Integrate apps and data with IBM App Connect

Copy and synchronize data between on-premises and cloud-based applications, solving the issue of mismatched sources, data formats and standards.

IBM App Connect Enterprise, Version 11.0.0.4 Operating Systems: Windows, Linux

IBM App Connect Enterprise introduction

IBM® App Connect Enterprise combines the existing, industry-trusted technologies of IBM Integration Bus with IBM App Connect Professional and with new cloud native technologies, to deliver a platform that supports the full breadth of integration needs across a modern digital enterprise.

Using the IBM App Connect Enterprise Toolkit, you can develop integration solutions and deploy them to the dedicated runtime of IBM App Connect Enterprise and to App Connect on IBM Cloud. You can use an extensive range of administration and systems management options to manage your integration solutions. This documentation provides details about working with this core software, referred to simply as *IBM App Connect Enterprise*.

Using the capabilities of IBM App Connect Professional (bundled as part of IBM App Connect Enterprise), you can quickly connect hybrid environments that are comprised of public clouds, private clouds, and on-premises applications. You can develop integrations by using a "configuration, not coding" approach, with premade integration templates, and rich connectors to speed development time. For more information about working with App Connect Professional, see the IBM App Connect Professional documentation.

IBM App Connect Enterprise can also use an extensive range of SaaS connectors, which can run on premises using the bundled App Connect Professional software or on the cloud using IBM App Connect on IBM Cloud. This capability is only available if you have purchased IBM App Connect on IBM Cloud. For more information about working with App Connect on IBM Cloud, see the IBM App Connect on IBM Cloud docs in the IBM Integration community on developerWorks

You can use IBM App Connect Enterprise to connect applications together, regardless of the message formats or protocols that they support.

This connectivity means that your diverse applications can interact and exchange data with other applications in a flexible, dynamic, and extensible infrastructure. IBM App Connect Enterprise routes, transforms, and enriches messages from one location to any other location:

- The product supports a wide range of protocols: WebSphere® MQ, JMS 1.1 and 2.0, HTTP and HTTPS, web services (SOAP and REST), File, Enterprise Information Systems (including SAP and Siebel), and TCP/IP.
- It supports a broad range of data formats: binary formats (C and COBOL), XML, and industry standards (including SWIFT, EDI, and HIPAA). You can also define your own data formats.
- It supports many operations, including routing, transforming, filtering, enriching, monitoring, distribution, collection, correlation, and detection.

IBM App Connect Enterprise software can be installed directly on a physical machine running in your own Data Center, in

a VMWare virtual machine, in a Docker image, as part of an IBM Cloud Private installation, or installed by you into a public cloud such as IBM Cloud, AWS, or Microsoft Azure. The Docker images can be easily scaled and managed by using orchestration frameworks, such as Kubernetes, alongside other components within a modern architecture.

Your interactions with IBM App Connect Enterprise can be considered in two broad categories:

- Application development, test, and deployment.
  You can choose from a range of tools optimized for the users' skillsets and the integration capabilities they want to exploit:
  - For core IT teams that manage the key systems and packaged applications, there are rich tools to support all styles of interaction, powerful mapping, parsing and transformation. A broad range of functions, which include built-in unit testing and the ability to perform pre-deploy validation, alongside linked browser-based tooling for the line-of-business teams, ensures both developers and non-technical users can rapidly build integration without the need for code.
  - Knowledge workers and citizen integrators in lines of business can take advantage of the simpler, no-coding, web-based *App Connect Designer* to connect applications in the cloud and with applications and resources in hybrid environments. Alternatively, they can innovate on-premises applications for themselves to automate information and process flows by using a no-coding approach while taking advantage of the multi-tenant, cloud runtime of IBM App Connect on IBM Cloud.
  - Integration specialists can choose to use the web-based App Connect Designer to develop, test, and deploy general connections quickly, or use a full Integrated Development Environment (IDE) to tackle more-detailed and challenging integration requirements.
    - Using theIBM App Connect Enterprise Toolkit to develop integration solutions to transform, enrich, route, and process your business messages and data. You can integrate client applications that use different protocols and message formats. The IBM App Connect Enterprise Toolkit is a natural and familiar tool for existing users who have experience with the IBM Integration Toolkit, helping them to easily switch to developing for IBM App Connect Enterprise, accelerate their development of new integration solutions, and preserving and exploiting their investment in IBM Integration Bus development skills.
    - Using the App Connect Studio (part of IBM App Connect Professional) to connect hybrid environments that are comprised of public clouds, private clouds, and on-premises applications. You can develop integrations by using a "configuration, not coding" approach, with premade integration templates, and rich connectors to speed development time.

When used in partnership, these tooling experiences truly unlock the value of enterprise data. IT teams can curate data from complex packaged applications or systems of record and expose it to line-of-business users for final mile integration using the designer tooling, dynamically and without difficulty. This perfect pairing supports collaboration between the IT teams that manage the data and the users with the context of where it is needed.

Users of all these tools and development experience benefit from accelerators, such as templates for common integration and industry-specific-use cases.

Developing, testing, and deploying with the IBM App Connect Enterprise Toolkit, you can use one or more of the supplied options to develop your applications:

- Patterns provide reusable solutions that encapsulate a tested approach to solving a common architecture, design, or deployment task in a particular context. You can use them unchanged or modify them to suit your own requirements.
- Message flows describe your application connectivity logic, which defines the exact path that your data takes in the integration node, and therefore the processing that is applied to it by the message nodes in that flow.

    - Message nodes encapsulate required integration logic, which operates on your data when it is processed through your integration node.
    - Message trees describe data in an efficient, format independent way. You can examine and modify the contents of message trees in many of the nodes that are provided, and you can supply additional nodes to your own design.
    - You can implement transformations by using graphical mapping, Java™, ESQL, and XSL, and can make your choice based on the skills of your workforce without having to provide retraining.

- Operational management and performance. IBM App Connect Enterprise includes the following features and functionality, which support the operation and performance of your deployment:
    - An extensive range of administration and systems management options for developed solutions, including the following:
        - The IBM App Connect Enterprise Toolkit.
        - The web user interface, which you can use to administer your integration nodes.
        - A comprehensive set of commands, which you can run interactively or by using scripts.
        - The Representational State Transfer API (REST) allows development of administrative applications without the need to install client software and web browsers can administer integration nodes through a user interface.
    - Support for a wide range of operating system and hardware platforms.
    - A scalable, highly performing architecture, based on requirements from traditional transaction processing environments.
    - Tight integration with software products, from IBM and other vendors, that provide related management and connectivity services.

Parent topic:

→ IBM App Connect Enterprise overview

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[1] Use of App Connect Designer and deployment to the multi-tenant cloud runtime are only available with IBM App Connect on IBM Cloud.