



OpenShift Dedicated 4

故障排除

了解 OpenShift Dedicated 的支持

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法律通告

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摘要

本文档提供有关获取对 OpenShift Dedicated 的支持的信息。

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第 1 章 通过连接集群进行远程健康监控

1.1. 关于远程健康监控

OpenShift Dedicated 收集集群的遥测和配置数据，并使用 Telemeter Client 和 Insights Operator 向红帽报告。提供给红帽的数据可实现本文档概述的好处。

通过 Telemetry 和 Insights Operator 向红帽报告数据的集群被称为 *连接的集群* (connected cluster)。

Telemetry 是红帽用来描述 OpenShift Dedicated Telemeter 客户端向红帽发送的信息的术语。轻量级属性从连接的集群发送到红帽，以便启用订阅管理自动化、监控集群的健康状态、提供支持以及改进客户体验。

Insights Operator 收集 OpenShift Dedicated 配置数据并将其发送到红帽。这些数据用于生成有关集群可能潜在存在的问题的分析报告。这些 insights 用于通过 [OpenShift Cluster Manager 混合云控制台](#) 与集群管理员进行交流。

本文档中提供了有关这两个工具的更多信息。

Telemetry 和 Insights Operator 的优点

Telemetry 和 Insights Operator 为最终用户提供以下优点：

- **增强了识别和解决问题的能力。** 对于一些事件，最终用户可能会认为是正常的，但从更广泛深入的角度来说，红帽会对这些事件的影响有不同的评估。因此，一些问题可以被更快地识别并解决，而不需要用户创建一个支持问题单或 [Jira issue](#)。
- **高级的版本管理。** OpenShift Dedicated 提供 **candidate**、**fast** 和 **stable** 发行频道，供您选择一个更新策略。版本从 **fast** 到 **stable** 的过程取决于更新的速度以及升级过程中的事件。通过连接的集群提供的信息，红帽可以将发行版本质量提高到 **stable** 频道，并对在 **fast** 频道中发现的问题做出更快反应。
- **有针对性地对新功能的开发进行优先级排序。** 收集的数据可让您了解哪些 OpenShift Dedicated 区域被使用最多使用。通过这些信息，红帽可以专注于开发对客户有严重影响的新功能。
- **更好的支持体验。** 在 [红帽客户门户网站](#) 上创建支持问题单时，可以为连接的集群提供集群 ID。这可以让红帽通过使用连接的信息，简化用户的支持体验。本文档提供有关改进的支持体验的更多信息。
- **预测分析。** 从已连接集群收集的信息，在 [OpenShift Cluster Manager 混合云控制台](#) 上显示集群的 insights 会被启用。红帽正在努力应用深度学习、机器学习和智能自动化，以帮助识别 OpenShift Dedicated 集群暴露的问题。

1.1.1. 关于 Telemetry

Telemetry 会向红帽发送一组精选的集群监控指标子集。Telemeter 客户端每四分三十秒获取一次指标值，并将数据上传到红帽。本文档中描述了这些指标。

红帽使用这一数据流来实时监控集群，必要时将对影响客户的问题做出反应。它同时还有助于红帽向客户推出 OpenShift Dedicated 升级，以便最大程度降低服务影响，持续改进升级体验。

这类调试信息将提供给红帽支持和工程团队，其访问限制等同于访问通过问题单报告的数据。红帽利用所有连接集群信息来帮助改进 OpenShift Dedicated，提高其易用性。

1.1.1.1. Telemetry 收集的信息

Telemetry 收集以下信息：

1.1.1.1.1. 系统信息

- 版本信息，包括 OpenShift Dedicated 集群版本并安装了用于决定更新版本可用性的更新详情
- 更新信息，包括每个集群可用的更新数、用于更新的频道和镜像存储库、更新进度信息以及更新中发生的错误数
- 安装期间生成的唯一随机标识符
- 帮助红帽支持为客户提供有用支持的配置详情，包括云基础架构级别的节点配置、主机名、IP 地址、Kubernetes pod 名称、命名空间和服务
- 在集群中安装的 OpenShift Dedicated 框架组件及其状况和状态
- 为降级 Operator 列出为 "related objects" 的所有命名空间的事件
- 有关降级软件的信息
- 有关证书的有效性的信息
- 部署 OpenShift Dedicated 的供应商平台的名称及数据中心位置

1.1.1.1.2. 大小信息

- 有关集群、机器类型和机器的大小信息，包括 CPU 内核数和每个机器所使用的 RAM 量
- etcd 成员数和存储在 etcd 集群中的对象数量

1.1.1.1.3. 使用信息

- 有关组件、功能和扩展的使用情况信息
- 有关技术预览和不受支持配置的使用详情

Telemetry 不会收集任何身份识别的信息，如用户名或密码。红帽不会收集个人信息。如果红帽发现个人信息被意外地收到，红帽会删除这些信息。有关红帽隐私实践的更多信息，请参考[红帽隐私声明](#)。

1.1.2. 关于 Insights Operator

Insights Operator 会定期收集配置和组件故障状态信息，默每两小时向红帽报告这些数据。这些信息可让红帽评估配置，它提供了比 Telemetry 报告更深入的数据。

OpenShift Dedicated 用户可以在 Red Hat Hybrid Cloud Console 上的 [Insights Advisor](#) 服务中显示每个集群的报告。如果发现了任何问题，Insights 会提供更详细的信息，并在可能的情况下提供如何解决相关问题的步骤。

Insights Operator 不会收集任何身份识别信息，如用户名、密码或证书。如需有关 Red Hat Insights 数据收集和控制的更多信息，请参阅 [Red Hat Insights 数据和应用程序安全性](#)。

红帽使用所有连接的集群信息以实现：

- 识别潜在的集群问题，并在 Red Hat Hybrid Cloud Console 上的 [Insights Advisor](#) 服务中提供解决方案和防止动作

- 通过为产品和支持团队提供聚合和重要信息来改进 OpenShift Dedicated
- 使 OpenShift Dedicated 更直观

其他资源

- Insights Operator 被默认安装并启用。

1.1.2.1. Insights Operator 收集的信息

Insights Operator 收集以下信息：

- 有关集群及其组件的常规信息，以识别与您所使用的具体 OpenShift Dedicated 版本和环境的相关问题
- 集群的配置文件（如容器镜像仓库的配置）用于识别设置参数中的问题
- 集群组件中发生的错误
- 正在运行的更新的进度信息，以及组件升级的状态
- 有关 OpenShift Dedicated 部署平台（如 Amazon Web Services）以及集群所在区域的详情
- 如果 Operator 报告了一个问题，则会收集 **openshift-*** 和 **kube-*** 项目中 OpenShift Dedicated 核心 pod 的信息。这包括状态、资源、安全上下文、卷信息等。

其他资源

- 用户可以查看 Insights Operator 的源代码，并对代码进行贡献。如需 Insights Operator 收集的项目列表，请参阅 [Insights Operator 上游](#) 项目。

1.1.3. 了解 Telemetry 和 Insights Operator 数据流

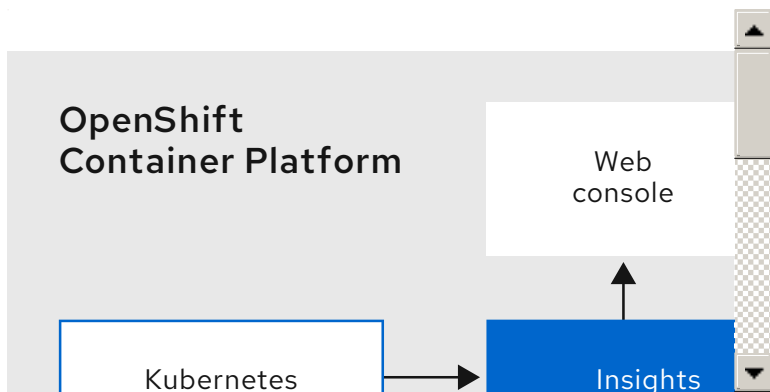
Telemeter Client 从 Prometheus API 收集所选的时间序列数据。时间序列数据每 4 分 30 秒上传到 api.openshift.com 进行处理。

Insights Operator 从 Kubernetes API 和 Prometheus API 中收集所选的数据并进行存档。该存档每两小时上传到 [OpenShift Cluster Manager 混合云控制台](#) 进行处理。Insights Operator 还从 [OpenShift Cluster Manager 混合云控制台](#) 下载最新的 Insights 分析。这用于填充 OpenShift Dedicated Web 控制台的 [Overview](#) 页面中包含的 **Insights 状态** 弹出窗口。

所有与红帽的通信都使用传输层安全（TLS）和 mutual 证书验证通过加密频道进行。所有数据在传输及非活跃的情况下都会被加密。

对处理客户数据的系统是通过多因素验证和严格的授权控制来控制的。访问权限的设置是基于需要的，仅限于针对需要的操作。

telemetry 和 Insights Operator 数据流



1.1.4. 有关如何使用远程健康监控数据的更多详情

[Telemetry 收集的信息](#)和[Insights Operator 收集的信息](#)中提供了与启用健康检查健康相关的数据收集的信息。

如本文档前面部分所述，红帽会收集您使用红帽产品的数据，如提供支持和升级、优化性能或配置、减小服务影响、识别和补救威胁、故障排除、改进提供和用户体验、响应问题、根据情况提供账单目的。

