

SAP NetWeaver Application Server

Comgroup Boosts Developer Productivity

A Fresh Take on Application Development with
ABAP® Development Tools for Eclipse



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How does a business generate healthy margins in the fiercely competitive nuts and bolts market? Do as Würth Group, global leader in mechanical fasteners, does: foster customer intimacy, deliver quality products on schedule, and keep tabs on costs. Precision-tuned applications are key to the group's success. Comgroup GmbH, its IT service provider, achieved a **major boost in productivity** by utilizing development tools for the ABAP® programming language in Eclipse.

ABOUT SAP NetWeaver® APPLICATION SERVER

Development tools for ABAP running on the SAP NetWeaver® Application Server (SAP NetWeaver AS) component provide an integrated environment for developing business applications in pace with changing needs. The functionality for the application server for ABAP provided by these tools supports comprehensive lifecycle management and effective testing and troubleshooting. The tools integrate with a wide range of development tools from SAP (including the SAP HANA® studio and the UI development toolkit for HTML5) and from third parties – on the open Eclipse platform.

ABOUT ECLIPSE

Eclipse is a multilanguage integrated development environment (IDE). It comprises a core platform with extension points for enhancing and customizing the development environment. Eclipse supports the development of applications in Java and, by means of various plug-ins, a host of other programming languages, including Ada, C, C++, COBOL, Fortran, Haskell, JavaScript, Perl, PHP, Python, R, Ruby, Scala, Clojure, Groovy, Scheme, and Erlang. It also supports the Web Dynpro development environment, a user interface technology developed by SAP for Web applications.

The thriving Eclipse ecosystem provides developers with a vast array of tools and encourages them to share their own best practices.

Available as open-source software, Eclipse is developed and driven by the Eclipse Foundation, a not-for-profit consortium of software vendors. The Eclipse Foundation provides support to the Eclipse community for four critical components:

- 1** an IT infrastructure,
- 2** an ecosystem development environment,
- 3** a development process, and
- 4** integration platform management.

SAP is a key member of and major contributor to the Eclipse Foundation.

ABOUT THE WÜRTH GROUP AND COMGROUP

The Würth Group (www.wuerth.com) is a global leader in the trade of mechanical fasteners. It comprises some 400 companies in more than 80 countries, over 66,000 employees, delivers to 3 million customers worldwide, and generated €9.7 billion revenue in 2012.

A member company of the Würth Group, Comgroup GmbH (www.comgroup.de) provides comprehensive IT services, including the development, implementation, and provisioning of business applications as well as e-business and IT security solutions. Founded in 1994, Comgroup employs some 180 staff worldwide. The company generates annual revenues of €28 million. Headquartered in Bad Mergentheim, Germany, Comgroup has subsidiaries in Shanghai, China, and Biel/Bienne, Switzerland.

The Nuts and Bolts of Application Development

The Würth Group is a global player in the nuts and bolts business. The mechanical fasteners sold by the group serve to create reliable connections. And they are standardized. Standardization provides efficiency and cuts out guesswork. Now, to harmonize business processes across its country organizations, the Würth Group is driving an application standardization initiative. Supported by Comgroup, this initiative envisages a central system on which the group's member companies and subsidiaries access the same business applications. At the same time, Comgroup supports developers across the Würth Group in switching to a unified application development environment.

ABAP IN ECLIPSE – THE BUSINESS CASE

Comgroup was recently tasked with developing a warehousing optimization application tuned to the logistics needs of the Würth Group. This application was designed to make the most out of available warehouse capacities in order to facilitate binning and picking, expedite shipments, and cut costs. Written in ABAP, this application heralds a new era in software development within the Würth Group: it was developed entirely on the Eclipse platform.

WHY ABAP?

For a number of years, developers at Comgroup have relied on the workbench for ABAP in the development and maintenance of business applications. Comgroup draws on ABAP alongside Java for programming SAP NetWeaver AS. "ABAP keeps getting better all the time. SAP continues to enhance and modernize the ABAP programming language," notes Christian Hiller, senior SAP consultant for Comgroup.

WHY ECLIPSE?

When it came to defining a unified platform for application development in ABAP across the Würth Group, Comgroup chose Eclipse. Application developers all over the world know the Eclipse development environment for its flexibility, versatility, and speed. ABAP development tools are available to developers as a set of plug-ins for the Eclipse platform.

