# Veeam One – мониторинг, отчетность и планирование ресурсов

**Сергей Кунько**
Системный инженер, Veeam Software
sergey.kunko@veeam.com

# Знакомство с Veeam

**Veeam** – это глобальная компания, основанная в 2006, со штаб-квартирой в городе Baar, Швейцария

Более
**282 000**
заказчиков

Global 2000
**57%**

Более
**16,4 млн**
ВМ защищено

# Veeam в цифрах

Количество заказчиков


**282 000**
заказчиков по всему миру
**Более 4000** новых заказчиков в месяц

**16,4 млн.**
защищенных ВМ
**в 180** странах

**57%**
из списка **Global 2000**

**74%**
из списка **Fortune 500**

защищены решениями Veeam

**+73**
**#1 по удовлетворенности заказчиков!**
Индекс потребительской лояльности (Net Promoter Score, NPS)

## В 3 раза выше среднего по отрасли

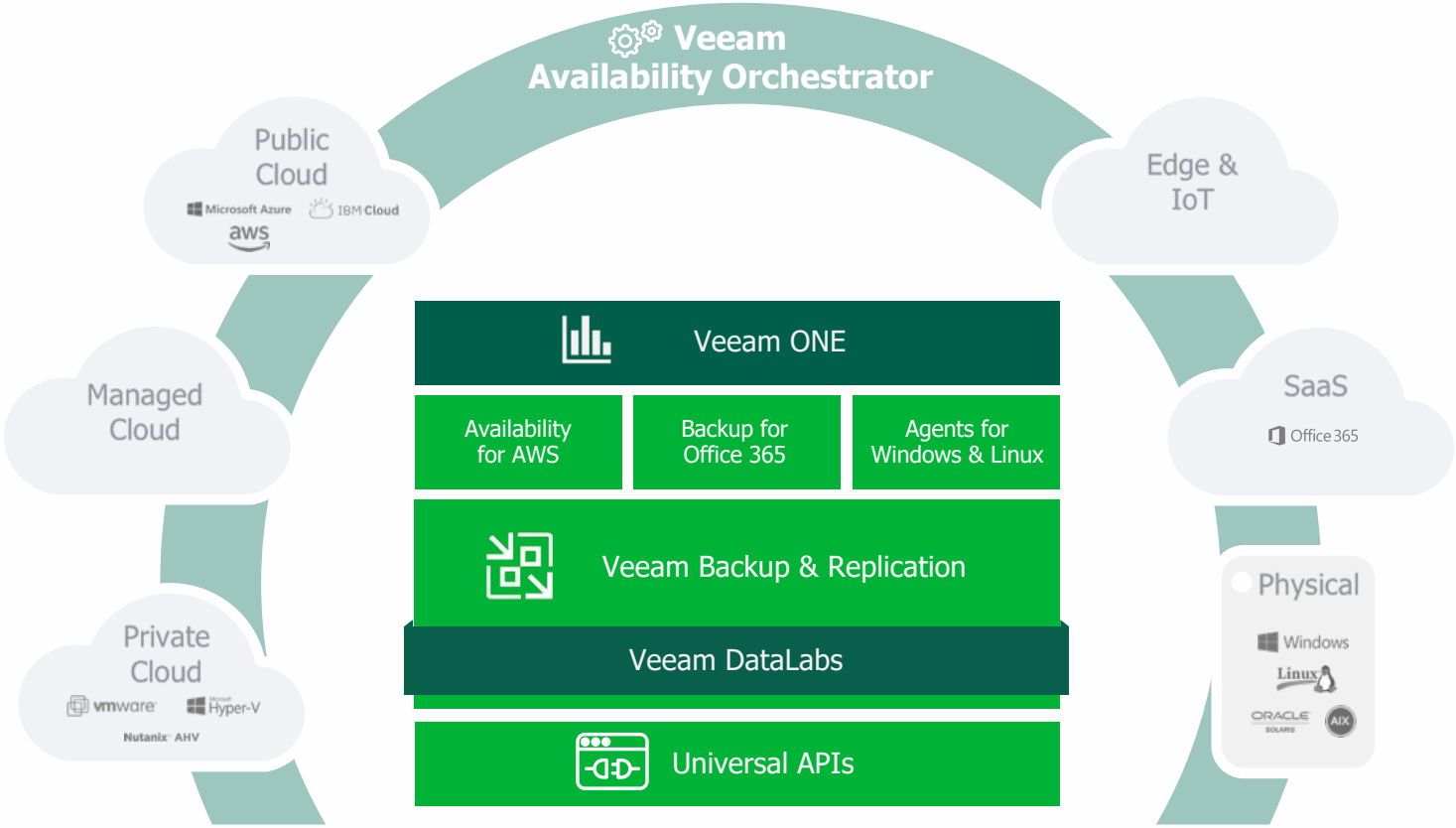
Удовлетворенность заказчиков 9.0/10

Возможности решений 8.9/10

Вероятность обновления 9.1/10

Эффективность продаж 9.2/10

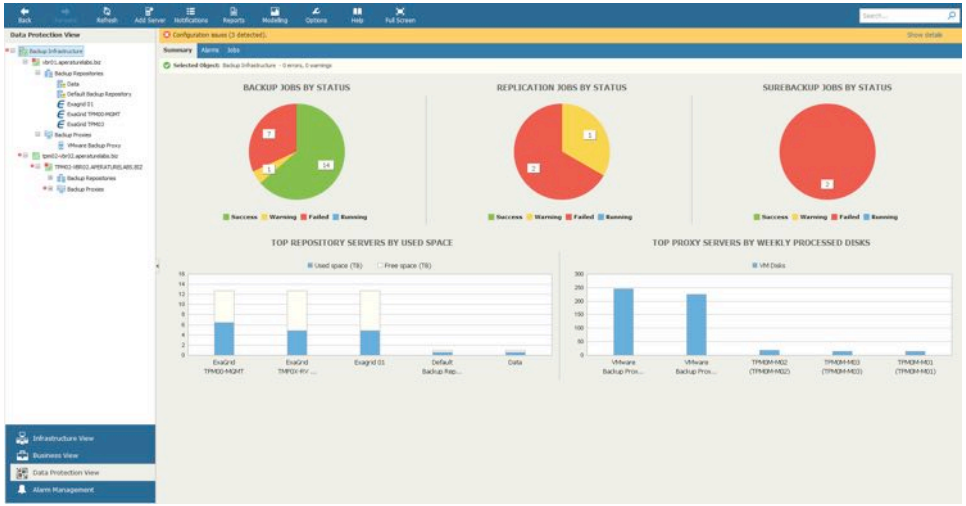
# Veeam Hyper-Availability Platform



# Поддерживаемые платформы

Veeam One обеспечивает мониторинг виртуальной среды и инфраструктуры резервного копирования Veeam

