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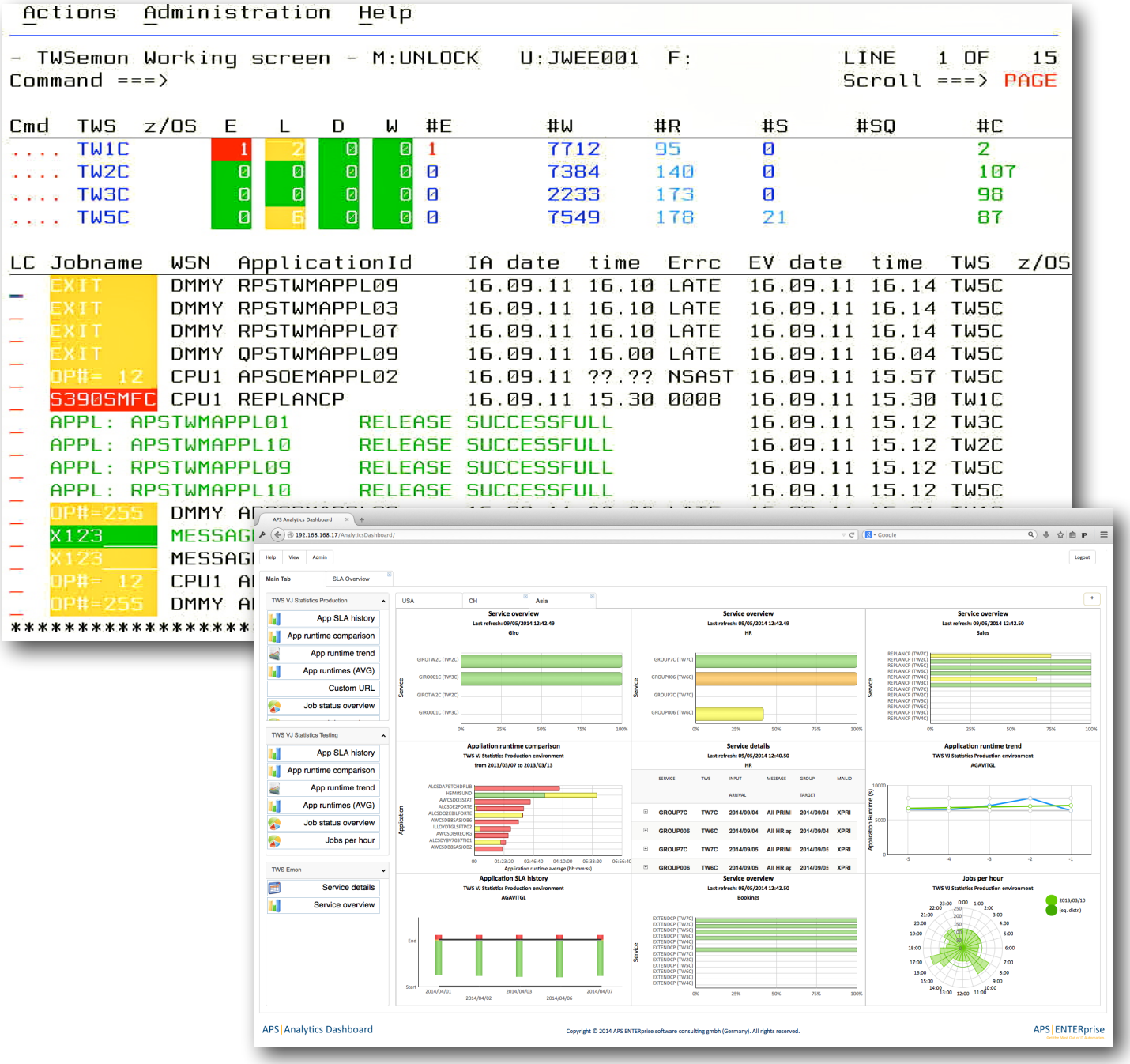
# TWS | emon

## SLA Monitoring and effective problem resolution



# TWS|emon

## Extended monitoring and operating for TWS

In today's workload automation environments maintaining an uninterrupted batch flow is critical. Scheduling staff are required to proficiently run an ever-increasing number of jobs within a static or shrinking batch window. When a failed or delayed job is not identified and attended to immediately the repercussions can extend throughout the entire schedule. On top of all this, Service Level Agreements must still be met.

TWSemon is specifically designed to address these requirements by providing one central point for the enhanced monitoring and operating of the TWS for z/OS and TWS End to End batch flow running on one or more controllers.

