Business Central cloud vs on premise similarities differences

What is Cloud ERP Software?

Cloud enterprise resource planning software (ERP) refers to any software that is accessible by using the internet. Cloud ERP software aims to deliver employee flexibility and less up-front organizational costs.

What is On-premise ERP Software?

On-premise enterprise resource planning software refers to software that is installed on and controlled through organizational controlled servers. On-premise ERP software aims to deliver full control, including security, to the organization.

Business Central Cloud vs On-premise differences

1. Updates
2. Development License
3. Integrations
4. Storage Capacity
5. Performance
6. Security
7. Implementation Speed

Let's start by taking a look at the below comparison charts that outline some of the basic differences between hosting options and the differences between Business Central cloud and Business Central on-premise. Updates, custom development license, and Office 365 integrations all have stark money saving differences.

1. Business Central Updates

Business Central cloud updates are automatically applied each month. You'll always be on the latest version of the software and have eliminated the need for paid on-premise upgrades. Business Central on-premise updates are paid because they will have to be applied through your Microsoft partner.
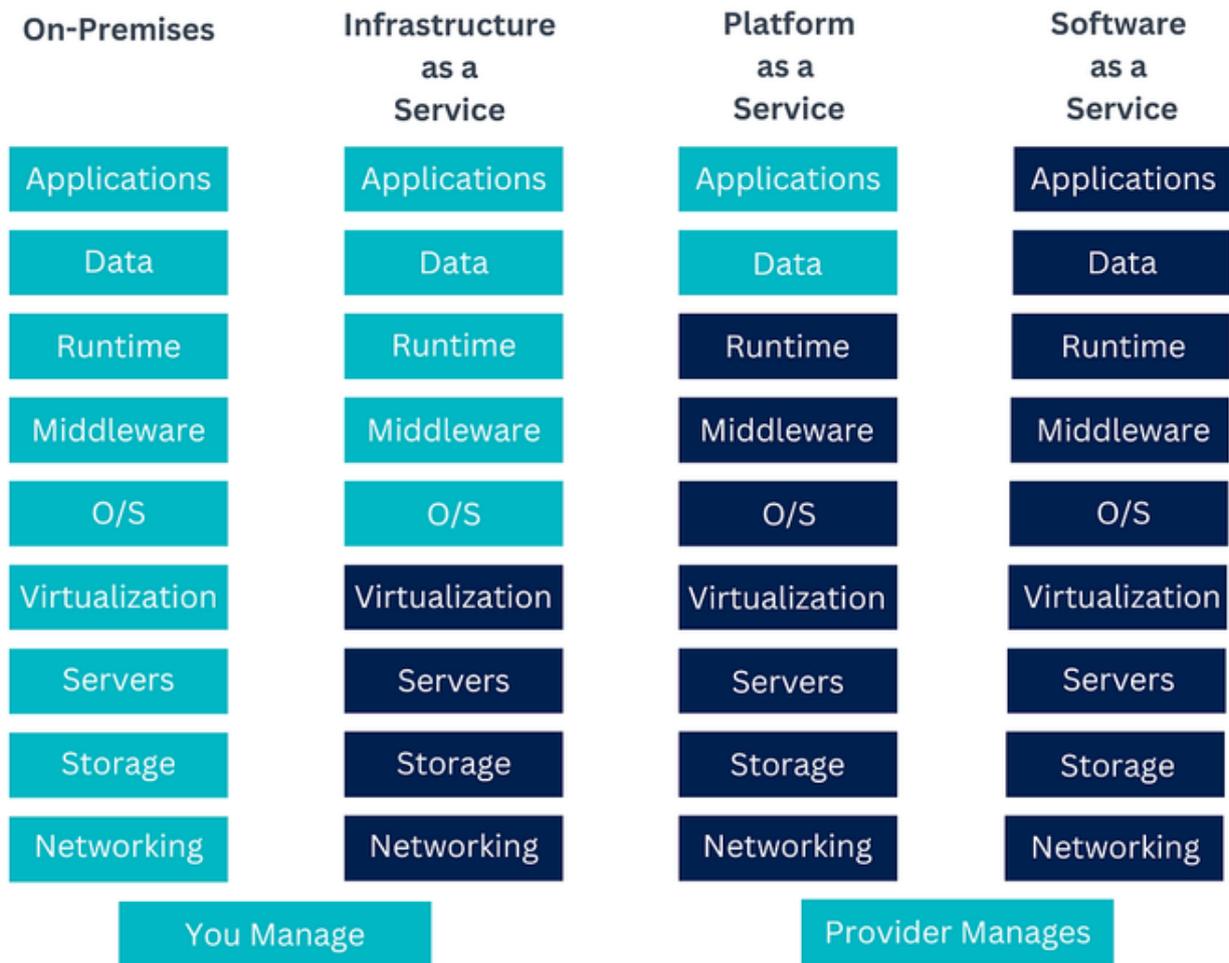
2. Business Central Development License

Business Central cloud custom development license is not needed. You can apply as many customizations through extensions and apps as you'd like. Business Central on-premise requires tables, code units, pages, etc. to customize your software and these "objects" require purchase.

