guide to INFOR System21 templates
Overview

Halcyon Templates are designed to provide the same level of monitoring across a number of similar devices by applying a set of user-defined filters with a single-click. This greatly reduces set-up time and ensures all systems are covered by at least a basic level of monitoring.

Should you need to make a system-wide change at a later date, a single update covers all systems using the template.
If you already use any of Halcyon's Level 1 to 4 software suites then follow these instructions to install templates to a customized environment on the IBM i. If you do not currently use Halcyon's tools in your INFOR System 21 environment but wish to have more information, an on-line demonstration or a free trial then please see the list of contacts on the back page of this guide.

**Installation of Customized Environment**

Follow these instructions to install templates to a customized environment.

1. Install the Halcyon solution, using the appropriate installation guide.

2. Once successfully installed, log into the environment to which you wish to apply the customized template, for example, HALPROD/HALCYON.

3. From the command line run `ENDMON` and press `F4`. Follow the prompts to complete the ending of the monitors.

    **Note:** *The installation of the customized environment fails if the monitors are not stopped.*

4. From the command line type `CSTENV` and press `F4`.

5. Type the required authorization code for the template you wish to apply and press `Enter`. 
Note: Each customized environment requires an authorization code.

Please contact technicalservices@halcyonsoftware.com or your local Halcyon office or reseller for details on how to obtain this code.

The Customized environment is now installed.

6 From the main menu of your Halcyon solution, select option 5=Work with Rules. The template rules applicable to the customized environment that you installed can be found in the listed queue and rule groups. Default action schedules are installed and additionally, where appropriate, changes to system defaults may also be made.

In most cases, the templates supplied can be used immediately upon completion of installation, but there may be instances where you need to change rule properties to match those of your own environment. This can be done by taking option 2=Change against the rule and making the required changes. Similarly, should you require multiple rules for different message queues or devices and so on you can use option 3=Copy against the rule and then make the required amendments.
Actions

Unless otherwise specified, all template rules are implemented with a default action schedule which sends an alert message to your local console (option 10=Message Console from the main menu). Should you wish to amend this option, take option 2=Change against the action within the rule and make the amendments as required.

Note: Please refer to the user reference guide for your Halcyon solution for details of actions that may be applied to rules.
Infor System21 brings the most complete mixed-mode and distribution business manufacturing functionality together with the latest ERP technology on the IBM i platform. Infor System21 helps apparel, food and beverage, automotive, electronics, industrial equipment, and general manufacturing and distribution companies manage highly customized products.

Message Queue Rules

There are two additional rules added to the QSYSOPR Message Queue Rule Group for Infor System21 application monitoring.

QSYSOPR Message Queue Rules

S21: All inquiry messages
This rule checks to ensure that all inquiry messages on the QSYSOPR message queue have been received as expected. The rule runs every minute on a 24/7 cycle. The specially created Infor System21 Action Schedule is used as the action. See “Infor System21 Action Schedule” for more information.

S21: High Severity Messages >=90
This rule checks to ensure that all messages with a severity of 90 of greater have been received as expected on the QSYSOPR message queue. The rule runs every minute on a 24/7 cycle. The specially created Infor System21 Action Schedule is used as the action. See “Infor System21 Action Schedule” for more information.
TCP/IP Rules

There is one TCP/IP Rule contained within the S21 System 21 Rules rule group.

S21 System 21 Rule

S21: Verify That TCP/IP is active
This rule, which runs every 5 minutes on a 24/7 basis, checks to ensure that a remote system or specified internet address is available. The rule is suspended for 30 minutes should the an error be found allowing you to find and resolve the cause of the issue.

Job Queue Rules

There are eleven different rule groups that look after critical Infor System21 Job Queues as follows (all running in the AULES1SBS Library):

• ACES1JBQ
• AGES1JBQ
• AIES1JBQ
• AOES1JBQ
• ASES1JBQ
• AXES1JBQ
• AYES1JBQ
• BPES1JBQ
• BWES1JBQ
• BXES1JBQ
• CNES1JBQ

Each of the above System21 Job Queue Rule Groups are setup to constantly monitor each job queue every 60 seconds over a continuous 24 hour period and use the specially created Infor System21 Action Schedule. See “Infor System21 Action Schedule” for more information.

Each Job Queue Rule Group contains the same three jobs:

Check job queue is RLS status
This rule checks to ensure that the corresponding job queue is in a status of released. The rule is suspended for 30 minutes should the job queue be found in any other status allowing you to find and resolve the cause of the issue.
Backlog of jobs >10
This rule checks to ensure that the corresponding job queue does not have a backlog of jobs, regardless of status, of greater than 10 in number. The rule is suspended for 30 minutes should the job queue be found in this status allowing you to find and resolve the cause of the issue.

