-74, 74-75, 75-76, 76-77, 77-78, 78-79, 79-80, 80-81, 81-82, 82-83, 83-84, 84-85, 85-86, 86-87, 87-88, 88-89, 89-90, 90-91, 91-92, 92-93, 93-94, 94-95, 95-96, 96-97, 97-98, 98-99, 99-100, 100-101, 101-102, 102-103, 103-104, 104-105, 105-106, 106-107, 107-108, 108-109, 109-110, 110-111, 111-112, 112-113, 113-114, 114-115, 115-116, 116-117, 117-118, 118-119, 119-120, 120-121, 121-122, 122-123, 123-124, 124-125, 125-126, 126-127, 127-128, 128-129, 129-130, 130-131, 131-132, 132-133, 133-134, 134-135, 135-136, 136-137, 137-138, 138-139, 139-140, 140-141, 141-142, 142-143, 143-144, 144-145, 145-146, 146-147, 147-148, 148-149, 149-150, 150-151, 151-152, 152-153, 153-154, 154-155, 155-156, 156-157, 157-158, 158-159, 159-160, 160-161, 161-162, 162-163, 163-164, 164-165, 165-166, 166-167, 167-168, 168-169, 169-170, 170-171, 171-172, 172-173, 173-174, 174-175, 175-176, 176-177, 177-178, 178-179, 179-180, 180-181, 181-182, 182-183, 183-184, 184-185, 185-186, 186-187, 187-188, 188-189, 189-190, 190-191, 191-192, 192-193, 193-194, 194-195, 195-196, 196-197, 197-198, 198-199, 199-200, 200-201, 201-202, 202-203, 203-204, 204-205, 205-206, 206-207, 207-208, 208-209, 209-210, 210-211, 211-212, 212-213, 213-214, 214-215, 215-216, 216-217, 217-218, 218-219, 219-220, 220-221, 221-222, 222-223, 223-224, 224-225, 225-226, 226-227, 227-228, 228-229, 229-230, 230-231, 231-232, 232-233, 233-234, 234-235, 235-236, 236-237, 237-238, 238-239, 239-240, 240-241, 241-242, 242-243, 243-244, 244-245, 245-246, 246-247, 247-248, 248-249, 249-250, 250-251, 251-252, 252-253, 253-254, 254-255, 255-256, 256-257, 257-258, 258-259, 259-260, 260-261, 261-262, 262-263, 263-264, 264-265, 265-266, 266-267, 267-268, 268-269, 269-270, 270-271, 271-272, 272-273, 273-274, 274-275, 275-276, 276-277, 277-278, 278-279, 279-280, 280-281, 281-282, 282-283, 283-284, 284-285, 285-286, 286-287, 287-288, 288-289, 289-290, 290-291, 291-292, 292-293, 293-294, 294-295, 295-296, 296-297, 297-298, 298-299, 299-300, 300-301, 301-302, 302-303, 303-304, 304-305, 305-306, 306-307, 307-308, 308-309, 309-310, 310-311, 311-312, 312-313, 313-314, 314-315, 315-316, 316-317, 317-318, 318-319, 319-320, 320-321, 321-322, 322-323, 323-324, 324-325, 325-326, 326-327, 327-328, 328-329, 329-330, 330-331, 331-332, 332-333, 333-334, 334-335, 335-336, 336-337, 337-338, 338-339, 339-340, 340-341, 341-342, 342-343, 343-344, 344-345, 345-346, 346-347, 347-348, 348-349, 349-350, 350-351, 351-352, 352-353, 353-354, 354-355, 355-356, 356-357, 357-358, 358-359, 359-360, 360-361, 361-362, 362-363, 363-364, 364-365, 365-366, 366-367, 367-368, 368-369, 369-370, 370-371, 371-372, 372-373, 373-374, 374-375, 375-376, 376-377, 377-378, 378-379, 379-380, 380-381, 381-382, 382-383, 383-384, 384-385, 385-386, 386-387, 387-388, 388-389, 389-390, 390-391, 391-392, 392-393, 393-394, 394-395, 395-396, 396-397, 397-398, 398-399, 399-400, 400-401, 401-402, 402-403, 403-404, 404-405, 405-406, 406-407, 407-408, 408-409, 409-410, 410-411, 411-412, 412-413, 413-414, 414-415, 415-416, 416-417, 417-418, 418-419, 419-420, 420-421, 421-422, 422-423, 423-424, 424-425, 425-426, 426-427, 427-428, 428-429, 429-430, 430-431, 431-432, 432-433, 433-434, 434-435, 435-436, 436-437, 437-438, 438-439, 439-440, 440-441, 441-442, 442-443, 443-444, 444-445, 445-446, 446-447, 447-448, 448-449, 449-450, 450-451, 451-452, 452-453, 453-454, 454-455, 455-456, 456-457, 457-458, 458-
```

[illegible]

The screenshot displays the pfSense web interface. At the top, the navigation bar includes links for System, Interfaces, Firewall, Services, VPN, Status, Diagnostics, and Help. The main content area is titled 'Status / Traffic Graph'. On the left, the 'Graph Settings' panel shows 'WAN' as the selected interface, 'Standard' as the sort, and 'Clear graphs when not visible' as an option. Below this is the 'Traffic Graph' showing a line chart for WAN traffic. The chart has a Y-axis from 0 to 1200 and an X-axis with labels for 02:21, 02:30, 02:40, and 02:45. Two data series are plotted: 'wan (in)' (blue line) and 'wan (out)' (green line). The 'wan (out)' series shows a significant spike in traffic starting around 02:30, reaching a peak of approximately 1100 at 02:40, and then gradually decreasing. The 'wan (in)' series remains relatively flat and low throughout the period. On the right, the 'Access Log' section is visible, showing a table with columns for 'Related Module' and 'Related Directives'. The table contains one entry: 'mod_log.conf' with 'ContentLog', 'LogStream', and 'Maildir' as related directives. Below the table, there is a paragraph of text explaining that the server access log records all incoming requests and that the LogStream directive can be used to configure the server to store information in the OpenSense, storing the information in the access log provides useful statistical analysis in general. It also mentions that for more information about this topic, users can refer to various versions of Apache httpd have used other...

[illegible]



Demo



Pontos de atenção

- Segurança na API Elasticsearch (Cloudflare, OWASP, WAF...)
- Controle de acessos e permissões de usuários
- <https://sematext.com/blog/elasticsearch-security-authentication-encryption-backup>
- Analise sua aplicação / elasticsearch no <https://shodan.io>





Estudos

- <https://www.elastic.co/guide/en/apm/agent/dotnet>
- <https://www.elastic.co/guide>
- <https://discuss.elastic.co>
- <https://contributor-program.app.elstc.co>
- <https://www.youtube.com/c/eduardoneves>





Estudos