3. Business Central Office 365 Integrations

Business Central cloud Office 365 integrations require minimal effort to connect and work seamlessly throughout the software. Business Central on-premise Office 365 integrations requires configuration of Azure Active Directory and still has some integration limitations.

BUSINESS CENTRAL ON PREMISE vs CLOUD

	Online	On Premise
Licensing	Subscription Only	Purchase or Subscription* * requires deployment on Microsoft Azure private cloud server
Deployment	Hosted by Microsoft and included in subscription fee	Hosted privately either on an on premise server or private cloud server (Azure)
User Interface	App or Browser (Chrome, Edge)	App or Browser (Chrome, Edge)
Device	Any Windows, Apple, or Android device.	Any Windows, Apple, or Android device.
Software Updates	Automatically applied by Microsoft	Any Windows, Apple, or Android device.
Custom Development Environment	Allowed using Visual Studio Code and AL Language.	Allowed using Visual Studio Code and AL Language.
Custom Development License	Unlimited customizations available.	"Object" license required but license includes 10 Tables, 10 Codeunits, 100 Pages, Reports, XML Ports and additional can be purchased.
Custom Integration Capabilities	Available via web services, APIs, oData. Direct SQL server database access NOT available.	Available via web services, APIs, oData. Direct SQL Server database access available.
Power BI Integration	Pre-configured and available for use within Business Central	Power BI Pro subscription licenses required and manual configuration required.
Office 365 Integration	All features available and pre-configured for use.	All features available but requires Azure Active Directory be setup.
Azure Machine Learning / AI Features	All features available and pre-configured for use.	Azure Machine Learning subscription required and manual configuration required.
Power Apps Integration	All features available and pre-configured for use.	Not available
Sandbox Environments	Up to 3 Sandboxes available per Environment and setup via Admin Center.	Unlimited Sandboxes available per Environment but manually setup.

On-Premises	Infrastructure as a Service	Platform as a Service	Software as a Service
Applications	Applications	Applications	Applications
Data	Data	Data	Data
Runtime	Runtime	Runtime	Runtime
Middleware	Middleware	Middleware	Middleware
O/S	O/S	O/S	O/S
Virtualization	Virtualization	Virtualization	Virtualization
Servers	Servers	Servers	Servers
Storage	Storage	Storage	Storage
Networking	Networking	Networking	Networking

You Manage   Provider Manages

4. Storage Capacity

Both Business Central cloud and Business Central on-premise have unlimited storage capabilities. You can choose to pay for upgrades to your on-site hardware to increase your on-premise storage or you can choose to pay Microsoft to increase your cloud storage. The main difference between the two is with Business Central cloud the increased storage cost will be a recurring monthly cost and the on-premise storage increase will be a one-time purchase.

5. Performance

Business Central performance questions are not a new thing. Way back yonder before Dynamics NAV was rebranded to Business Central organizations from time to time battled with on-premise performance issues. Today's Business Central on-premise software is no different. It's very robust and requires optimal hardware to run efficiently. Most organizations today understand this. What seems to be a more frequent question is the performance of Business Central cloud software especially for larger businesses. In my opinion, there is not a need to worry about cloud performance issues. Microsoft is a large organization that spends a lot of money on their resources to keep their runtime at 99.99%.

Business Central On-Premises:

Pros:

1. **Control**: With Business Central On-Premises, you have more control over the environment because it's installed locally on your own servers.
2. **Customization**: You can have more customization options, including the ability to modify the code directly if necessary.
3. **Data Storage**: You can store your data on your own servers, which might be a preference for some organizations due to compliance or regulatory requirements.

Cons:

1. **Upfront Costs**: There may be higher initial costs associated with purchasing and setting up the required hardware and software.
2. **Maintenance**: You are responsible for the maintenance, updates, and backups of the system, which can require significant IT resources.
3. **Scalability**: Scaling resources up or down might be more complex and might require additional investment in infrastructure.

Business Central Cloud (SaaS):

Pros:

1. **Lower Initial Costs**: Generally, there are lower upfront costs because you don't need to invest in on-premises hardware and software.
2. **Automatic Updates**: Updates and patches are managed by Microsoft, reducing the burden on your IT team.
3. **Accessibility**: You can access Business Central from anywhere with an internet connection.
4. **Scalability**: It's easier to scale resources up or down as your business needs change.

Cons:

1. **Limited Customization**: While Business Central Cloud supports customization, it may be more limited compared to the on-premises version. Direct modification of the underlying code is generally not supported.
2. **Data Location**: Depending on your specific requirements, you may have less control over where your data is stored, which can be a concern for some organizations.