Jobs on queue >= 30 minutes
This rule checks to ensure that the corresponding job queue for any jobs, regardless of user or status, that have exceeded or are equal to 30 minutes run time. The rule is suspended for 30 minutes should the job queue be found in this status allowing you to find and resolve the cause of the issue.

Performance Rules
These rules are available within the Performance Rules > System 21 Application Rules.

System 21 Application Rules

S21: *ASP Any ASP using >80%
This *ASP performance rule runs 24/7 and is set to alert on the first occurrence of the performance threshold being breached, in this case, any ASP using greater than 80% its capacity. The rule is suspended for 30 minutes should any ASP be found in this status allowing you to find and resolve the cause of the issue.

S21: *JOB Any A22ES1SBS S21 jobs using 40%
This *JOB performance rule runs 24/7 and is set to alert on the first occurrence of the performance threshold being breached, in this case, any of the following System21 jobs, running in subsystem A22ES1SBS, using greater than 40% the CPU capacity. The monitored jobs are:

- CS_UPDATE
- EQ_ACASSSLP
- EQ_JOBESCL
- EQ_UPDCMTS
- GL_UPDATE
- IN_PMOERSV
- IN_STKMON
- IN_STKUPDT

The rule is suspended for 30 minutes should any of these jobs be using 40% of CPU allowing you to find and resolve the cause of the issue.
S21: *JOB Any A22ES1SBS S21 jobs in a status of LCKW
This *JOB performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, any of the following System21 jobs, running in subsystem A22ES1SBS, which are found to be in a status of LCKW. The monitored jobs are:

- CS_UPDATE
- EQ_ACASSLP
- EQ_JOBEESCL
- EQ_UPDCMTS
- GL_UPDATE
- IN_PMOERSV
- IN_STKMONT
- IN_STKUPDT

The rule is suspended for 30 minutes should any of these jobs be found in a status of LCKW allowing you to find and resolve the cause of the issue.

Note: This rule contains an additional action of ‘Command’ which displays the jobs that are currently locked and also outputs this information to a spooled file.

S21: *JOB Any A22ES1SBS S21 jobs in a status of MSGW
This *JOB performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, any of the following System21 jobs, running in subsystem A22ES1SBS, which are found to be in a status of MSGW. The monitored jobs are:

- CS_UPDATE
- EQ_ACASSLP
- EQ_JOBEESCL
- EQ_UPDCMTS
- GL_UPDATE
- IN_PMOERSV
- IN_STKMONT
- IN_STKUPDT

The rule is suspended for 30 minutes should any of these jobs be found in a status of MSGW allowing you to find and resolve the cause of the issue.

S21: *JOB A22ES1SBS Mandatory Job Monitoring
This *JOB performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if any of the following System21 jobs, running in subsystem A22ES1SBS, which are found not to exist. The monitored jobs are:
The rule is suspended for 30 minutes should any of these jobs not be found allowing you to find and resolve the cause of the issue.

**S21: *JOB Any A22ES2SBS S21 jobs using 40%***
This *JOB performance rule runs 24/7 and is set to alert on the first occurrence of the performance threshold being breached, in this case, any of the following System21 jobs, running in subsystem A22ES1SBS, using greater than 40% the CPU capacity. The monitored jobs are:

- CS_UPDATE
- EQ_ACASSLP
- EQ_JOBESCL
- EQ_UPDCMTS
- GL_UPDATE
- IN_PMOERSV
- IN_STKMONT
- IN_STKUPDT

The rule is suspended for 30 minutes should any of these jobs be using 40% of CPU allowing you to find and resolve the cause of the issue.

**S21: *JOB Any A22ES2SBS S21 Jobs in LCKW***
This *JOB performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, any of the following System21 jobs, running in subsystem A22ES2SBS, which are found to be in a status of LCKW. The monitored jobs are:

- CS_UPDATE
- GL_UPDATE
- IN_PMOERSV
- MJ_CONTROL
- OE_ADPRICE
- PL_UPDATE
- SL_UPDATE
The rule is suspended for 30 minutes should any of these jobs be found in a status of LCKW allowing you to find and resolve the cause of the issue.

Note: This rule contains an additional action of ‘Command’ which displays the jobs that are currently locked and also outputs this information to a spooled file.