集合保护

红帽采用一些技术和机构措施来保护遥测数据和配置数据。

共享

红帽可以在红帽内部通过 Telemetry 和 Insights Operator 共享收集的数据，以提升您的用户体验。红帽可能会以汇总的方式与业务合作伙伴共享遥测和配置数据，该表格可帮助合作伙伴更好地了解其业务及其客户对红帽产品的使用，或者确保成功整合这些合作伙伴支持的产品。

第三方

红帽可能会与某些第三方合作，协助收集、分析和存储遥测和配置数据。

1.2. 显示远程健康监控收集的数据

作为管理员，您可以查看 Telemetry 和 Insights Operator 收集的指标。

1.2.1. 显示 Telemetry 收集的数据

您可以查看 Telemetry 收集的集群和组件的时间序列数据。

先决条件

- 已安装 OpenShift Container Platform CLI (**oc**)。
- 您可以使用具有 **cluster-admin** 角色或 **cluster-monitoring-view** 角色的用户访问集群。

流程

1. 登录到集群。
2. 运行以下命令，它会查询集群的 Prometheus 服务并返回由 Telemetry 收集的完整时间序列数据集：

```
$ curl -G -k -H "Authorization: Bearer $(oc whoami -t)" \
```

```

https://$(oc get route prometheus-k8s-federate -n \
openshift-monitoring -o jsonpath="{.spec.host}")/federate \
--data-urlencode 'match[]={__name__=~"cluster:usage:.*"}' \
--data-urlencode 'match[]={__name__="count:up0"}' \
--data-urlencode 'match[]={__name__="count:up1"}' \
--data-urlencode 'match[]={__name__="cluster_version"}' \
--data-urlencode 'match[]={__name__="cluster_version_available_updates"}' \
--data-urlencode 'match[]={__name__="cluster_version_capability"}' \
--data-urlencode 'match[]={__name__="cluster_operator_up"}' \
--data-urlencode 'match[]={__name__="cluster_operator_conditions"}' \
--data-urlencode 'match[]={__name__="cluster_version_payload"}' \
--data-urlencode 'match[]={__name__="cluster_installer"}' \
--data-urlencode 'match[]={__name__="cluster_infrastructure_provider"}' \
--data-urlencode 'match[]={__name__="cluster_feature_set"}' \
--data-urlencode 'match[]={__name__="instance:etcd_object_counts:sum"}' \
--data-urlencode 'match[]={__name__="ALERTS",alertstate="firing"}' \
--data-urlencode 'match[]={__name__="code:apiserver_request_total:rate:sum"}' \
--data-urlencode 'match[]={__name__="cluster:capacity_cpu_cores:sum"}' \
--data-urlencode 'match[]={__name__="cluster:capacity_memory_bytes:sum"}' \
--data-urlencode 'match[]={__name__="cluster:cpu_usage_cores:sum"}' \
--data-urlencode 'match[]={__name__="cluster:memory_usage_bytes:sum"}' \
--data-urlencode 'match[]={__name__="openshift:cpu_usage_cores:sum"}' \
--data-urlencode 'match[]={__name__="openshift:memory_usage_bytes:sum"}' \
--data-urlencode 'match[]={__name__="workload:cpu_usage_cores:sum"}' \
--data-urlencode 'match[]={__name__="workload:memory_usage_bytes:sum"}' \
--data-urlencode 'match[]={__name__="cluster:virt_platform_nodes:sum"}' \
--data-urlencode 'match[]={__name__="cluster:node_instance_type_count:sum"}' \
--data-urlencode 'match[]={__name__="cnv:vmi_status_running:count"}' \
--data-urlencode 'match[]={__name__="cluster:vmi_request_cpu_cores:sum"}' \
--data-urlencode 'match[]={
__name__="node_role_os_version_machine:cpu_capacity_cores:sum"}' \
--data-urlencode 'match[]={
__name__="node_role_os_version_machine:cpu_capacity_sockets:sum"}' \
--data-urlencode 'match[]={__name__="subscription_sync_total"}' \
--data-urlencode 'match[]={__name__="olm_resolution_duration_seconds"}' \
--data-urlencode 'match[]={__name__="csv_succeeded"}' \
--data-urlencode 'match[]={__name__="csv_abnormal"}' \
--data-urlencode 'match[]={
__name__="cluster:kube_persistentvolumeclaim_resource_requests_storage_bytes:provisioner:sum"}' \
--data-urlencode 'match[]={
__name__="cluster:kubelet_volume_stats_used_bytes:provisioner:sum"}' \
--data-urlencode 'match[]={__name__="ceph_cluster_total_bytes"}' \
--data-urlencode 'match[]={__name__="ceph_cluster_total_used_raw_bytes"}' \
--data-urlencode 'match[]={__name__="ceph_health_status"}' \
--data-urlencode 'match[]={__name__="odf_system_raw_capacity_total_bytes"}' \
--data-urlencode 'match[]={__name__="odf_system_raw_capacity_used_bytes"}' \
--data-urlencode 'match[]={__name__="odf_system_health_status"}' \
--data-urlencode 'match[]={__name__="job:ceph_osd_metadata:count"}' \
--data-urlencode 'match[]={__name__="job:kube_pv:count"}' \
--data-urlencode 'match[]={__name__="job:odf_system_pvs:count"}' \
--data-urlencode 'match[]={__name__="job:ceph_pools_iops_total"}' \
--data-urlencode 'match[]={__name__="job:ceph_pools_iops_bytes_total"}' \
--data-urlencode 'match[]={__name__="job:ceph_versions_running:count"}' \
--data-urlencode 'match[]={__name__="job:noobaa_total_unhealthy_buckets:sum"}' \
--data-urlencode 'match[]={__name__="job:noobaa_bucket_count:sum"}' \

```

```

--data-urlencode 'match[]={__name__="job:noobaa_total_object_count:sum"}' \
--data-urlencode 'match[]={__name__="odf_system_bucket_count", system_type="OCS",
system_vendor="Red Hat"}' \
--data-urlencode 'match[]={__name__="odf_system_objects_total", system_type="OCS",
system_vendor="Red Hat"}' \
--data-urlencode 'match[]={__name__="noobaa_accounts_num"}' \
--data-urlencode 'match[]={__name__="noobaa_total_usage"}' \
--data-urlencode 'match[]={__name__="console_url"}' \
--data-urlencode 'match[]='
{__name__="cluster:ovnkube_master_egress_routing_via_host:max"} \
--data-urlencode 'match[]='
{__name__="cluster:network_attachment_definition_instances:max"} \
--data-urlencode 'match[]='
{__name__="cluster:network_attachment_definition_enabled_instance_up:max"} \
--data-urlencode 'match[]={__name__="cluster:ingress_controller_aws_nlb_active:sum"}' \
--data-urlencode 'match[]='
{__name__="cluster:route_metrics_controller_routes_per_shard:min"} \
--data-urlencode 'match[]='
{__name__="cluster:route_metrics_controller_routes_per_shard:max"} \
--data-urlencode 'match[]='
{__name__="cluster:route_metrics_controller_routes_per_shard:avg"} \
--data-urlencode 'match[]='
{__name__="cluster:route_metrics_controller_routes_per_shard:median"} \
--data-urlencode 'match[]={__name__="cluster:openshift_route_info:tls_termination:sum"}' \
--data-urlencode 'match[]={__name__="insightsclient_request_send_total"}' \
--data-urlencode 'match[]={__name__="cam_app_workload_migrations"}' \
--data-urlencode 'match[]='
{__name__="cluster:apiserver_current_inflight_requests:sum:max_over_time:2m"} \
--data-urlencode 'match[]={__name__="cluster:alertmanager_integrations:max"}' \
--data-urlencode 'match[]={__name__="cluster:telemetry_selected_series:count"}' \
--data-urlencode 'match[]={__name__="openshift:prometheus_tsdb_head_series:sum"}' \
--data-urlencode 'match[]='
{__name__="openshift:prometheus_tsdb_head_samples_appended_total:sum"} \
--data-urlencode 'match[]='
{__name__="monitoring:container_memory_working_set_bytes:sum"} \
--data-urlencode 'match[]='
{__name__="namespace_job:scrape_series_added:topk3_sum1h"} \
--data-urlencode 'match[]='
{__name__="namespace_job:scrape_samples_post_metric_relabeling:topk3"} \
--data-urlencode 'match[]='
{__name__="monitoring:haproxy_server_http_responses_total:sum"} \
--data-urlencode 'match[]={__name__="rhmi_status"}' \
--data-urlencode 'match[]={__name__="status:upgrading:version:rhoam_state:max"}' \
--data-urlencode 'match[]={__name__="state:rhoam_critical_alerts:max"}' \
--data-urlencode 'match[]={__name__="state:rhoam_warning_alerts:max"}' \
--data-urlencode 'match[]={__name__="rhoam_7d_slo_percentile:max"}' \
--data-urlencode 'match[]={__name__="rhoam_7d_slo_remaining_error_budget:max"}' \
--data-urlencode 'match[]={__name__="cluster_legacy_scheduler_policy"}' \
--data-urlencode 'match[]={__name__="cluster_master_schedulable"}' \
--data-urlencode 'match[]={__name__="che_workspace_status"}' \
--data-urlencode 'match[]={__name__="che_workspace_started_total"}' \
--data-urlencode 'match[]={__name__="che_workspace_failure_total"}' \
--data-urlencode 'match[]={__name__="che_workspace_start_time_seconds_sum"}' \
--data-urlencode 'match[]={__name__="che_workspace_start_time_seconds_count"}' \
--data-urlencode 'match[]={__name__="cco_credentials_mode"}' \
--data-urlencode 'match[]='

