



Teamcenter Betrieb - Nicht den Überblick verlieren

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Die LMtec Gruppe | Herausforderungen | System Monitoring | Q&A

Building Smart Digital Enterprises Across the Globe & Industry Verticals



90+

Mitarbeiter weltweit



06

Standorte weltweit



60,000+

Beratungsstunden pro Jahr



15+

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Unternehmensberatung

Lösungen

Dienstleistungen

Application Managed Services

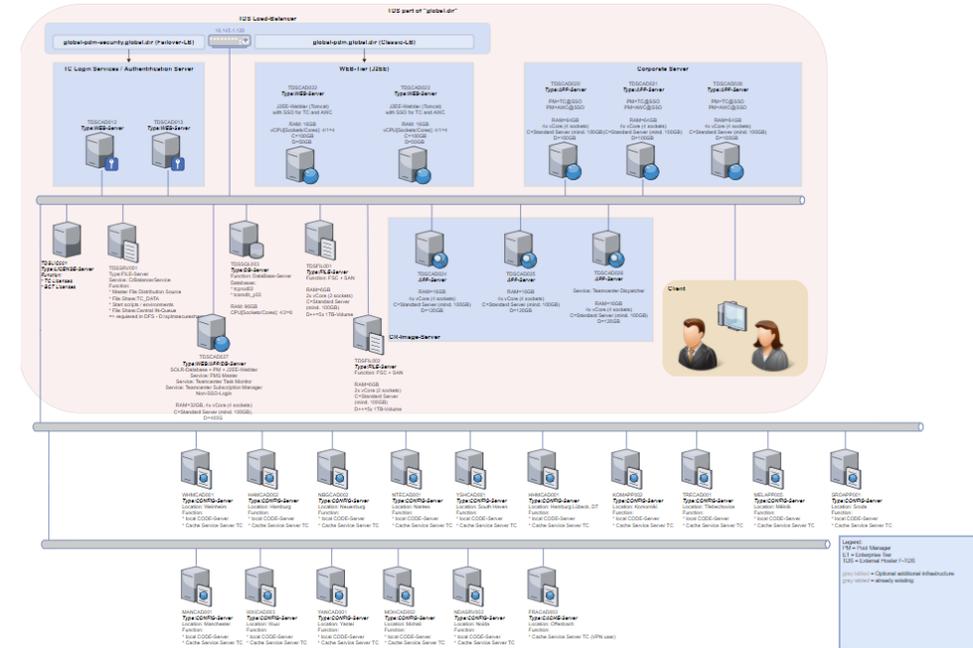


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Was sind typische Herausforderungen beim Betrieb von Teamcenter?

Kundenbeispiel

- Komplexe und weltweite Systemlandschaft (20+ Server)
- Erreichbarkeit / Verfügbarkeit von Servern, Windows Diensten, interaktiven Prozessen
- Transparenz der Systemverfügbarkeit
- Transparenz bei der systemseitigen Lastverteilung
- Endanwendererwartung an Systemperformance an verteilten Standorten



„Kann mich nicht einloggen,
Server Manager nicht
verfügbar“

„Teamcenter ist langsam“

„Ich erhalte von Teamcenter
keine Benachrichtigungen“

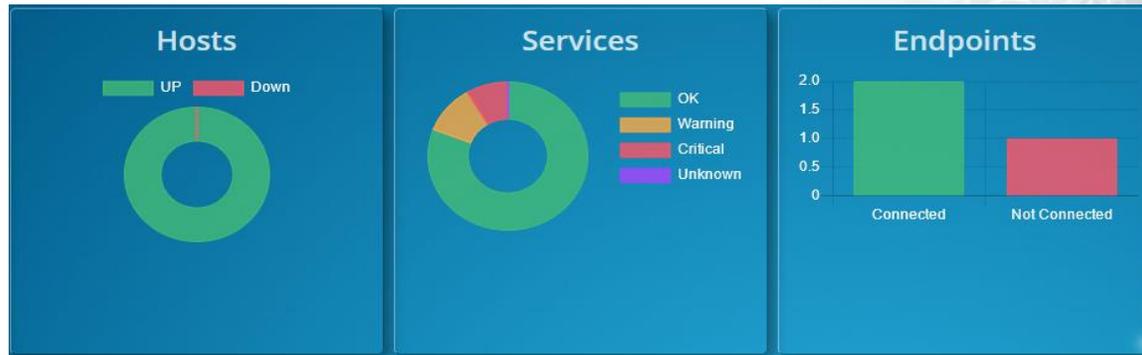


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System Monitoring für Teamcenter