S21: *JOB Any A22ES2SBS S21 jobs in a status of MSGW
This *JOB performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, any of the following System21 jobs, running in subsystem A22ES2SBS, which are found to be in a status of MSGW. The monitored jobs are:

• CSUPDATE
• GL_UPDATE
• IN_PMOERSV
• MJ_CONTROL
• OE_ADPRICE
• PL_UPDATE
• SL_UPDATE

The rule is suspended for 30 minutes should any of these jobs be found in a status of MSGW allowing you to find and resolve the cause of the issue.

S21: *JOB A22ES2SBS Mandatory Job Monitoring
This *JOB performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if any of the following System21 jobs, running in subsystem A22ES2SBS, which are found not to exist. The monitored jobs are:

• CSUPDATE
• GL_UPDATE
• IN_PMOERSV
• MJ_CONTROL
• OE_ADPRICE
• PL_UPDATE
• SL_UPDATE

The rule is suspended for 30 minutes should any of these jobs not be found allowing you to find and resolve the cause of the issue.
S21: *SYSTEM System CPU >95%
This *SYSTEM performance rule runs 24/7 and is set to alert on the first occurrence of the performance threshold being breached, in this case, if the system CPU used percentage exceeds 95% of its capacity. The rule is suspended for 30 minutes should the system be found in this status allowing you to find and resolve the cause of the issue.

S21: *SUBSYSTEM A22ES1SBS Monitoring
This *SUBSYSTEM performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if the subsystem A22ES1SBS is found to be in a status of inactive. The rule is suspended for 30 minutes should the system be found in this status allowing you to find and resolve the cause of the issue.

S21: *SUBSYSTEM A22ES2SBS Monitoring
This *SUBSYSTEM performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if the subsystem A22ES2SBS is found to be in a status of inactive. The rule is suspended for 30 minutes should the system be found in this status allowing you to find and resolve the cause of the issue.

S21: *SUBSYSTEM QCTL Monitoring
QCTL is a controlling subsystem and the only one that can be used when machine is in a restricted state (unless the controlling subsystem has been changed to QBASE).
This *SUBSYSTEM performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if the subsystem QCTL is found to be in a status of inactive. The rule is suspended for 30 minutes should the system be found in this status allowing you to find and resolve the cause of the issue.

S21: *SUBSYSTEM QCMN Monitoring
The QCMN communications subsystem contains service jobs that communicate with other machines.
This *SUBSYSTEM performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if the subsystem QCMN is found to be in a status of inactive. The rule is suspended for 30 minutes should the system be found in this status allowing you to find and resolve the cause of the issue.
S21: *SUBSYSTEM QINTER Monitoring
The QINTER subsystem is the default subsystem where interactive users and jobs run.

This *SUBSYSTEM performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if the subsystem QINTER is found to be in a status of inactive. The rule is suspended for 30 minutes should the system be found in this status allowing you to find and resolve the cause of the issue.

S21: *SUBSYSTEM HTTPSVR Monitoring
IBM HTTP Server for IBM i runs in the QHTTPSVR subsystem, and each HTTP server instance starts multiple jobs.

This *SUBSYSTEM performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if the subsystem HTTPSVR is found to be in a status of inactive. The rule is suspended for 30 minutes should the system be found in this status allowing you to find and resolve the cause of the issue.

S21: *SUBSYSTEM QSERVER Monitoring
The QSERVER subsystem is for file-serving work only. The daemon jobs for the database server, file server and NetServer run in this subsystem.

This *SUBSYSTEM performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if the subsystem QSERVER is found to be in a status of inactive. The rule is suspended for 30 minutes should the system be found in this status allowing you to find and resolve the cause of the issue.

S21: *SUBSYSTEM QSPL Monitoring
The spooling subsystem, QSPL, is used for processing the spooling readers and writers. The subsystem needs to be active when readers or writers are active.

This *SUBSYSTEM performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if the subsystem QSPL is found to be in a status of inactive. The rule is suspended for 30 minutes should the system be found in this status allowing you to find and resolve the cause of the issue.

S21: *SUBSYSTEM QSYSWRK Monitoring
The QSYSWRK subsystem is for system work (not work done on behalf of a specific user) and those servers that have a limited number of server jobs that will be active at any point in time. It is also used for daemon or listening jobs that pass their work off to a server job that runs in a different subsystem.

This *SUBSYSTEM performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if the subsystem QSYSWRK is found to be in a status of inactive.
The rule is suspended for 30 minutes should the system be found in this status allowing you to find and resolve the cause of the issue.

**S21: *SUBSYSTEM QUSRWRK Monitoring**

The QUSRWRK subsystem is for user work (work done on behalf of a specific user) and intended to be used when there can potentially be a large number of user jobs.

