

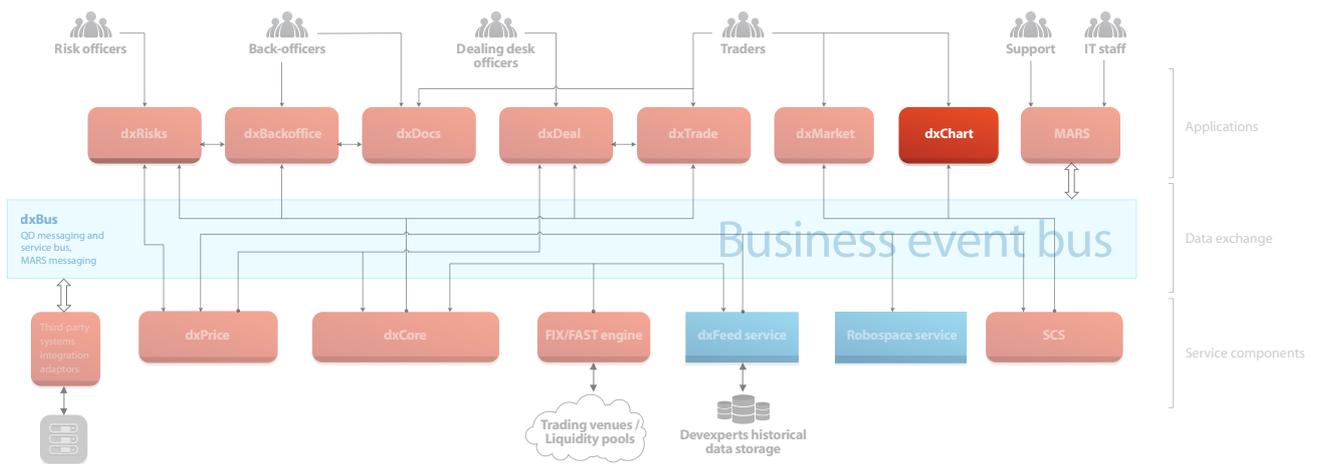


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Financial software development
for brokerage and exchanges

dxCharts

A powerful out-of-the-box application for accurate technical analysis and representing live market data on different securities in a flash-chart form.





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Product Highlights

Multiple ways of product use: dxCharts can be placed on a website as a stand-alone application, or incorporated into a trading platform as a plug-in. As a reduced «light» version, the chart can shrink to as little as approximately 150x100 pixels to be used as a non-interactive static element in web-site pages like stock summary;

Wide integration capabilities: can be easily integrated with any source and type of financial data you need, as well as complimented by our market data distribution service;

Customization as per customer requirements is available including white-labeling, additional client-side features and server-side configuration;

Storable user settings: A special persistence option enables storage of custom chart configurations (chart colors, chart view options, list of indicators & list of drawings) at the server side and application of stored settings from the server side;

A wide choice of tools for technical analysis: drawings, including various lines, Fibonacci arcs, fans and retracements, and the most popular technical indicators, including SMA, EMA, MMA, MACD, TEMA, stochastic oscillators, Bollinger bands, RTI, ATR, and others.

Important Features

- Real-time quotes monitoring;
- Historical data analysis;
- Customizable studies: a special user-friendly plug-in is included for tuning studies settings – inputs and plots - to get the most accurate results in technical analysis;
- Detailed reports on each quote;
- Color customization settings;
- User-friendly navigation tools;
- Powerful engine for technical studie's calculation.

Standalone Charts



The Flash-charting system offered by Devexperts is an easy-to-use application for precise technical analysis allowing to display both live and historical market data on securities, derivatives, currencies, and other instruments in a chart form. The application offers a variety of drawing tools, including Fibonacci lines, and a set of the most popular studies. Users can select instruments, chart styles, and trading intervals, customize studies and colors, navigate charts, and manage chart objects directly in their favorite browsers provided that Flash Player is installed.

Though Flash-based charting is an out-of-the-box solution, a number of optional features on both client and server sides is also available, allowing to customize it as per your requirements. The product can be used as a standalone application or as an element of your trading platform. Flash-charting can be easily placed on your website as a free or paid service providing the website visitors with live analytical information.



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Business Features

Real-time as well as historical quotes to view and analyze trends:

Flash-charting can receive and display live financial data in a chart form and can be customized to support the complete history of market data. Users can use charts to view the latest prices, run different drawings and studies to analyze trends within certain time frames, and use historical data to test their trading strategies.

Market from authentic sources:

Devexperts offers direct access to leading market data providers (OPRA, ISE, NYSE, NYSE AMEX and others) via our cross-platform API or using FAST format which is an industry-specific standard. dxCharts software can be integrated with all data sources you need for your business practices. More details about integration with data sources are available at www.dxfed.com.

Full customization according to your requirements:

Devexperts offers full server-side customization according to your requirements. Customization can cover performance, data sources, platform, integrations, studies, and other parameters. According to your needs, we can also develop and implement additional client-side functionality such as colors themes, objects, drawings, financial instruments, and technical studies.