Überwachung ihrer Teamcenter
Systeme, Dienste und Anwendungen



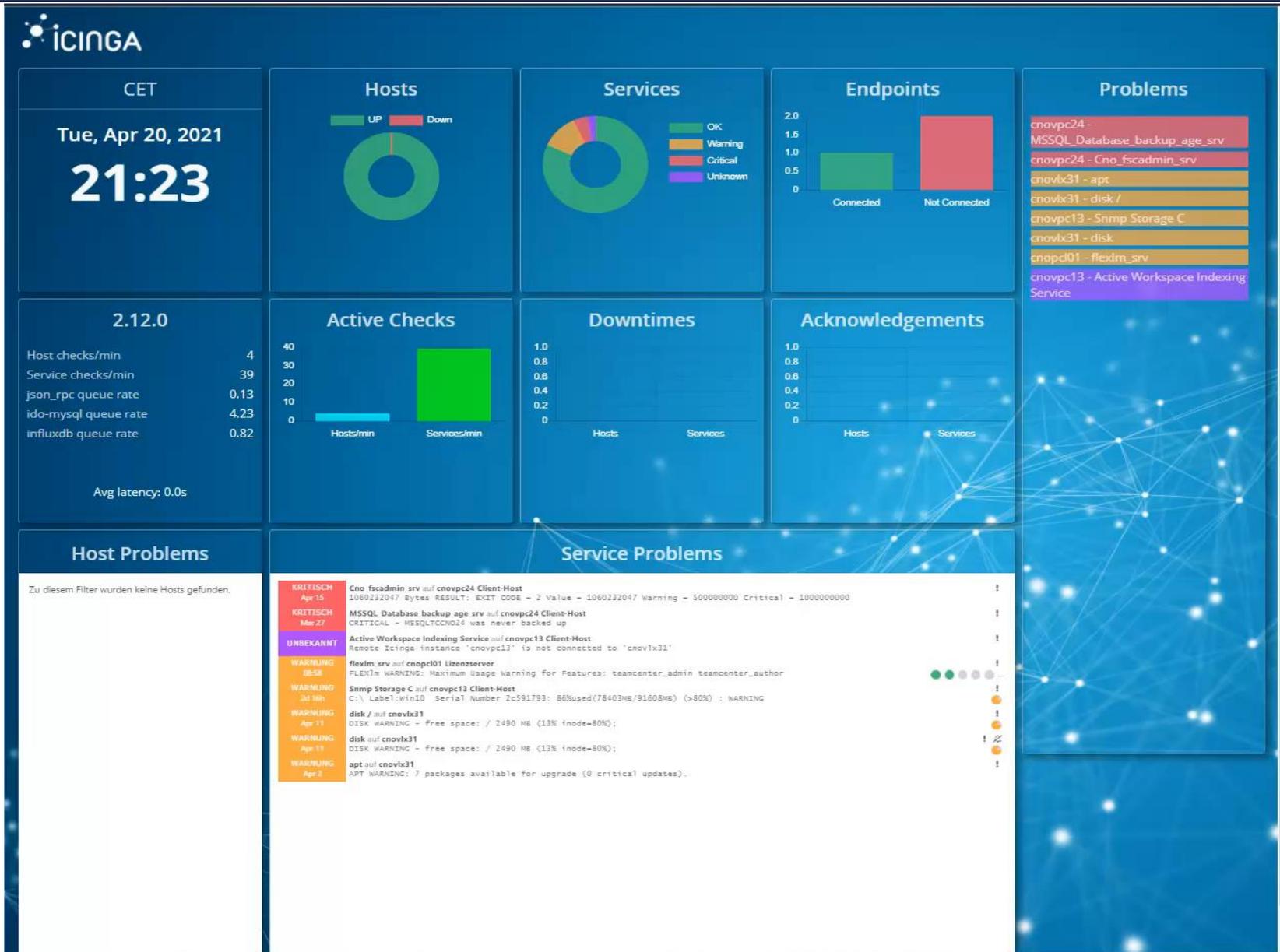


CNO System Monitoring für Teamcenter: Lösungsansatz

- Zentraler Überblick über Teamcenter-Komponenten und -Services
- Überwachung zur frühzeitigen Erkennung von Störungen und Engpässen:
 - Überwachung der Hardware (Storage, CPU, Speicher, Netzwerk, ...)
 - Messen der Verfügbarkeit und Reaktionszeiten von Anwendungen
- Statistiken zur Ableitung von Maßnahmen
 - Messen von Zeiten für verschiedene Arten von Vorgängen wie Anmelden, Suchen, ...
 - Basierend auf Messungen kann eine Untersuchung von Problemen durchgeführt werden
- Proaktive Unterstützung der Administration
 - Reporting der Messung über die Zeit, zur Erkennung von Abweichungen in Bezug auf Referenzwerte
 - Automatisierte Benachrichtigungen und Durchführung von definierten Aktionen