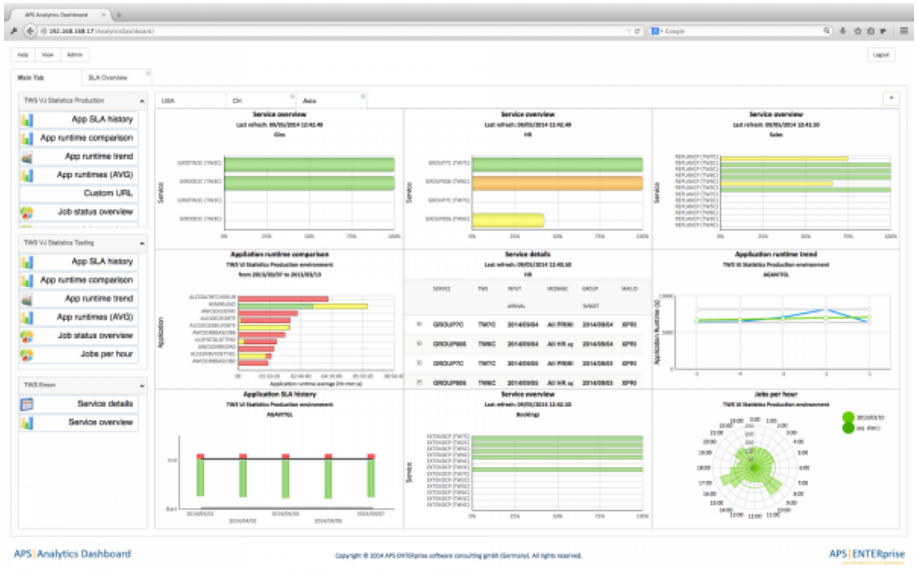
## Improved Productivity and Improved Quality

TWSemon allows you to increase the quality of, and decrease the effort put into, the detection and resolution of out-of-line situations in the batch production environment. Real time monitoring, early detection and timely resolution of these situations is the key to running a best practices workload automation environment.

# APS|Analytics Dashboard

## SLA Metrics within everyone´s reach

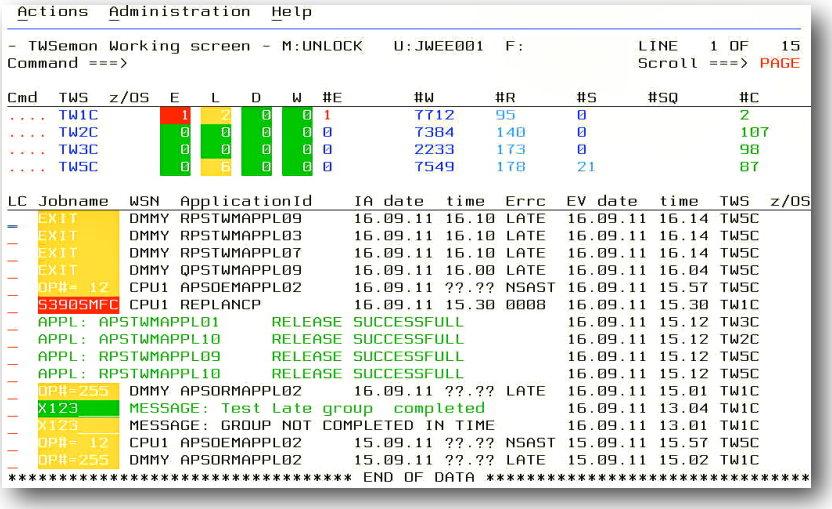
SLA Metrics about your current TWS automation, collected and aggregated by TWSemon can also be visualised via the new APS Analytics Dashboard. This satisfies executive and business line managers' metrics requirements delivering realtime SLA and trend statistics.



# TWSemon Features

### Extended TWS Monitoring capabilities

TWSemon allows the TWS Operator to focus their work on the important issues within the active TWS Current Plan environment. Monitoring capabilities that go beyond the functionality of the TWS standard features assist in detecting important jobs in error, important long-running jobs, jobs or groups of jobs that have missed or reached a milestone, inactive TWS Workstations or a deactivated job submission.




| FUNCTION | DESCRIPTION |
|---|---|
| Jobs in Error | Jobs in error can be detected immediately for all controllers, without having to call the error lists of possibly several TWS for z/OS controllers. |
| Long Duration Conditions | TWS for z/OS reports an operation as “Long Duration” when the predefined duration for this operation is exceeded. In most practical situations the duration of an operation is not defined realistically, which invokes numerous unnecessary alarms. Within TWSemon, long duration jobs can be identified through relative or absolute values. This refines the monitoring process by establishing tolerances and reduces “false alarms”. |
| Milestones<br>(Late Conditions) | Specific jobs can be defined as milestones; which if not started or completed by a specified timeframe are reported in TWSemon. Thus, critical situations are detected immediately without having to review vast amounts of information from different sources. In order to support dynamic batch environments in an optimal way with TWSemon, Milestones can even be defined for jobs that are not (yet) part of the TWS Critical Path. With this, the TWS Operator can easily detect if certain dynamic TWS Applications are not added or executed by a certain predefined time. |

