



IT Management Solutions

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Microsoft SCOM Reporting

Christian Heitkamp, Michael Tovornik, Nikolai Karpov

Speakers



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Product Manager



Michael Tovornik
Test Manager



Nikolai Karpov
Senior Developer

Agenda

- Short Introduction
- Setting up the Reporting Server – Technical Walkthrough
- NiCE Management Pack Reporting – Showcase Demo
- PowerBI, Grafana, and Community Reporting Options
- Q&A

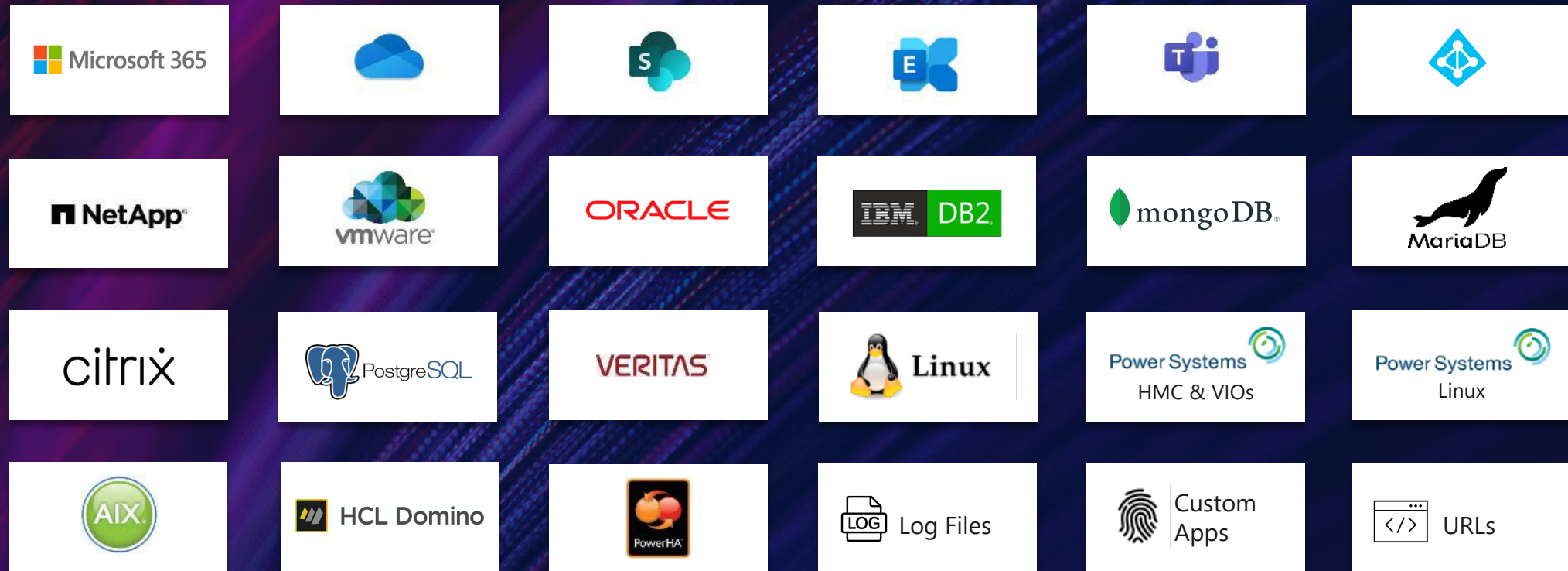
NiCE | Since 1991

- Monitoring Software & Services
- Global Customer Reach
- Headquarters in Germany

Technology Partners



Microsoft SCOM Monitoring for...



Custom Monitoring Solutions

Proven Reusable Modules

Log files, APIs, processes, directory & files, command-line checks, status & heartbeat validation, and more – enabling:

- Fast implementation
- Reduced project risk
- High reliability
- Easy maintenance
- Long-term scalability

Your Project



cplace



windchill®



Bitbucket



Confluence

Partners & Integrations

ITSM



Dashboards & AI



Monitoring Platforms



SCOM Reporting Server

- Installation, Configuration & Common Failure Scenarios

Christian Heitkamp

Introduction

- Technical focus on SCOM Reporting infrastructure
- Dependencies on SQL, SSRS, TLS, Authentication
- Common installation issues and workarounds
- Importance of infrastructure preparation

Core Dependencies

- SQL Server
- SQL Server Reporting Services (SSRS)
- SCOM Data Warehouse
- Monitoring Service
- TLS & Authentication Infrastructure

Technical Prerequisites

Reporting Server

- Windows Server 2019 or newer
- Fully patched systems
- TLS 1.2 enabled consistently
- Modern cipher suites supported
- Compatible security policies
- NET 4.8
- Remote Registry service running.