- VMWare vSphere
- VMWare vCloud Director
- Microsoft Hyper-V
- Veeam Backup & Replication
- Veeam Agents



# Компоненты Veeam One

# Обзор виртуальной среды и инфраструктуры РК
# Мониторинг, отчетность, планирование

**VeeamONE**
(Monitor)

**VeeamONE**
**Business View**

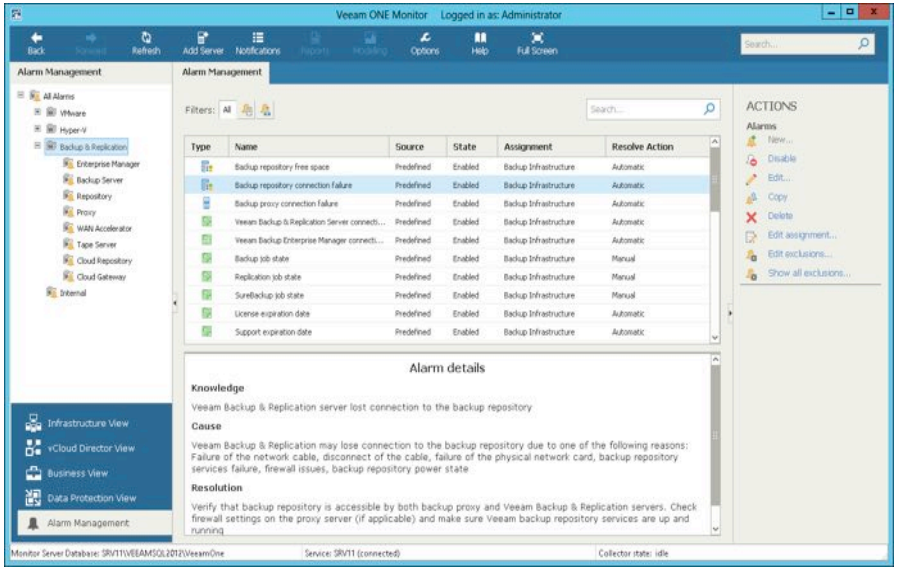
**VeeamONE**
**Reporter**

# Veeam One Monitor

# Управление событиями

Veeam One Monitor мониторинг событий в реальном времени

- Severity: Error, Warning, Resolved, Information
- Встроенная KB по известным ошибкам
- Suppression
  - На время выполнения действия
  - На определенный промежуток времени
  - На период обслуживания

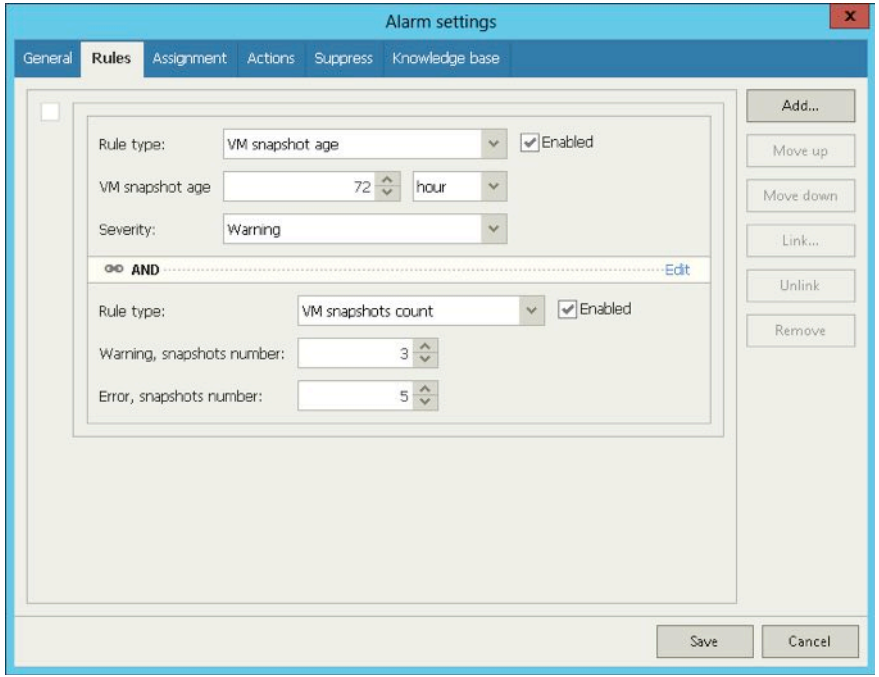


# Правила генерации сообщений

**Condition-Based**
- Изменение состояния

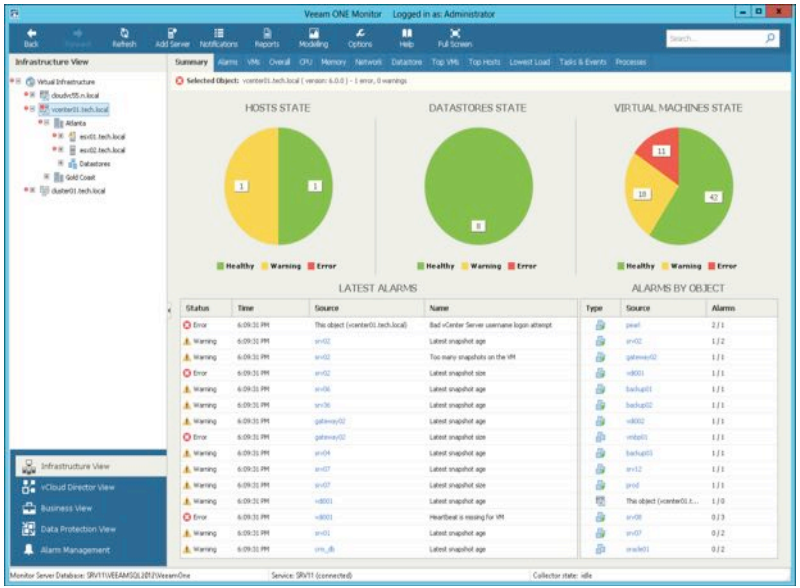
**Event-Based**
- На основе другого сообщения

**Linked Rules**
- Составные правила используют операторы AND, OR



# Автоматические действия

- Отправка e-mail
- Отправка SNMP Traps
- Запуск произвольного скрипта
- Выборочное или одновременное выполнение перечисленных действий за счет политики уведомлений



