

ПРОДВИНУТЫЙ ИНТЕНСИВ

# Terraform МЕГА

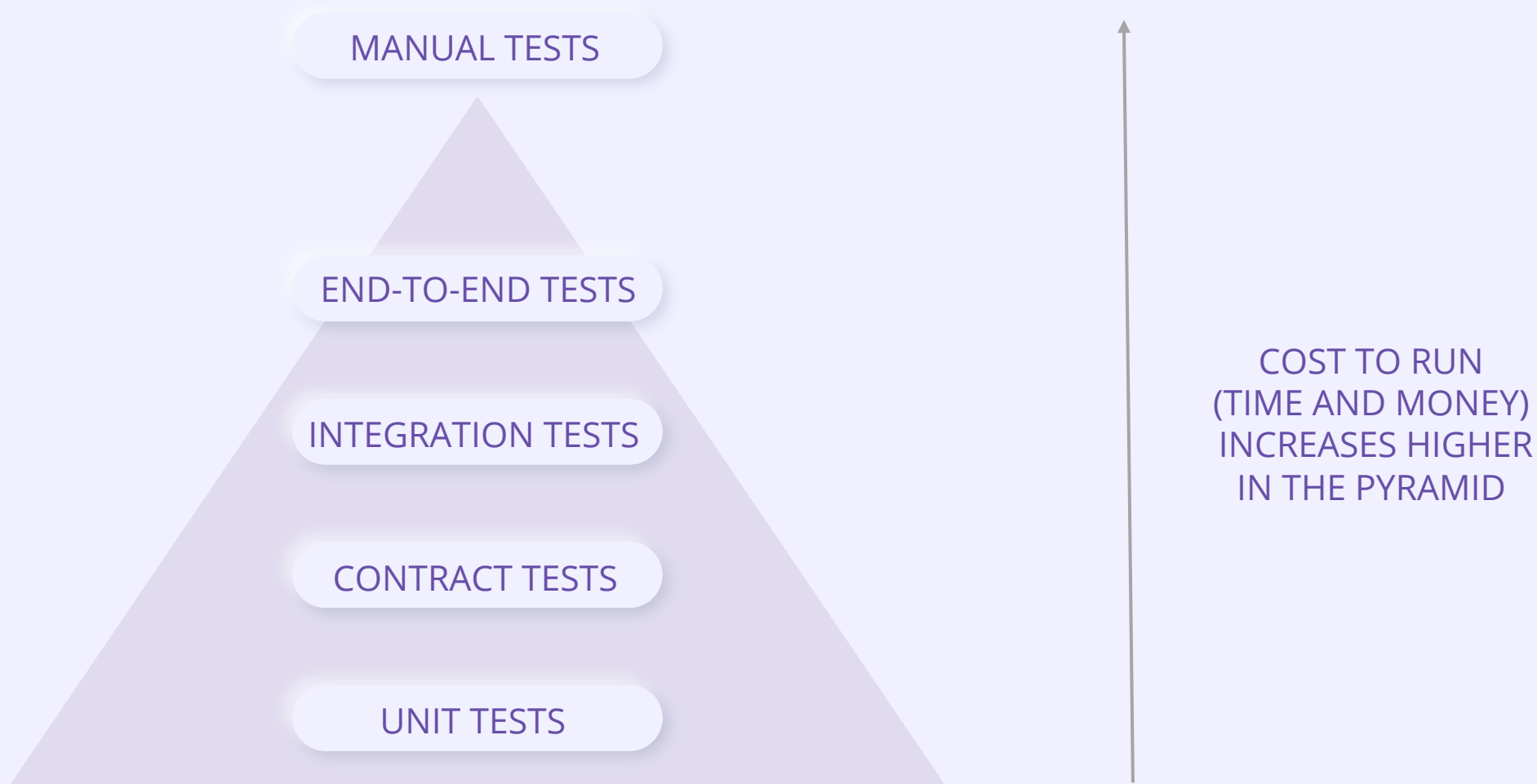
СЛЁРМ + Yandex Cloud

## Тестирование

Павел Селиванов



# План



# Линтеры

- terraform fmt -check
- terraform validate



# Статистические проверки

checkov

<https://github.com/bridgecrewio/checkov>



# Альтернативные варианты

conftest

<https://www.conftest.dev/>



# Проверка контракта

```
variable "image_id" {  
  description = "The id of the machine image (AMI) to use for the server."  
  type        = string  
  default     = " "  
  
  validation {  
    condition     = length(var.image_id) > 4 && substr(var.image_id, 0, 4) == "ami-"  
    error_message = "The image_id value must be a valid AMI id, starting with \"ami-\"."  
  }  
}
```



# Precondition / Postcondition

```
data "aws_ami" "example" {  
  id = var.aws_ami_id  
  
  lifecycle {  
    postcondition {  
      condition          = self.tags["Component"] == "nomad-server"  
      error_message = "tags[\"Component\"] must be \"nomad-server\"."  
    }  
  }  
}
```



# Доступные функции

<https://www.terraform.io/language/expressions/custom-conditions#condition-expressions>





# Интеграционные тесты

- kitchen-terraform

```
control 'operating_system' do
  describe command('lsb_release -a') do
    its('stdout') { should match (/Ubuntu/) }
  end
end
```



# Интеграционные тесты

- kitchen-terraform
- terratest



```
package test

import (
    "testing"

    "github.com/gruntwork-io/terratest/modules/terraform"
    "github.com/stretchr/testify/assert"
)

func TestTerraformHelloWorldExample(t *testing.T) {
    // retryable errors in terraform testing.
    terraformOptions := terraform.WithDefaultRetryableErrors(t,
        &terraform.Options{
            TerraformDir: "../examples/terraform-hello-world-example",
        })

    defer terraform.Destroy(t, terraformOptions)

    terraform.InitAndApply(t, terraformOptions)

    output := terraform.Output(t, terraformOptions, "hello_world")
    assert.Equal(t, "Hello, World!", output)
}
```

## Рекомендуемые материалы

<https://www.hashicorp.com/resources/test-driven-development-tdd-for-infrastructure>



ПРОДВИНУТЫЙ ИНТЕНСИВ

# Terraform МЕГА

СЛЕДРМ + Yandex Cloud

■ Спасибо!