```

```

{__name__="cluster:kube_persistentvolume_plugin_type_counts:sum"}' \
--data-urlencode 'match[]={__name__="visual_web_terminal_sessions_total"}' \
--data-urlencode 'match[]={__name__="acm_managed_cluster_info"}' \
--data-urlencode 'match[]={__name__="cluster:vsphere_vcenter_info:sum"}' \
--data-urlencode 'match[]={__name__="cluster:vsphere_esxi_version_total:sum"}' \
--data-urlencode 'match[]={__name__="cluster:vsphere_node_hw_version_total:sum"}' \
--data-urlencode 'match[]={__name__="openshift:build_by_strategy:sum"}' \
--data-urlencode 'match[]={__name__="rhods_aggregate_availability"}' \
--data-urlencode 'match[]={__name__="rhods_total_users"}' \
--data-urlencode 'match[]=
{__name__="instance:etcd_disk_wal_fsync_duration_seconds:histogram_quantile",quantile="0.99"}' \
--data-urlencode 'match[]={__name__="instance:etcd_mvcc_db_total_size_in_bytes:sum"}' \
--data-urlencode 'match[]=
{__name__="instance:etcd_network_peer_round_trip_time_seconds:histogram_quantile",quantile="0.99"}' \
--data-urlencode 'match[]=
{__name__="instance:etcd_mvcc_db_total_size_in_use_in_bytes:sum"}' \
--data-urlencode 'match[]=
{__name__="instance:etcd_disk_backend_commit_duration_seconds:histogram_quantile",quantile="0.99"}' \
--data-urlencode 'match[]={__name__="jaeger_operator_instances_storage_types"}' \
--data-urlencode 'match[]={__name__="jaeger_operator_instances_strategies"}' \
--data-urlencode 'match[]={__name__="jaeger_operator_instances_agent_strategies"}' \
--data-urlencode 'match[]={__name__="appsvcs:cores_by_product:sum"}' \
--data-urlencode 'match[]={__name__="nto_custom_profiles:count"}' \
--data-urlencode 'match[]={__name__="openshift_csi_share_configmap"}' \
--data-urlencode 'match[]={__name__="openshift_csi_share_secret"}' \
--data-urlencode 'match[]={__name__="openshift_csi_share_mount_failures_total"}' \
--data-urlencode 'match[]={__name__="openshift_csi_share_mount_requests_total"}' \
--data-urlencode 'match[]={__name__="cluster:velero_backup_total:max"}' \
--data-urlencode 'match[]={__name__="cluster:velero_restore_total:max"}' \
--data-urlencode 'match[]={__name__="eo_es_storage_info"}' \
--data-urlencode 'match[]={__name__="eo_es_redundancy_policy_info"}' \
--data-urlencode 'match[]={__name__="eo_es_defined_delete_namespaces_total"}' \
--data-urlencode 'match[]={__name__="eo_es_misconfigured_memory_resources_info"}' \
--data-urlencode 'match[]={__name__="cluster:eo_es_data_nodes_total:max"}' \
--data-urlencode 'match[]={__name__="cluster:eo_es_documents_created_total:sum"}' \
--data-urlencode 'match[]={__name__="cluster:eo_es_documents_deleted_total:sum"}' \
--data-urlencode 'match[]={__name__="pod:eo_es_shards_total:max"}' \
--data-urlencode 'match[]={__name__="eo_es_cluster_management_state_info"}' \
--data-urlencode 'match[]={__name__="imageregistry:imagestreamtags_count:sum"}' \
--data-urlencode 'match[]={__name__="imageregistry:operations_count:sum"}' \
--data-urlencode 'match[]={__name__="log_logging_info"}' \
--data-urlencode 'match[]={__name__="log_collector_error_count_total"}' \
--data-urlencode 'match[]={__name__="log_forwarder_pipeline_info"}' \
--data-urlencode 'match[]={__name__="log_forwarder_input_info"}' \
--data-urlencode 'match[]={__name__="log_forwarder_output_info"}' \
--data-urlencode 'match[]={__name__="cluster:log_collected_bytes_total:sum"}' \
--data-urlencode 'match[]={__name__="cluster:log_logged_bytes_total:sum"}' \
--data-urlencode 'match[]={__name__="cluster:kata_monitor_running_shim_count:sum"}' \
--data-urlencode 'match[]={__name__="platform:hypershift_hostedclusters:max"}' \
--data-urlencode 'match[]={__name__="platform:hypershift_nodepools:max"}' \
--data-urlencode 'match[]=
{__name__="namespace:noobaa_unhealthy_bucket_claims:max"}' \
--data-urlencode 'match[]={__name__="namespace:noobaa_buckets_claims:max"}' \

```

```

--data-urlencode 'match[]={__name__="namespace:noobaa_unhealthy_namespace_resources:max"}' \
--data-urlencode 'match[]={__name__="namespace:noobaa_namespace_resources:max"}' \
--data-urlencode 'match[]={__name__="namespace:noobaa_unhealthy_namespace_buckets:max"}' \
--data-urlencode 'match[]={__name__="namespace:noobaa_namespace_buckets:max"}' \
--data-urlencode 'match[]={__name__="namespace:noobaa_accounts:max"}' \
--data-urlencode 'match[]={__name__="namespace:noobaa_usage:max"}' \
--data-urlencode 'match[]={__name__="namespace:noobaa_system_health_status:max"}' \
--data-urlencode 'match[]={__name__="ocs_advanced_feature_usage"}' \
--data-urlencode 'match[]={__name__="os_image_url_override:sum"}'

```

1.2.2. 显示 Insights Operator 收集的数据

您可以查看 Insights Operator 收集的数据。

先决条件

- 使用具有 **cluster-admin** 角色的用户访问集群。

流程

1. 为 Insights Operator 查找当前正在运行的 pod 的名称：

```

$ INSIGHTS_OPERATOR_POD=$(oc get pods --namespace=openshift-insights -o custom-
columns=:metadata.name --no-headers --field-selector=status.phase=Running)

```

2. 复制 Insights Operator 收集的最近数据存档：

```

$ oc cp openshift-insights/$INSIGHTS_OPERATOR_POD:/var/lib/insights-operator ./insights-
data

```

Insights Operator 最近存档可在 **insights-data** 目录中找到。

1.3. 使用 INSIGHTS 发现集群中的问题

Insights 会反复分析 Insights Operator 发送的数据。OpenShift Dedicated 用户可以在 [OpenShift Cluster Manager Hybrid Cloud Console](#) 上每个集群的 **Insights** 标签页中显示报告。

1.3.1. 关于 Red Hat Insights Advisor for OpenShift Dedicated

您可以使用 Insights Advisor 来评估和监控 OpenShift Dedicated 集群的健康状态。无论您是关注单个集群还是与整个基础架构相关，都必须了解对您可能会影响服务可用性、容错、性能或安全性的问题。

Insights 会重复使用一个 *建议* 的数据库来重复分析 Insights Operator 发送的数据，这是会使 OpenShift Dedicated 集群处于风险状态的条件集。然后，您的数据将上传到 Red Hat Hybrid Cloud Console 上的 Insights Advisor 服务，您可以执行以下操作：

- 请参阅受特定建议影响的集群。
- 使用可靠的过滤功能，将结果优化为这些建议。
- 了解更多有关单独建议、了解它们存在的风险的详细信息，并针对您的单个集群量身定制解决方案。

- 与其他利益相关者分享结果。

1.3.2. 了解 Insights Advisor 建议

深入了解顾问捆绑包信息，它们可能对集群的服务可用性、容错、性能或安全性造成负面影响。这些信息集在 Insights Advisor 中称为建议，并包含以下信息：

- **Name**：有关建议的简要描述
- **Added**: 在将建议发布到 Insights Advisor 归档时
- **Category**: 问题是否有可能对服务可用性、容错、性能或安全性造成负面影响
- **Total risk**: 从条件对基础架构造成负面影响的 *可能性* 派生的值，以及发生以下情况时对操作的 *影响*
- **Clusters**：检测到建议的集群列表
- **Description**：这个问题的简要概要，包括它对您的集群的影响
- **Link to associated topics**: 红帽的相关信息

1.3.3. 显示集群中的潜在问题

本节论述了如何在 [OpenShift Cluster Manager Hybrid Cloud Console](#) 上的 Insights Advisor 中显示 Insights 报告。

请注意，Insights 会重复分析您的集群并显示最新结果。这些结果可能会改变，如您解决了一个问题，或发现了一个新问题时。

先决条件

- 您的集群已在 [OpenShift Cluster Manager 混合云控制台](#) 上注册。
- 启用了远程健康报告（这是默认设置）。
- 登录到 [OpenShift Cluster Manager 混合云控制台](#)。

流程

1. 在 [OpenShift Cluster Manager Hybrid Cloud Console](#) 上进入到 **Advisor** → **Recommendations**。