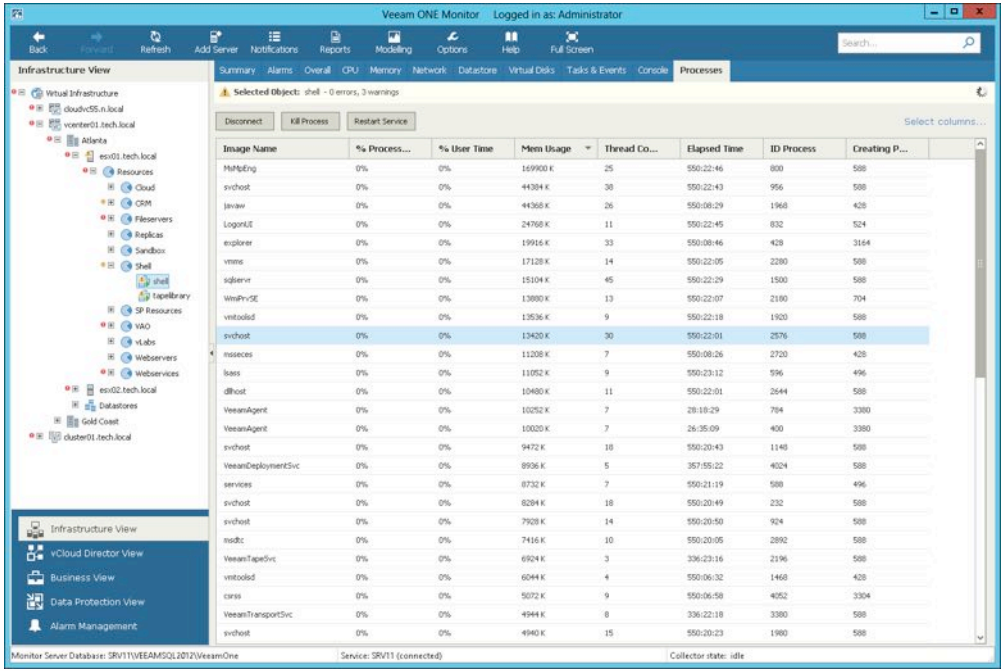
# Работа с гостевой ОС

## Для Windows

- Перезапуск службы
- Остановка службы

## Для Linux

- Остановка демона



# Доступ к консоли ВМ из интерфейса Veeam One

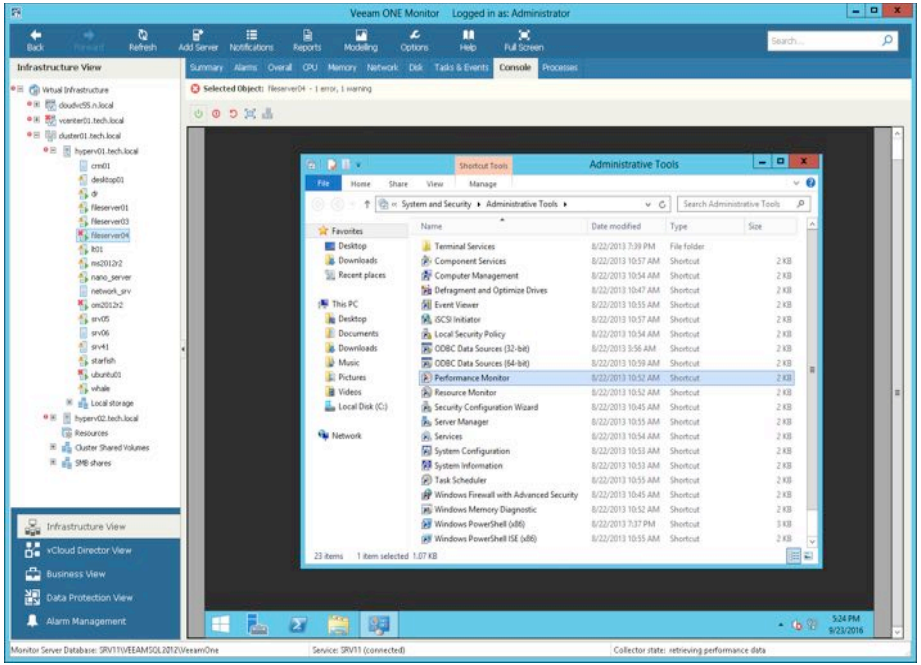
**Для Vmware vSphere**

VMware Remote Console (VMRC)

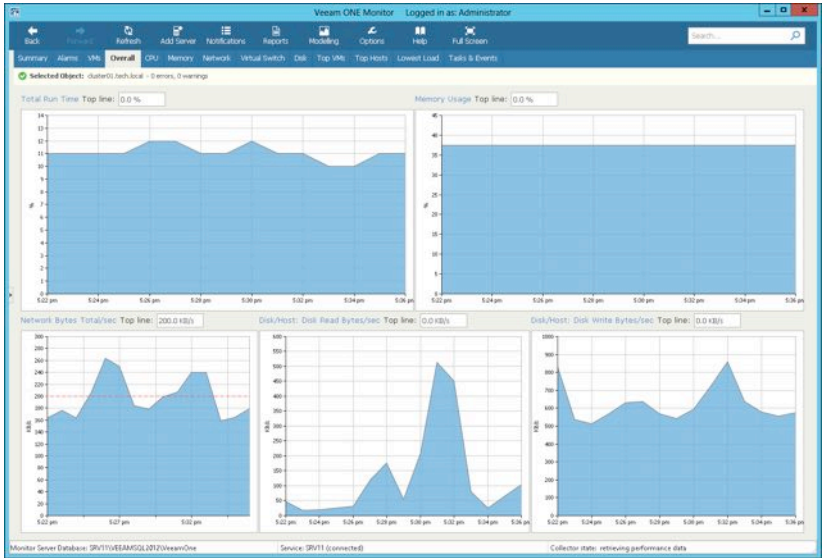
- Не требует установки доп. ПО
- Работает с Windows и Linux

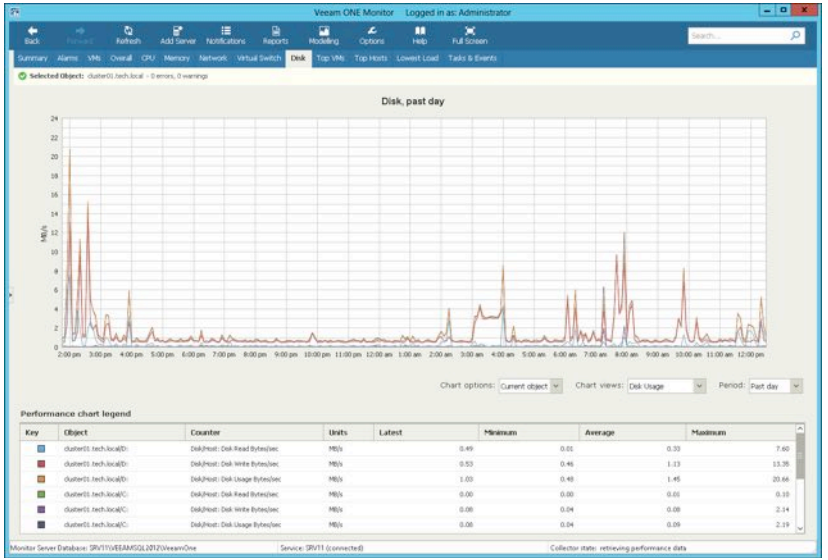
**Для Microsoft Hyper-V**

- Для работы с Linux дополнительно нужно загрузить putty.exe
- Работает с Windows и Linux