An effective web-service to bring in customers:

Flash-charting is an effective and useful service for any financial or analytical website. When Flash-charting is installed on a website, visitors can enjoy free or paid access to live financial data and technical analysis tools. Access to all system tools can be limited to authorized users only. As a web-based financial solution, Flash-charting is a must-have service for a trader's daily practices and will no doubt attract new customers to your website.

Seamless installation and compatibility:

Flash-charting can be effortlessly installed on any page of your website in just a couple of minutes. The application runs flawlessly in any web browser and works on a cross-platform basis, as it supports Microsoft Windows, Mac OS, Linux and other Unix platforms. studies.

Client-Side Features

Real-time quote monitoring: When Flash-charting is connected to a source of real-time market data, prices on charts can be updated and viewed tight at the moment they are received from data vendors.

Historical data analysis: The system supports historical data which can be viewed and analyzed on charts. The application allows users to select the aggregation period (typically from several minutes to day and month), adjust history depth (from days to years), and analyze the behavior of a selected instrument within various time frames.

A choice of most popular studies: A standard license includes 10 most popular indicators calculated according to specified formulas, such as moving averages (SMA, EMA, and MMA), MACD, TEMA, stochastic oscillators, Bollinger bands, ATR, and others. Users can add up to 5 studies at a time, customize their settings, and delete studies. Studies are displayed either on the main price chart or on additional charts synchronized with the main one.

Customizable studies: The application has a user-friendly interface allowing users to adjust their study-related settings – inputs and plots - to get the most accurate results in technical analysis.

Detailed reports on each quote: A special cross tool allows viewing quote details at a selected point of the chart area. Each quote corresponds to a certain spike on a line chart or to a certain candle or bar on candle or bar

charts accordingly. The cross tool shows such values as current price, study, volume, and the time corresponding to these values, as well as opening, closing, highest, and lowest price values during the trading day.

A variety of drawing tools: The application offers a variety of drawing tool such as horizontal lines, trend lines, and a choice of Fibonacci drawings (retracements, fans, arcs). Using the drawings, you can mark certain areas on your charts, as well as drag, move, or delete your marks.

A variety of chart styles: The system offers various data display options, such as lines, candles, bars, and area. When a new chart style is selected, the application automatically switches to a new data viewing format.

Color customization settings: Users can customize the general view of their charts including foreground, background and grid, and change the color of chart styles for bars (up and down), candles (bull and bear), lines, and volumes.

User-friendly navigation tools: The application interface enables users to move the chart area backward and forward and change the number of candles displayed (horizontal zoom). The vertical scale is adjusted automatically to fit the data.



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Server-Side Features

Storable user settings: A special persistence option allows for saving custom chart configurations on the server side and apply these custom configurations from the server side. The following settings can be stored:

- Customizable chart colors
- Customizable chart view options
- List of indicators (with respective settings) added to chart
- List of drawings (with respective settings) added to chart

Powerful engine for technical studies calculation.

Customizable backend integration.

Technology

Client Side: Flex-based application: Flex is a platform for Rich Internet Application introduced by Adobe for increased user experience: (according to FlexCharts presentation):

- Powerful UI toolkit for faster and easier development of Rich Internet Applications;
- Runtime readily available at almost any computer with a browser;
- Compact binary files;
- No installation phase;
- Unified implementation for all browsers and all platforms.

Server Side: LiveCycle DS

- Java-based solution;
- Standard Adobe solution for server backend;
- Can run under Apache Tomcat servlet container;
- Custom replacement is on a long-term list of tasks.

Mini Charts



We can offer a reduced «light» version of the standalone Flash-charting application adjusted for use as a non-interactive static web page element providing for display of stock summary data. One of its main advantages is its ability to shrink to as small a size as some 150x100 pixels and to remain quite readable at the same time; you can check it out by resizing the window of your browser. Basically it is the same chart (based on the same source code) with all the controls removed, and its instrument and timeframe settings provided externally. We can easily make an intermediate version (with any

set of visual components and user controls) belonging anywhere between the extremely limited «light» and the «full» standalone version. Though Flash-based charting is an out-of-the-box solution, a number of optional features on both client and server sides is also available, allowing to customize it as per your requirements. The product can be used as a standalone application or as an element of your trading platform. Flash-charting can be easily placed on your website as a free or paid service providing the website visitors with live analytical information.



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Product Description

Mini Chart display mode: A Mini chart displays the same financial real-time and historical data as the "full" stand-alone version does, however in a compact form. This feature is useful for showing chart thumbnails in a limited space (200x150 pixels and below).

Displaying chart data: A Mini chart can receive real-time price updates and display data changes. A Mini chart can display the following data only:

- Closing prices as an area graph (impossible to switch display mode to OHLC aggregates) Automatically scaled horizontal (time) axis with labels. Can be shown or hidden. Does not allow for manual scroll or zoom.
- Automatically scaled vertical (price) axis with labels. Can be shown or hidden.

Requesting chart data: Mini charts have no controls for changing display options and sending data requests by the end-user. Display options (instrument, aggregation period, and range) are controlled programmatically by an external application through a relevant API.