根据结果，Insights Advisor 会显示以下之一：

- 如果 Insights 没有发现任何问题，则 **不会找到匹配的建议**。
 - Insights 检测到的问题列表，按风险分组（低、中、重要和严重）。
 - **No clusters yet**，如果 Insights 还没有分析集群。这个分析会在集群安装、注册并连接到互联网后立即开始。
2. 如果显示任何问题，请点击条目前面的 > 图标以了解更多详情。
根据具体问题，详细信息还可以包含来自红帽有关此问题的更多信息的链接。

1.3.4. 显示所有 Insights Advisor 建议

默认情况下，Recommendations 视图仅显示集群中检测到的建议。但是，您可以查看 advisor 归档中的所有建议。

先决条件

- 启用了远程健康报告（这是默认设置）。
- 集群在 Red Hat Hybrid Cloud Console [注册](#)。
- 登录到 [OpenShift Cluster Manager 混合云控制台](#)。

流程

1. 在 [OpenShift Cluster Manager Hybrid Cloud Console](#) 上进入到 **Advisor** → **Recommendations**。
2. 点 **Clusters Impacted** 和 **Status** 过滤器旁边的 **X** 图标。
现在，您可以浏览集群的所有潜在建议。

1.3.5. 禁用 Insights Advisor 建议

您可以禁用影响集群的具体建议，以便它们不再出现在报告中。可以禁用单个集群或所有集群的建议。



注意

禁用对所有集群的建议也适用于所有集群。

先决条件

- 启用了远程健康报告（这是默认设置）。
- 您的集群已在 [OpenShift Cluster Manager 混合云控制台](#) 上注册。
- 登录到 [OpenShift Cluster Manager 混合云控制台](#)。

流程

1. 在 [OpenShift Cluster Manager Hybrid Cloud Console](#) 上进入到 **Advisor** → **Recommendations**。
2. 点要禁用的建议名称。您会被定向到单一推荐页面。
3. 禁用单个集群的建议：
 - a. 点击该集群的 **Options** 菜单 ，然后点 **Disable recommendations for cluster**。
 - b. 输入说明并单击 **保存**。
4. 禁用所有集群的建议：
 - a. 点 **Actions** → **Disable recommendations**。
 - b. 输入说明并单击 **保存**。

1.3.6. 启用之前禁用的 Insights Advisor 建议


当所有集群都禁用了一个建议时，您将不再看到 Insights Advisor 中的建议。您可以更改此行为。

先决条件

- 启用了远程健康报告（这是默认设置）。
- 您的集群已在 [OpenShift Cluster Manager 混合云控制台](#) 上注册。
- 登录到 [OpenShift Cluster Manager 混合云控制台](#)。

流程

1. 在 [OpenShift Cluster Manager Hybrid Cloud Console](#) 上进入到 **Advisor → Recommendations**。
2. 按 **Status → Disabled** 过滤建议。
3. 找到启用的建议。

4. 点 **Options** 菜单 ，然后点 **Enable recommendations**。

1.3.7. 在 web 控制台中显示 Insights 状态

Insights 会重复分析您的集群，可以在 OpenShift Dedicated web 控制台中显示已识别的集群潜在问题的状态。此状态显示不同类别中的问题数量，以及 [OpenShift Cluster Manager Hybrid Cloud Console](#) 中报告的链接。

先决条件

- 集群在 [OpenShift Cluster Manager Hybrid Cloud Console](#) 中注册。
- 启用了远程健康报告（这是默认设置）。
- 已登陆到 OpenShift Dedicated Web 控制台。

流程

1. 在 OpenShift Dedicated Web 控制台中进入 **Home → Overview**。
2. 点 **Status** 卡上的 **Insights**。
弹出窗口列出了按风险分组的潜在问题。点击独立类别或查看 **Insights Advisor** 中的所有建议，以显示更多详情。

第 2 章 集群规格总结

2.1. 通过 `CLUSTERVERSION` 总结集群规格

您可以通过查询 `clusterversion` 资源来获取 OpenShift Dedicated 集群规格概述。

先决条件

- 您可以使用具有 `cluster-admin` 角色的用户访问集群。
- 已安装 OpenShift CLI(`oc`)。

流程

1. 查询集群版本、可用性、运行时间以及常规状态：

```
$ oc get clusterversion
```

2. 获取集群规格、更新可用性和更新历史记录の詳細概述：

```
$ oc describe clusterversion
```

第 3 章 OPENSIFT DEDICATED 受管资源

3.1. 概述

以下涵盖了由 Service Reliability Engineering Platform (SRE-P) 团队管理或保护的所有资源。客户不应尝试修改这些资源，因为这样做可能会导致集群不稳定。

3.2. HIVE 受管资源

以下列表显示了由 OpenShift Hive 管理的 OpenShift Dedicated 资源，即集中式配置管理系统。除了安装期间创建的 OpenShift Container Platform 资源外，这些资源还除外。OpenShift Hive 持续尝试保持所有 OpenShift Dedicated 集群的一致性。应该通过 OpenShift Cluster Manager 对 OpenShift Dedicated 资源进行更改，以便 OpenShift Cluster Manager 和 Hive 同步。如果 OpenShift Cluster Manager 不支持修改问题中的资源，请联系 ocm-feedback@redhat.com。

例 3.1. Hive 受管资源列表

```
Resources:
  ConfigMap:
    - namespace: openshift-deployment-validation-operator
      name: deployment-validation-operator-config
    - namespace: openshift-managed-upgrade-operator
      name: managed-upgrade-operator-config
    - namespace: openshift-monitoring
      name: cluster-monitoring-config
    - namespace: openshift-monitoring
      name: managed-namespaces
    - namespace: openshift-monitoring
      name: ocp-namespaces
    - namespace: openshift-monitoring
      name: osd-rebalance-infra-nodes
    - namespace: openshift-monitoring
      name: sre-dns-latency-exporter-code
    - namespace: openshift-monitoring
      name: sre-dns-latency-exporter-trusted-ca-bundle
    - namespace: openshift-monitoring
      name: sre-ebs-iops-reporter-code
    - namespace: openshift-monitoring
      name: sre-ebs-iops-reporter-trusted-ca-bundle
    - namespace: openshift-monitoring
      name: sre-stuck-ebs-vols-code
    - namespace: openshift-monitoring
      name: sre-stuck-ebs-vols-trusted-ca-bundle
    - namespace: openshift-monitoring
      name: token-refresher-trusted-ca-bundle
    - namespace: openshift-security
      name: osd-audit-policy
    - namespace: openshift-validation-webhook
      name: webhook-cert
  Endpoints:
    - namespace: openshift-deployment-validation-operator
      name: deployment-validation-operator-metrics
    - namespace: openshift-monitoring
      name: sre-dns-latency-exporter
```

- namespace: openshift-monitoring
name: sre-ebs-iops-reporter
- namespace: openshift-monitoring
name: sre-stuck-ebs-vols
- namespace: openshift-monitoring
name: token-refresher
- namespace: openshift-validation-webhook
name: validation-webhook

Namespace:

- name: dedicated-admin
- name: openshift-addon-operator
- name: openshift-aqua
- name: openshift-aws-vpce-operator
- name: openshift-backplane
- name: openshift-backplane-cee
- name: openshift-backplane-csa
- name: openshift-backplane-cse
- name: openshift-backplane-csm
- name: openshift-backplane-managed-scripts
- name: openshift-backplane-mobb
- name: openshift-backplane-srep
- name: openshift-backplane-tam
- name: openshift-build-test
- name: openshift-cloud-ingress-operator
- name: openshift-codeready-workspaces
- name: openshift-custom-domains-operator
- name: openshift-customer-monitoring
- name: openshift-deployment-validation-operator
- name: openshift-managed-node-metadata-operator
- name: openshift-managed-upgrade-operator
- name: openshift-must-gather-operator
- name: openshift-observability-operator
- name: openshift-ocm-agent-operator
- name: openshift-operators-redhat
- name: openshift-osd-metrics
- name: openshift-rbac-permissions
- name: openshift-route-monitor-operator
- name: openshift-security
- name: openshift-splunk-forwarder-operator
- name: openshift-sre-pruning
- name: openshift-strimzi
- name: openshift-validation-webhook
- name: openshift-velero
- name: openshift-monitoring
- name: openshift
- name: openshift-cluster-version

ReplicationController:

- namespace: openshift-monitoring
name: sre-ebs-iops-reporter-1
- namespace: openshift-monitoring
name: sre-stuck-ebs-vols-1

Secret:

- namespace: openshift-authentication
name: v4-0-config-user-idp-0-file-data
- namespace: openshift-authentication
name: v4-0-config-user-template-error