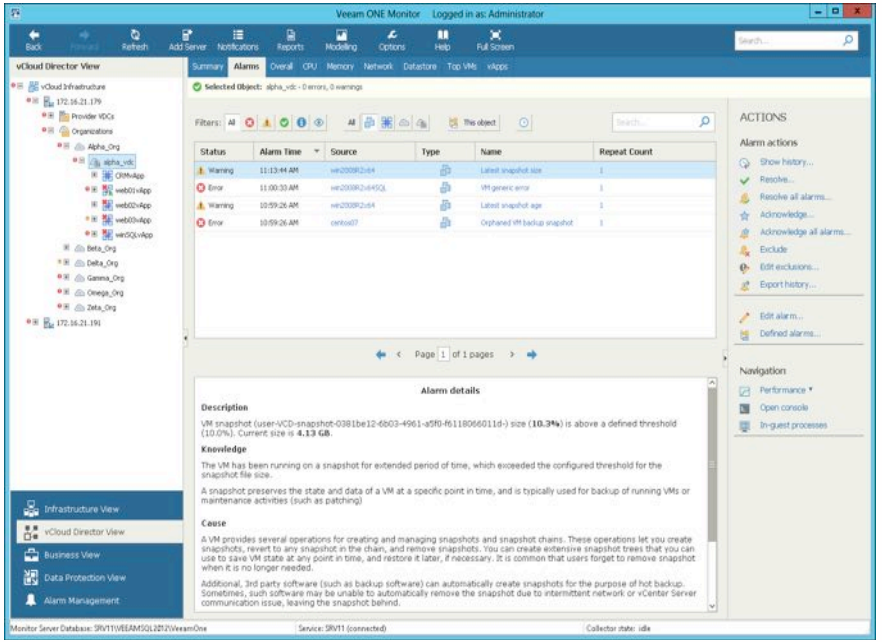
# Performance метрики для vSphere и Hyper-V



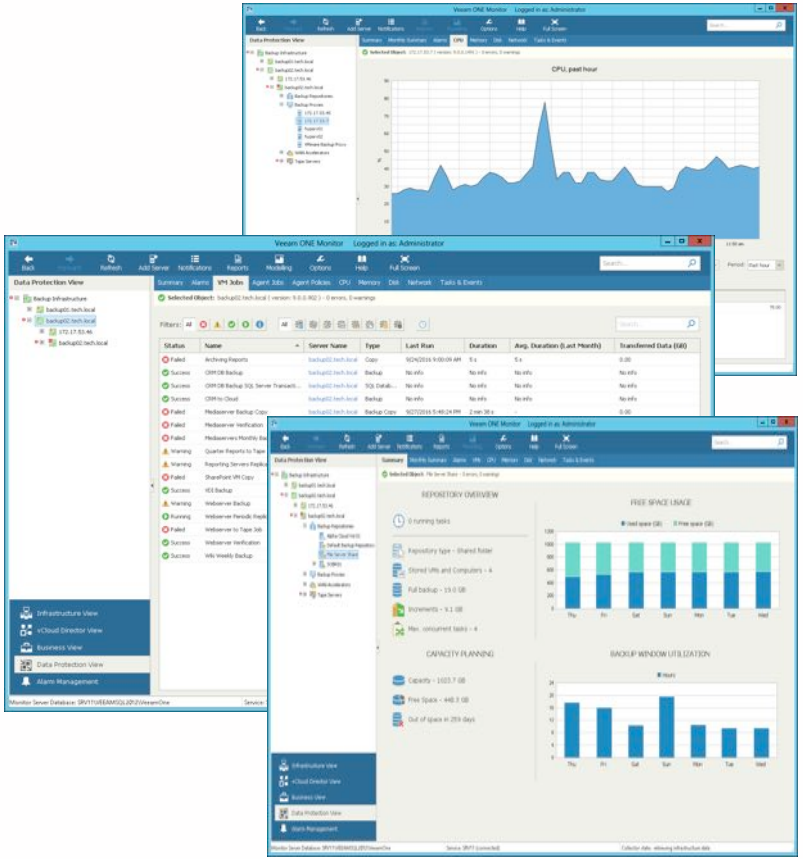
# Состояние ресурсов vCloud Director

- Provider vDCs
- Список сконфигурированных провайдеров
- Ресурсы Datastore
- Ресурсы Хостов
- vApps



# Инфраструктура Veeam Backup & Replication

- Последнее состояние заданий РК и репликации
- Состояние компонентов инфраструктуры VBR
- Dashboards с общей информацией о выбранном компоненте
- Графики производительности выбранного компонента инфраструктуры РК

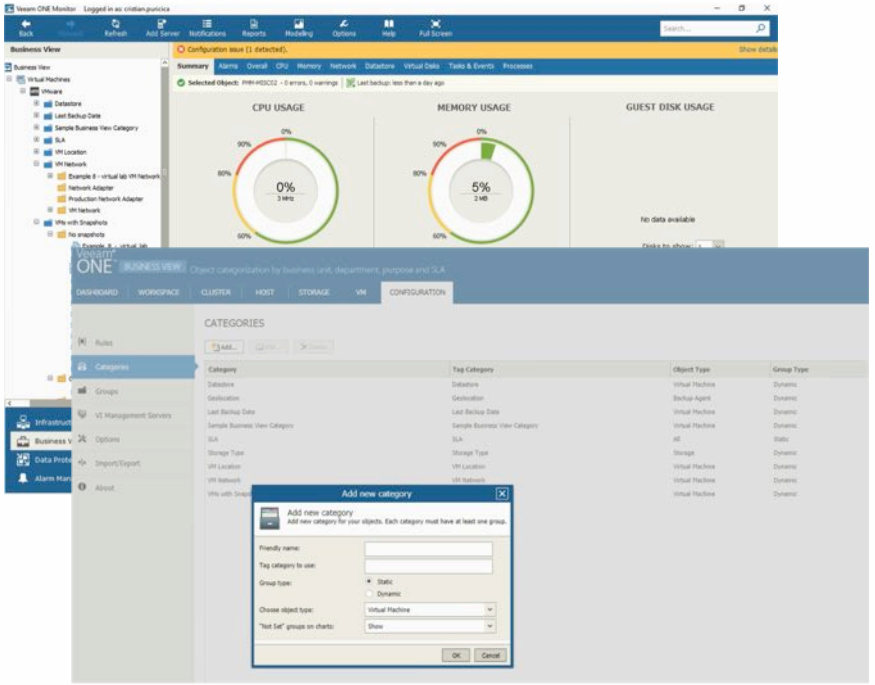


# Veeam Business View

# Категоризация окружения

Использование категорий для объектов мониторинга.