SSRS Requirements

- SSRS must already be installed
- Validate using Reporting Services Configuration Manager
- Web Service and Web Portal must function. Test <http://<server>/Reports>
- Reporting database must be operational
- For SCOM 2025 & SQL Server 2025: Details end of line notice later
- gMSA is not supported, create a regular domain account for Data Reader

Certificates & TLS

- Use certificates with FQDN only
Example: reportsrv01.domain.local
- Avoid short names and IP addresses
- Server Authentication EKU required
- Private key access required for SQL service
- Restart SQL services after certificate binding

Kerberos & SPNs

- Register HTTP SPNs correctly
Examples: HTTP/reportsrv01 and HTTP/reportsrv01.domain.local
- Assign SPNs to service account
- Avoid duplicate SPNs
- Verify Kerberos authentication

Installation Considerations

- Verify port 5724 connectivity
- Test Management Server reachability via FQDN
- Check service availability before setup
- Validate firewall configuration

Version & UR-Level Issues

- Different UR levels can block installations
- RTM media often incompatible with updated MGs
- ! Temporary MTV_HealthService workaround
- ! Restore original values after installation

Failed Installations & Cleanup

- Old web.config changes may remain
- rsreportserver.config can cause issues
- Reports won't deploy: usually the AllowedResourceExtensionsForUpload setting, or the Data Reader account missing rights on the data warehouse.
- Access denied / 401: set SPNs for SSRS (HTTP/<fqdn>) when SQL/SSRS sit on a different server (Kerberos double hop).
- gMSA services won't start: the server isn't in the PrincipalsAllowedToRetrieveManagedPassword group (a reboot helps after adding it), or the account is missing "Log on as a service".

Best Practices

- Use FQDNs consistently
- Enable HTTPS from the beginning
- Keep all components on same UR level
- Test SSRS independently first
- Prepare certificates and SPNs early

Conclusion

- Most issues originate outside SCOM itself
- Focus on SQL, SSRS, TLS and authentication consistency
- Proper preparation creates stable environments
- Infrastructure quality determines reporting stability

SCOM Versions & Reporting Challenges

Quick Poll

SCOM Reports

- Examples, Limitations, and Extensions

Michael Tovornik

- Client Monitoring Views Library
- Microsoft Change Tracking Rep
- Microsoft Data Warehouse Rep
- Microsoft Generic Report Library
- Microsoft ODR Report Library
- Microsoft Service Level Report L
- Network Management Reports
- NiCE Db2 Reports (UNIX/Linux)
- NiCE Domino Reports
- NiCE Library Management Pack
- NiCE Library Management Pack
- NiCE Oracle ASM Reports (UNIX)
- NiCE Oracle DB Reports (UNIX/I
- NiCE Report Library
- NiCE VMware vSphere Reports**
- Red Hat Enterprise Linux Server
- SUSE Linux Enterprise Server 11
- SUSE Linux Enterprise Server 12

- Monitoring
- Authoring
- Reporting**
- Administration
- My Workspace

- Cluster CPU Details
- Cluster CPU Resources
- Cluster Memory Details
- Cluster Memory Resources
- Cluster Virtual Machine Count
- Host Capacity Usage (Percent)
- Host Memory Details
- Host Performance**
- Virtual Machine CPU Over-Utilisation
- Virtual Machine CPU Under-Utilisation
- Virtual Machine Details
- Virtual Machine Memory Over-Utilisation
- Virtual Machine Memory Under-Utilisation
- Virtual Machine Network Usage Over-Utilisation
- Virtual Machine Network Usage Under-Utilisation
- Virtual Machine Storage Usage Over-Utilisation
- Virtual Machine Storage Usage Under-Utilisation

Report Details:

Host Performance

Summary

This report gives a history of the overall performance of a host and its capacity in four areas: CPU Usage, Memory Usage, Network Usage, and Storage Usage.

Parameters:

To add Objects to this report, search for the object, then add them to the "Selected objects" list.

Object Name:

Contains

 Filter Options have been applied

Search

Options...

Available items

Name	Class	Path
 esx101.nicelab.de	VMware Host (6.x)	datacenter-3.eb9627d3ffc8-4c04-bb0d-fd7657c...