This *SUBSYSTEM performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if the subsystem QUSRWRK is found to be in a status of inactive. The rule is suspended for 30 minutes should the system be found in this status allowing you to find and resolve the cause of the issue.

**S21: *SUBSYSTEM QBATCH Monitoring**

QBATCH is the default batch subsystem.

This *SUBSYSTEM performance rule runs 24/7 and is set to alert on the first occurrence of the performance status occurring, in this case, if the subsystem QBATCH is found to be in a status of inactive. The rule is suspended for 30 minutes should the system be found in this status allowing you to find and resolve the cause of the issue.

**Object Rules**

This single rule is available within the **Object Rules > System 21 Application Rules**.

The Object Rule Group is setup to constantly monitor the System21 Object Rule Group every 60 seconds over a continuous 24 hour period and uses the specially created Infor System21 Action Schedule. See Infor System21 Action Schedule (below) for more information.

**S21: *OBJECT Auto Day Start/Auto Day End Tracking**

This *OBJECT rule runs 24/7 and is set to monitor any critical job within System21 file AMM10PHY for a status of 'Run Fail'. The rule is suspended for 30 minutes should any job in this file be found to be in this status allowing you to find and resolve the cause of the issue.

**Audit Rules**

The following audit rules track specialist user profiles within System 21 for any changes, creation or restores. The rules in this group operate on a 24/7 basis. No rule suspension occurs if a breach is found.

*Note:* The following user profiles are bespoke and may not exist on your system. In order for the rules to be operative, the user profiles (or their equivalent) must exist on your system/environment.
S21: User Profile AULAMDBUSR Tracking
This rule checks user profile AULAMDBUSR for any changes or being created or restored. An alert is raised if any of these conditions exist.

S21: User Profile AULDBUSER Tracking
This rule checks user profile AULDBUSER for any changes or being created or restored. An alert is raised if any of these conditions exist.

S21: User Profile AULDFTOPR Tracking
This rule checks user profile AULDFTOPR for any changes or being created or restored. An alert is raised if any of these conditions exist.

S21: User Profile AULEXTOWN Tracking
This rule checks user profile AULEXTOWN for any changes or being created or restored. An alert is raised if any of these conditions exist.

S21: User Profile AUROPR Tracking
This rule checks user profile AUROPR for any changes or being created or restored. An alert is raised if any of these conditions exist.

S21: User Profile AUOWNER Tracking
This rule checks user profile AUOWNER for any changes or being created or restored. An alert is raised if any of these conditions exist.

S21: User Profile AULPTFUSR2 Tracking
This rule checks user profile AULPTFUSR2 for any changes or being created or restored. An alert is raised if any of these conditions exist.

S21: User Profile AULDIMUSER Tracking
This rule checks user profile AULDIMUSER for any changes or being created or restored. An alert is raised if any of these conditions exist.

S21: User Profile AULPTFUSR3 Tracking
This rule checks user profile AULPTFUSR3 for any changes or being created or restored. An alert is raised if any of these conditions exist.

S21: User Profile AULSCOFR Tracking
This rule checks user profile AULSCOFR for any changes or being created or restored. An alert is raised if any of these conditions exist.

S21: User Profile AULUSER Tracking
This rule checks user profile AULUSER for any changes or being created or restored. An alert is raised if any of these conditions exist.
Infor System21 Action Schedule

The Infor System21 Action Schedule is used throughout Infor System21 customizations as a means of alerting of any issues that are raised as a result of thresholds being breached, messages not being received or objects and job queues in error status.

The action schedule consists of two actions, one of which sends an alert to the local ‘green screen’ message console and second which sends the same alert to a ‘PC-based’ Enterprise Console.

The Infor System21 action schedule can be amended to suit the requirements of your own organization.
Halcyon Templates

The following system templates are available for use with Halcyon IBMi and Windows monitoring solutions:

• AIX
• AIX TEMENOS 24
• AIX VIOS
• HP DATA PROTECTOR
• IBM SERVICES MONITORING
• iCLUSTER
• INFOR M3
• INFOR SYSTEM 21
• INFOR XA
• JD EDWARDS
• LINUX
• MAXAVA
• MISYS EQUATION
• MISYS MIDAS PLUS
• POWER HA
• QUICK EDD
• ROBOT HA
• SAP
• STAND GUARD ANTI VIRUS
• SYMANTEC BACKUP EXEC
• SYMANTEC NETBACKUP
• VISION iTERA
• VISION OMS/ODS REPLICATION
• WEBSPHERE MQ MONITORING
• WINDOWS
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