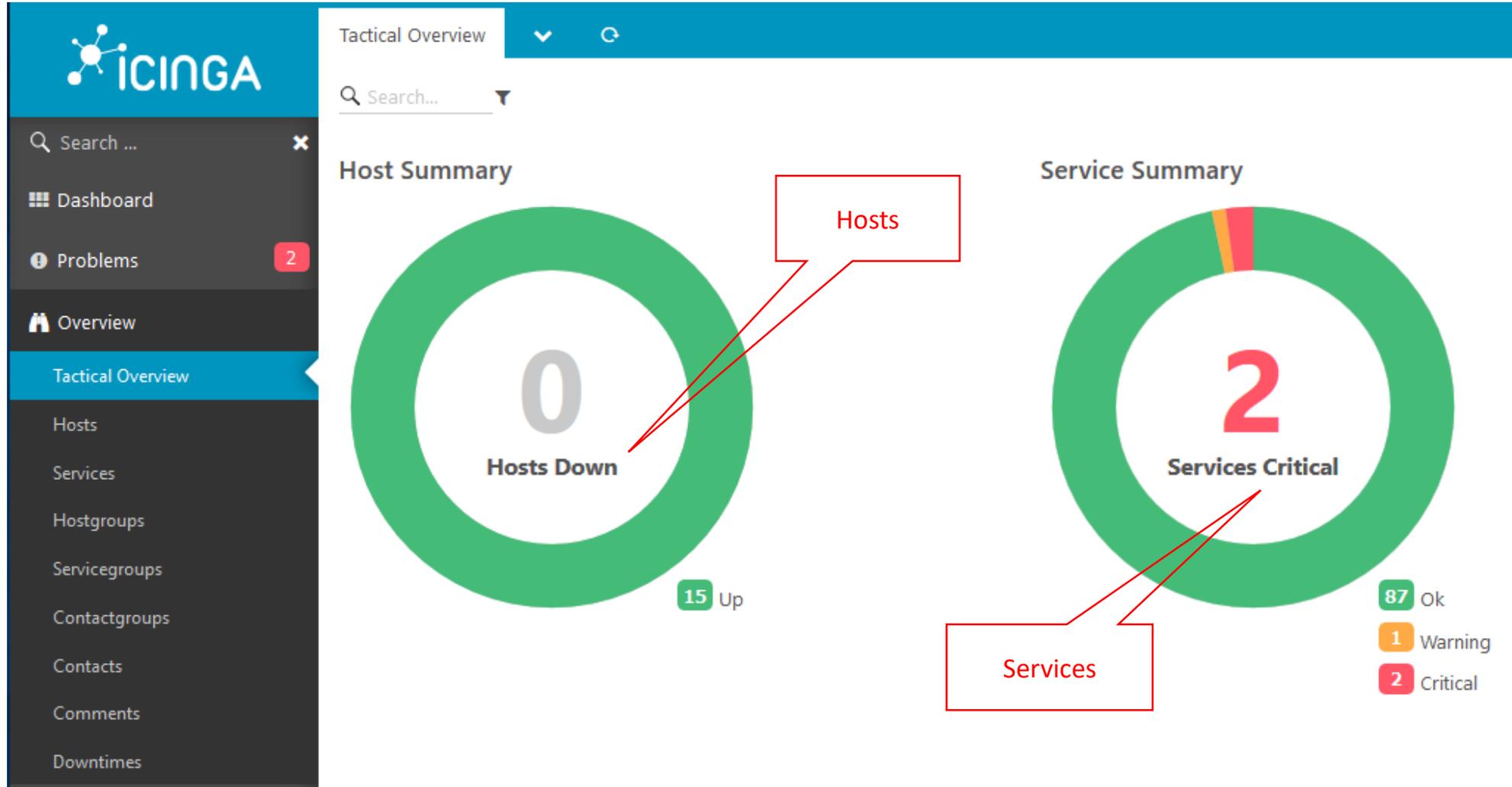
CNO System Monitoring für Teamcenter: Dashboard – Overview



<https://www.youtube.com/watch?v=XJfEqikOM0o>



CNO System Monitoring für Teamcenter: Dashboard – Overall Status





CNO System Monitoring für Teamcenter: Dashboard – Overview Hosts

The screenshot displays the Icinga2 monitoring interface. The top navigation bar includes tabs for 'Current Incidents', 'Overdue', 'Muted', and 'All Hosts'. The left sidebar contains a search bar and a menu with items: 'Dashboard', 'Problems', 'Overview', 'Business Processes', 'Icinga Director', 'History', 'Documentation', 'System', 'Configuration', and 'admin'. The main content area is titled 'All Host' and shows a tree view of monitoring components. The tree structure is as follows:

- All Hosts Status (AND)
 - cnovpc22 Status (AND)
 - TC SOA Status (AND)
 - cnovpc22.CNO: Cno SOA cmd Login Time (OK)
 - cnovpc22.CNO: Cno SOA cmd Logout Time (Warning)
 - cnovpc22.CNO: Cno SOA cmd Search Time (OK)
 - TC Service Status (AND)
 - cnovpc22.CNO: Snmp Service Oracle (OK)
 - cnovpc22.CNO: Snmp Service Teamcenter (OK)
 - Basis Service Status (AND)
 - Snmp Services (AND)
 - cnovpc22.CNO: Snmp CPU Load (OK)
 - cnovpc22.CNO: Snmp Load (OK)