VMware Datastore Capacity Planning Report

VMware Datastore Used Percent

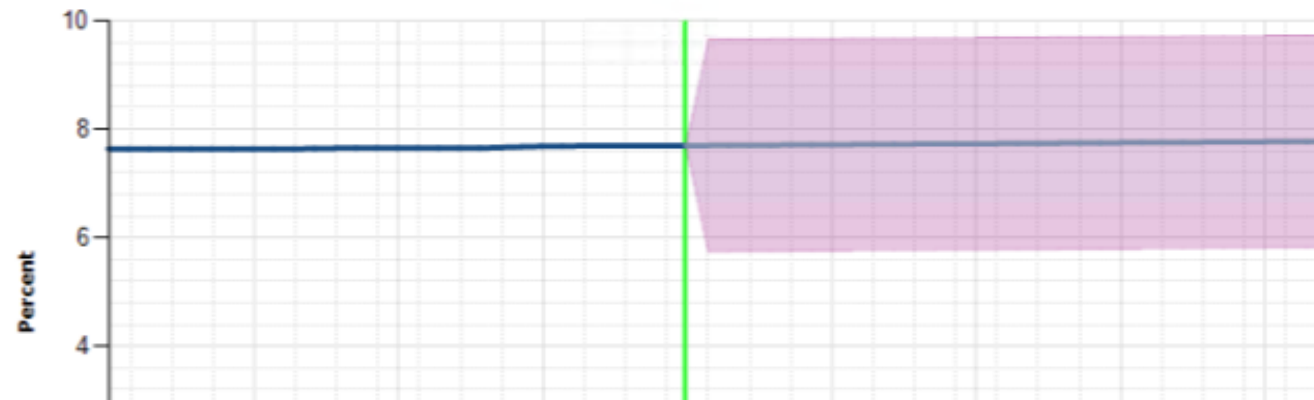
Report description

The report shows a datastore used percent in the past and forecasts a datastore usage in the future.

Report parameters

datastore_esx101

datacenter-3.eb9627d3-ffc8-4c04-bb0d-
fd7657ca2123





IBM Db2 Instance (UNIX/Linux): db2i1158

SCOM_W196 | l181.nicelab.de

Date Time	Change	Property	Old value	New value
6/2/2026 8:04:22 AM	Initial discovery			
6/3/2026 4:04:25 AM	Change value	Version	Version=11.05;ModPack=00008; Fixpack=00000	Version=11.05;ModPack=00009;Fix pack=00000

- Microsoft Data Warehouse Rep ^
- Microsoft Generic Report Libran
- Microsoft ODR Report Library
- Microsoft Service Level Report L
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- NiCE Domino Reports
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- NiCE Library Management Pack
- NiCE Oracle ASM Reports (UNI>
- NiCE Oracle DB Reports (UNIX/I
- NiCE Report Library
- NiCE VMware vSphere Reports
- Red Hat Enterprise Linux Server
- SUSE Linux Enterprise Server 11
- SUSE Linux Enterprise Server 12
- SUSE Linux Enterprise Server 15
- System Center Core Monitoring
- Universal Linux Monitoring

Name

- Cluster CPU Details
- Cluster CPU Resources
- Cluster Memory Details
- Cluster Memory Resources
- Cluster Virtual Machine Count
- Host Capacity Usage (Percent)
- Host Memory Details
- Host Performance
- Virtual Machine CPU Over-Utilisation
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- Virtual Machine Network Usage Over-Utilisation
- Virtual Machine Network Usage Under-Utilisation
- Virtual Machine Storage Usage Over-Utilisation
- Virtual Machine Storage Usage Under-Utilisation



	Host Memory Usage (%)			
	Min	Max		Average
esx101.nibelab.de	49.18	49.69		49.43

Host Storage Usage (KB/s)



Reporting



Reports



- Microsoft Change Tracking Rep
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- Red Hat Enterprise Linux Server
- SUSE Linux Enterprise Server 11
- SUSE Linux Enterprise Server 12
- SUSE Linux Enterprise Server 15
- System Center Core Monitoring

Name

- Logical Disk (File System) Capacity Analysis
- Logical Disk (File System) Capacity History
- Logical Disk (File System) Performance Analysis
- Logical Disk (File System) Performance History
- Memory Performance Analysis
- Memory Performance History
- Network Adapter Performance Analysis
- Network Adapter Performance History
- Operating System Configuration
- Operating System Performance Analysis
- Operating System Performance History
- Operating System Storage Configuration

Reporting

- Reporting
 - AIX 7 Operating System
 - Application Monitoring
 - Client Monitoring Views Library
 - Microsoft Change Tracking Rep
 - Microsoft Data Warehouse Rep
 - Microsoft Generic Report Libran
 - Microsoft ODR Report Library
 - Microsoft Service Level Report L
 - Network Management Reports
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 - NiCE Domino Reports
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 - NiCE Oracle ASM Reports (UNI)
 - NiCE Oracle DB Reports (UNIX/I
 - NiCE Report Library
 - NiCE VMware vSphere Reports
 - Red Hat Enterprise Linux Server