- namespace: openshift-authentication
name: v4-0-config-user-template-login
 - namespace: openshift-authentication
name: v4-0-config-user-template-provider-selection
 - namespace: openshift-config
name: htpasswd-secret
 - namespace: openshift-config
name: osd-oauth-templates-errors
 - namespace: openshift-config
name: osd-oauth-templates-login
 - namespace: openshift-config
name: osd-oauth-templates-providers
 - namespace: openshift-config
name: sbasabat-mc-primary-cert-bundle-secret
 - namespace: openshift-config
name: support
 - namespace: openshift-ingress
name: sbasabat-mc-primary-cert-bundle-secret
 - namespace: openshift-kube-apiserver
name: user-serving-cert-000
 - namespace: openshift-kube-apiserver
name: user-serving-cert-001
 - namespace: openshift-monitoring
name: dms-secret
 - namespace: openshift-monitoring
name: observatorium-credentials
 - namespace: openshift-monitoring
name: pd-secret
 - namespace: openshift-security
name: splunk-auth
- ServiceAccount:
- namespace: openshift-backplane-managed-scripts
name: osd-backplane
 - namespace: openshift-backplane-srep
name: osd-delete-ownerrefs-serviceaccounts
 - namespace: openshift-backplane
name: osd-delete-backplane-serviceaccounts
 - namespace: openshift-build-test
name: sre-build-test
 - namespace: openshift-cloud-ingress-operator
name: cloud-ingress-operator
 - namespace: openshift-custom-domains-operator
name: custom-domains-operator
 - namespace: openshift-managed-upgrade-operator
name: managed-upgrade-operator
 - namespace: openshift-marketplace
name: osd-patch-subscription-source
 - namespace: openshift-monitoring
name: configure-alertmanager-operator
 - namespace: openshift-monitoring
name: osd-cluster-ready
 - namespace: openshift-monitoring
name: osd-rebalance-infra-nodes
 - namespace: openshift-monitoring
name: sre-dns-latency-exporter
 - namespace: openshift-monitoring

- name: sre-ebs-iops-reporter
- namespace: openshift-monitoring
 - name: sre-stuck-ebs-vols
- namespace: openshift-network-diagnostics
 - name: sre-pod-network-connectivity-check-pruner
- namespace: openshift-ocm-agent-operator
 - name: ocm-agent-operator
- namespace: openshift-rbac-permissions
 - name: rbac-permissions-operator
- namespace: openshift-splunk-forwarder-operator
 - name: splunk-forwarder-operator
- namespace: openshift-sre-pruning
 - name: bz1980755
- namespace: openshift-sre-pruning
 - name: sre-pruner-sa
- namespace: openshift-validation-webhook
 - name: validation-webhook
- namespace: openshift-velero
 - name: managed-velero-operator
- namespace: openshift-velero
 - name: velero
- namespace: openshift-backplane-srep
 - name: UNIQUE_BACKPLANE_SERVICEACCOUNT_ID

Service:

- namespace: openshift-deployment-validation-operator
 - name: deployment-validation-operator-metrics
- namespace: openshift-monitoring
 - name: sre-dns-latency-exporter
- namespace: openshift-monitoring
 - name: sre-ebs-iops-reporter
- namespace: openshift-monitoring
 - name: sre-stuck-ebs-vols
- namespace: openshift-monitoring
 - name: token-refresher
- namespace: openshift-validation-webhook
 - name: validation-webhook

AddonOperator:

- name: addon-operator

ValidatingWebhookConfiguration:

- name: sre-hiveownership-validation
- name: sre-namespace-validation
- name: sre-pod-validation
- name: sre-prometheusrule-validation
- name: sre-regular-user-validation
- name: sre-scc-validation
- name: sre-techpreviewnoupgrade-validation

DaemonSet:

- namespace: openshift-monitoring
 - name: sre-dns-latency-exporter
- namespace: openshift-security
 - name: audit-exporter
- namespace: openshift-validation-webhook
 - name: validation-webhook

Deployment:

- namespace: openshift-monitoring
 - name: token-refresher

DeploymentConfig:

- namespace: openshift-monitoring
name: sre-ebs-iops-reporter
- namespace: openshift-monitoring
name: sre-stuck-ebs-vols

ClusterRoleBinding:

- name: aqua-scanner-binding
- name: backplane-cluster-admin
- name: backplane-impersonate-cluster-admin
- name: bz1980755
- name: configure-alertmanager-operator-prom
- name: dedicated-admins-cluster
- name: dedicated-admins-registry-cas-cluster
- name: openshift-backplane-managed-scripts-reader
- name: osd-cluster-ready
- name: osd-delete-backplane-script-resources
- name: osd-delete-ownerrefs-serviceaccounts
- name: osd-patch-subscription-source
- name: osd-rebalance-infra-nodes
- name: pcap-dedicated-admins
- name: splunk-forwarder-operator
- name: splunk-forwarder-operator-clusterrolebinding
- name: sre-build-test
- name: sre-pod-network-connectivity-check-pruner
- name: sre-pruner-buildsdeploys-pruning
- name: velero
- name: webhook-validation

ClusterRole:

- name: backplane-cee-readers-cluster
- name: backplane-impersonate-cluster-admin
- name: backplane-readers-cluster
- name: backplane-srep-admins-cluster
- name: backplane-srep-admins-project
- name: bz1980755
- name: dedicated-admins-aggregate-cluster
- name: dedicated-admins-aggregate-project
- name: dedicated-admins-cluster
- name: dedicated-admins-manage-operators
- name: dedicated-admins-project
- name: dedicated-admins-registry-cas-cluster
- name: dedicated-readers
- name: image-scanner
- name: openshift-backplane-managed-scripts-reader
- name: openshift-splunk-forwarder-operator
- name: osd-cluster-ready
- name: osd-custom-domains-dedicated-admin-cluster
- name: osd-delete-backplane-script-resources
- name: osd-delete-backplane-serviceaccounts
- name: osd-delete-ownerrefs-serviceaccounts
- name: osd-get-namespace
- name: osd-netnamespaces-dedicated-admin-cluster
- name: osd-patch-subscription-source
- name: osd-readers-aggregate
- name: osd-rebalance-infra-nodes
- name: osd-rebalance-infra-nodes-openshift-pod-rebalance
- name: pcap-dedicated-admins

- name: splunk-forwarder-operator
- name: sre-allow-read-machine-info
- name: sre-build-test
- name: sre-pruner-buildsdeploys-cr
- name: webhook-validation-cr
- RoleBinding:
- namespace: kube-system
name: cloud-ingress-operator-cluster-config-v1-reader
- namespace: kube-system
name: managed-velero-operator-cluster-config-v1-reader
- namespace: openshift-aqua
name: dedicated-admins-openshift-aqua
- namespace: openshift-backplane-managed-scripts
name: osd-delete-backplane-script-resources
- namespace: openshift-build-test
name: sre-build-test
- namespace: openshift-cloud-ingress-operator
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
- namespace: openshift-codeready-workspaces
name: dedicated-admins-openshift-codeready-workspaces
- namespace: openshift-config
name: dedicated-admins-project-request
- namespace: openshift-config
name: dedicated-admins-registry-cas-project
- namespace: openshift-config
name: muo-pullsecret-reader
- namespace: openshift-config
name: oao-openshiftconfig-reader
- namespace: openshift-config
name: osd-cluster-ready
- namespace: openshift-custom-domains-operator
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
- namespace: openshift-customer-monitoring
name: dedicated-admins-openshift-customer-monitoring
- namespace: openshift-customer-monitoring
name: prometheus-k8s-openshift-customer-monitoring
- namespace: openshift-dns
name: dedicated-admins-openshift-dns
- namespace: openshift-dns
name: osd-rebalance-infra-nodes-openshift-dns
- namespace: openshift-image-registry
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
- namespace: openshift-ingress-operator
name: cloud-ingress-operator
- namespace: openshift-ingress
name: cloud-ingress-operator
- namespace: openshift-kube-apiserver
name: cloud-ingress-operator
- namespace: openshift-machine-api
name: cloud-ingress-operator
- namespace: openshift-machine-api
name: osd-cluster-ready
- namespace: openshift-machine-api
name: sre-ebs-iops-reporter-read-machine-info
- namespace: openshift-machine-api
name: sre-stuck-ebs-vols-read-machine-info

- namespace: openshift-managed-node-metadata-operator
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
- namespace: openshift-marketplace
name: dedicated-admins-openshift-marketplace
- namespace: openshift-monitoring
name: backplane-cee
- namespace: openshift-monitoring
name: muo-monitoring-reader
- namespace: openshift-monitoring
name: oao-monitoring-manager
- namespace: openshift-monitoring
name: osd-cluster-ready
- namespace: openshift-monitoring
name: osd-rebalance-infra-nodes-openshift-monitoring
- namespace: openshift-monitoring
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
- namespace: openshift-monitoring
name: sre-dns-latency-exporter
- namespace: openshift-monitoring
name: sre-ebs-iops-reporter
- namespace: openshift-monitoring
name: sre-stuck-ebs-vols
- namespace: openshift-must-gather-operator
name: backplane-cee-mustgather
- namespace: openshift-must-gather-operator
name: backplane-srep-mustgather
- namespace: openshift-must-gather-operator
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
- namespace: openshift-network-diagnostics
name: sre-pod-network-connectivity-check-pruner
- namespace: openshift-network-operator
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
- namespace: openshift-ocm-agent-operator
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
- namespace: openshift-operators-redhat
name: admin-dedicated-admins
- namespace: openshift-operators-redhat
name: admin-system:serviceaccounts:dedicated-admin
- namespace: openshift-operators-redhat
name: openshift-operators-redhat-dedicated-admins
- namespace: openshift-operators-redhat
name: openshift-operators-redhat:serviceaccounts:dedicated-admin
- namespace: openshift-operators
name: dedicated-admins-openshift-operators
- namespace: openshift-osd-metrics
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
- namespace: openshift-osd-metrics
name: prometheus-k8s
- namespace: openshift-rbac-permissions
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
- namespace: openshift-rbac-permissions
name: prometheus-k8s
- namespace: openshift-route-monitor-operator
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
- namespace: openshift-security
name: osd-rebalance-infra-nodes-openshift-security

