A hand holding a brass compass on a ship's deck at sunset. The background shows the ocean and a distant landmass under a warm, golden sky. The compass is open, and the hand is positioned in the lower center of the frame.

## Embark on Your Application Development Journey with SAP HANA<sup>®</sup>, Express Edition



The Best-Run Businesses Run SAP<sup>®</sup>

**Develop with SAP HANA®  
at no charge**

# Develop with SAP HANA® at no charge

As demand for modern applications skyrockets, developers seek quick hands-on experience with the SAP HANA® platform for in-memory computing. SAP offers you the express edition of SAP HANA, a community-supported package that runs on PCs, on small servers, or in the cloud. Start [building applications using up to 32GB of memory for free](#), and upgrade when your requirements expand.

The SAP HANA platform has fundamentally changed the database market. Its in-memory computing architecture eliminates the need for costly data movement between disk and memory, between transaction systems and analytics systems, and between databases and application servers. Combined with columnar storage, this innovation lets new applications execute live transactions and deliver real-time analytics on any type and volume of data – simultaneously.

Meanwhile, competitive pressure drives companies to demand applications that exploit the latest technologies to reveal new opportunities for revenue. In this climate, developers want an efficient way to gain experience with SAP HANA. Our response is the express edition of SAP HANA – a jump-start version that runs on your own PC, on a small server, or in the cloud. The express edition lets you develop applications that use up to 32 GB of memory for free, and you can upgrade to more robust editions as you need more memory – or more features.



# Gain high-speed features critical for application development

## Gain high-speed features critical for application development

Build in flexibility to grow as your business expands

Begin developing modern applications right away

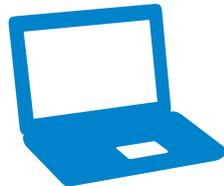
Program for high reusability with multiple tools

The express edition of SAP HANA is free for up to 32 GB of memory use (or up to 128 GB for a fee). Running on your laptop computer, desktop computer, or any server with an Intel chip set, it is suitable for use cases with relatively low demand on system resources.

Despite omitting features that place a greater demand on resources, the express edition has everything you need for application development, including advanced data processing and database services, as illustrated in [Figure 1](#) on the next page. The installation package, downloadable from [www.sap.com/sap-hana-express](http://www.sap.com/sap-hana-express), includes options for Linux

as well as preconfigured virtual machines that bring the power of SAP HANA to Microsoft Windows or the Apple Mac OS. The express edition also runs in the cloud when you use the SAP® Cloud Appliance Library tool to access Amazon Web Services or Microsoft Azure (cloud infrastructure fees apply).

The express edition includes community support from SAP Community at [www.sap.com/hana-express-support](http://www.sap.com/hana-express-support), along with tutorials, use cases, and sample code to help you jump-start your introduction to the power of SAP HANA.



The express edition runs on any computer with Linux, Windows, or Mac OS – with no need for hardware certification.



Objectives

**Solution**

Benefits

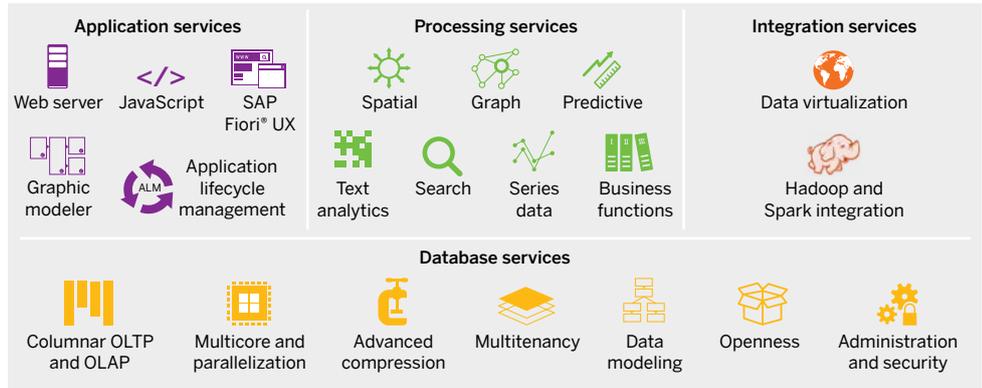
Quick Facts

**Gain high-speed features critical for application development**

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OLAP = Online analytical processing; OLTP = Online transaction processing; UX = User experience