Reports

- | Name |
|--|
| Logical Disk (File System) Capacity Analysis |
| Logical Disk (File System) Capacity History |
| Memory Performance Analysis |
| Memory Performance History |
| Network Adapter Performance Analysis |
| Network Adapter Performance History |
| Operating System Configuration |
| Operating System Performance Analysis |
| Operating System Performance History |
| Operating System Storage Configuration |

Reporting

- ▶ AIX 7 Operating System
- ▶ Application Monitoring
- Client Monitoring Views Library
- Microsoft Change Tracking Report Library
- Microsoft Data Warehouse Reports
- Microsoft Generic Report Library
- Microsoft ODR Report Library
- Microsoft Service Level Report Library
- Network Management Reports
- NiCE Db2 Reports (UNIX/Linux)**
- NiCE Domino Reports
- NiCE Library Management Pack (UNIX/Linux)
- NiCE Library Management Pack (Windows)
- NiCE Oracle ASM Reports (UNIX/Linux)
- NiCE Oracle DB Reports (UNIX/Linux)
- NiCE Report Library
- NiCE VMware vSphere Reports (6x)
- Red Hat Enterprise Linux Server 7 Operating
- SUSE Linux Enterprise Server 11 Operating

Reports

Name

- Physical I/O Details
- Tablespace Usage Trend
- Top 20 Backup Delay
- Top 20 Database Growth
- Top 20 Database Lock Timeouts
- Top 20 Database Log Growth
- Top 20 Database Memory Usage
- Top 20 Database Size
- Top 20 Db2 Tablespaces

Report Details:

Reporting

-  AIX 7 Operating System
-  Application Monitoring
-  Client Monitoring Views Library
-  Microsoft Change Tracking Report Library
-  Microsoft Data Warehouse Reports
-  Microsoft Generic Report Library
-  Microsoft ODR Report Library
-  Microsoft Service Level Report Library
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-  NiCE Library Management Pack (Windows)
-  NiCE Oracle ASM Reports (UNIX/Linux)
-  NiCE Oracle DB Reports (UNIX/Linux)
-  NiCE Report Library
-  NiCE VMware vSphere Reports (6.x)
-  Red Hat Enterprise Linux Server 7 Operating
-  SUSE Linux Enterprise Server 11 Operating

Reports

Name

-  Availability Index
-  Average Mail Deliver Time
-  Database Whitespace
-  Mail Dead
-  Mail Waiting
-  MailBox Doc Count
-  Performance Report (1 Chart for all Rules)
-  Performance Report (1 Chart per Rule)
-  Performance Top Instance Report
-  Server Users

Report Details:



Monitoring

Reporting

- Microsoft Generic Report Library
- Microsoft ODR Report Library
- Microsoft Service Level Report Library
- Network Management Reports
- NiCE Db2 Reports (UNIX/Linux)
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- NiCE Oracle ASM Reports (UNIX/Linux)
- NiCE Oracle DB Reports (UNIX/Linux)
- NiCE Report Library
- Red Hat Enterprise Linux Server 7 Operating System
- SUSE Linux Enterprise Server 12 Operating System
- System Center Core Monitoring Reports
- Universal Linux Monitoring
- Web Application Availability Monitoring Solutions Library
- Authored Reports

Reports

Name

- Background Dump Device Usage
- Core Dump Device Usage
- Database Instance Availability
- Database Instance Configuration
- Database Size Forecasts
- Flash Recovery Area Usage
- Tablespace Fragmentation
- Tablespace Free Extents
- Tablespace Free Space Percentage
- Tablespace Free Space Percentage Forecasts
- Tablespace Temp Segment Usage
- Transactions Percentage
- User Dump Device Usage

Reporting



Reports



Name

-  ASM Disk Group Free Space
-  ASM Disk Group Free Space Forecasts
-  ASM Disk Group Total Space
-  ASM Disk Group Usable Space
-  ASM Disk Group Usable Space Forecasts
-  ASM Disk Group Used Space
-  ASM Disk Group Used Space Forecasts
-  ASM Instance Availability

-  Microsoft Generic Report Library
-  Microsoft ODR Report Library
-  Microsoft Service Level Report Library
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-  System Center Core Monitoring Reports
-  Universal Linux Monitoring
-  Web Application Availability Monitoring Solutions Library
-  Authored Reports
-  Favorite Reports
-  Scheduled Reports

Further Reporting Options

Microsoft PowerBI, Grafana, Cookdown,
Project SAWA

Christian Heitkamp, Nikolai Karpov

Houston, we have a problem

**SCOM reporting runs on SSRS,
and SSRS has reached the end of its line**

- SSRS 2022 is the last SSRS version.
- From SQL Server 2025, Microsoft moves on-premises reporting to Power BI Report Server (PBIRS) and PBIRS isn't listed as supported for SCOM reporting
- SCOM reporting is tied to a product that's frozen and has **no documented way forward**
- **Intermediate workaround:** Keep SCOM reporting on SQL Server 2022 or earlier.