- namespace: openshift-splunk-forwarder-operator
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
 - namespace: openshift-strimzi
name: dedicated-admins-openshift-strimzi
 - namespace: openshift-user-workload-monitoring
name: dedicated-admins-uwm-config-create
 - namespace: openshift-user-workload-monitoring
name: dedicated-admins-uwm-config-edit
 - namespace: openshift-user-workload-monitoring
name: dedicated-admins-uwm-managed-am-secret
 - namespace: openshift-user-workload-monitoring
name: osd-rebalance-infra-nodes-openshift-user-workload-monitoring
 - namespace: openshift-velero
name: osd-rebalance-infra-nodes-openshift-pod-rebalance
 - namespace: openshift-velero
name: prometheus-k8s
- Role:
- namespace: kube-system
name: cluster-config-v1-reader
 - namespace: kube-system
name: cluster-config-v1-reader-cio
 - namespace: openshift-aqua
name: dedicated-admins-openshift-aqua
 - namespace: openshift-backplane-managed-scripts
name: osd-delete-backplane-script-resources
 - namespace: openshift-build-test
name: sre-build-test
 - namespace: openshift-codeready-workspaces
name: dedicated-admins-openshift-codeready-workspaces
 - namespace: openshift-config
name: dedicated-admins-project-request
 - namespace: openshift-config
name: dedicated-admins-registry-cas-project
 - namespace: openshift-config
name: muo-pullsecret-reader
 - namespace: openshift-config
name: oao-openshiftconfig-reader
 - namespace: openshift-config
name: osd-cluster-ready
 - namespace: openshift-customer-monitoring
name: dedicated-admins-openshift-customer-monitoring
 - namespace: openshift-customer-monitoring
name: prometheus-k8s-openshift-customer-monitoring
 - namespace: openshift-dns
name: dedicated-admins-openshift-dns
 - namespace: openshift-dns
name: osd-rebalance-infra-nodes-openshift-dns
 - namespace: openshift-ingress-operator
name: cloud-ingress-operator
 - namespace: openshift-ingress
name: cloud-ingress-operator
 - namespace: openshift-kube-apiserver
name: cloud-ingress-operator
 - namespace: openshift-machine-api
name: cloud-ingress-operator
 - namespace: openshift-machine-api

- name: osd-cluster-ready
- namespace: openshift-marketplace
 - name: dedicated-admins-openshift-marketplace
- namespace: openshift-monitoring
 - name: backplane-cee
- namespace: openshift-monitoring
 - name: muo-monitoring-reader
- namespace: openshift-monitoring
 - name: oao-monitoring-manager
- namespace: openshift-monitoring
 - name: osd-cluster-ready
- namespace: openshift-monitoring
 - name: osd-rebalance-infra-nodes-openshift-monitoring
- namespace: openshift-must-gather-operator
 - name: backplane-cee-mustgather
- namespace: openshift-must-gather-operator
 - name: backplane-srep-mustgather
- namespace: openshift-network-diagnostics
 - name: sre-pod-network-connectivity-check-pruner
- namespace: openshift-operators
 - name: dedicated-admins-openshift-operators
- namespace: openshift-osd-metrics
 - name: prometheus-k8s
- namespace: openshift-rbac-permissions
 - name: prometheus-k8s
- namespace: openshift-security
 - name: osd-rebalance-infra-nodes-openshift-security
- namespace: openshift-strimzi
 - name: dedicated-admins-openshift-strimzi
- namespace: openshift-user-workload-monitoring
 - name: dedicated-admins-user-workload-monitoring-create-cm
- namespace: openshift-user-workload-monitoring
 - name: dedicated-admins-user-workload-monitoring-manage-am-secret
- namespace: openshift-user-workload-monitoring
 - name: osd-rebalance-infra-nodes-openshift-user-workload-monitoring
- namespace: openshift-velero
 - name: prometheus-k8s

CronJob:

- namespace: openshift-backplane-managed-scripts
 - name: osd-delete-backplane-script-resources
- namespace: openshift-backplane-srep
 - name: osd-delete-ownerrefs-serviceaccounts
- namespace: openshift-backplane
 - name: osd-delete-backplane-serviceaccounts
- namespace: openshift-build-test
 - name: sre-build-test
- namespace: openshift-marketplace
 - name: osd-patch-subscription-source
- namespace: openshift-monitoring
 - name: osd-rebalance-infra-nodes
- namespace: openshift-network-diagnostics
 - name: sre-pod-network-connectivity-check-pruner
- namespace: openshift-sre-pruning
 - name: builds-pruner
- namespace: openshift-sre-pruning
 - name: bz1980755

- namespace: openshift-sre-pruning
name: deployments-pruner

Job:

- namespace: openshift-monitoring
name: osd-cluster-ready

CredentialsRequest:

- namespace: openshift-cloud-ingress-operator
name: cloud-ingress-operator-credentials-aws
- namespace: openshift-cloud-ingress-operator
name: cloud-ingress-operator-credentials-gcp
- namespace: openshift-monitoring
name: sre-ebs-iops-reporter-aws-credentials
- namespace: openshift-monitoring
name: sre-stuck-ebs-vols-aws-credentials
- namespace: openshift-velero
name: managed-velero-operator-iam-credentials-aws
- namespace: openshift-velero
name: managed-velero-operator-iam-credentials-gcp

APIScheme:

- namespace: openshift-cloud-ingress-operator
name: rh-api

PublishingStrategy:

- namespace: openshift-cloud-ingress-operator
name: publishingstrategy

EndpointSlice:

- namespace: openshift-deployment-validation-operator
name: deployment-validation-operator-metrics-rhtwg
- namespace: openshift-monitoring
name: sre-dns-latency-exporter-4cw9r
- namespace: openshift-monitoring
name: sre-ebs-iops-reporter-6tx5g
- namespace: openshift-monitoring
name: sre-stuck-ebs-vols-gmdhs
- namespace: openshift-monitoring
name: token-refresher-v5cpg
- namespace: openshift-validation-webhook
name: validation-webhook-bl99t

MachineHealthCheck:

- namespace: openshift-machine-api
name: srep-infra-healthcheck
- namespace: openshift-machine-api
name: srep-metal-worker-healthcheck
- namespace: openshift-machine-api
name: srep-worker-healthcheck

MachineSet:

- namespace: openshift-machine-api
name: sbasabat-mc-qhqkn-infra-us-east-1a
- namespace: openshift-machine-api
name: sbasabat-mc-qhqkn-worker-us-east-1a

ContainerRuntimeConfig:

- name: custom-crio

KubeletConfig:

- name: custom-kubelet

SubjectPermission:

- namespace: openshift-rbac-permissions
name: backplane-cee

- namespace: openshift-rbac-permissions
name: backplane-csa
 - namespace: openshift-rbac-permissions
name: backplane-cse
 - namespace: openshift-rbac-permissions
name: backplane-csm
 - namespace: openshift-rbac-permissions
name: backplane-mobb
 - namespace: openshift-rbac-permissions
name: backplane-srep
 - namespace: openshift-rbac-permissions
name: backplane-tam
 - namespace: openshift-rbac-permissions
name: dedicated-admin-serviceaccounts
 - namespace: openshift-rbac-permissions
name: dedicated-admin-serviceaccounts-core-ns
 - namespace: openshift-rbac-permissions
name: dedicated-admins
 - namespace: openshift-rbac-permissions
name: dedicated-admins-alert-routing-edit
 - namespace: openshift-rbac-permissions
name: dedicated-admins-core-ns
 - namespace: openshift-rbac-permissions
name: dedicated-admins-customer-monitoring
 - namespace: openshift-rbac-permissions
name: osd-delete-backplane-serviceaccounts
 - namespace: openshift-rbac-permissions
name: sre-build-test
- VeleroInstall:
- namespace: openshift-velero
name: cluster
- PrometheusRule:
- namespace: openshift-monitoring
name: rhmi-sre-cluster-admins
 - namespace: openshift-monitoring
name: rhoam-sre-cluster-admins
 - namespace: openshift-monitoring
name: sre-alertmanager-silences-active
 - namespace: openshift-monitoring
name: sre-alerts-stuck-builds
 - namespace: openshift-monitoring
name: sre-alerts-stuck-volumes
 - namespace: openshift-monitoring
name: sre-cloud-ingress-operator-offline-alerts
 - namespace: openshift-monitoring
name: sre-configure-alertmanager-operator-offline-alerts
 - namespace: openshift-monitoring
name: sre-control-plane-resizing-alerts
 - namespace: openshift-monitoring
name: sre-dns-alerts
 - namespace: openshift-monitoring
name: sre-ebs-iops-burstbalance
 - namespace: openshift-monitoring
name: sre-elasticsearch-jobs
 - namespace: openshift-monitoring
name: sre-elasticsearch-managed-notification-alerts