Позволяет делать выборку по объектам, интересным с точки зрения бизнеса.

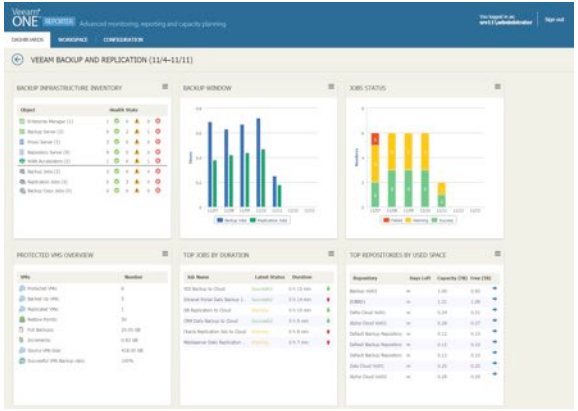


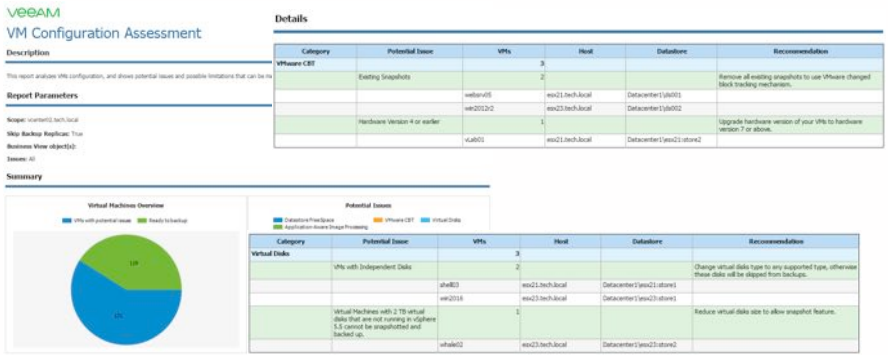
# Veeam Reporter

# Veeam Reporter

## Основные элементы

- Dashboards
- Workspace
  - Отчеты
  - Deployment Projects

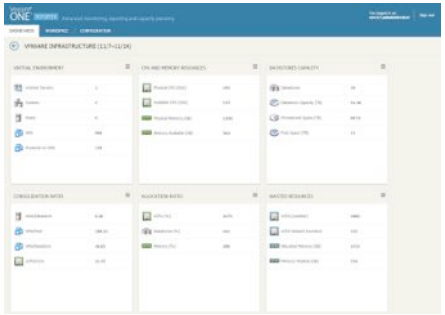


# Оценка инфраструктуры VMware

- Dashboard VMware Infrastructure

- Отчеты
  - Datastore Performance Assessment
  - VM Change Rate Estimation
  - VM Configuration Assessment



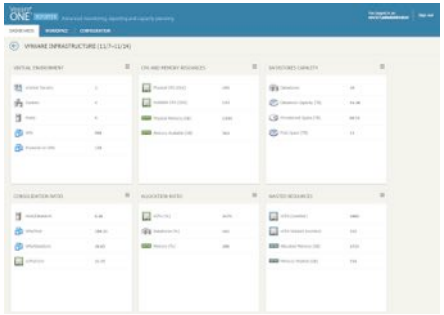
Details

| Scope | VM | 12:00 AM 2:59 AM | 3:00 AM 5:59 AM | 6:00 AM 8:59 AM | 9:00 AM 11:59 AM | 12:00 PM 2:59 PM | 3:00 PM 5:59 PM | 6:00 PM 8:59 PM | 9:00 PM 12:00 AM | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| vcenter01.tech.local | 22 | 7.45 GB | 5.73 GB | 10.27 GB | 9.44 GB | 6.81 GB | 6.72 GB | 4.97 GB | 6.37 GB | 57.75 GB |
| | pearl | < 1 GB | 0.99 GB | 1.03 GB | 1.66 GB | < 1 GB | 1.29 GB | < 1 GB | 1.31 GB | 8.21 GB |
| | vcenter01 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 6.34 GB |
| | backup02 | < 1 GB | < 1 GB | < 1 GB | 1.14 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 5.75 GB |
| | vbk02 | 1.62 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 3.93 GB |
| | backup03 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 3.77 GB |
| | backup01 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 3.58 GB |
| | srv13 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 3.05 GB |
| | srv26 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 2.89 GB |
| | srv12 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 2.62 GB |
| | SPBackupsrv05 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 2.45 GB |
| | srv25 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 2.24 GB |
| | Tenantsrv05 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 2.18 GB |
| | TenantBackupsrv01 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 1.80 GB |
| | BackupServer | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 1.60 GB |
| | gatewaysrv02 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 1.56 GB |
| | srv08 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 1.37 GB |
| | ds01 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 1.04 GB |
| | srv40 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 1.02 GB |
| | SPGatewaysrv05 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB |
| | Cloudrepl05 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB |
| | bkrsrv05 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB |
| | srv42 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB |
| Total | | 7.45 GB | 5.73 GB | 10.27 GB | 9.44 GB | 6.81 GB | 6.72 GB | 4.97 GB | 6.37 GB | 57.75 GB |

# Оценка инфраструктуры Hyper-V

- Dashboard Hyper-V Infrastructure

- Отчеты
  - Performance Assessment
  - VM Change Rate Estimation
  - Configuration Assessment