Alternatives to SSRS

PowerBI

- Microsoft's own reporting and analytics platform, built on the SCOM data
- Flexible, modern visuals
- **Every report** has to be rebuilt from scratch
- Requires multiple new licenses
- SCOM permissions don't carry over, so access has to be set up again

Grafana

- Open source, strong dashboards
- Connects to the DW over SQL
- You write and maintain the queries yourself
- More Dashboard than Report
- SCOM permissions don't carry over
- Another platform to run, patch and secure

Announcing:

NiCE SAWA – Reporting for SCOM

- Connects straight to your existing SCOM environment
- Live and historical monitoring data in a web portal
- Keeps each user's existing SCOM permissions: same user, same scope
- No SSRS, no Power BI Report Server, no extra Microsoft licences
- Similar to the reporting console, no need for retraining

Live Demo

NiCE SAWA – Reporting for SCOM

FAQ

```
mirror_object = bpy.context.selected_object
if operation == "MIRROR_X":
    mirror_mod.use_x = True
    mirror_mod.use_y = False
    mirror_mod.use_z = False
elif operation == "MIRROR_Y":
    mirror_mod.use_x = False
    mirror_mod.use_y = True
    mirror_mod.use_z = False
elif operation == "MIRROR_Z":
    mirror_mod.use_x = False
    mirror_mod.use_y = False
    mirror_mod.use_z = True
```

```
#selection at the end -add
mirror_ob.select= 1
modifier_ob.select=1
context.scene.objects.active = modifier_ob
print("Selected" + str(modifier_ob.name))
mirror_ob.select = 0
# bpy.context.selected_object = mirror_ob
data.objects[one.name].select = 1

print("please select exactly one mirror")
```

--- OPERATOR CLASSES ---

```
bpy.types.Operator):
    """X mirror to the selected
    object.mirror_mirror_x"""
    mirror X"
```

Further Information

Install Documentation SCOM Reporting

<https://learn.microsoft.com/en-us/system-center/scom/deploy-install-reporting-server?view=sc-om-2019>
<https://learn.microsoft.com/en-us/system-center/scom/deploy-install-reporting-server?view=sc-om-2022>
<https://learn.microsoft.com/en-us/system-center/scom/deploy-install-reporting-server?view=sc-om-2025>

Allowed Resource Extensions For Upload

<https://learn.microsoft.com/en-us/troubleshoot/system-center/scom/cannot-deploy-operations-manager-reports>

Configure Windows service accounts and permissions

<https://learn.microsoft.com/en-us/sql/database-engine/configure-windows/configure-windows-service-accounts-and-permissions?view=sql-server-ver17>

Install Failures

<https://learn.microsoft.com/en-us/answers/questions/711316/scom-reporting-server-installation-failure>

Enforce TLS 1.2

<https://learn.microsoft.com/en-us/system-center/scom/plan-security-tls12-config?view=sc-om-2019>
<https://learn.microsoft.com/en-us/system-center/scom/plan-security-tls12-config?view=sc-om-2022>
<https://learn.microsoft.com/en-us/system-center/scom/plan-security-tls12-config?view=sc-om-2025>

Encrypt connections to SQL Server by importing a certificate

<https://learn.microsoft.com/en-us/sql/database-engine/configure-windows/configure-sql-server-encryption?view=sql-server-ver15>
<https://learn.microsoft.com/en-us/sql/database-engine/configure-windows/configure-sql-server-encryption?view=sql-server-ver16>
<https://learn.microsoft.com/en-us/sql/database-engine/configure-windows/configure-sql-server-encryption?view=sql-server-ver17>

Version difference - Workaround

<https://blakedrumm.com/blog/fix-install-bug-scom-2019-reporting/>

Contact

A stylized space-themed illustration on a dark blue background. It features a central blue planet with a ring, a small orange astronaut sitting on top, and a red and white rocket launching from the planet. Two other purple planets are visible in the background, and a thick, light blue orbital ring curves around the scene.

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