Status of a service type,
Summary

Status of services,
Detail



CNO System Monitoring für Teamcenter: Dashboard – Overview Services

The screenshot displays the Icinga dashboard interface. The left sidebar contains navigation options: Search, Dashboard, Problems (2), Overview, Tactical Overview, Hosts, Services (highlighted with a red box), Hostgroups, Servicegroups, Contactgroups, Contacts, Comments, and Downtimes. The main content area shows a list of services under the 'Services' tab. A red arrow points to the 'Service Problems' sub-menu. A red box highlights a critical service entry: 'CRITICAL for 7m 33s' for 'cnovpc22: Agent Cno SOA cmd Search Time CNO SOA SystemMonitor 2019-06-28'. A red callout box points to this entry with the text 'Details of a critical service'.

Status	Service Name	Details
OK	cnopcl01.cadnorg.de: Snmp Storage C	since Jul 11 12:34 C:\ Label: Serial Number 82d7fb1b
OK	cnovpc22: Snmp Storage C	since Jul 11 12:34 C:\ Label: Windows Serial Number 2
OK	cnovpc22: Agent Cno SOA cmd Login Time	for 1m 33s CNO SOA SystemMonitor 2019-06-28
OK	cnovpc22: Agent Cno SOA cmd Logout Time	for 1m 57s CNO SOA SystemMonitor 2019-06-28
CRITICAL	cnovpc22: Agent Cno SOA cmd Search Time	for 7m 33s CNO SOA SystemMonitor 2019-06-28
OK	cnovlx01.cadnorg.de: apt	since Jul 8 APT OK: 0 packages available for upgrade (0 critical updates).
OK	cnovpc22: Cno SOA cmd Login Time	for 18m 23s CNO SOA SystemMonitor 2019-06-28
OK	cnovpc22: Cno SOA cmd Logout Time	for 1m 1s CNO SOA SystemMonitor 2019-06-28

Details of a critical service



CNO System Monitoring für Teamcenter: Anwendungsfall «Verfügbarkeit»

Kontinuierlicher und zuverlässiger Überblick über Teamcenter-Komponenten und -Dienste:

- Sind alle Komponenten und Services in Bezug auf Verfügbarkeit, Reaktionszeit usw. betriebsbereit?
- Welche Maßnahmen sollten bei Abweichungen und Problemen durchgeführt werden?

Lösungsansatz:

- Überwachung der Hardware- und Softwarekomponenten von Teamcenter
- Messen der Verfügbarkeit von Komponenten und Services
- Messen von Reaktionszeiten einzelner Komponenten und Services
- Automatisierte Benachrichtigungen und Durchführung von spezifischen Aktionen



CNO System Monitoring für Teamcenter: Business Processes

The screenshot displays the Icinga CNO monitoring interface. The left sidebar contains navigation options: Dashboard, Problems (4), Overview, Business Processes, CNO (selected), Icinga Director, History, Documentation, System, Configuration, and admin. The main content area shows a top navigation bar with 'CNO' and a refresh icon. Below this is a breadcrumb 'CNO' and a dropdown menu 'Cnovpc24'. A toolbar includes 'View' (grid and list icons), 'Fullscreen', and 'Unlock Editing'. The dashboard features five colored panels, each representing a business process check with its child count:

- Cno Performance Monitoring checks** (Orange): 3 Children
- Cno Admin Utilities check** (Orange): 4 Children
- Database Checks** (Red): 5 Children
- Infrastructure Checks** (Green): 4 Children
- Teamcenter Services** (Green): 4 Children



CNO System Monitoring für Teamcenter: Infrastruktur Checks

CNO Host Service Services History

CNO Cnovpc24 Infrastructure Checks

View Fullscreen Unlock Editing

- cnovpc24.CNO: ping4 ← ping
- cnovpc24.CNO: Snmp Load ← load
- cnovpc24.CNO: Snmp Process ← Processes
- cnovpc24.CNO: Snmp Storage C ← Storage

UP since Nov 10 172.18.100.90
OK since Nov 11 Service: **Snmp Load**

[Check now](#) [Comment](#) [Notification](#) [Downtime](#)

Plugin Output

8 CPU, average Toad 3.8% < 85% : OK

Performance Graph

Minutes Hours Days Months Years Special [Apply](#)

Snmp Load

— CPU Load — Warning — Critical

Problem handling

Comments [Add comment](#)
Downtimes [Schedule downtime](#)
Actions [Business Impact](#)
[Inspect](#)
[Modify](#)

Performance data

Label	Value	Warning	Critical
cpu_prct_used	3.75%	85%	95%



CNO System Monitoring für Teamcenter: Database Checks

Host: Pre-Sales Cloud Production | Service: TC_Cloud_DB1

View: Fullscreen | Host Editing

TC_Cloud_DB1: MSSQL_Connection-time_demo_srv (Green)