| FUNCTION | DESCRIPTION |
|---|---|
| Group Milestones | For SLA Reporting purposes, TWSemon allows you to group operations of multiple TWS applications to a logical entity, assign SLA times to the individual operation and/or the Group Milestone as a whole.<br>An overview about the status of of a Group Milestone and the individual milestones within a group is available via ISPF and the APS Analytics Dashboard.<br>A notification event is issued if all operations are completed and/or at least one operation is not completed at a desired time. In both cases, a meaningful email may be sent to certain predefined recipients. |
| Workstation Offline/Failed | If a workstation turns into status offline or failed a colour-coded message will be displayed in the TWSemon event list. |
| Controller Inactivity | TWSemon monitors for the inactivity of TWS for z/OS controllers. In addition, TWSemon also monitors the status of job submission, allowing the TWSemon user to detect an inactive job submission. |

Unlike the standard TWS for z/OS environment, out-of-line messages like jobs in error, jobs with long durations, jobs that have missed a milestone and offline workstations are visible in one consolidated overview. This reduces the risk for the TWS Operator of missing an important status information.

Real time statistics are displayed for each connected TWS controller for the various statuses of the jobs running under that controller, which include jobs in waiting status, jobs in error status, jobs in completed status, jobs in started status, jobs in ready status.

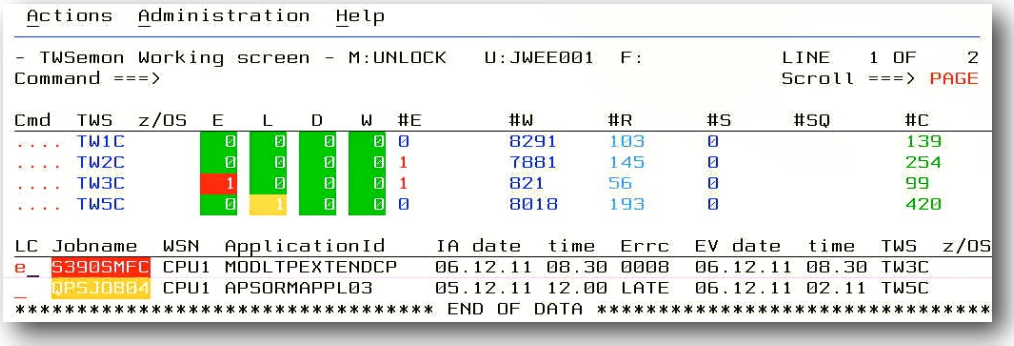
The ISPF interface also contains a consolidated real-time out-of-line list for all monitored controllers. The event list can be sorted on up to five fields at a time. The interface is completely customizable. Multiple filters can be created that filter what will / will not appear in the interface. Filters can be created on any combination of Application Id, Owner Id, Authority Group Id and Group definition. Wild cards are fully supported.

### Extended TWS Operating capabilities

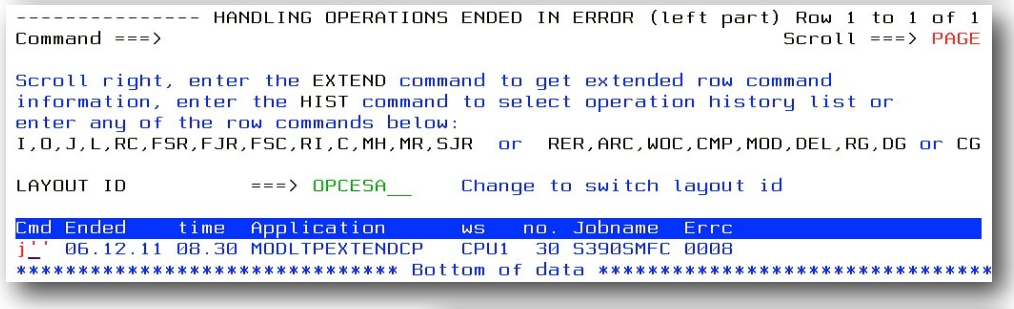
The integration of monitoring and operating capabilities with TWSemon does not only allow TWS Operators to detect important issues immediately. It also enables the TWS Operator to analyse and resolve identified issues in record time. As soon as an out-of-line situation occurs, it is visible in TWSemon. The TWS Operator can now enter different commands to either analyse, resolve, document or or escalate a problem situation.

