

Syslink

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About Syslink

Syslink is an independent SAP® Service Provider as well as a software developing firm. We are a certified SAP Hosting Partner since the year 2000, and a certified SAP Software Solution Partner since 2004. Syslink emerged from PricewaterhouseCoopers' outsourcing business in Switzerland, so we have 18 years worth of experience in SAP System Operation with a high level of staff continuity.

ZK x Syslink Xandria

ZK is used to provide user interface for Syslink Xandria, a smart and reliable System Management application focused on Enterprise-grade SAP Solutions and large-scale Database Environments. Syslink Xandria is effortless to install, there is no need to setup any implementation project. No consulting needed, no additional training required, no hidden costs. No more repetitive manual work. No additional overhead. Instead it acts as a thorough and reliable team member.

The screenshot displays the Syslink Xandria Control Center interface. At the top, it shows the URL 'https://xangu/rtm/rtm.zul' and the title 'syslink Xandria (Control Center)'. Below this, there's a 'RealTime Monitoring - Control Center - View 2013-11-18 14:21:05' section. This section contains a table with columns: Name, Status Age, System, Type Customer, Last Refresh, System Role, and Result. Several rows are visible, including 'AGENTALIVE', 'SAP_MEMORY', 'QMC_OUT_ERRQ', 'SAP_DIAGLOG', 'FILESYSTEMS', 'HDB_Alerts', 'ORA_TABLESPACES', and 'PAGINGSPACE'. Each row has a corresponding status icon and a brief description of the issue or check.

Below the RealTime Monitoring section, there are three main panels:

- Systems:** A table with columns for Customer, Systems, Checks, and Business Services. Each cell contains a status indicator (green, yellow, or red).
- Checks:** A table with columns for Name, Type, Reason, and Monitoring Off Until. It lists various checks like 'Dhanaia_PP1_01', 'DIS_PP1', 'F010', etc.
- Monitoring Off Systems:** A table with columns for Name, System, and Reason. It lists systems that are currently off monitoring, such as 'Dhanaia_PP1_01', 'DIS_PP1', 'F010', etc.

At the bottom, there's a section for 'Unassigned Changes' with columns for Name, Short Description, and Time. It lists changes like 'System change option for maintenance has been changed', 'SAP basis release has been changed', etc.

Architecture

Data Layer:

Data is stored either in a Microsoft SQL Server or a PostgreSQL database. MyBatis was decided as the Java persistence framework. The strengths of MyBatis are very good support for existing databases (which were originally not designed for a Java persistence layer), the support of multiple database vendors with no or very minor adaptations, and the excellent code generated from the MyBatis Generator.

Application Server:

We decided to run our web application with an embedded Jetty server. This approach makes installation very easy. But it is also possible to deploy it in any other Java application server (Apache Tomcat, Jetty, ...).

Communication Layer:

We use netty as communication framework to backend services.

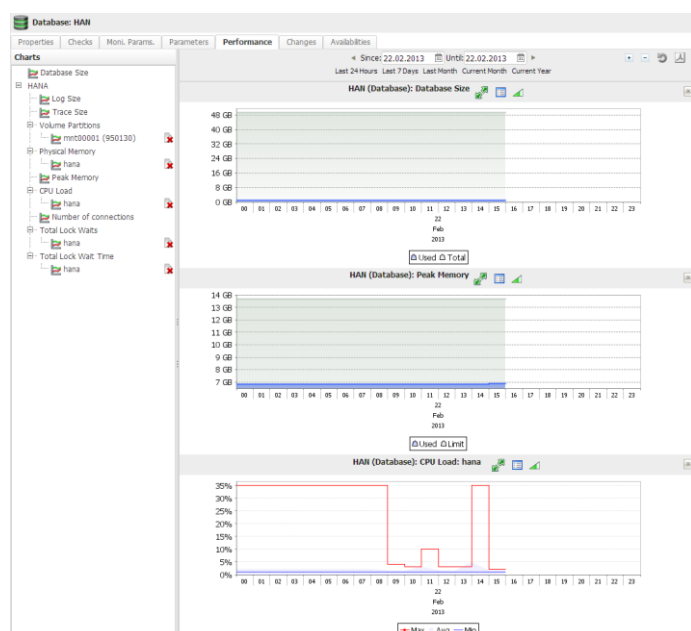
Other components:

- iText: PDF generation library, used for very large reports, including images, tables
- JFreeChart: chart library to generate charts
- Lucene: used to generate indexes search

Build Environment:

We use Maven/Hudson as our build environment. Module testing is performed with JUnit Tests (including ZATS). In addition we have automated Selenium based tests, which test browsers under real-life conditions.

“We were especially impressed of the development speed using ZK”

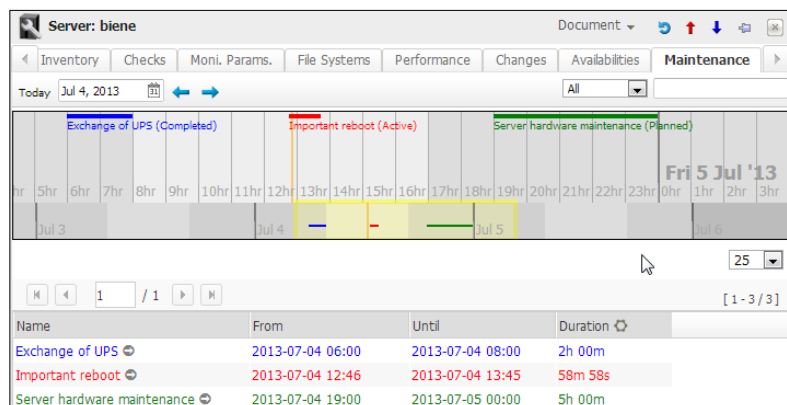


Why ZK

Our evaluation process came up with a short list containing Java Server Faces (ICEFaces, RichFaces), GWT, and ZK. The most important decision criteria were:

- development speed
- learning curve
- small footprint
- support of various operating systems, application servers & browsers.