TC_Cloud_DB1: MSSQL_Database_backup_age_demo_srv (Red)

TC_Cloud_DB1: MSSQL_Database_free_demo_sr (Green)

TC_Cloud_DB1: MSSQL_TC_users_tc_12_demo_sr (Orange)

Host: UP since Nov 19 | Service: MSSQL_Database_backup_age_demo_srv ! CRITICAL since Nov 19

Plugin Output: CRITICAL - tc_12_intec_demo was backed up 1184h ago

Performance Graph: MSSQL_Database_backup_age_demo_srv

Last Backup: 7.040 week

Warning: 2.000 day

Critical: 3.000 day

Problem handling: Acknowledge, Add comment, Schedule downtime, Business Impact, Inspect, Modify

Performance data:

Label	Value	Warning	Critical
tc_12_intec_demo_bck_age	1,184.00	48.00	72.00
tc_12_intec_demo_bck_time	0.00	-	-

Callout box:

- Connection Time
- Backup age
- Free Memory
- No. of users
- ...



CNO System Monitoring für Teamcenter: Teamcenter Services

The screenshot displays the CNO System Monitoring interface. On the left, a sidebar lists services for host **cnovpc24.CNO** under the **Teamcenter Services** group. The services listed are:

- cnovpc24.CNO: Active Workspace Indexing Service
- cnovpc24.CNO: JBoss Application Server 7.1.0
- cnovpc24.CNO: Teamcenter FSC Service FSC_CNOVPC24_infodba
- cnovpc24.CNO: Teamcenter Server Manager MSTCCNO24_PoolA

Red arrows point from the first three services to a red-bordered box labeled **TC Services**. The main panel shows details for the selected service: **cnovpc24 (cnovpc24.CNO)**, IP **172.18.100.90**, and status **UP** since Nov 10. The specific service is **Teamcenter FSC Service FSC_CNOVPC24_infodba**, which is **OK** since Nov 12. The **Plugin Output** shows: `SERVICE "Teamcenter FSC service FSC_cnovpc24_infodba" OK RUNNING`. The **Performance Graph** shows a green bar with **UP** in the center, indicating the service is operational. The **Problem handling** section includes options for **Comments**, **Downtimes**, and **Actions**.



CNO System Monitoring für Teamcenter: Teamcenter Volume Checks

Monitoring interface for Teamcenter Volume Checks. The interface shows a dashboard with service status tiles and a detailed view for a critical service.

Dashboard Tiles:

- Red (Critical):** AWS_TCCloud_Corp_Svr_TC12.4: Cno_fscadmin_volume_01_srv
- Green (OK):** AWS_TCCloud_Corp_Svr_TC12.4: Cno_fscadmin_volume_02_srv
- Red (Critical):** AWS_TCCloud_Corp_Svr_TC12.4: Cno_list_users_srv
- Green (OK):** AWS_TCCloud_Corp_Svr_TC12.4: Cno_verify_tasks_srv
- Green (OK):** AWS_TCCloud_Corp_Svr_TC12.4: flexlm_srv

Service Details: AWS_TCCloud_Corp_Svr_TC12.4 (EC2AMAZ-DO3AO9T.WORKGROUP)

- Status: UP since Nov 24 10.0.0.52
- Alert: **CRITICAL** since Nov 30. Service: Cno_fscadmin_volume_01_srv !
- Actions: Acknowledge, Check now, Comment, Notification, Downtime

Plugin Output: 7440 Files RESULT: EXIT CODE = 2 Value = 7440 Warning = 2000 Critical = 5000

Performance Graph: Cno_fscadmin_volume_01_srv

Time range: now-3h to now. Legend: Current No of Files (green), Warning (orange), Critical (red).

Problem handling: Acknowledge, Add comment, Schedule downtime, Business Impact, Inspect, Modify.

Performance data:

Label	Value	Warning	Critical
Store size	7,440.00	2,000.00	5,000.00

Annotation: A red box highlights the text "No of files in Volume_01" with an arrow pointing to the current value of 7440 on the performance graph.



CNO System Monitoring für Teamcenter: Teamcenter License Checks

The screenshot displays the CNO System Monitoring interface. On the left, a sidebar lists services: **cnopcl01: flexlm_srv** (green), **cnovpc24.CNO: Cno_fscadmin_srv** (orange), **cnovpc24.CNO: Cno_list_users_srv** (green), and **cnovpc24.CNO: Cno_verify_tasks_srv** (green). The main panel shows the **cnopcl01** host details, including IP **172.18.100.16** and service **flexlm_srv** status **OK** since **06:38**. The **Plugin Output** section reports: **FLEXlm OK: Server is up. All Modules/Features Available.**

The **Performance Graph** for **flexlm_srv** shows license usage for three categories: **teamcenter_author** (1), **teamcenter_admin** (0), and **teamcenter_consumer** (0). A red box highlights the text **No of Used Licenses with Feature Name**, with red arrows pointing to the values 1, 0, and 0.

