

# drop-observability-azure-research

## Drop — Observability Stack on Azure (Research)

**Client:** Drop (Digital Banking) **Type:** Research — Azure equivalent of AWS observability plan

**Reference:** ~/system/specs/drop-observability-plan.md (AWS version) **Created:** 2026-02-20

### AWS ? Azure Mapping

Komponenta	AWS (Drop danas)	Azure ekvivalent
Log aggregation	CloudWatch Logs	<b>Azure Monitor Logs</b> (Log Analytics Workspace)
Alarmi	CloudWatch Alarms	<b>Azure Monitor Alerts</b> (Metric Alerts + Log Alerts)
Notifikacije	SNS Topics	<b>Action Groups</b> (email, SMS, Slack webhook, Teams)
DB monitoring	RDS Performance Insights	<b>Query Performance Insight</b> (Azure Database for PostgreSQL)
App observability	App Runner Observability	<b>Application Insights</b> (auto-instrument, zero-code za .NET/Node/Python)
Container logs	App Runner → CloudWatch	<b>Container Apps Logs</b> → Log Analytics (automatic)
Uptime monitoring	BetterStack (external)	<b>BetterStack</b> (isto — cloud-agnostic) ILLI Azure Availability Tests
Error tracking	Sentry (external)	<b>Sentry</b> (isto — cloud-agnostic) ILLI Application Insights Exceptions
Metrics/Dashboards	Grafana Cloud (external)	<b>Grafana Cloud</b> (isto) ILLI Azure Dashboards + Workbooks

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# Azure-Specific Prednosti

1. **Application Insights** — Ubija 3 alata odjednom (APM + error tracking + metrics). Auto-instrument za Node.js. Zamjenjuje Sentry + Prometheus + dio Grafane.
  2. **Log Analytics Workspace** — KQL query language (moćniji od CloudWatch Insights). Centralni log store.
  3. **Action Groups** — Jedna konfiguracija za SVE alerte (email + SMS + Slack webhook + Teams + Azure Function).
  4. **Azure Workbooks** — Besplatni interaktivni dashboardi (zamjena za Grafana ako ne treba multi-cloud).
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## Terraform (AzureRM)

```
# 1. Log Analytics Workspace
resource "azurerm_log_analytics_workspace" "main" {
  name                = "drop-logs"
  resource_group_name = azurerm_resource_group.main.name
  location            = azurerm_resource_group.main.location
  sku                 = "PerGB2018"    # Pay-as-you-go, 5GB/mo free
  retention_in_days  = 30
}

# 2. Application Insights
resource "azurerm_application_insights" "main" {
  name                = "drop-appinsights"
  resource_group_name = azurerm_resource_group.main.name
  location            = azurerm_resource_group.main.location
  workspace_id       = azurerm_log_analytics_workspace.main.id
  application_type    = "Node.JS"
}

# 3. Action Group (notifikacije)
resource "azurerm_monitor_action_group" "ops" {
  name                = "drop-ops-alerts"
  resource_group_name = azurerm_resource_group.main.name
  short_name          = "dropops"
}
```

```
email_receiver {
  name          = "ceo"
  email_address = "alem@alai.no"
}
# Slack: webhook_receiver { ... service_uri = "https://hooks.slack.com/..." }
}

# 4. Alert Rules (primjeri)
resource "azurerm_monitor_metric_alert" "high_error_rate" {
  name                = "drop-high-error-rate"
  resource_group_name = azurerm_resource_group.main.name
  scopes              = [azurerm_application_insights.main.id]
  severity            = 1
  frequency           = "PT1M"
  window_size        = "PT5M"

  criteria {
    metric_namespace = "microsoft.insights/components"
    metric_name      = "requests/failed"
    aggregation      = "Count"
    operator         = "GreaterThan"
    threshold        = 5
  }

  action { action_group_id = azurerm_monitor_action_group.ops.id }
}

# 5. Availability Test (uptime monitoring)
resource "azurerm_application_insights_standard_web_test" "health" {
  name                = "drop-health-check"
  resource_group_name = azurerm_resource_group.main.name
  location            = azurerm_resource_group.main.location
  application_insights_id = azurerm_application_insights.main.id
  frequency           = 300 # 5 min
  enabled             = true

  request { url = "https://drop.example.com/api/health" }
}
```

# Koraci za implementaciju

- Kreiraj Azure Resource Group za monitoring resurse
- Deploy Log Analytics Workspace (Terraform)
- Deploy Application Insights connected to Workspace (Terraform)
- Dodaj `APPLICATIONINSIGHTS_CONNECTION_STRING` u app environment
- `npm install applicationinsights` u app + `appinsights.setup().start()` na boot
- Kreiraj Action Group sa email + Slack webhook (Terraform)
- Dodaj Metric Alerts: error rate, response time p99, availability (Terraform)
- Dodaj Availability Test za health endpoint (Terraform)
- Opciono: BetterStack kao external monitor (isti setup kao AWS varijanta)
- Verifikuj: App Insights prima telemetriju, alarmi rade, logi vidljivi u Log Analytics

## Cost (Azure)

Stavka	Cijena
Application Insights	5GB/mo free, zatim ~\$2.30/GB
Log Analytics	5GB/mo free ingestion, 31 dana free retention
Alert Rules	1st metric alert free, zatim ~\$0.10/rule/mo
Availability Tests	1st 10 free
<b>Total (mali promet)</b>	<b>~\$0-5/mo</b>

## Reference

- AWS plan: [~/system/specs/drop-observability-plan.md](#)
- Azure Monitor docs: <https://learn.microsoft.com/en-us/azure/azure-monitor/>
- Application Insights Node.js: <https://learn.microsoft.com/en-us/azure/azure-monitor/app/nodejs>
- Terraform AzureRM Monitor:  
[https://registry.terraform.io/providers/hashicorp/azurerm/latest/docs/resources/monitor\\_metric\\_alert](https://registry.terraform.io/providers/hashicorp/azurerm/latest/docs/resources/monitor_metric_alert)

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