- namespace: openshift-monitoring
name: sre-excessive-memory
 - namespace: openshift-monitoring
name: sre-haproxy-reload-fail
 - namespace: openshift-monitoring
name: sre-internal-slo-recording-rules
 - namespace: openshift-monitoring
name: sre-kubequotaexceeded
 - namespace: openshift-monitoring
name: sre-leader-election-master-status-alerts
 - namespace: openshift-monitoring
name: sre-managed-node-metadata-operator-alerts
 - namespace: openshift-monitoring
name: sre-managed-notification-alerts
 - namespace: openshift-monitoring
name: sre-managed-upgrade-operator-alerts
 - namespace: openshift-monitoring
name: sre-managed-velero-operator-alerts
 - namespace: openshift-monitoring
name: sre-node-unschedulable
 - namespace: openshift-monitoring
name: sre-oauth-server
 - namespace: openshift-monitoring
name: sre-pending-csr-alert
 - namespace: openshift-monitoring
name: sre-proxy-managed-notification-alerts
 - namespace: openshift-monitoring
name: sre-pruning
 - namespace: openshift-monitoring
name: sre-pv
 - namespace: openshift-monitoring
name: sre-router-health
 - namespace: openshift-monitoring
name: sre-runaway-sdn-preventing-container-creation
 - namespace: openshift-monitoring
name: sre-slo-recording-rules
 - namespace: openshift-monitoring
name: sre-telemeter-client
 - namespace: openshift-monitoring
name: sre-telemetry-managed-labels-recording-rules
 - namespace: openshift-monitoring
name: sre-upgrade-send-managed-notification-alerts
 - namespace: openshift-monitoring
name: sre-uptime-sla
- ServiceMonitor:
- namespace: openshift-monitoring
name: sre-dns-latency-exporter
 - namespace: openshift-monitoring
name: sre-ebs-iops-reporter
 - namespace: openshift-monitoring
name: sre-stuck-ebs-vols
- ClusterUrlMonitor:
- namespace: openshift-route-monitor-operator
name: api
- RouteMonitor:
- namespace: openshift-route-monitor-operator

name: console

NetworkPolicy:

- namespace: openshift-deployment-validation-operator
name: allow-from-openshift-insights
- namespace: openshift-deployment-validation-operator
name: allow-from-openshift-olm
- namespace: openshift-monitoring
name: token-refresher

ManagedNotification:

- namespace: openshift-ocm-agent-operator
name: sre-elasticsearch-managed-notifications
- namespace: openshift-ocm-agent-operator
name: sre-managed-notifications
- namespace: openshift-ocm-agent-operator
name: sre-proxy-managed-notifications
- namespace: openshift-ocm-agent-operator
name: sre-upgrade-managed-notifications

OcmAgent:

- namespace: openshift-ocm-agent-operator
name: ocmagent

CatalogSource:

- namespace: openshift-addon-operator
name: addon-operator-catalog
- namespace: openshift-cloud-ingress-operator
name: cloud-ingress-operator-registry
- namespace: openshift-custom-domains-operator
name: custom-domains-operator-registry
- namespace: openshift-deployment-validation-operator
name: deployment-validation-operator-catalog
- namespace: openshift-managed-node-metadata-operator
name: managed-node-metadata-operator-registry
- namespace: openshift-managed-upgrade-operator
name: managed-upgrade-operator-catalog
- namespace: openshift-monitoring
name: configure-alertmanager-operator-registry
- namespace: openshift-must-gather-operator
name: must-gather-operator-registry
- namespace: openshift-observability-operator
name: observability-operator-catalog
- namespace: openshift-ocm-agent-operator
name: ocm-agent-operator-registry
- namespace: openshift-osd-metrics
name: osd-metrics-exporter-registry
- namespace: openshift-rbac-permissions
name: rbac-permissions-operator-registry
- namespace: openshift-route-monitor-operator
name: route-monitor-operator-registry
- namespace: openshift-splunk-forwarder-operator
name: splunk-forwarder-operator-catalog
- namespace: openshift-velero
name: managed-velero-operator-registry

OperatorGroup:

- namespace: openshift-addon-operator
name: addon-operator-og
- namespace: openshift-aqua
name: openshift-aqua

- namespace: openshift-cloud-ingress-operator
name: cloud-ingress-operator
- namespace: openshift-codeready-workspaces
name: openshift-codeready-workspaces
- namespace: openshift-custom-domains-operator
name: custom-domains-operator
- namespace: openshift-customer-monitoring
name: openshift-customer-monitoring
- namespace: openshift-deployment-validation-operator
name: deployment-validation-operator-og
- namespace: openshift-managed-node-metadata-operator
name: managed-node-metadata-operator
- namespace: openshift-managed-upgrade-operator
name: managed-upgrade-operator-og
- namespace: openshift-must-gather-operator
name: must-gather-operator
- namespace: openshift-observability-operator
name: observability-operator-og
- namespace: openshift-ocm-agent-operator
name: ocm-agent-operator-og
- namespace: openshift-osd-metrics
name: osd-metrics-exporter
- namespace: openshift-rbac-permissions
name: rbac-permissions-operator
- namespace: openshift-route-monitor-operator
name: route-monitor-operator
- namespace: openshift-splunk-forwarder-operator
name: splunk-forwarder-operator-og
- namespace: openshift-strimzi
name: openshift-strimzi
- namespace: openshift-velero
name: managed-velero-operator

Subscription:

- namespace: openshift-addon-operator
name: addon-operator
- namespace: openshift-cloud-ingress-operator
name: cloud-ingress-operator
- namespace: openshift-custom-domains-operator
name: custom-domains-operator
- namespace: openshift-deployment-validation-operator
name: deployment-validation-operator
- namespace: openshift-managed-node-metadata-operator
name: managed-node-metadata-operator
- namespace: openshift-managed-upgrade-operator
name: managed-upgrade-operator
- namespace: openshift-monitoring
name: configure-alertmanager-operator
- namespace: openshift-must-gather-operator
name: must-gather-operator
- namespace: openshift-observability-operator
name: observability-operator
- namespace: openshift-ocm-agent-operator
name: ocm-agent-operator
- namespace: openshift-osd-metrics
name: osd-metrics-exporter
- namespace: openshift-rbac-permissions


```
name: rbac-permissions-operator
- namespace: openshift-route-monitor-operator
  name: route-monitor-operator
- namespace: openshift-splunk-forwarder-operator
  name: openshift-splunk-forwarder-operator
- namespace: openshift-velero
  name: managed-velero-operator
PackageManifest:
- namespace: openshift-splunk-forwarder-operator
  name: splunk-forwarder-operator
- namespace: openshift-addon-operator
  name: addon-operator
- namespace: openshift-rbac-permissions
  name: rbac-permissions-operator
- namespace: openshift-cloud-ingress-operator
  name: cloud-ingress-operator
- namespace: openshift-managed-node-metadata-operator
  name: managed-node-metadata-operator
- namespace: openshift-velero
  name: managed-velero-operator
- namespace: openshift-deployment-validation-operator
  name: managed-upgrade-operator
- namespace: openshift-custom-domains-operator
  name: managed-node-metadata-operator
- namespace: openshift-route-monitor-operator
  name: custom-domains-operator
- namespace: openshift-managed-upgrade-operator
  name: managed-upgrade-operator
- namespace: openshift-ocm-agent-operator
  name: ocm-agent-operator
- namespace: openshift-observability-operator
  name: observability-operator
- namespace: openshift-monitoring
  name: configure-alertmanager-operator
- namespace: openshift-must-gather-operator
  name: deployment-validation-operator
- namespace: openshift-osd-metrics
  name: osd-metrics-exporter
Status:
- {}
Project:
- name: dedicated-admin
- name: openshift-addon-operator
- name: openshift-aqua
- name: openshift-backplane
- name: openshift-backplane-cee
- name: openshift-backplane-csa
- name: openshift-backplane-cse
- name: openshift-backplane-csm
- name: openshift-backplane-managed-scripts
- name: openshift-backplane-mobb
- name: openshift-backplane-srep
- name: openshift-backplane-tam
- name: openshift-build-test
- name: openshift-cloud-ingress-operator
- name: openshift-codeready-workspaces
```

- name: openshift-custom-domains-operator
- name: openshift-customer-monitoring
- name: openshift-deployment-validation-operator
- name: openshift-managed-node-metadata-operator
- name: openshift-managed-upgrade-operator
- name: openshift-must-gather-operator
- name: openshift-observability-operator
- name: openshift-ocm-agent-operator
- name: openshift-operators-redhat
- name: openshift-osd-metrics
- name: openshift-rbac-permissions
- name: openshift-route-monitor-operator
- name: openshift-security
- name: openshift-splunk-forwarder-operator
- name: openshift-sre-pruning
- name: openshift-strimzi
- name: openshift-validation-webhook
- name: openshift-velero

ClusterResourceQuota:

- name: loadbalancer-quota
- name: persistent-volume-quota

SecurityContextConstraints:

- name: pcap-dedicated-admins
- name: splunkforwarder

SplunkForwarder:

- namespace: openshift-security
- name: splunkforwarder

Group:

- name: dedicated-admins

User:

- name: backplane-cluster-admin

Backup:

- namespace: openshift-velero
- name: daily-full-backup-20221123112305
- namespace: openshift-velero
- name: daily-full-backup-20221125042537
- namespace: openshift-velero
- name: daily-full-backup-20221126010038
- namespace: openshift-velero
- name: daily-full-backup-20221127010039
- namespace: openshift-velero
- name: daily-full-backup-20221128010040
- namespace: openshift-velero
- name: daily-full-backup-20221129050847
- namespace: openshift-velero
- name: hourly-object-backup-20221128051740
- namespace: openshift-velero
- name: hourly-object-backup-20221128061740
- namespace: openshift-velero
- name: hourly-object-backup-20221128071740
- namespace: openshift-velero
- name: hourly-object-backup-20221128081740
- namespace: openshift-velero
- name: hourly-object-backup-20221128091740
- namespace: openshift-velero
- name: hourly-object-backup-20221129050852

```

- namespace: openshift-velero
  name: hourly-object-backup-20221129051747
- namespace: openshift-velero
  name: weekly-full-backup-20221116184315
- namespace: openshift-velero
  name: weekly-full-backup-20221121033854
- namespace: openshift-velero
  name: weekly-full-backup-20221128020040
Schedule:
- namespace: openshift-velero
  name: daily-full-backup
- namespace: openshift-velero
  name: hourly-object-backup
- namespace: openshift-velero
  name: weekly-full-backup