Figure 1: Key features of SAP HANA®, express edition



# Build in flexibility to grow as your business expands

Gain high-speed features critical for application development

## **Build in flexibility to grow as your business expands**

Begin developing modern applications right away

Program for high reusability with multiple tools

Most applications start out simple but grow increasingly complex to cover additional scenarios. And every new application should run on a platform where it can scale to user demand. With the express edition of SAP HANA, you can start small and agile and invest in a full-use edition as your data volumes and user base expand.

Three full-license editions of SAP HANA offer incrementally more features. The base edition of SAP HANA provides core database services, basic development tools, business

function libraries (BFLs), and application function libraries (AFLs). The platform edition adds new options for processing text, spatial, graph, and time-series data; implementing predictive analytics; and managing a data warehouse. You can also purchase extra functionality for data streaming, operational process intelligence, and dynamic tiering. And the enterprise edition includes all the features of the express, base, and platform editions, plus a business rules framework and functionality for data provisioning, replication, and data distribution rights.



The express edition includes open interfaces for standard protocols and languages, built-in integration services, and functionality for data mining.



# Begin developing modern applications right away

Gain high-speed features critical for application development

Build in flexibility to grow as your business expands

## **Begin developing modern applications right away**

Program for high reusability with multiple tools

The express edition of SAP HANA gives you a jump start on developing the crucial applications that help your business make the most of emerging technologies. You have access to open interfaces for standard application environments, protocols, and programming languages, so you can apply your expertise and avoid a long learning curve. And the express edition entitles you to interact with other developers in SAP Community to help maintain standards and avoid known pitfalls.

The express edition includes built-in application services, processing services, integration services, and database services to simplify application architectures. The advanced data processing engine in all editions of SAP HANA helps you analyze multiple data types, such as structured, text, spatial, and graph data. Full in-memory processing lets you combine transactions and analytics in the same application, reducing development efforts. If you need to mine data or perform predictive calculations, the embedded application function library and R integration in any of the full-license editions can save you hours.



At no charge, you can quickly build application prototypes that use up to 32 GB of memory to showcase specific features for user feedback.



# Program for high reusability with multiple tools

Gain high-speed features critical for application development

Build in flexibility to grow as your business expands

Begin developing modern applications right away

**Program for high reusability with multiple tools**

In today's fast-paced marketplace, you don't have time for monolithic development and layers of change requests. You need to develop applications continuously and dynamically – while maximizing the potential to reuse your work.

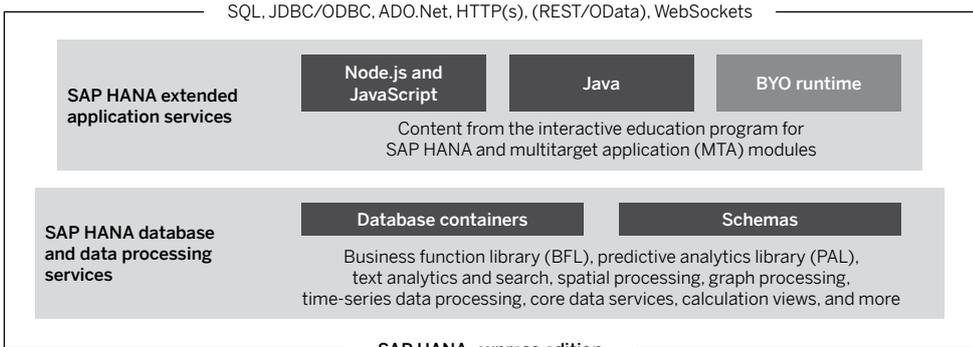
Because an in-memory computing platform pushes computation down to the database, SAP HANA allows you to reuse more of your code than other platforms. The express edition lets you program using a command-line interface or the browser-based SAP Web IDE for SAP HANA. SAP Web IDE for SAP HANA is ideal for applications that include numerous SAP HANA data models and extensive business logic for access through Web-based user

interfaces. Optionally, you can install the Eclipse-based SAP HANA studio to develop applications and manage the SAP HANA database. You can also work with the open interfaces of the express edition to use your preferred tools and version control systems.