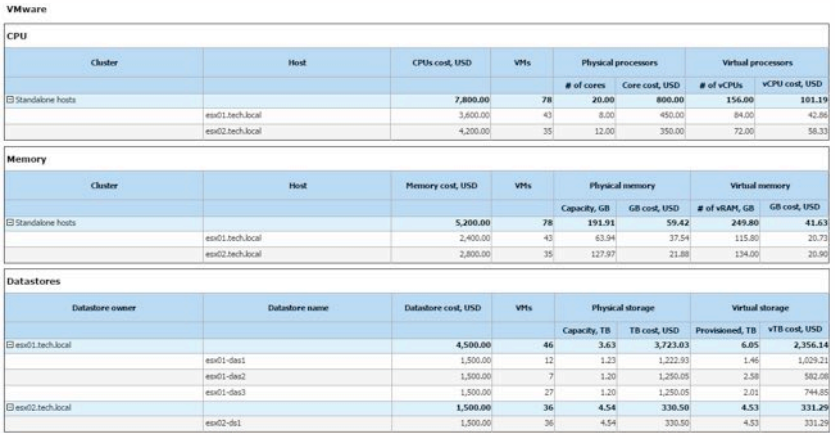


Details

| Scope | VM | 12:00 AM 2:59 AM | 3:00 AM 5:59 AM | 6:00 AM 8:59 AM | 9:00 AM 11:59 AM | 12:00 PM 2:59 PM | 3:00 PM 5:59 PM | 6:00 PM 8:59 PM | 9:00 PM 12:00 AM | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| ⊟ vcenter01.tech.local | 22 | 7.45 GB | 5.73 GB | 10.27 GB | 9.44 GB | 6.81 GB | 6.72 GB | 4.97 GB | 6.37 GB | 57.75 GB |
| | pearl | < 1 GB | 0.99 GB | 1.03 GB | 1.66 GB | < 1 GB | 1.29 GB | < 1 GB | 1.31 GB | 8.21 GB |
| | vcenter01 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 6.34 GB |
| | backup02 | < 1 GB | < 1 GB | < 1 GB | 1.14 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 5.75 GB |
| | vd002 | 1.62 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 3.93 GB |
| | backup03 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 3.77 GB |
| | backup01 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 3.58 GB |
| | srv13 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 3.05 GB |
| | srv36 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 2.89 GB |
| | srv12 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 2.62 GB |
| | SPBackupser95 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 2.45 GB |
| | srv35 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 2.24 GB |
| | Tenantserver95 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 2.18 GB |
| | Tenantbackupserver | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 1.80 GB |
| | BackupServer | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 1.60 GB |
| | gateway02 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 1.56 GB |
| | srv39 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 1.37 GB |
| | ds01 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 1.04 GB |
| | srv40 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | 1.02 GB |
| | SPGateway95 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB |
| | Cloudrep95 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB |
| | labvar95 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB |
| | srv92 | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB | < 1 GB |
| Total: | | 7.45 GB | 5.73 GB | 10.27 GB | 9.44 GB | 6.81 GB | 6.72 GB | 4.97 GB | 6.37 GB | 57.75 GB |

# Infrastructure Chargeback

- Host Configuration Chargeback
- Host Resource Usage Chargeback
- VM Configuration Chargeback
- VM Performance Chargeback



VMware

CPU

| Cluster | Host | CPUs cost, USD | VMs | Physical processors | | Virtual processors | |
|---|---|---|---|---|---|---|---|
| | | | | # of cores | Core cost, USD | # of vCPUs | vCPU cost, USD |
| ⊟ Standalone hosts | | **7,800.00** | **78** | **20.00** | **800.00** | **156.00** | **101.19** |
| | esx01.tech.local | 3,600.00 | 43 | 8.00 | 450.00 | 84.00 | 42.86 |
| | esx02.tech.local | 4,200.00 | 35 | 12.00 | 350.00 | 72.00 | 58.33 |

Memory

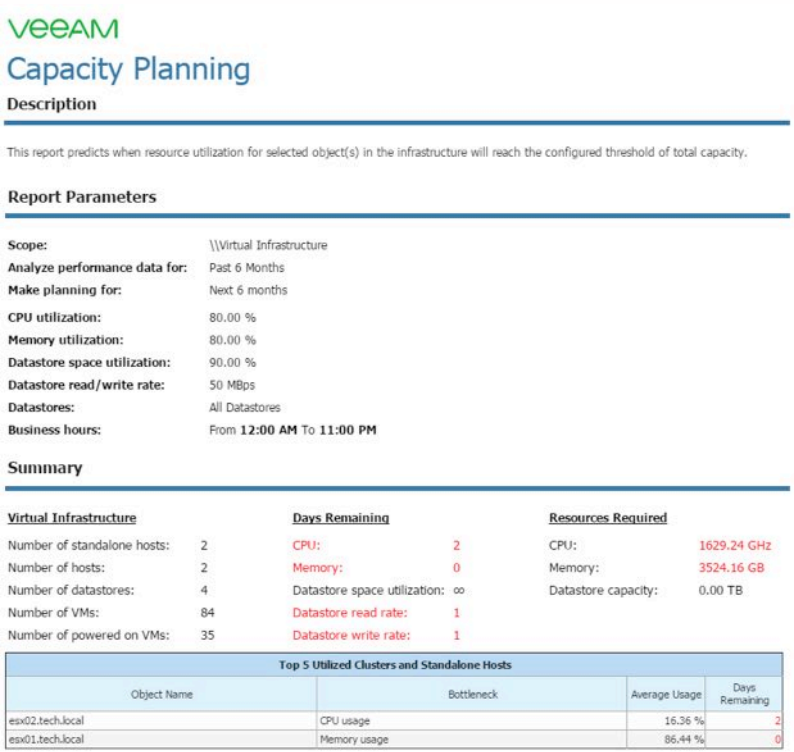
| Cluster | Host | Memory cost, USD | VMs | Physical memory | | Virtual memory | |
|---|---|---|---|---|---|---|---|
| | | | | Capacity, GB | GB cost, USD | # of vRAM, GB | GB cost, USD |
| ⊟ Standalone hosts | | **5,200.00** | **78** | **191.91** | **59.42** | **249.80** | **41.63** |
| | esx01.tech.local | 2,400.00 | 43 | 63.94 | 37.54 | 115.80 | 20.73 |
| | esx02.tech.local | 2,800.00 | 35 | 127.97 | 21.88 | 134.00 | 20.90 |

Datastores

| Datastore owner | Datastore name | Datastore cost, USD | VMs | Physical storage | | Virtual storage | |
|---|---|---|---|---|---|---|---|
| | | | | Capacity, TB | TB cost, USD | Provisioned, TB | vTB cost, USD |
| ⊟ esx01.tech.local | | **4,500.00** | **46** | **3.63** | **3,723.03** | **6.05** | **2,356.14** |
| | esx01-das1 | 1,500.00 | 12 | 1.23 | 1,222.93 | 1.46 | 1,029.21 |
| | esx01-das2 | 1,500.00 | 7 | 1.20 | 1,250.05 | 2.58 | 582.08 |
| | esx01-das3 | 1,500.00 | 27 | 1.20 | 1,250.05 | 2.01 | 744.85 |
| ⊟ esx02.tech.local | | **1,500.00** | **36** | **4.54** | **330.50** | **4.53** | **331.29** |
| | esx02-ds1 | 1,500.00 | 36 | 4.54 | 330.50 | 4.53 | 331.29 |

# Capacity Planning VMware

- Capacity Planning
- Host Failure Modelling
- How Many More VMs Can Be Provisioned
- Over-provisioned Datastores



VEEAM

## Capacity Planning

### Description

This report predicts when resource utilization for selected object(s) in the infrastructure will reach the configured threshold of total capacity.