```

3.3. OPENSIFT DEDICATED 附加组件命名空间

OpenShift Dedicated 附加组件是集群安装后可以安装的服务。这些额外服务包括 Red Hat OpenShift Dev Spaces、Red Hat OpenShift API Management 和 Cluster Logging Operator。以下命名空间中的资源的任何更改都可以在升级过程中被附加组件覆盖，这可能会导致附加组件功能不支持的配置。

例 3.2. 附加组件受管命名空间列表

```

addon-namespaces:
ocs-converged-dev: openshift-storage
managed-api-service-internal: redhat-rhoami-operator
codeready-workspaces-operator: codeready-workspaces-operator
managed-odh: redhat-ods-operator
codeready-workspaces-operator-qe: codeready-workspaces-operator-qe
integreatly-operator: redhat-rhmi-operator
nvidia-gpu-addon: redhat-nvidia-gpu-addon
integreatly-operator-internal: redhat-rhmi-operator
rhosak-qe: redhat-managed-kafka-operator-qe
rhoams: redhat-rhoam-operator
ocs-converged: openshift-storage
addon-operator: redhat-addon-operator
rhosak: redhat-managed-kafka-operator
kas-fleetshard-operator-qe: redhat-kas-fleetshard-operator-qe
prow-operator: prow
cluster-logging-operator: openshift-logging
advanced-cluster-management: redhat-open-cluster-management
cert-manager-operator: redhat-cert-manager-operator
dba-operator: addon-dba-operator
reference-addon: redhat-reference-addon
ocm-addon-test-operator: redhat-ocm-addon-test-operator
kas-fleetshard-operator: redhat-kas-fleetshard-operator
connectors-operator: redhat-openshift-connectors

```

3.4. OPENSIFT DEDICATED 验证 WEBHOOK

OpenShift Dedicated 验证 Webhook 是由 OpenShift SRE 团队维护的一组动态准入控制。对于各种类型的请求，这些 HTTP 回调也称为 Webhook，以确保集群稳定性。以下列表描述了各种带有控制注册的操作和资源的规则的 Webhook。任何尝试绕过这些验证 Webhook 都可能会影响集群的稳定性和可支持性。

例 3.3. 验证 Webhook 列表

```
[
  {
    "webhookName": "clusterlogging-validation",
    "rules": [
      {
        "operations": [
          "CREATE",
          "UPDATE"
        ],
        "apiGroups": [
          "logging.openshift.io"
        ],
        "apiVersions": [
          "v1"
        ],
        "resources": [
          "clusterloggings"
        ],
        "scope": "Namespaced"
      }
    ],
    "documentString": "Managed OpenShift Customers may set log retention outside the allowed range of 0-7 days"
  },
  {
    "webhookName": "hiveownership-validation",
    "rules": [
      {
        "operations": [
          "UPDATE",
          "DELETE"
        ],
        "apiGroups": [
          "quota.openshift.io"
        ],
        "apiVersions": [
          "*"
        ],
        "resources": [
          "clusterresourcequotas"
        ],
        "scope": "Cluster"
      }
    ],
    "webhookObjectSelector": {
      "matchLabels": {
        "hive.openshift.io/managed": "true"
      }
    },
    "documentString": "Managed OpenShift customers may not edit certain managed resources. A
```

```

managed resource has a \"hive.openshift.io/managed\": \"true\" label.\"
},
{
  \"webhookName\": \"namespace-validation\",
  \"rules\": [
    {
      \"operations\": [
        \"CREATE\",
        \"UPDATE\",
        \"DELETE\"
      ],
      \"apiGroups\": [
        \"\"
      ],
      \"apiVersions\": [
        \"*\"
      ],
      \"resources\": [
        \"namespaces\"
      ],
      \"scope\": \"Cluster\"
    }
  ],
  \"documentString\": \"Managed OpenShift Customers may not modify namespaces specified in
the [openshift-monitoring/addons-namespaces openshift-monitoring/managed-namespaces
openshift-monitoring/ocp-namespaces] ConfigMaps because customer workloads should be
placed in customer-created namespaces. Customers may not create namespaces identified by
this regular expression (^com$|^io$|^in$) because it could interfere with critical DNS resolution.
Additionally, customers may not set or change the values of these Namespace labels
[managed.openshift.io/storage-pv-quota-exempt managed.openshift.io/service-lb-quota-exempt].\"
},
{
  \"webhookName\": \"pod-validation\",
  \"rules\": [
    {
      \"operations\": [
        \"*\"
      ],
      \"apiGroups\": [
        \"v1\"
      ],
      \"apiVersions\": [
        \"*\"
      ],
      \"resources\": [
        \"pods\"
      ],
      \"scope\": \"Namespaced\"
    }
  ],
  \"documentString\": \"Managed OpenShift Customers may use tolerations on Pods that could
cause those Pods to be scheduled on infra or master nodes.\"
},
{
  \"webhookName\": \"regular-user-validation\",
  \"rules\": [

```

```
{
  "operations": [
    "*"
  ],
  "apiGroups": [
    "cloudcredential.openshift.io",
    "machine.openshift.io",
    "admissionregistration.k8s.io",
    "addons.managed.openshift.io",
    "cloudingress.managed.openshift.io",
    "managed.openshift.io",
    "ocmagent.managed.openshift.io",
    "splunkforwarder.managed.openshift.io",
    "upgrade.managed.openshift.io"
  ],
  "apiVersions": [
    "*"
  ],
  "resources": [
    "*"/*
  ],
  "scope": "*"
},
{
  "operations": [
    "*"
  ],
  "apiGroups": [
    "autoscaling.openshift.io"
  ],
  "apiVersions": [
    "*"
  ],
  "resources": [
    "clusterautoscalers",
    "machineautoscalers"
  ],
  "scope": "*"
},
{
  "operations": [
    "*"
  ],
  "apiGroups": [
    "config.openshift.io"
  ],
  "apiVersions": [
    "*"
  ],
  "resources": [
    "clusterversions",
    "clusterversions/status",
    "schedulers",
    "apiservers"
  ],
  "scope": "*"
}
```

```

},
{
  "operations": [
    "*"
  ],
  "apiGroups": [
    "operator.openshift.io"
  ],
  "apiVersions": [
    "*"
  ],
  "resources": [
    "kubernetes",
    "openshiftapiservers"
  ],
  "scope": "*"
},
{
  "operations": [
    "*"
  ],
  "apiGroups": [
    ""
  ],
  "apiVersions": [
    "*"
  ],
  "resources": [
    "nodes",
    "nodes/*"
  ],
  "scope": "*"
},
{
  "operations": [
    "*"
  ],
  "apiGroups": [
    "managed.openshift.io"
  ],
  "apiVersions": [
    "*"
  ],
  "resources": [
    "subjectpermissions",
    "subjectpermissions/*"
  ],
  "scope": "*"
},
{
  "operations": [
    "*"
  ],
  "apiGroups": [
    "network.openshift.io"
  ],

```

```

    "apiVersions": [
      "*"
    ],
    "resources": [
      "netnamespaces",
      "netnamespaces/*"
    ],
    "scope": "*"
  }
],
"documentString": "Managed OpenShift customers may not manage any objects in the
following APIgroups [network.openshift.io cloudcredential.openshift.io managed.openshift.io
ocmagent.managed.openshift.io upgrade.managed.openshift.io config.openshift.io
operator.openshift.io machine.openshift.io admissionregistration.k8s.io
addons.managed.openshift.io cloudingress.managed.openshift.io
splunkforwarder.managed.openshift.io autoscaling.openshift.io], nor may Managed OpenShift
customers alter the APIServer, KubeAPIServer, OpenShiftAPIServer, ClusterVersion, Node or
SubjectPermission objects."
},
{
  "webhookName": "scc-validation",
  "rules": [
    {
      "operations": [
        "UPDATE",
        "DELETE"
      ],
      "apiGroups": [
        "security.openshift.io"
      ],
      "apiVersions": [
        "*"
      ],
      "resources": [
        "securitycontextconstraints"
      ],
      "scope": "Cluster"
    }
  ],
  "documentString": "Managed OpenShift Customers may not modify the following default SCCs:
[anyuid hostaccess hostmount-anyuid hostnetwork node-exporter nonroot privileged restricted]"
},
{
  "webhookName": "techpreviewnoupgrade-validation",
  "rules": [
    {
      "operations": [
        "CREATE",
        "UPDATE"
      ],
      "apiGroups": [
        "config.openshift.io"
      ],
      "apiVersions": [
        "*"
      ],
    }
  ],

```



```
"resources": [  
  "featuregates"  
],  
"scope": "Cluster"  
}  
],  
"documentString": "Managed OpenShift Customers may not use TechPreviewNoUpgrade  
FeatureGate that could prevent any future ability to do a y-stream upgrade to their clusters."  
}  
]
```