Factors to Consider:

1. **Compliance Requirements**: Consider any industry-specific compliance requirements that may dictate where and how your data is stored.
2. **Budget**: Evaluate your budget and determine whether the lower upfront costs of the cloud version outweigh the potential long-term costs.
3. **IT Resources**: Assess your organization's IT capabilities and resources. Consider whether you have the expertise and capacity to manage an on-premises solution.
4. **Scalability Needs**: Consider how quickly your business may grow or change, and whether the flexibility of the cloud version is beneficial.
5. **Customization Needs**: Determine the level of customization your organization requires. If extensive customization is a necessity, the on-premises version might be preferable.
6. **Data Accessibility**: Consider where your employees will be accessing Business Central from and whether cloud accessibility is a priority.

6. Security

Business Central On-Premises:

Security Pros:

1. **Control over Physical Access**: With On-Premises deployment, you have direct control over the physical servers where Business Central is hosted. This allows you to implement specific physical security measures.
2. **Network Security**: You can implement and control your own network security protocols, firewalls, and other protective measures to safeguard your on-premises environment.
3. **Data Location**: You have direct control over where your data is stored, which can be important for compliance with specific regulatory requirements or data sovereignty concerns.

Security Cons:

1. **Responsibility for Security Maintenance**: You are responsible for managing and maintaining the security infrastructure, including firewalls, patches, and other security measures. This can be resource-intensive and requires a skilled IT team.
2. **Potential for Outdated Security Practices**: If not regularly updated and maintained, an on-premises deployment could potentially lag behind in terms of adopting the latest security practices and technologies.

Business Central Cloud (SaaS):

Security Pros:

1. **Microsoft's Security Expertise**: Microsoft has a dedicated team of security experts working to protect the cloud infrastructure. They implement and maintain industry-leading security measures.
2. **Automatic Updates**: Security patches and updates are applied by Microsoft, reducing the risk of vulnerabilities due to outdated software.
3. **Compliance Certifications**: Microsoft invests heavily in obtaining and maintaining compliance certifications, which can be crucial for industries with strict regulatory requirements.
4. **Advanced Threat Protection**: Microsoft offers advanced threat protection services to help detect and mitigate security threats.

Security Cons:

1. **Data Location**: Depending on your specific requirements, you may have less control over where your data is stored. While Microsoft provides regional data centers, some organizations may have specific compliance requirements regarding data location.
2. **Limited Customization**: While Business Central Cloud supports customization, there may be limitations compared to the on-premises version. Direct modification of the underlying code is generally not supported.

6. Implementation Speed

Business Central On-Premises:

Implementation Pros:

1. **Customization Flexibility**: On-premises implementations may offer more flexibility for extensive customization, including modifications to the codebase. This can potentially speed up implementation for organizations with complex, highly specialized requirements.
2. **No Internet Dependency**: Implementation is not dependent on internet connectivity, which can be beneficial for organizations in areas with limited or unreliable internet access.

Implementation Cons:

1. **Hardware Setup Time**: Setting up the required on-premises hardware can take time, especially if it involves procuring and configuring new servers or infrastructure.
2. **Software Installation and Configuration**: Installing and configuring the Business Central software on-premises can be a time-consuming process, especially for large organizations with complex environments.

Business Central Cloud (SaaS):

Implementation Pros:

1. **Reduced Hardware Setup**: Since Business Central Cloud is a Software as a Service (SaaS) offering, there's no need to set up and configure on-premises hardware, which can significantly expedite the implementation process.
2. **Rapid Deployment**: Cloud deployments generally offer faster and more straightforward implementations due to the absence of physical infrastructure setup.
3. **Automatic Updates and Patching**: Updates and patches are managed by Microsoft, reducing the need for manual intervention and potentially accelerating the implementation process.

Implementation Cons:

1. **Internet Dependency**: A stable internet connection is necessary for cloud-based implementations. Organizations in areas with limited or unreliable internet access may face challenges.
2. **Potential Customization Limitations**: While Business Central Cloud supports customization, there may be limitations compared to the on-premises version. Direct modification of the underlying code is generally not supported.

Factors to Consider:

1. **Complexity of Requirements**: Assess the complexity of your organization's requirements. Highly specialized or heavily customized implementations may take longer regardless of deployment type.
2. **IT Infrastructure Readiness**: Consider the readiness of your IT infrastructure. If you already have robust on-premises infrastructure in place, the on-premises deployment might be relatively faster.
3. **Internet Reliability**: Evaluate the reliability of your organization's internet connection. If internet access is consistently reliable, a cloud-based implementation may proceed smoothly.
4. **Customization Needs**: Determine the level of customization your organization requires. If extensive customization is a necessity, the on-premises version might take longer due to the potential complexity of customization efforts.

Ultimately, the speed of implementation will depend on your specific business needs, IT infrastructure, and customization requirements.