In addition it was also important to build a web application that behaves like a desktop application providing all the bells and whistles users are familiar with nowadays. It turned out the client centric approach of GWT was a no-go. Our application is very data centric and implementing data loading from servers would require too much effort. The JSF based solutions tend to be very complex. We were not able to build a simple test application in a reasonable time.



So, it turned out that ZK is best suited for our needs. We were especially impressed of the development speed using ZK. The server centric approach makes it very easy to access all our server resources like the database and other web services. With ZK it is possible to build a web application that behaves like a desktop application. The resulting code is clean, well-structured and easy to understand.

“ZK code is clean, very easy to understand and easy to maintain. New developers are ready to implement new features within a very short timeframe”

Best of ZK

- The easy and very powerful way of writing web applications.
- The development speed; we can focus on our core business instead of web technologies
- The excellent support of different browsers, including many old browser versions
- The good performance and low footprint

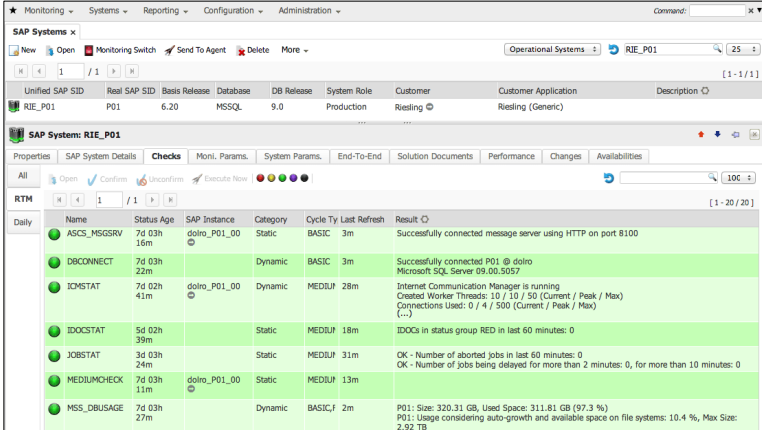
- ZK code is clean, very easy to understand and easy to maintain. New developers are ready to implement new features within a very short timeframe.
- And, it simply works, we had never had and severe ZK related problems. ZK proved to be a very mature framework.

The Result

The result is an application, which can be used with almost no training. The little training that is required focuses on the business logic of syslink Xandria, not on the user interface. The core features are:

- Powerful lists showing domain objects. Lists are powered with a Lucene based search, column moving and resizing (persistent), multi selection, context menu, context sensitive actions, and paging.
- Multiple tabs with different content. Tabs can be moved, can be added to favorites
- Object detail dialogs.

As the legacy user interface is replaced now, we can reduce resources put in user interface development. Nonetheless we are still developing new functions and continuously improve existing ones.



The screenshot shows the SAP Systems monitoring interface. The main table displays the following data:

Name	Status Age	SAP Instance	Category	Cycle Ty	Last Refresh	Result
ASCS_MSGSRV	7d 03h 16m	doiro_P01_00	Static	BASIC	3m	Successfully connected message server using HTTP on port 8100
DBCONNECT	7d 03h 22m	doiro_P01_00	Dynamic	BASIC	3m	Successfully connected P01 @ doiro Microsoft SQL Server 09.00.5057
ICMSTAT	7d 02h 41m	doiro_P01_00	Dynamic	MEDLJ	28m	Internet Communication Manager is running Created Worker Threads: 10 / 10 / 50 (Current / Peak / Max) Connections Used: 0 / 4 / 500 (Current / Peak / Max) (--)
IDOCSTAT	5d 02h 39m		Static	MEDLJ	18m	IDOCs in status group RED in last 60 minutes: 0
JOBSTAT	3d 03h 24m		Static	MEDLJ	31m	OK - Number of aborted jobs in last 60 minutes: 0 OK - Number of jobs being delayed for more than 2 minutes: 0, for more than 10 minutes: 0
MEDLUMCHECK	7d 03h 31m	doiro_P01_00	Static	MEDLJ	13m	
MSS_DBUSAGE	7d 03h 27m		Dynamic	BASIC,F	2m	P01: Size: 320.31 GB, Used Space: 311.81 GB (97.3 %) P01: Usage considering auto-growth and available space on file systems: 10.4 %, Max Size: 2.92 TB

About ZK

ZK is the leading enterprise Java Web framework with more than 1,500,000 downloads. ZK is deployed by a large number of Fortune Global 500 companies, including Barclays, Allianz, Swiss RE, Roche, Deutsche Bank, Sony, Sun Microsystems, and Toyota, providing them with the ability to rapidly create rich Ajax enterprise level applications.

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