"The Eclipse user interface was very well received by most of our developers. While the workbench for ABAP has its merits, its user interface is seen as somewhat old-fashioned. Eclipse comes with a Windows-style GUI that developers find easy to handle," Hiller points out. "Eclipse provides a rich set of plug-ins and supports applications that are key to our business, including 'floor plan manager,' an application developed in the Web Dynpro development environment."

Instant Productivity Boost

ABAP development tools on the Eclipse platform were demonstrated to the development teams at Comgroup. Although Comgroup's programmers are free to use the development platform they prefer, the Eclipse platform is gaining in popularity among them, a trend the company supports. The company's developers needed no classroom training for the Eclipse environment. A two-hour session to present key functionality and handling features in a real-life scenario proved to be fully sufficient. "Most of our younger developers were already familiar with Eclipse, so the learning curve was extremely short, and they were enthusiastic about putting their experience to use," emphasizes Hiller.

STRAIGHTFORWARD CODING IN PLAIN TEXT

The ability to write application code in plain text is one of the key benefits delivered by the Eclipse environment. "We found that the productivity of our developers has gone up significantly since we switched to developing in ABAP in Eclipse. Writing code in plain text is much faster than the forms-based approach of the venerable workbench for ABAP," Hiller underscores.

BEST PRACTICES SHARED WITH PEERS

Comgroup has set up an internal forum where its developers exchange and share ideas, experiences, and best practices with peers. And good news travels fast: suggestions provided by co-workers have helped other developers at Comgroup improve the performance of their application modules.

SAP® COMMUNITY NETWORK – ECOSYSTEM FOR ABAP IN ECLIPSE

Further afield, SAP® Community Network constitutes a much larger and more advanced ecosystem. A rapidly growing "ABAP in Eclipse" group is part of this network to which the development teams at Comgroup can turn for collaboration.

"SAP Community Network is highly responsive. When we post a question, we tend to get an answer within a very short space of time. We also receive technical support from the community. The collaboration we are experiencing goes beyond the mere exchange of knowledge and experience," says Hiller.



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Application Development Rejuvenated

Eclipse provides a robust cross-technology environment for application development. This environment not only spans an array of programming languages. It also supports a large number of leading business applications. And it enables developers to integrate items that are not natively supported by Eclipse.

When developing a screen not natively supported by Eclipse, the “screen painter” can be used as a prime example. If a developer accesses the screen in Eclipse, the screen is displayed in its native development environment embedded in Eclipse. To return to “native” Eclipse mode, the developer simply selects an item supported by Eclipse, for example, a function module used in the screen. “That’s a truly elegant approach. There are so many classical applications out there that can be brought into Eclipse,” notes Hiller.

POWERFUL FUNCTIONALITY, WELL DOCUMENTED

ABAP development tools on the Eclipse platform enable developers to work in parallel on the same application using different software environments. Hiller continues: “The Eclipse client provides a rich feature set via a straightforward user interface. The source code editor is excellent. We found that it’s easy to compare source code across systems. The code template editor is easy to use yet powerful. And ABAP in Eclipse comes with quality documentation. Also, the online help works well and returns useful content.”

FAST AND EASY NAVIGATION

Instead of displaying multiple windows, the Eclipse client provides views based on tabs that developers can quickly and easily customize for the task at hand. This visualization approach prevents screen clutter and makes developers feel comfortable. “Eclipse also speeds up navigation because it uses a text-based editor. Once you are familiar with the syntax, you can use the keyboard rather than pressing mouse keys,” adds Hiller.

VERSATILE AND EASY TO MAINTAIN

SAP is in the process of moving all of its major development tools to the Eclipse platform. To use any of these tools in Eclipse, developers simply choose the tools they need from the update site provided by SAP and start the automatic installation.

For his activities, Hiller notes: “The Eclipse environment provides much richer functionality than traditional development environments. Whenever possible, I use Eclipse as a first choice for all of our existing applications because it’s a lot more efficient and more powerful. Clearly, switching to Eclipse is the right way forward for application development in the long haul.”

New versions of the various plug-ins for the Eclipse environment are downward compatible. Plug-ins can be updated quickly and conveniently via the Eclipse update site.



MOVING FORWARD

Member companies of the Würth Group in southern Europe are currently ramping up to develop wholesale applications using ABAP development tools on the Eclipse platform. Würth Group subsidiaries in Spain and Italy will soon be able to migrate the Würth adaptation of the SAP Extended Warehouse Management application to the Eclipse environment.

“We are seeing a shift from the traditional workbench for ABAP to Eclipse across the board. Eclipse is easier to use, faster, and more efficient,” concludes Hiller.



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