Problem handling options include: [Add comment](#), [Schedule downtime](#), [Business Impact](#), [Inspect](#), and [Modify](#).

Performance data table:

Label	Value	Max
teamcenter_author	1.00	3.00
flytojt_file_transl	0.00	2.00

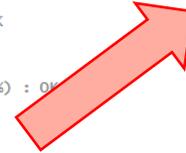


CNO System Monitoring für Teamcenter: Anwendungsfall «Zeitmessung»

Information zum Verhalten meiner Remoteclients beim Anmelden, Suchen oder Laden von Baugruppen:

- Messung an unterschiedlichen Standorten
- Messung über einen Zeitraum (Statistik)

Status	Service Name	Details
OK	cnopcl01.cadnorg.de: Snmp Storage C	since Jul 11 12:34 C:\ Label: Serial Number 82d7fb1b: 76%used(31138MB/40858MB) (<80%) : OK
OK	cnovpc22: Snmp Storage C	since Jul 11 12:34 C:\ Label: Windows Serial Number 2f51f6: 71%used(72383MB/102397MB) (<80%) : OK
OK	cnovpc22: Agent Cno SOA cmd Login Time	for 1m 33s CNO SOA SystemMonitor 2019-06-28
OK	cnovpc22: Agent Cno SOA cmd Logout Time	for 1m 57s CNO SOA SystemMonitor 2019-06-28
CRITICAL	cnovpc22: Agent Cno SOA cmd Search Time	for 7m 33s CNO SOA SystemMonitor 2019-06-28
OK	cnovlx01.cadnorg.de: apt	since Jul 8 APT OK: 0 packages available for upgrade (0 critical updates).
OK	cnovpc22: Cno SOA cmd Login Time	for 18m 23s CNO SOA SystemMonitor 2019-06-28
OK	cnovpc22: Cno SOA cmd Logout Time	for 1m 1s CNO SOA SystemMonitor 2019-06-28



Status	Service Name	Details
CRITICAL	cnovpc22: Agent Cno SOA cmd Logout Time	for 0m 8s Soft 1/5 CNO SOA SystemMonitor 2019-06-28
CRITICAL	cnovpc22: Agent Cno SOA cmd Search Time	for 4m 47s CNO SOA SystemMonitor 2019-06-28
WARNING	cnopcl01.cadnorg.de: Snmp Process	46 process matching .* (<= 50 : WARNING) (<= 200):OK since 06:55

Details of TC services login, search and logout



CNO System Monitoring für Teamcenter: TC Service „Login Zeit“

Monitoring interface for **Lmtec_TC_Monitoring**. The interface shows a navigation breadcrumb: **Lmtec_TC_Monitoring** > **Pre-Sales Cloud Production**. A status bar indicates **TC Performance Monitoring checks** are active. View options include **Fullscreen** and **Unlock Editing**.

Three service cards are visible:

- AWS_TCCloud_Corp_Svr_TC12.4: Agent Cno SOA cmd_logintime** (Green)
- AWS_TCCloud_Corp_Svr_TC12.4: Agent Cno SOA cmd_logoutTime** (Red)
- AWS_TCCloud_Corp_Svr_TC12.4: Agent Cno SOA cmd_SearchTime** (Green)