You can save additional time and effort with the advanced model of SAP HANA extended application services. It delivers a Web server and a full-featured application server and supports multiple runtime environments, including Java and JavaScript. It also provides syntax-aware editors, along with robust testing and debugging tools. [Figure 2](#) on the next page summarizes the programming approach of the express edition.



Objectives	Solution	Benefits	Quick Facts
<p>Gain high-speed features critical for application development</p> <p>Build in flexibility to grow as your business expands</p> <p>Begin developing modern applications right away</p> <p><b>Program for high reusability with multiple tools</b></p>	<p><b>Program from a command line using the client and HDBSQL</b></p> <p><b>Develop applications using a browser with SAP* Web IDE for SAP HANA*</b></p> <p><small>*Part of SAP HANA extended application services, advanced model</small></p>	<p><b>Develop applications and manage the database with SAP HANA studio*</b></p> <p><small>*Install separately</small></p>	<p><b>Bring your own (BYO) tools*</b></p> <p><small>*Install separately</small></p> <p><b>Version control (Git/Gerrit)*</b></p> <p><small>*Install separately</small></p>



**JD**BC = Java Database Connectivity; **OD**ata = Open Data Protocol; **OD**BC = Open Database Connectivity; **SQL** = Structured Query Language; **RE**ST = REpresentational State Transfer

Figure 2: Approach to application development using SAP HANA, express edition



# Create next-generation, real-time, flexible applications

## Create next-generation, real-time, flexible applications

What could be better than free, fast, and flexible? The express edition of SAP HANA is all those things – and powerful as well. With the express edition, free access to the SAP HANA platform for in-memory computing lets you rapidly prototype, develop, and deploy applications on your PC or in the cloud.

SAP HANA is one of the industry's first platforms to process application data and transaction data on a single in-memory database, laying the groundwork for real-time business. With the express edition of SAP HANA, you can tap into tutorials, samples,

and a community network to gain risk-free, firsthand experience with the power of SAP HANA. You can work directly from your PC or the cloud to develop and test sophisticated applications that start simple and yet address evolving business concerns with up-to-the-minute technologies. What if your application moves into production and expands to serve more users who want more advanced functionality or more processes that demand additional memory? Then you can scale upward by moving to a more comprehensive edition of SAP HANA.



“The shift to digital business is pushing organizations in every industry to accelerate [application] delivery well beyond today's plodding pace.”<sup>1</sup>

1. Liz Herbert, “Invest in Greater Speed and Agility for Application Development and Delivery,” Forrester Research Inc., March 25, 2016.





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## Objectives

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### Summary

Companies increasingly expect developers to create applications that capture emerging opportunities and sharpen competitive edge. So you need an easily accessible technology platform that can accelerate leading-edge application development and support applications of any size and complexity. SAP HANA® is our innovative in-memory computing platform designed to do just that, and the express edition offers free PC or cloud-based access to its critical features.

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### Objectives

- Learn to prototype, develop, and deploy next-generation applications for SAP HANA
- Choose from multiple tools and experiment with prototypes, demos, and trial applications
- Build flexibility, reusability, and scalability into your applications

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## Solution

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## Benefits

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## Quick Facts

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### Solution

- Starter edition with a reduced footprint
- Free download for PC or cloud use up to 32 GB of memory
- Bundled Eclipse-based and Web-based tools
- Support for your own development tools
- 24x7 collaboration through SAP® Community
- Upgrade to more comprehensive editions as your business grows

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### Benefits

- Try out real-time applications to boost your company's bottom line
- Apply existing expertise and lower your learning curve to save time
- Reuse more code and shorten development cycles by pushing computation down to the database
- Learn how to avoid known pitfalls

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### Learn more

For more information, visit us online at [www.sap.com/sap-hana-express](http://www.sap.com/sap-hana-express).



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The Best-Run Businesses Run SAP®