### Report Parameters

| | |
|---|---|
| **Scope:** | \\Virtual Infrastructure |
| **Analyze performance data for:** | Past 6 Months |
| **Make planning for:** | Next 6 months |
| **CPU utilization:** | 80.00 % |
| **Memory utilization:** | 80.00 % |
| **Datastore space utilization:** | 90.00 % |
| **Datastore read/write rate:** | 50 MBps |
| **Datastores:** | All Datastores |
| **Business hours:** | From **12:00 AM** To **11:00 PM** |

### Summary

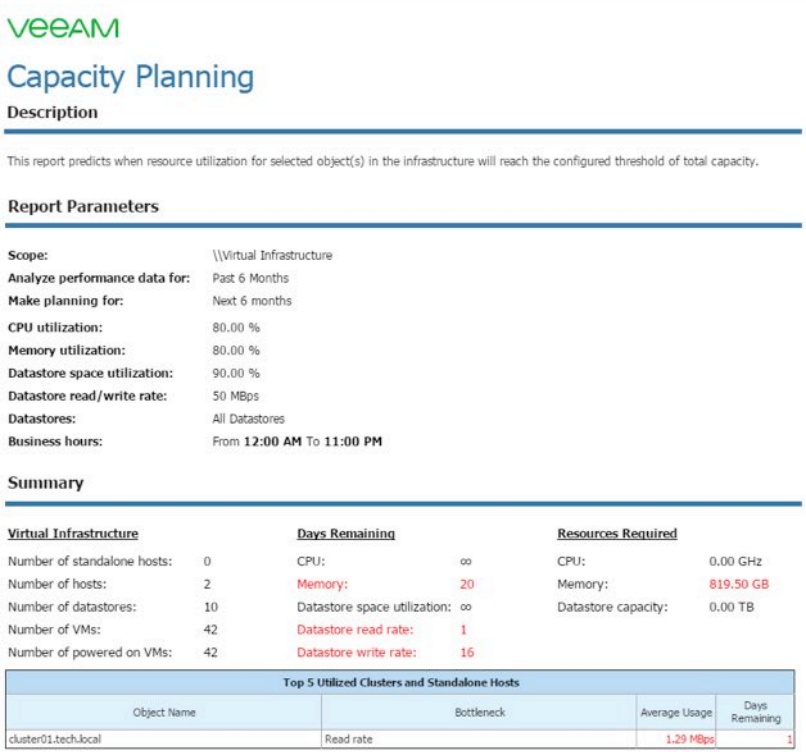
| Virtual Infrastructure | | Days Remaining | | Resources Required | |
|---|---|---|---|---|---|
| Number of standalone hosts: | 2 | CPU: | 2 | CPU: | 1629.24 GHz |
| Number of hosts: | 2 | Memory: | 0 | Memory: | 3524.16 GB |
| Number of datastores: | 4 | Datastore space utilization: | ∞ | Datastore capacity: | 0.00 TB |
| Number of VMs: | 84 | Datastore read rate: | 1 | | |
| Number of powered on VMs: | 35 | Datastore write rate: | 1 | | |

**Top 5 Utilized Clusters and Standalone Hosts**

| Object Name | Bottleneck | Average Usage | Days Remaining |
|---|---|---|---|
| esx02.tech.local | CPU usage | 16.36 % | 2 |
| esx01.tech.local | Memory usage | 86.44 % | 0 |

# Capacity Planning Hyper-V

- Capacity Planning
- Host Failure Modelling
- Over-provisioned Datastores



VEEAM

## Capacity Planning

### Description

This report predicts when resource utilization for selected object(s) in the infrastructure will reach the configured threshold of total capacity.

### Report Parameters

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| **Scope:** | \\Virtual Infrastructure |
| **Analyze performance data for:** | Past 6 Months |
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| **CPU utilization:** | 80.00 % |
| **Memory utilization:** | 80.00 % |
| **Datastore space utilization:** | 90.00 % |
| **Datastore read/write rate:** | 50 MBps |
| **Datastores:** | All Datastores |
| **Business hours:** | From **12:00 AM** To **11:00 PM** |

### Summary

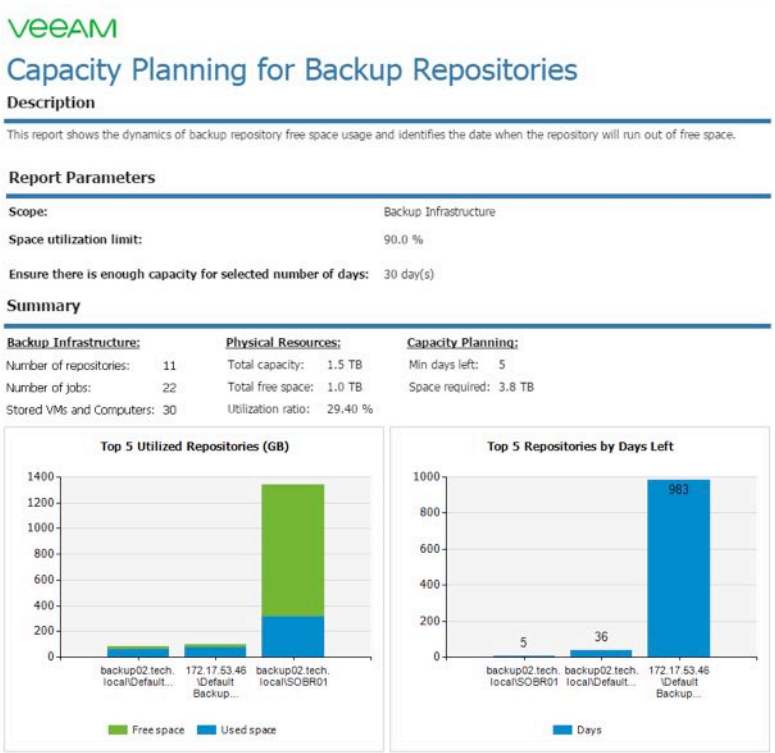
| Virtual Infrastructure | | Days Remaining | | Resources Required | |
|---|---|---|---|---|---|
| Number of standalone hosts: | 0 | CPU: | ∞ | CPU: | 0.00 GHz |
| Number of hosts: | 2 | Memory: | 20 | Memory: | 819.50 GB |
| Number of datastores: | 10 | Datastore space utilization: | ∞ | Datastore capacity: | 0.00 TB |
| Number of VMs: | 42 | Datastore read rate: | 1 | | |
| Number of powered on VMs: | 42 | Datastore write rate: | 16 | | |

**Top 5 Utilized Clusters and Standalone Hosts**

| Object Name | Bottleneck | Average Usage | Days Remaining |
|---|---|---|---|
| cluster01.tech.local | Read rate | 1.29 MBps | 1 |

# Capacity Planning Veeam Backup

- Capacity Planning for Backup Repositories
- Veeam Backup Files Growth



VEEAM

Capacity Planning for Backup Repositories

**Description**

This report shows the dynamics of backup repository free space usage and identifies the date when the repository will run out of free space.