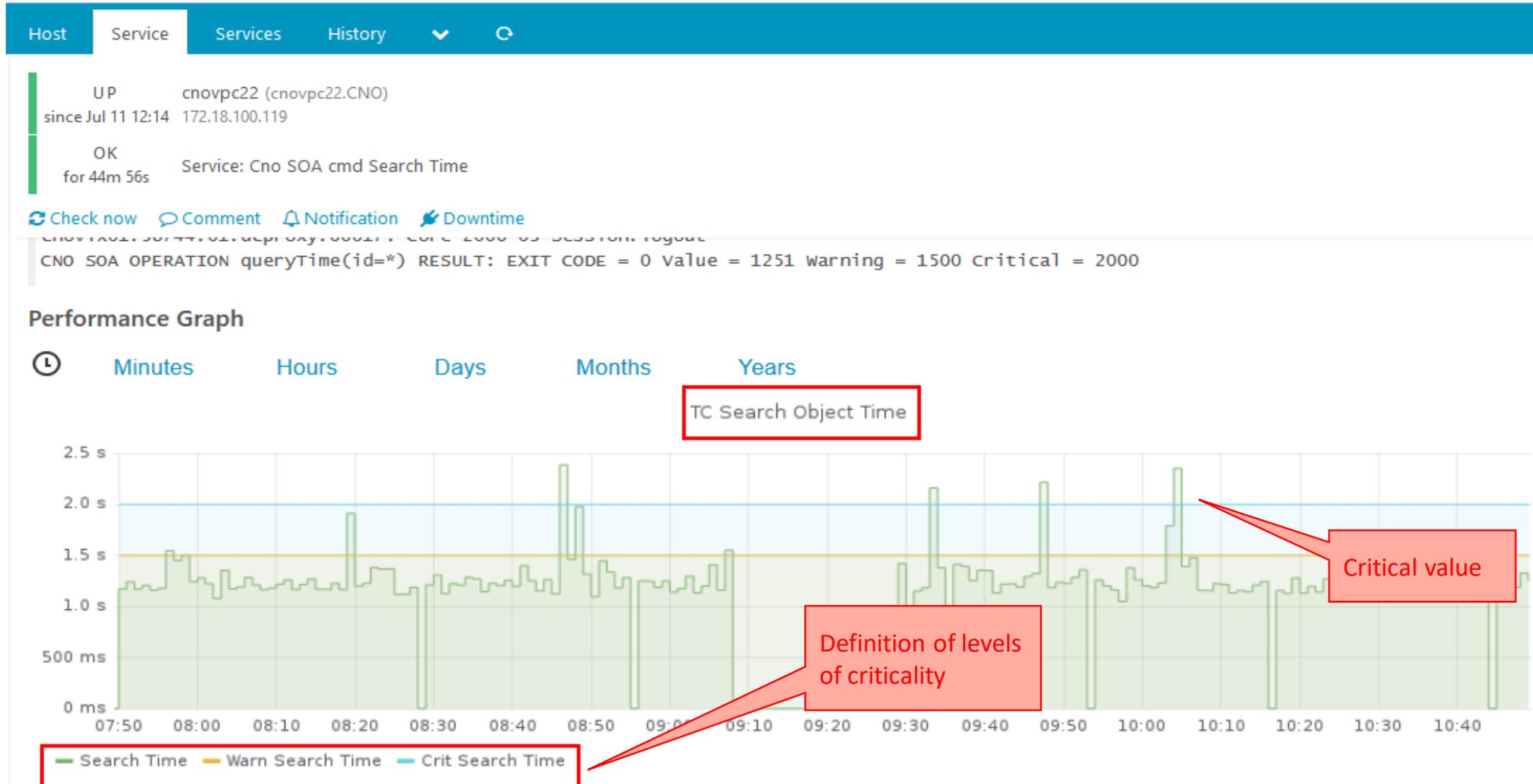
The right-hand pane displays details for the selected service: **AWS_TCCloud_Corp_Svr_TC12.4 (EC2AMAZ-DO3AO9T.WORKGROUP)**. The status is **UP** since Nov 24, 10.0.0.52. The service is **Agent Cno SOA cmd_logintime**, which is **OK** since 09:40. Action buttons include **Check now**, **Comment**, **Notification**, and **Downtime**.

The performance data shows: **CNO SOA OPERATION loginTime RESULT: EXIT CODE = 0 Value = 4320 Warning = 5000 Critical = 12000**.

The **Performance Graph** for **Agent Cno SOA cmd_logintime** is shown. The Y-axis represents time in seconds (0 ms to 12.5 s). The X-axis shows time from 12:30 to 15:00. The graph includes a **Login Time** line (green), a **Warning** threshold (orange), and a **Critical** threshold (red). The current value is 4320s, which is significantly above the warning threshold. A red arrow points from the graph to a callout box labeled **TC Login Time**.



CNO System Monitoring für Teamcenter: TC Service „Suchzeiten“





CNO System Monitoring für Teamcenter: „Laden von Baugruppen“

Performance Graph



Minutes

Hours

Days

Months

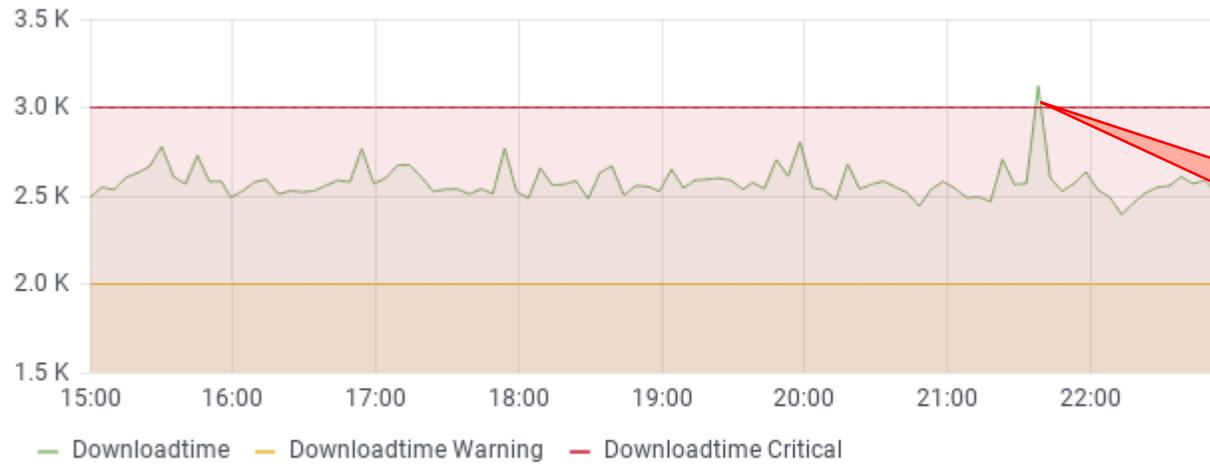
Years

Special

now-8h
now

Apply

Cno Remote File Downloadtime



Critical value

Problem handling

Comments

[Add comment](#)

Downtimes

[Schedule downtime](#)

Actions

[Business Impact](#)

[Inspect](#)

[Modify](#)

Definition of actions

ICINGA

Search ...