Example: Resolving a Job in Error

In case of a job in status error, the Operator can issue the line command “E” in the TWSemon event list and …



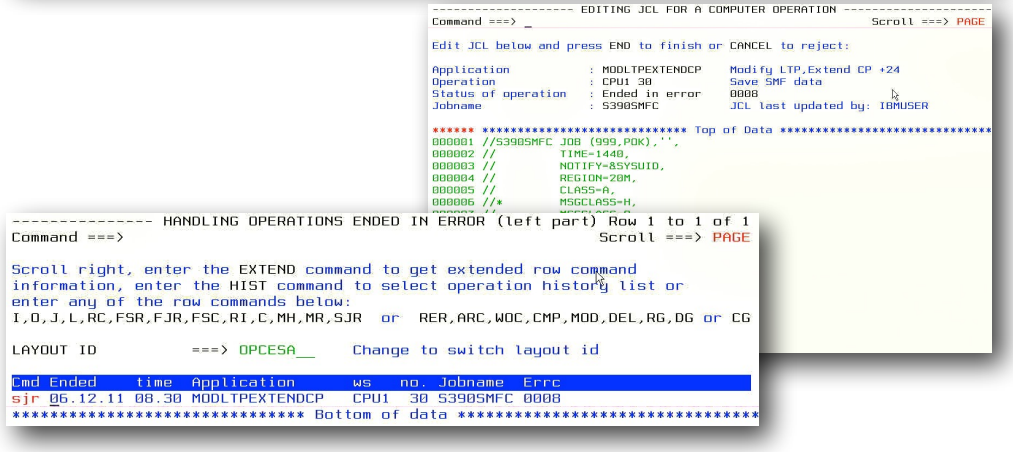

… be positioned directly within the TWS for z/OS error list panel of the corresponding TWS for z/OS system.



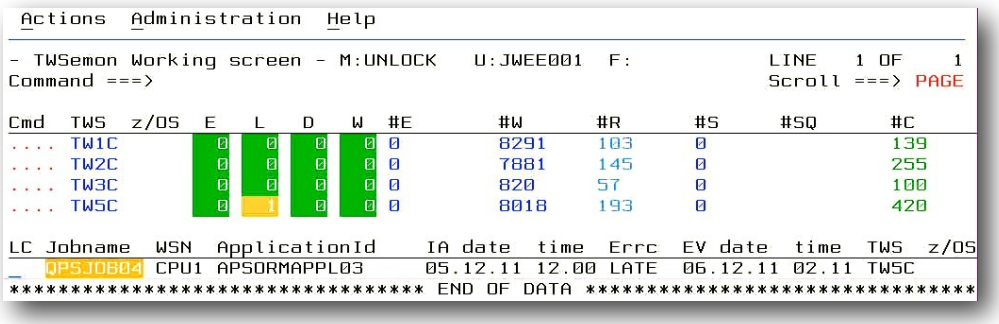

From there they can analyse the problem, resolve the problem

(e.g. modifying JCL) and …

…restart the job.




Returning back to TWSemon, the resolved problem has disappeared from the Working Screen.



### Analysing and Resolving Jobs with Long Durations, Jobs that missed a Milestone, TWS Workstation Offline/Failed

In case of a missed milestone, a job that is running too long (long duration) or a workstation in status offline or failed, the Operator will be guided to the corresponding TWS dialog functions in order to allow the fast and efficient analysis of the potential problem situation.

### Integrated TWS Monitoring and Operating

This allows the entire TWS environment to be handled as one entity from the operations standpoint. TWSemon also allows the user to navigate directly to the TWS for z/OS Primary Option menu of any controller being monitored creating a standardised way to access to all TWS for z/OS controllers.

### Documenting and Escalating TWS Problem Situations

Not every problem situation can be resolved by an Operator. In these situations, TWSemon provides capabilities to document open issues and to escalate an issue to an incident management system.

### Error & Event Reporting and Archiving

All out-of-line situations and actions are logged by the TWSemon Archive Facility, creating a completely centralized audit trail. An archive list can be displayed in the ISPF interface.

### Proactive Notification & Automation

Email or WTO alert messages can be issued for every new event that TWSemon detects.

### Low Resource Consumption

TWSemon was intelligently designed to have a very low footprint on your systems. TWSemon utilises the operation-status change exit (EQQUX007) for nearly all of its interfacing with TWS for z/OS. The advantage to this design is that the status of your TWS for z/OS jobs are reflected almost instantaneously within the TWSemon interface while having extremely low overhead. The flexible architecture of TWSemon allows users to monitor and operate multiple TWS for z/OS controllers on multiple LPARS, CPUs, SYSPLEXes or even other data centers. TWSemon fully supports IBM's TWS End-To-End architecture..

### Bottom Line

TWSemon allows you to increase the quality of, and decrease the effort put into, the detection and resolution of out-of-line situations in the batch production environment.
Real time monitoring, early detection and timely resolution of these situations is the key to running a best practices workload automation environment.

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