**Report Parameters**

| | |
|---|---|
| **Scope:** | Backup Infrastructure |
| **Space utilization limit:** | 90.0 % |
| **Ensure there is enough capacity for selected number of days:** | 30 day(s) |

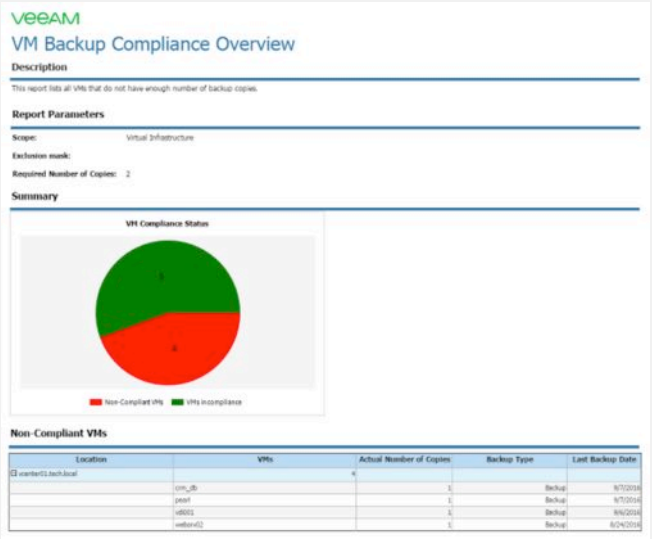
**Summary**

| Backup Infrastructure: | | Physical Resources: | | Capacity Planning: | |
|---|---|---|---|---|---|
| Number of repositories: | 11 | Total capacity: | 1.5 TB | Min days left: | 5 |
| Number of jobs: | 22 | Total free space: | 1.0 TB | Space required: | 3.8 TB |
| Stored VMs and Computers: | 30 | Utilization ratio: | 29.40 % | | |

# Compliance Reporting

## Соответствие требованиям и соблюдение законодательства

- Отчеты о количестве и расположении резервных копий
- Отчет о местоположении данных



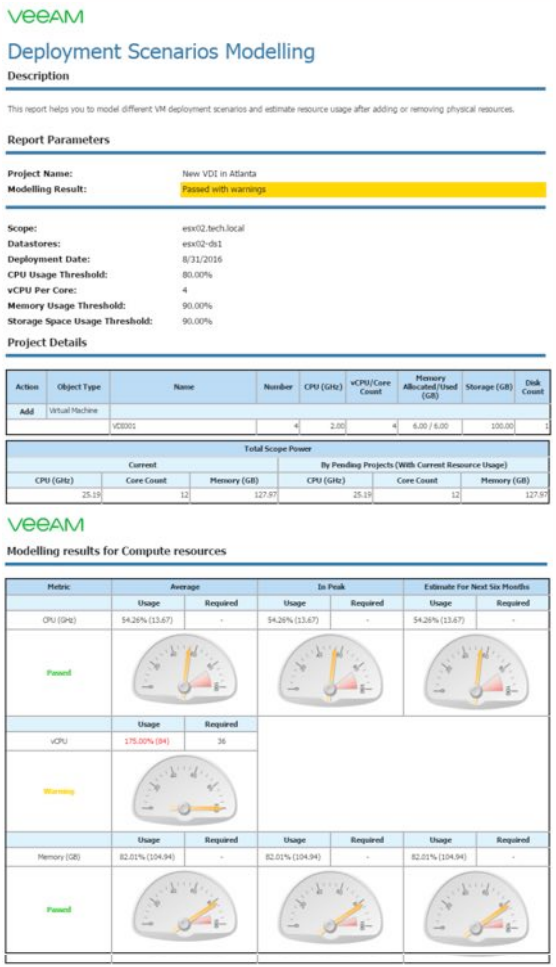
# Deployment Project

**Моделирование эффекта от:**

- Добавления или удаления хостов в кластере
- Добавления или удаления ВМ

**Выбор базовой модели:**

- Существующий хост или ВМ
- Явно определенная конфигурация хоста или ВМ



VEEAM

Deployment Scenarios Modelling

Description

This report helps you to model different VM deployment scenarios and estimate resource usage after adding or removing physical resources.

Report Parameters

| | |
|---|---|
| Project Name: | New VDI in Atlanta |
| Modelling Result: | Passed with warnings |
| Scope: | esx02.tech.local |
| Datastores: | esx02-ds1 |
| Deployment Date: | 8/31/2016 |
| CPU Usage Threshold: | 80.00% |
| vCPU Per Core: | 4 |
| Memory Usage Threshold: | 90.00% |
| Storage Space Usage Threshold: | 90.00% |

Project Details

| Action | Object Type | Name | Number | CPU (GHz) | vCPU/Core Count | Memory Allocated/Used (GB) | Storage (GB) | Disk Count |
|---|---|---|---|---|---|---|---|---|
| Add | Virtual Machine | | | | | | | |
| | | VDI001 | 4 | 2.00 | 4 | 6.00 / 6.00 | 100.00 | 1 |

| Total Scope Power | | | | | |
|---|---|---|---|---|---|
| Current | | | By Pending Projects (With Current Resource Usage) | | |
| CPU (GHz) | Core Count | Memory (GB) | CPU (GHz) | Core Count | Memory (GB) |
| 25.19 | 12 | 127.97 | 25.19 | 12 | 127.97 |

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Modelling results for Compute resources

| Metric | Average | | In Peak | | Estimate For Next Six Months | |
|---|---|---|---|---|---|---|
| | Usage | Required | Usage | Required | Usage | Required |
| CPU (GHz) | 54.26% (13.67) | - | 54.26% (13.67) | - | 54.26% (13.67) | - |
| Passed | | | | | | |
| | Usage | Required | | | | |
| vCPU | 175.00% (84) | 36 | | | | |
| Warning | | | | | | |
| | Usage | Required | Usage | Required | Usage | Required |
| Memory (GB) | 82.01% (104.94) | - | 82.01% (104.94) | - | 82.01% (104.94) | - |
| Passed | | | | | | |


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# Спасибо за внимание!

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