- Dashboard
- Problems **5**
- Overview
- Business Processes
- Icinga Director
- History
- Documentation
- System
- Configuration
- admin

Service Problems

CRITICAL 0m 23s	CNOVPC13: Agent Cno SOA cmd Login Time cnovpc13 CNO SOA SystemMonitor 2019-06-28	! x
CRITICAL 2m 20s	CNOVPC13: Agent Cno SOA cmd Search Time cnovpc13 CNO SOA SystemMonitor 2019-06-28	! x
CRITICAL 13m 21s	cadnorg.com: ping4 PING CRITICAL - Packet loss = 37%, RTA = 5.69 ms	! x
CRITICAL Jun 24 23:36	cnovpc22: Agent Cno SOA cmd Search Time CNO SOA SystemMonitor 2019-06-28	! x
CRITICAL Jun 18	CNOVPC13: Snmp Storage C C:\ Label:win18 Serial Number 2c59d750: 87Used(71060MB/81368MB) (>85%) : CRITICAL	! x
WARNING 0m 5s Soft 1/5	cnovpc22: Cno SOA cmd Search Time CNO SOA SystemMonitor 2019-06-28	! x
WARNING 1m 57s	cnovpc22: Snmp Process Teamcenter 1 process matching Teamcenter (<= 3 : WARNING) (<= 5):OK	!
WARNING 3m 43s	CNOVPC13: Snmp Process 175 process matching .* (> 0) (> 170 : WARNING)	!
WARNING 1d 20h	cnovpc22: Windows Process Dispatcher Process title = 'dispatcher'	!
WARNING Jun 18	CNOVPC13: Disk C: Windows Agent DISK WARNING - Free space:C:\ 10308 MB (13%)	!

Show More

Recently Recovered Services

OK 0m 20s	cnovpc22: Cno SOA cmd Login Time CNO SOA SystemMonitor 2019-06-28	!
OK 0m 39s	cnovpc22: ping4 PING OK - Packet loss = 0%, RTA = 0.62 ms	!
OK 1m 20s	cnovpc22: Agent Cno SOA cmd Login Time CNO SOA SystemMonitor 2019-06-28	!
OK 1m 47s	cnovpc22: Agent Cno SOA cmd Logout Time CNO SOA SystemMonitor 2019-06-28	!
OK 2m 52s	CNOVPC13: Agent Cno SOA cmd Logout Time cnovpc13 CNO SOA SystemMonitor 2019-06-28	!
OK 4m 49s	Samsung MFF: ping4 PING OK - Packet loss = 0%, RTA = 0.69 ms	!
OK 5m 39s	CNOVPC13: ping4 PING OK - Packet loss = 0%, RTA = 43.29 ms	!
OK 09:15	cnovpc101.cadnorg.de: Snmp Process 95 process matching .* (> 0) (<= 170):OK	!
OK 09:03	cnovpc22: Snmp Process 179 process matching .* (> 0) (<= 170):OK	!
OK 08:32	CNOVPC13: Snmp Service 109 services active (matching ".*"): OK	!

Show More

Host Problems

No hosts found matching the filter.



CNO System Monitoring für Teamcenter: Zusammenfassung

Durch das übersichtliche Monitoring, wird ein sicherer und zuverlässiger Betrieb von Teamcenter und verbundener Systeme ermöglicht.

Über das System Monitoring erreicht man:

- Umfassenden Überblick zur Teamcenter Infrastruktur (Server, Dienste, Applikationen usw.)
- Leichtes und übersichtliches Erkennen von Engpässen und Störungen
- Prüfungen von Teamcenter spezifischen Services und deren Funktion
- Durchführung spezifischer Aktionen zur Bewertung des Teamcenter Systemverhaltens und Systemperformance
- Einfache Konfiguration über Webfrontend
- Integrationsmöglichkeit in bestehende Monitoringkonzepte

Die LMtec Gruppe | Herausforderungen | System Monitoring | Q&A

Q&A

«Teamcenter Betrieb - Nicht den Überblick verlieren»

- Welche Anwendungen können überwacht werden?
- Lassen sich die einzelnen Teamcenter Messungen in anderen Monitoring Lösungen nutzen?
- Wie wird die Historie gespeichert und wie werden Referenzwerte definiert?
- ...

«Mehr Infos bei uns am Stand»



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